



## Annual report 2014

- Leiden University
- University of Amsterdam
- University of Groningen
- Tilburg University
- University of Twente
- Utrecht University
- KUL University of Leuven
- Statistics Netherlands (CBS)
- Psychometric Research Center (Cito)

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## Introduction

The year 2014 started with the retirement of IOPS director Willem Heiser, marked by the international symposium '*Best Practices in Statistical Data Analysis*' on January 30<sup>th</sup>. After his farewell speech the next day, Willem was awarded Knight of the Order of the Netherlands Lion. He received this royal award because of his exceptional scientific, social and administrative and organizational merits. Congratulations Willem!

One of Willem's recent achievements for IOPS, was the crucial role he played in obtaining a NWO Graduate Programme grant in September 2013, which allows for financing four PhD positions. These positions should be allocated to IOPS staff in an internal competition in 2015, in which, in accordance with the NWO conditions, candidates are able to select a research topic and a supervisor of their own choice. The first official acquaintance of the candidates with the staff was organized in speed-date sessions at the IOPS Winter Conference 2014. In the spring of 2015, all candidates will write a grant proposal together with their supervisors and an external committee will select the best four proposals for funding.

The IOPS board has changed considerably in 2014. Apart from the departure of Prof. Willem Heiser (Chair, Leiden University), three other members left the board: Dr Andries van der Ark (Tilburg University), Prof. Peter van der Heijden (Utrecht University) and Prof. Henk Kelderman (advisory member, Leiden University). The vacant position for a representative of CBS was fulfilled and the function of advisory member has been cancelled.

New in 2014 was the IOPS Best Poster Prize. The Board introduced this prize to emphasize the importance of this presentation in an early stage of the PhD project. The first Best Poster Prize was awarded to Merijn Mestdagh, KU Leuven, with his poster entitled '*The impact of bounded measurements on the relation between the mean and the standard deviation.*' The IOPS Best Paper of 2013 Award was granted to Annelies Bartlema, KU Leuven, with her article *A Bayesian hierarchical mixture approach to individual differences: Case studies in selective attention and representation in category learning.* (**Journal of Mathematical Psychology**)

We congratulate the 12 students that defended their thesis successfully and we welcome the 14 new students. With two students leaving IOPS without finishing their project, the number of students remains unchanged in 2014.

On behalf of the IOPS board,

Rob Meijer

# 1 Organization

## 1.1 Board

The IOPS Board consists of seven members delegated by the participating universities and two representatives of the participating research institutes. The institute director is also chairman, he/she is elected from the representatives of the seven participating universities.

Board meetings are also attended by two representatives of the IOPS PhD students, appointed by the IOPS PhD students for a period of two years.

### Members IOPS Board

On 31 December 2014 the IOPS Board consisted of:

- Prof. R.R. Meijer, Chair, University of Groningen
- Prof. D. Borsboom, University of Amsterdam
- Prof. M.J. de Rooij, Leiden University
- Dr G.J.A. Fox, University of Twente
- Dr J.M. Wicherts, Tilburg University
- Prof. H.J.A. Hoijtink, Utrecht University
- Prof. F. Tuerlinckx, KU Leuven, University of Leuven
- Dr A.A. Béguin/Prof. G.K.J. Maris, CITO (National Institute for Educational Measurement)
- Dr J.G. Schouten, CBS (Statistics Netherlands)

### PhD representatives

Marije Fagginger Auer (Leiden University) was appointed first representative, after being assistant representative in 2013.

Michèle Nijtjen (Tilburg University) was appointed assistant PhD student representative.

### Changes in the IOPS Board

In the IOPS Board meeting of 14 April 2014 the board was happy to welcome four new board members: Prof. Mark de Rooij, Dr Jelte Wicherts, Prof. Herbert Hoijtink and Dr Barry Schouten.

### Board meetings

The IOPS Board meets four times a year. In 2014 board meetings were held on 14 April, 26 June, 16 September and 11 December.

## 1.2 Office

As of 1 February 2014 the secretariat will be accommodated at:

Faculty of Social and Behavioral Sciences, Psychometrics and Statistics  
Grote Kruisstraat 2/1, 9712 TS Groningen, The Netherlands

**Secretary:** Drs. Edith Ruisch-de Vries  
**E-Mail:** secretariaat.iops@rug.nl  
**Web:** www.iops.nl

## 1.3 Participating institutes

<b>Leiden University</b>	
Faculty of Social and Behavioural Sciences	
<b>Methodology and Statistics Unit</b> Institute of Psychology	P.O. Box 9555, 2300 RB Leiden Secretary: Jacqueline Hartman 071 527 3761 <a href="mailto:j.hartman@fsw.leidenuniv.nl">j.hartman@fsw.leidenuniv.nl</a>
<b>Education and Child Studies</b> Institute of Education	P.O. Box 9555, 2300 RB Leiden Secretary: Esther Peelen 071 527 3434 <a href="mailto:peelene@fsw.leidenuniv.nl">peelene@fsw.leidenuniv.nl</a>
<b>Statistical Science for the Life and Behavioral Sciences</b> Mathematical Institute	P.O. Box 9512, 2300 RA Leiden Secretary: Martine Goderie-Vliegenthart <a href="mailto:m.l.goderie@math.leidenuniv.nl">m.l.goderie@math.leidenuniv.nl</a> +31 71 527 7047
<b>University of Amsterdam</b>	
Faculty of Social and Behavioural Sciences	
<b>Psychological Methods</b> Department of Psychology	Nieuwe Achtergracht 129-B, Postbus 15906, 1001 NK Amsterdam Secretary: Ineke van Osch 020 525 6870 <a href="mailto:mlsecretariaat-fmg@uva.nl">mlsecretariaat-fmg@uva.nl</a>
<b>Developmental Psychology</b> Department of Psychology	Postbus 15916, 1001 NK Amsterdam Secretary: Ellen Buijn 020 525 6830 <a href="mailto:e.buijn@uva.nl">e.buijn@uva.nl</a>
<b>Work and Organizational Psychology</b> Department of Psychology	Nieuwe Achtergracht 129 B, Amsterdam Postbus 15919, 1001 NK Amsterdam Secretary: Joke Vermeulen 020 525 6860 <a href="mailto:j.h.vermeulen@uva.nl">j.h.vermeulen@uva.nl</a>
<b>Methods and Statistics</b> Department of Child Development and Education	Nieuwe Achtergracht 127, Amsterdam Postbus 15906, 1001 NK Amsterdam Secretary: Mariëlle de Reuver 020 525 6050 <a href="mailto:j.m.dereuver@uva.nl">j.m.dereuver@uva.nl</a>
<b>University of Groningen</b>	
Faculty of Behavioural and Social Sciences	
<b>Psychometrics and Statistics</b> Department of Psychology	Grote Kruisstraat 2/1, 9712 TS Groningen Secretary: Hanny Baan 050 363 63 66 <a href="mailto:j.m.baan@rug.nl">j.m.baan@rug.nl</a>
<b>Theoretical Sociology</b> Department of Sociology	Grote Kruisstraat 2/1, 9712 TS Groningen Secretary: Saskia Simon 050 363 6469 <a href="mailto:s.simon@rug.nl">s.simon@rug.nl</a>

## **University of Twente**

Faculty Behavioural, Management and Social Science (BMS)

Department of Research Methodology, Measurement and Data Analysis (OMD)	P.O. Box 217, 7500 AE Enschede Secretary: Birgit Olthof-Regeling, T. 053 489 3555 <a href="mailto:Birgit.Olthof@utwente.nl">Birgit.Olthof@utwente.nl</a>
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## **Tilburg University**

Tilburg School of Social and Behavioral Sciences

<b>Methodology and Statistics</b>	P.O. Box 90153, 5000 LE Tilburg Secretary: Marieke Timmermans 013 466 2544 <a href="mailto:m.c.c.timmermans@tilburguniversity.edu">m.c.c.timmermans@tilburguniversity.edu</a>
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## **Utrecht University**

Faculty of Social and Behavioural Sciences

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## **KU Leuven, University of Leuven, Belgium**

Faculty of Psychology and Educational Sciences

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## **Statistics Netherlands (CBS), Den Haag**

P.O. Box 24500, 2490 AH Den Haag  
Secretary: 070 337 3800

## **Psychometric Research Center (Cito), Arnhem**

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Secretary: Rianne van der Werff (T 026-  
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## 1.4 Cooperating institutes

### **University of Groningen**

Faculty of Behavioural and Social Sciences

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### **VU University Amsterdam**

Faculty of Psychology and Education

#### **Department of Clinical Psychology**

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#### **Department of Biological Psychology**

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### **Maastricht University**

Faculty of Health, Medicine and Life Sciences & Faculty of Psychology & Neuroscience

#### **Department of Methodology and Statistics**

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 ria.lumeij@maastrichtuniversity.nl

### **Erasmus University Rotterdam**

#### **Department of Econometrics**

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 010 408 1370 / 1377  
 kurtz@ese.eur.nl

#### **Department of Psychology, Education & Child Studies**

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 Secretariat D-PECS  
 010 408 8789 / 8799  
 sec-dpecs@fsw.eur.nl

### **Wageningen University**

#### **Research Methodology Group**

P.O. Box 8130, 6700 EW, Wageningen  
 Secretary: Nicolette Tauecchio  
 0317 48 5702  
 nicolette.tauecchio@wur.nl

## 2 Staff

The members of the staff belong to the participating universities. There are two categories of staff members: junior and senior staff members. Both require acknowledgment in their field according to, among others, international publications. Junior staff members have obtained their PhD less than five years ago, and do not necessarily have (co-)responsibility of dissertation research. Senior staff members do have (co-)responsibility of dissertation research.

### Associated staff

In 1994, the establishment of graduate schools and the rearrangement of staff members as a result of this, caused IOPS to introduce a new category of staff for those who - for formal reasons - could not be a regular IOPS staff member. The requirements for associated staff members are identical to those of regular staff members. PhD students of these associated staff members can be admitted to IOPS as an external dissertation student.

### 2.1 Professorships

1. On September 1<sup>st</sup> 2014, Mark de Rooij (Leiden University) was appointed full professor of methodology and statistics at the Institute of Psychology of Leiden University.
2. Also, on September 1<sup>st</sup> 2014, Marieke Timmerman (University of Groningen) was appointed professor, chair '*Statistische technieken voor analyse van multivariate gegevens uit gedragswetenschappelijk onderzoek*'

### 2.2 Staff meetings

Plenary meetings for all IOPS members (staff and PhD students) are held twice a year during the IOPS conferences. In 2014 two plenary meetings took place, one on 26 June, and one on 11 December.

### 2.3 Staff changes

#### Junior staff members admitted to IOPS in 2014

- Shahab Jolani, Maastricht University
- Iris Smits, University of Amsterdam
- Jesper Tijmstra, Tilburg University
- Jorre Vannieuwenhuyze, Utrecht University
- Tom Wilderjans, KU University of Leuven

#### Senior staff members admitted to IOPS in 2014

- Katrijn Van Deun, Tilburg University
- Jorge Tendeiro, University of Groningen

#### Junior staff members leaving IOPS in 2014

- Johan Braeken, Tilburg University

- Laurence **Frank**, Utrecht University
- Milosh **Kankarash**, Tilburg University
- Maurits **Kaptein**, Tilburg University
- Richard **Morey**, University of Groningen
- Fetene **Tekle**, Tilburg University

## Senior staff members leaving IOPS in 2014

- Dr Margo **Jansen**, University of Groningen

## Emeritus status

The following staff members entered the emeritus status in 2014 or in previous years.

- Prof. Martijn **Berger**, Maastricht University (2011)
- Prof. Jelke **Bethlehem**, CBS, Statistics Netherlands (2014)
- Prof. Paul **De Boeck**, KU Leuven
- Prof. Paul **Eilers**, Erasmus University Rotterdam
- Prof. Cees **Glas**, University of Twente
- Prof. Willem **Heiser**, Leiden University (2014)
- Prof. Joop **Hox**, Utrecht University (2014)
- Prof. Pieter **Kroonenberg**, Leiden University
- Prof. Ivo **Molenaar**, University of Groningen
- Prof. Tom **Snijders**, University of Groningen

	1 Januari 2014	31 December 2014
Junior staff members	30	29
Senior staff members	76	68
Honorary emeritus members	10	20

## 2.4 Staff members

### Leiden University

#### *Institute of Psychology, Methodology and Statistics Unit*

- Prof. Mark **De Rooij** (senior): rooijm@fsw.leidenuniv.nl
- Dr Marian **Hickendorff** (junior): hickendorff(at)fsw.leidenuniv.nl
- Prof. Henk **Kelderman** (senior): h.kelderman@fsw.leidenuniv.nl
- Dr Kees **Van Putten** (senior): putten@fsw.leidenuniv.nl
- Dr Matthijs **Warrens** (junior): m.j.warrens@fsw.leidenuniv.nl

#### *Institute of Education and Child Studies*

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## Mathematical Institute

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## University of Amsterdam

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- Dr Marieke **Timmerman** (senior): m.e.timmerman@rug.nl

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- Dr David **Hessen** (senior): d.j.hessen@uu.nl
- Prof. Herbert **Hoijsink** (senior): h.hoijsink@uu.nl
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- Dr Rebecca **Kuiper** (junior): r.m.kuiper@uu.nl
- Dr Peter **Lugtig** (junior): p.lugtig@uu.nl
- Dr Mirjam **Moerbeek** (senior): m.moerbeek@uu.nl
- Dr Vera **Toepoel** (senior): v.toepoel@uu.nl
- Prof. Stef **Van Buuren** (senior): s.vanbuuren@uu.nl
- Prof. Peter **Van der Heijden** (senior): p.g.m.vanderheijden@uu.nl
- Dr Rens **Van de Schoot** (junior): a.g.j.vandeschoot@uu.nl
- Dr Jorre **Vannieuwenhuyze** (junior): j.t.a.vannieuwenhuyze@uu.nl

## **KU Leuven, University of Leuven**

### ***Faculty of Psychology and Educational Sciences***

- Dr Eva **Ceulemans** (senior): eva.ceulemans@ppw.kuleuven.be
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- Prof. Francis **Tuerlinckx** (senior): francis.tuerlinckx@ppw.kuleuven.be
- Prof. Iven **Van Mechelen** (senior): iven.vanmechelen@ppw.kuleuven.be
- Dr Wolf **Vanpaemel** (senior): wolf.vanpaemel@ppw.kuleuven.be
- Dr Tom **Wilderjans** (junior): tom.wilderjans@ppw.kuleuven.be

## **Statistics Netherlands (CBS)**

- Dr J.G. **Schouten** (senior): jg.schouten@cbs.nl

## **Psychometric Research Center (Cito), Arnhem**

- Dr Timo **Bechger** (senior), timo.bechger@cito.nl
- Dr Anton **Béguin** (senior), anton.beguin@cito.nl
- Dr Bas **Hemker** (senior), bas.hemker@cito.nl

## **2.5 Associated staff members**

- Prof. Lidia **Arends** (senior), Psychology Institute, Erasmus University Rotterdam: arends@fsw.eur.nl
- Dr Samantha **Bouwmeester** (senior), Psychology Institute, Erasmus University Rotterdam: bouwmeester@fsw.eur.nl
- Dr Math **Candel** (senior), Methodology and Statistics, Maastricht University: math.candel@maastrichtuniversity.nl
- Dr. Conor **Dolan** (senior), Faculty of Psychology and Education, Dept. Biological, VU University Amsterdam: c.v.dolan@vu.nl
- Prof. Patrick **Groenen** (senior), Faculty of Economics, Erasmus University Rotterdam: groenen@ese.eur.nl
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- Dr Yfke **Ongena** (junior): Centre for Information and Communication Research, Faculty of Arts, University of Groningen: y.p.ongena@rug.nl

- Dr Marike **Polak** (junior), Psychology Institute, Erasmus University Rotterdam: polak@fsw.eur.nl
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- Dr Niels **Smits** (senior), Department of Social and Organizational Psychology, VU University Amsterdam: n.smits@psy.vu.nl
- Dr Frans **Tan** (senior), Methodology and Statistics, Maastricht University: frans.tan@maastrichtuniversity.nl
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- Prof. Gerard **Van Breukelen** (senior), Methodology and Statistics, Maastricht University: gerard.vbreukelen@maastrichtuniversity.nl
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- Dr Wolfgang **Viechtbauer** (senior), Methodology and Statistics, Maastricht University: wolfgang.viechtbauer@maastrichtuniversity.nl

## 2.6 Honorary emeritus members

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- Prof. Robert **Mokken**, mokken@science.uva.nl
- Prof. Ivo **Molenaar**, molenaarivo@gmail.com
- Prof. Ab **Mooijaart**, mooijaart@fsw.leidenuniv.nl
- Prof. Willem **Saris**, w.saris@telefonica.net
- Prof. Tom **Snijders**, t.a.b.snijders@rug.nl
- Prof. Jos **Ten Berge**, j.m.f.ten.berge@rug.nl
- Prof. Wim **Van der Linden**, wim\_vanderlinden@ctb.com
- Prof. Hans **Van der Zouwen**, j.van.der.zouwen@fsw.vu.nl
- Dr Norman **Verhelst**, norman.verhelst@gmail.com

## 3 Scientific awards and grants

### 3.1 Awards and grants honored to IOPS staff members

#### 3.1.1 Scientific awards

#### 3.1.2 NWO Grants

<b>NWO Veni, Vidi, Vici grants</b>				
These are part of the NWO Innovational Research Incentives Scheme [ <i>Vernieuwingsimpuls</i> ]				
<b>Hamaker, E.</b> (2010), Utrecht Un.	Time for change: Studying individual differences in dynamics	Vidi	1 May 2011 – 1 May 2016	€ 600.000
<b>Huizenga, H.</b> (2013), UvA Amsterdam	Why speeding on your scooter is a good idea: decision strategies in childhood and adolescence	Vici	1 Sept 2013 – 31 Aug 2019	€ 1.500.000
<b>Klugkist, I.</b> (2013), Utrecht Un.	A Different Angle: New Tools for Circular Data	Vidi	November 2013 – November 2018	€ 800.000
<b>Moerbeek, M.</b> (2008), Utrecht Un.	Improving statistical power in studies on event occurrence by using an optimal design	Vidi	1 February 2009 – 1 February 2014	€ 600.000
<b>Morey, R.</b> (2010), Un. of Groningen	A modelling-based approach to testing item-based versus resource-based working memory storage	Veni	1 May 2011 – 1 May 2014	€ 250.000
<b>Mulder, J.</b> (2013), Tilburg University	Testing competing theories	Veni	2013 - 2018	€ 250.000
<b>Oberski, D.</b> (2014), Tilburg University	Developing novel latent variable techniques that open up a treasure trove of register data for social science	Veni	1 January 2015 – 31 December 2017	€ 250.000
<b>Stegeman, A.</b> (2008), Un of Groningen	Multi-way decompositions : Existence and uniqueness	Vidi	6 February 2009 – 5 February 2014	€ 600.000
<b>Van de Schoot, R.</b> (2011), Utrecht Un.	Integrating background knowledge about traumatic stress experienced after trauma into statistical models assessing individual change over time	Veni	January 2011 – January 2016	€ 250.000
<b>Vermunt, J.K.</b> (2010), Tilburg University	Stepwise model-fitting approaches for latent class analysis and related methods	Vici	23 June 2011 – 22 June 2016	€ 1.500.000
<b>Wicherts, J.M.</b> (2012), Tilburg University	Human Factors in statistics	Vidi	September 2012 – September 2017	€ 800.000

### NWO Aspasia grants

With the Aspasia grants, NWO stimulates the promotion of female researchers in higher ranking.

<b>Hamaker, E.</b> (2011), Utrecht Un.	2011-2016	€ 100.000
<b>Moerbeek, M.</b> (2009), Utrecht Un.	1 February 2009 - 1 February 2014	€ 100.000

### NWO Open Competition grants

The Open Competition is subsidy program for the advancement of innovative and high-quality scientific research in the social and behavioral sciences.

<b>De Rooij, M.</b> (2010), Leiden Un.	Multivariate logistic regression using the ideal point classification model	PhD student: Haile M. <b>Worku</b>	1 Oct. 2010 – 1 Oct. 2014	€ 209.513
<b>Timmerman, M.E. &amp; Meijer, R.R.</b> (2009), Un. of Groningen	Dimensionality assessment of polytomous Items	PhD student: M.T. <b>Barendse</b>	1 Sept. 2010 – 1 Sept. 2014	€ 209.513
<b>Vermunt, J.K., Van der Ark, A. &amp; Sijtsma, K.</b> (2009), Tilburg Un.	Multiple imputation using mixture models	PhD student <b>D. Van der Palm</b>	1 Sept. 2009 – 30 Jan. 2014	€ 207.155
<b>Wagenmakers, E.J., Forstmann, B., Nieuwenhuis, S. &amp; Van der Maas, H.</b> (2011), UvA Amsterdam	A dynamic and formal account of what people do before and after they make an error	PhD student: H. Steingroever	1 Sept. 2011 - 1 Sept. 2015	€ 208.193
<b>Wicherts, J.</b> (2009), UvA Amsterdam	Expectancy effects on the analysis of behavioral research data	PhD student: Marjan <b>Bakker</b>	1 April 2009 - 16 June 2014	€ 207.155

### NWO Research Talent grants

NWO Research Talent is a responsive mode funding scheme, which offers talented and ambitious young researchers a platform to pursue a scientific career and carry out high-quality PhD research.

<b>Ark, A. van der</b> (2013), Tilburg University	Improving norms for psychological and educational tests	PhD student <b>Hannah Oosterhuis</b>	1 Sept. 2012 – 1 Sept. 2016	€ 168.735
<b>Assen, M. van</b> (2013), Tilburg University	Meta-analysis in the presence of publication bias and researcher degrees of freedom	PhD student Robbie van <b>Aert</b>	1 Sept. 2013 – 1 Sept. 2017	€ 165.000
<b>Borsboom, D.</b> (2012), UvA Amsterdam	Network psychometrics	PhD student <b>Sacha Epskamp</b>	1 Aug. 2012 - 1 Aug. 2016	€ 167.576
<b>Hoijtink, H.</b> (2013), Utrecht Un.	Processing within person experimental and longitudinal data using Bayesian updating	PhD student Anouck <b>Kluytmans</b>	1 Sept. 2013 – 1 Sept. 2016	€ 168.735
<b>Timmerman, M.E. &amp; Meijer, R.R.</b> (2012), Un. of Groningen	Understanding human behavioural processes with Bayesian dynamic models	PhD student: Tanja <b>Krone</b>	1 July 2012 – 1 March 2016	€ 161.363
<b>Van der Maas, H.L.J.</b> (2012), UvA Amsterdam	Analyzing developmental change with time-series data	PhD student: Abe <b>Hofman</b>	1 Sep. 2012 – 1 Sep. 2016	€ 168.576

	of a large scale educational monitoring system			
<b>Van Duijn, M.A.J., Snijders, T.A.B., &amp; Niezink, N.M.D. (2013), Un. of Groningen</b>	Co-Evolution of networks and real-valued actor attributes	PhD student: Niezink, N.M.D.	2013 - 2016	€ 166.235
<b>Vermunt, J.K. (2012), Tilburg University</b>	Power analysis for simple and complex mixture models	PhD student Dereje <b>Gudicha</b>	1 Sept. 2012 – 1 Sept. 2015	€ 165.000
<b>Vermunt, J.K. (2013), Tilburg University</b>	Multiple imputation of nested missing data using extended latent class models	PhD student Davide <b>Vidotto</b>	1 Sept. 2013 – 1 Sept. 2016	€ 165.000
<b>Wicherts, J.M. (2013) Tilburg University</b>	The psychometrics of stereotype threat	PhD student Paulette <b>Flore</b>	1 Sept. 2013 – 1 Sept. 2017	€ 165.000

<b>Other NWO grants</b>				
Schmand, B., <b>Huizenga, H. &amp; Murre, J.</b> (2013), UvA Amsterdam	Advanced Neuropsychological Diagnostics Infrastructure (ANDI)	Investment Subsidy NWO Medium	1 Sept 2013- 31 Aug 2017	€ 450.000
<b>Van Putten, K. (Leiden University) &amp; Béguin A. (Cito)</b>	Mathematics education in the classroom and students' strategy use and achievement in primary education	NWO-PROO	1 Sept. 2011 – 1 Sept. 2015	€ 299.850
Veenstra, R., Dijkstra, J.K., Vollebergh, W., Harakeh, Z., <b>Van Duijn, M.</b> , & Steglich,C. (2013)	Social networks processes and social development of children and adolescents	NWO-PROO	2013 -	€ 717.326

### 3.1.3 International grants

<b>International grants</b>				
<b>Altinisik, Y., Kuiper, R.M. &amp; Hoijtink, H. (2014), Utrecht Un.</b>	Research replication through the evaluation of prior knowledge in the form of informative hypotheses and sparse big data models	Turkish Government	2014-2018	€ 50.000
<b>Brown, S., Eidels, A., Heathcote, A. &amp; Wagenmakers, E.J. (2011), UvA Amsterdam</b>	Rapid decisions: From neuroscience to complex cognition	Australian Research Council	2012-2014	AUS \$ 134,000
<b>Gu Xin and Hoijtink, H. (2011), Utrecht Un.</b>	Bayesian Evaluation of Inequality Constrained Hypotheses	Chinese Scholarship Council	2011-2015	€ 65.000
<b>Karayanidis, F., Lenroot, R., Parsons, M., Michie, P. &amp; Eric-Jan Wagenmakers (2011), UvA Amsterdam</b>	Cognitive flexibility from adolescence to senescence: Variability associated with cognitive strategy and brain connectivity	Australian Research Council	2012-2014	AUS \$ 387,000
<b>Lugtig, P.</b>	Subsidy for three year research	ERSC Future Leaders	2012 –	€ 163.000

(2012), Utrecht Un.	project 'Trade-offs between nonresponse and measurement error in a panel survey'	Grant (United Kingdom)	2015	
<b>Meijer, R.R., Tendeiro, J.N. &amp; Albers, C.J.</b> (2014), University of Groningen	Diagnostic Statistics to Evaluate response behavior for individual test takers	Research grant obtained from the Law School Admission Council (USA)	June 2014 – June 2015	€ 96.666
<b>Wagenmakers, E.J.</b> , (2012), UvA Amsterdam	Cognitive Flexibility from Adolescence to Senescence: Variability Associated with Cognitive Strategy and Brain Connectivity	Partner investigator on the Australian Research Council	2012-2014	AUS \$ 387.000
<b>Wagenmakers, E.J.</b> (2012), UvA Amsterdam	Rapid Decisions: From Neuroscience to Complex Cognitions	Partner investigator on the Australian Research Council	2012-2014	AUS \$ 134.000
<b>Wagenmakers, E.J.</b> (2011), UvA Amsterdam	Bayes or Bust: Sensible hypothesis tests for social scientists	Consolidator grant by the European Research Council	1 May 2012- 1 May 2017	€ 1.500.000
<b>Wagenmakers, E.J.</b> , (2011), UvA Amsterdam	Engineering and Physical Sciences Research Council project "Decision making in an unstable world" (investigators: Iain Gilchrist, Roland Baddeley, Rafal Bogacz, Simon Farrell, David Leslie, Casimir Ludwig, and John McNamara).	External advisor	2011-2015	£ 1.858.354

<b>Grants awarded to KU Leuven, University of Leuven</b>				
<b>Ceulemans, E., Kuppens, P., &amp; Tuerlinckx, F.</b> (2013)	Switching component models for capturing emotional response patterning and synchronization processes	Fund Scientific Research (FWO), Flanders, Belgium	1 Jan 2014 – 31 Dec 2019	€ 310.000
<b>Tuerlinckx, F.</b> (2012): KU Leuven	Understanding the dynamics of the individual through network analyses of Experience Sampling data	Grant by The National Fund for Scientific Research-Belgium [Fonds voor Wetensch. Onderzoek-Vlaanderen]	31 Dec. 2012 - 31 Dec. 2018	€ 296.518
<b>Tuerlinckx, F., Ceulemans, E., Kuppens, P., Van Mechelen, I., &amp; Vanpaemel, W.</b> (2013)	Formal models of the affective system: Dynamics, exogenous inputs and relation to subjective well-being.	GOA grant. Special Research Fund, KU Leuven	1 Jan 2015 – 31 Dec 2019	€ 1.250.000
<b>Van Mechelen, I.</b> (2012)	Developing crucial Statistical methods for Understanding major complex Dynamic Systems in natural, bio-medical and social sciences	Grant by Belgian Science Policy [Federaal Wetenschapsbeleid]	2012 - 2017	€ 430.000

<b>Van Mechelen, I., Tuerlinckx, F. &amp; Ceulemans, E.</b> (2008)	Formele modellering van de tijdsdynamiek van emoties	GOA	2008 - 2014	€ 1.400.000
<b>Van Mechelen, I.</b> (2011)	Disentangling the innate and adaptive response to vaccines	GSK (contract research) Van Mechelen -GSK Biologicals	2011-2015	€ 200.000
<b>Vanpaemel, W.</b> (2011)	The use of the prior predictive in modelling cognition	OT (Onderzoekstoelage) and CREA; Research Council KU Leuven	2011-2015	€ 294.240

<b>Other Grants</b>				
<b>Boeije, H. &amp; Leferink, S.</b> (2012), Utrecht University	Kwaliteitsverbetering in de hulpverlening aan slachtoffers door innovatie in effectmeting	Grant for PhD-project, funded by Fonds slachtofferhulp and Dept. of Methodology and Statistics, Utrecht Un.	Aug. 2012 – Aug. 2016	€ 120.000 by Fonds Slachtofferhulp and €120.000 by Dept. M&S, Utrecht Un.
<b>Boersma, P., Raijmakers, M. &amp; Bögels, S.</b> (2009), UvA Amsterdam	Models and tests of early category formation: interactions between cognitive, emotional, and neural mechanisms	Cognition Program, Cognitive Science Center Amsterdam	2009 – 1 Sep 2015	€ 470.000
<b>Candel, M.</b> (2011), Maastricht Un.	Sample size calculation for nested cost-effectiveness RCTs (PhD student project)	ZonMw (The Netherlands Organization for Health Research and Development)	April 2012 - April 2016	€ 115.000
<b>Hoijtink, H. &amp; Maris, G.</b> (2011), Utrecht Un. / CITO	Unmixing Rasch Models	PhD project, funded by CITO and Dept. of Methodology and Statistics, Utrecht Univ.	2011-2015	€ 87.500 by CITO and € 87.500 by Dept. M&S, Utrecht Un.
<b>Hox, J., Snijders, G.</b> (CBS)	Motivation of Respondents in Business Surveys	Grant for PhD-project, funded by CBS	Sept. 2010 – Sept. 2015	€ 238.000
<b>Jansen, B.R.J., Saleminck, E., &amp; Wiers, R.</b> (2014), UvA Amsterdam	The missing factor in math anxiety: The role and modification of cognitive biases and executive functioning	Interne AIO-competitie Ontwikkelingspsychologie	2014-2018	€ 200.000
<b>Keijsers, L., Ter Hillegers, M. Bogt, T., Van de Schoot, R., Vollebergh, W., Cahn, W.</b>	Grant for Post-doc on disentangling normative irritability from early signs of depression among adolescents with cell-phone micro-measures of daily mood swings	Utrecht University, Youth & Identity Seed Project	2013 - 2016	€ 96.000
<b>Klinkenberg, S. &amp; Van der Maas, H.</b> (2010), UvA Amsterdam	Nieuwe scoreregel voor digitale toetsen	SURF Foundation Tender: Toetsing en Toetsgestuurd Leren	1 March 2011 – 28 March 2014	€ 77.766

<b>Klugkist, I.</b> , Nielen, M. (DGK, Utrecht University)	Bayesian statistics applied to clinical trials from veterinary medicine	Grant for PhD-project, funded by Faculty of Veterinary Medicine, Utrecht Un. and Dept. of Methodology and Statistics, Utrecht Un.	Sept. 2013 – Sept. 2017	€ 97.500 by Fac. Veterinary Medicine, UU and € 97.500 by Dept. M&S, UU.
<b>Kuiper, R.M.</b> (2012), Utrecht Un.	Facultaire subsidie voor tijdelijk extra onderzoekstijd	Utrecht University	Sept. 2012 – Sept. 2014	€ 13.100
<b>Meijer, R.R. &amp; Tendeiro, J.</b> (2012), Un. of Groningen	Assessment of the validity of total scores in high-stakes testing through nonparametric statistical techniques	Law School Admission Council Research Grant (U.S.A)	February 2013 – Febräuary 2014	\$ 100.000
<b>Raijmakers, M.</b> <b>Van der Maas, H.</b> & Haarhuis H. (2011), UvA Amsterdam	1. Mental models: Guiding knowledge development in the individual child 2. Optimizing materials for experimentation	Research Grant from the Platform Beta Techniek [TalentenKracht]	1 Jan 2012 – 1 jan 2016	€ 417.000
<b>Toepoel, V.</b> (2014), Utrecht Un.	Facultaire subsidie voor tijdelijk meer onderzoekstijd	Utrecht University	Jan. 2014 – Dec. 2015	€ 17.830
<b>Van der Heijden, P.</b>	SURF	Learning Analytics stimuleringsregeling	July 2013 – July 2014	€ 10.000
<b>Van der Heijden, P.</b> , Bakker, B. (CBS), (main appl); <b>Cruyff, M.</b> , Whittaker, J. (Lancaster Un.)	The estimation of population size and population characteristics using incomplete registries	Grant for PhD project, funded by CBS and Dept. of Methodology and Statistics, Utrecht Un.	Jan. 2012 – Jan. 2016	€ 100.000 by CBS and € 100.000 by Dept. M&S, Utrecht Un.
<b>Van der Heijden, P.</b> , <b>Cruyff, M.</b>	Omvang van huiselijk geweld in Nederland	Ministerie van Justitie en Veiligheid, WODC	2012 - 2014	€ 20.470
<b>Van der Schaaf, M.F.</b> <b>Van der Heijden, P.</b> , Van Tartwijk, J.	WATCHME, Workplace-based e-Assessment Technology for Competency-based Higher Multi-professional Education	Utrecht University e.a.	2013 - 2014	€432.395
<b>Van Tartwijk, J.</b> , <b>Van der Heijden, P.</b> and others	Opbrengstgericht en data-gestuurd werken in het Utrechtse voortgezet onderwijs op alle niveaus	Samenwerkingsverband VO Utrecht, Universiteit Utrecht, Willibrord Stichting	Oct. 2013 – Oct. 2014	€ 432.905
<b>Vink, G</b> & <b>Van Buuren, S.</b>	Multiple imputation of Parent Management Training Oregon (PMTO) data	Maastricht University	Nov. 2014 – Dec. 2014	€ 12.000

## 3.2 Awards and grants honored to IOPS PhD students

In 2014, the following IOPS PhD students were honored with a scientific award or grant:

- Paulette **Flore**: John B. Carroll Award for Methodology at the congres of ISIR (International Society for Intelligence Research)
- Marjolein **Fokkema**: [Psychometric Society Student Travel Award](#) for presenting her paper '*Connecting clinical and actuarial prediction with rule-based methods*' at IMPS 2014 in Madison, Wisconsin
- **Zondervan-Zwijnenburg, M.** and **Lek, K.** (2014), Utrecht University  
They both won the Peter G. Swankorn Prize 2014 for the research masterthesis die that gives proof of exceptional insight on the concepts and methods of social scientific research. Enabled by SETOS (Stichting Empirisch-Theoretisch Onderzoek in de Sociologie).

## 4 Students and projects

### 4.1 Introduction

Applicants for the IOPS dissertation training must have a Master's degree in one of the following disciplines. Behavioral Sciences, Technical Sciences, Mathematics or Econometrics. They are appointed as PhD student, or as an indirectly financed PhD student. PhD students within IOPS are financed by the participating universities or by NWO (Netherlands Foundation of Scientific Research).

PhD student projects in progress on 1 January 2014	61
New projects	14
Dissertations	12
Projects left unfinished	2
PhD student projects in progress on 31 December 2014	60
Projects that exceeded the project time limit	5

### Dissertations

1. Marjan **Bakker** (University of Amsterdam) - *Good science, bad science. Questioning research practices in psychological research*
2. Margot **Bennink** (Tilburg University) - *Micro-macro multilevel analysis for discrete data*
3. Matthieu **Brinkhuis** (University of Amsterdam) - *Tracking educational progress*
4. Rogier **Kievit** (University of Amsterdam) - *Turtles all the way down? Psychometric approaches to the reduction problem*
5. Thomas **Klausch** (Utrecht University) - *Informed Design of Mixed-Mode Surveys: Evaluating mode effects on measurement and selection error*
6. Gabriela **Koppenol-Gonzales** (Tilburg University) - *Verbal and Visual Short Term Memory Processes in Children: Capturing their Complexities Using Latent Class Models*
7. Maarten **Marsman** (University of Twente) - *Plausible Values in Statistical Inference*
8. Marie-Anne **Mittelhaëuser** (Tilburg University) - *Modeling the Effect of Differential Motivation on Linking Educational Tests*
9. Iris **Smits** (University of Groningen) - *A methodological perspective on the analysis of clinical and personality questionnaires*
10. Marthe **Straatemeier** (University of Amsterdam) - *Math garden. A new educational and scientific instrument*
11. Janke **Ten Holt** (University of Groningen) - *A comparison between factor analysis and item response theory modeling in scale analysis*
12. Maarike **Van Groen** (University of Twente) - *Adaptive testing for making unidimensional and multidimensional classification decisions*

## New projects

1. Joost **Agelink van Rentergem Zandvliet** (University of Amsterdam) - *Advanced Neuropsychological Diagnostic Infrastructure (ANDI)*
2. Jed **Cabrieto** (KU Leuven) - *Capturing time-varying response patterning and synchronicity through Switching PCA models*
3. Jolien **Cremers** (Utrecht University) - *Circular data in longitudinal designs*
4. Laura **Dekkers** (University of Amsterdam) - *Why speeding on your scooter is a good idea: Decision strategies in childhood and adolescence*
5. Dino **Dittrich** (Tilburg University) - *Social network modeling using Bayesian statistics,*
6. Paulette **Flore** (Tilburg University) - *The psychometrics of stereotype threat*
7. Lianne **Ippel** (Tilburg University) - *Streaming estimation of response heterogeneity*
8. Jurian **Meijering** (Wageningen University) - *The Delphi method: methodological issues and its application to the development of rankings*
9. Kees **Mulder** (Utrecht University) - *Bayesian analysis of circular data in between-subjects designs*
10. Aniek **Sies** (KU Leuven) - *Developing a statistical methodology for optimal treatment assignment*
11. Robbie **Van Aert** (Tilburg University) - *Meta-analysis in the presence of publication bias and researcher degrees of freedom*
12. Claudia **Van Borkulo** (University of Amsterdam) - *A network approach to mood disorders*
13. Mattis **Van den Bergh** (Tilburg University) - *Divisive latent class modeling*
14. Mariëlle **Zondervan-Zwijnenburg** (Utrecht University) - *Formalization and evaluation of prior knowledge based on prior/posterior predictive inference*

## Projects in progress beyond project time limits

The projects of the following PhD students are still in progress, but have exceeded the project time limit. Therefore, these projects are no longer mentioned in the summary of projects:

1. Mariska **Barendse** (University of Groningen)
2. Marjolein **Fokkema** (VU University of Amsterdam)
3. Khurrem **Jehangir** (University of Twente)
4. Renske **Kuipers** (Tilburg University)
5. Gerko **Vink** (Utrecht University)

## Projects left unfinished

1. Anouck **Kluytmans** (Utrecht University) - *Processing within person experimental and longitudinal data using Bayesian updating*
2. Cor **Ninaber** (Leiden University) - *Prediction of disease classes using resting rate state neuroimaging data*

## 4.2 Dissertations

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### Marjan Bakker

***Good science, bad science. Questioning research practices in psychological research***



24 April 2014  
Department of Methodology, University of Amsterdam

Supervisors:

Prof. H.L.J. Van der Maas , Dr J.M. Wicherts

Project financed by NWO, Open Competition grant  
1 March 2009 - 1 April 2013

### Summary of thesis

In this dissertation we have questioned the current research practices in psychological science and thereby contributed to the current discussion about the credibility of psychological research. We specially focused on the problems with the reporting of statistical results and showed that reporting errors are rather common in the psychological literature and related to other questionable research practices (QRPs) like not sharing the data with other researchers. Moreover, we investigated the consequences of applying several commonly used QRPs. The use of QRPs, like the ad hoc exclusion of outliers to obtain a significant result, will increase the probability of publishing false positive results, will result in biased effect size estimates, and will distort meta-analytical results. Furthermore, we investigated the power paradox, or the question of why the psychological literature contains so many significant results based on underpowered studies. We showed that the running of multiple underpowered studies with a small sample size combined with the use of QRPs represents the “optimal” strategy for a researcher if his or her goal is to find a significant p value in the hypothesized direction. However, for science this strategy is disastrous. Another reason for the power paradox might be the flawed intuitions about power of many researchers. Specifically, we showed that researchers strongly overestimated the power of typical studies in their work. We also discuss the current directions and initiatives that are already improving or will hopefully improve research practices in psychological science in the future..

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### Margot Bennink

***Micro-macro multilevel analysis for discrete data***



10 October 2014  
MTO, Tilburg School of Social and Behavioral Sciences, Tilburg University

Supervisors :

Prof. J.K. Vermunt, Dr F.B. Tekle

Project financed by NWO  
Period: 1 October 2010 – 1 October 2014

### Project description

***Micro-macro multilevel analysis for discrete data***

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This project deals with multilevel models for predicting outcomes at the higher level (e.g. team performance) from predictors measured at the lower level (e.g. employee's motivation and skills). This form of "reversed" multilevel analysis, which is rather common in social sciences, is something referred to as micro-macro analysis. Recently, Croon and Van Veldhoven proposed a statistical model for micro-macro multilevel analysis. The aim of this project is to generalize their approach so that it can also be applied when the model of interest contains explanatory and outcome variables which are discrete instead of continuous and normally distributed.

**Matthieu Brinkhuis**  
*Tracking educational progress*



9 December 2014

Psychometric Research Center (POC), CITO/University of Amsterdam

Supervisor: Prof. G.K.M. Maris

Project financed by CITO/RCEC

Period: 1 April 2008 - 1 November 2013

**Summary of thesis**

There is an increase in the use of online practice and learning environments in education. Many of these systems adapt both the content and the level of the practice material to the individual learner. Clearly, we expect the learners to develop, but in addition we also expect the properties of the system itself to change over time due to practice, feedback, education, etc. Since reporting and feedback mechanisms in these environments depend on properties of the system as a whole, such as the abilities of learners and the difficulties of items, we expect dynamically changing model parameters and intricate non-linear dynamics in the statistical modeling of data from practice and learning environments. Nonetheless, commonly used models in educational measurement assume parameters that do not change over time. In this thesis, new methods to deal with such dynamics are discussed, with a special focus on tracking progress, i.e., following development instead of modeling it. The trackers that are introduced are suitable for all sorts of educational measurement applications where learning, practice and feedback take place.

**Rogier Kievit**  
*Turtles all the way down? Psychometric approaches to the reduction problem*



23 April 2014

Department of Methodology, University of Amsterdam

Supervisors:

Prof. D. Borsboom (UvA), Dr L.J. Waldorp (UvA), Dr J.W. Romeijn (RuG), Prof. H.L.J. Van der Maas (UvA)

Project financed by University of Amsterdam

**Summary of thesis**

The question of how different explanatory levels in scientific inquiry are related to each other is known as the reduction problem. This thesis focuses on a specific domain of this question, namely how we should relate

brains to (psychological) behaviour. The central position of this thesis is that this question is ultimately a measurement problem. That is, in order to understand the relationship between brains and minds,

we need to formulate measurement models that can relate observable variables (e.g. response times, brain activity, brain structure) to the underlying constructs we are interested in (e.g. memory capacity, intelligence or personality differences). Moreover, in the case of relating brains to behaviour, theories from philosophy of mind can be translated into such measurement models, thereby guiding empirical inquiry and simultaneously providing an empirical test of philosophical theories. Further extensions of these ideas focus on the application of representational geometry, whereby the structure of neural and behavioural patterns are used to relate brain and behaviour, and the examination of cases where inferences across explanatory levels goes awry (known as Simpson's Paradox). Based on empirical applications in several domains it is concluded that supervenience theory, which suggests a fundamentally asymmetrical relationship between brain and mind, is most in line both with theoretical considerations and empirical data.

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**Thomas Klausch*****Design of Mixed-Mode Surveys: Evaluating mode effects on measurement and selection error***

10 October 2014

Methods & Statistics, Faculty of Social Sciences, Utrecht University

Supervisors: Prof. J. Hox, Dr B. Schouten

Financed by Utrecht University / Statistics Netherlands (CBS)

Period: 1 November 2009 - 1 November 2013

**Summary of thesis**

A mixed-mode survey is an innovative method for collecting data in social research, which has increased greatly in world-wide popularity among survey researchers in the past decade. In a mixed-mode survey, researchers use multiple modes of communication – for example online, telephone, and in person – to ask questions to respondents. An advantage of mixed-mode surveys is that more people are reached, for example those who do not have an internet or a telephone connection or those who prefer a certain mode. However, choosing modes for mixed-mode surveys is not a simple task for researchers. One threat is that answers under some modes may have lower quality and it is questionable whether these should be used for mixed-mode designs. This dissertation contributes methodology that survey researchers can use to evaluate the effects of mode choice for the size of errors of statistics produced using mixed-mode surveys. In collaboration with Statistics Netherlands (Centraal Bureau voor de Statistiek / CBS), a large experiment was conducted, in which four different single-mode and three mixed-mode designs were compared with regard to so-called measurement and selection error for the case of the Crime Victimization Survey (CVS), a survey of safety in The Netherlands. It is found that the same types of respondents participate in different survey modes but that they may provide very different answers, depending on mode and question. Especially answers provided under the telephone and face-to-face modes differed from the web and paper modes in this respect. This result challenges the comparability of data collected using interviewers and self-administered questionnaires. It is recommended not to combine these modes in the CVS.

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**Gabriela V. Koppenol-Gonzalez Marin**

***Verbal and Visual Short Term Memory Processes in Children: Capturing their Complexities Using Latent Class Models***



31 January 2014

MTO, Tilburg School of Social and Behavioral Sciences, Tilburg University

Supervisors: Prof. J.K. Vermunt, Dr S. Bouwmeester

Financed by Tilburg University

Period: 15 March 2009 - 15 March 2013

**Project description**
**The influence of strategy use on working memory task performance**

There are some robust effects on WM that are replicated in different studies over the years, like the visual similarity effect and the phonological similarity effect (e.g., Hitch et al., 1989; Poirier et al., 2007). The nature of these effects has been investigated, but research in which group means are compared show inconsistent results. Other researchers have focused more on the methodology and individual differences in WM research (e.g., Logie et al, 1996; Della Sala & Logie, 1997; Engle, 1999). These studies have shown that there are different influences on performance besides the aforementioned effects, like task demands and strategy use. Because this focus seems to lead to useful information about the cognitive processes involved in working memory, there is a need for further refinement of the methodology. The aim of this project is to address this issue. First, we want to investigate the development of WM and test the hypothesis that younger children process information mostly visually, whereas older children process information mostly verbally. Second, we want to further investigate this question by distinguishing the different cognitive processes that underlie the different strategies. Third, we want to explore different measurement tools that enable us to investigate the influence of strategy use and task demands on performance in order to better understand the model of working memory of Baddeley and Hitch and its generalization. Finally, in addressing these aims, we will apply a latent variable approach.

**Maarten Marsman**
***Plausible Values in Statistical Inference***


19 November 2014

Central Institute for Educational Measurement (CITO) / University of Twente

Supervisors: Prof. C.A.W. Glas, Prof. K. Brookhuis, Dr M.J.H. Van Onna

Financed by Cito Arnhem and RCEC (University of Twente)

Period: 1 January 2009 - 1 January 2014

**Summary of thesis**

A Plausible Value is a draw from the posterior ability distribution of a pupil given the pupil's responses of items on a test and any additional information that is available from the pupil (i.e. gender, age, etc.). Plausible Values are commonly used in educational surveys as a tool for the secondary analyses performed by researchers that lack the sophisticated resources to estimate the latent regression models (i.e. regress the latent abilities on the covariates). The Plausible Values can also be used as dependent variables in the regression model, turning a latent regression problem into a manifest regression problem that can be

estimated in standard statistical software.

The regression model estimated with Plausible Values has been estimated before, however, since it is used to make Plausible Values (it is the prior distribution for ability). But why are Plausible Values needed then? This question is answered in Chapter 2. First, it is shown that the marginal distribution of Plausible Values converges monotonically to the true distribution of ability. From this result one can show that the marginal distribution of Plausible Values is a better estimator of this true ability distribution than the latent regression model (properly seen as a prior), except when the latent regression model is equal to the true ability distribution.

New simulation methods to efficiently sample Plausible Values in large-scale settings are proposed in Chapters 3 and 4. A rejection algorithm is described in Chapter 3 and several Metropolis-Hastings algorithms are described in Chapters 3 and 4. A convenient feature of the proposed algorithms is that they are well suited for parallel computation and that they scale (i.e. become more efficient when applied to larger datasets), whereas certain existing methods become less efficient when the amount of observations increases, as shown in Chapter 5.

The methodology that is the topic of this thesis is highly practical and small pieces of R-code are provided in the appendices to help those who wish to try if the proposed methods work. In some cases, an appendix provides material that was simply too much fun to leave out.

This thesis was written with large scale educational surveys in mind, focusing on latent regression models using item response theory (IRT) to model the distribution of item responses, although Chapter 4 is also about Ising network models. The results contained in this thesis, however, readily generalize to other applications and models.

### **Marie-Anne Mittelhaëuser**

#### ***Modeling the Effect of Differential Motivation on Linking Educational Tests***



12 December 2014

MTO, Tilburg School of Social and Behavioral Sciences, Tilburg University

Supervisors: Prof. K. Sijtsma, Dr A.A. Béguin

Financed by Tilburg University / Cito Arnhem

Period: 1 October 2010 – 1 October 2014

### **Project description**

#### **Application of mixed IRT models and person-fit methods in educational measurement**

Item response theory (IRT) models have specific properties that are useful in educational measurement. These properties support the construction of measurement instruments, linking and equating of measurements, and evaluation of test bias, among other things (Scheerens, Glas, & Thomas, 2007). However, these properties are only useful if the IRT model fits the data and if the proficiency level and item parameters are accurately estimated. Unfortunately, due to various reasons, this condition is not always met. For example, if groups of respondents display “sleeping” behavior (e.g., inaccurately answering the first items in a test due to problems getting started), “plodding” behavior (e.g., spending too much time on the first items and thereby answering the later items incorrect due to too little time left), random response behavior (e.g., answering items randomly) or cheating behavior (e.g., copying answers from other examinees) an IRT model might not fit to specific subgroups of respondents within the total group (Meijer & Sijtsma, 2001; Meijer, 2003).

Several methods were proposed to identify these aberrant response behaviors. For example, person-fit methods assign a value to each individual vector of items scores, and a statistical test is used to decide whether the underlying IRT model or other measurement model fits the item scores. Significant person-fit values identify item-scores that are aberrant relative to the IRT model, and the researcher may decide to remove the aberrant item-score vectors from the data set (Meijer & Sijtsma, 1995). This is expected to

improve the fit of the IRT model and the correctness of the parameter estimates. A well-known person-fit statistic is the  $I_z$  statistic (Drasgow, Levine, & Williams, 1985). Research showed that the normal approximation to  $I_z$  is invalid, which yields a conservative test, in particular for detecting aberrant responses at the lower and higher end of the level scale and when applied to short scales (Van Krimpen-Stoop & Meijer, 1999). Fortunately, Snijders (2001) and De la Torre and Deng (2008) developed methods for the accuracy of person-fit analysis using  $I_z$ .

Alternatively, mixed IRT models assume that the data are a mixture of different data sets from two or more latent populations (Rost, 1997; Von Davier & Yamamoto, 2004), also called latent classes. If this assumption is correct, a particular IRT model does not hold for the entire population, but different model parameters are valid for different subpopulations. Hence, mixed IRT models may be used to identify classes in our data displaying different types of responsive behavior, and the researcher may decide to remove an entire class from the data set so as to improve IRT model fit and parameter estimates. For example, one can specify the mixed IRT model in such a way that one of the latent classes represent high-stakes response behavior while the other latent class represents low-stakes responsive behavior (Béguin, 2005; Béguin & Maan, 2007). The goal of this project is to investigate how mixed IRT models and person-fit methods can be used to improve educational measurement procedures. More specifically, research is done into equating and linking procedures in which two high-stakes tests are compared.

### **Iris A.M. Smits**

#### ***A methodological perspective on the analysis of clinical and personality questionnaires***



20 February 2014

Heijmans Institute, Faculty of Behavioural and Social Sciences  
University of Groningen

Supervisors: Prof. R.R. Meijer, Dr M.E. Timmerman

Financed by University of Groningen

Period: 1 November 2009 - 1 November 2013

### **Summary of thesis**

Psychologists regularly use clinical and personality (C&P) questionnaires for the assessment of particular personality traits and / or psychopathological symptoms. To assess the quality of C&P questionnaires, specific measurement models are of interest. This thesis discusses the characteristics and usefulness of these measurement models for the analysis of C&P questionnaires.

Mokken scale analysis (Mokken, 1971) can be used to identify items that together form a Mokken scale. These Mokken scales are regularly interpreted as reflecting unidimensional scales, i.e., scales that measure a single trait. In this thesis, it is shown that this interpretation is not necessarily correct, because one Mokken scale can measure multiple traits and multiple Mokken scales can measure a single trait.

For the skew-normal factor model and the quadratic factor model, it was not clear which model is useful in which conditions. In this thesis, it is illustrated that observed data that follow any skew-normal factor model can be so well approximated with a quadratic factor model that the models are indistinguishable in practice. The reverse does not necessarily hold. Consequently, for the analysis across populations, the skew-normal factor model is preferred over the quadratic factor model.

This thesis also gives some examples of applications of measurement models for C&P questionnaires. Discussed are the use of the bifactor model for the evaluation of the specific contribution of subscale scores above the total scale score of the SCL-90 and measurement invariance tests (i.e., whether a questionnaire measures equally across populations) for the SDQ and Big Five personality factors.

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**Marthe Straatemeier**

*Math garden. A new educational and scientific instrument*



25 April 2014

Psychological Methodology, University of Amsterdam

Supervisors: Prof. H.L.J. Van der Maas, Dr B.R.J. Jansen

Financed by NWO

**Summary of thesis**

This dissertation describes the research concerning the construction of a new educational and scientific instrument. This instrument, Math Garden, is a web application in which children can practice arithmetic by playing math games in which items are tailored to their ability level. At the same time, Math Garden enables studying arithmetical development with high frequency measurements. For these aims a new method for combining computer adaptive practice and testing was implemented. This method enables simultaneously tracking the development of the abilities of persons and the difficulties of items, and is an extension of the Elo rating system. Both response times and accuracy are used in the computation of the ability and item difficulty estimates. This dissertation includes research concerning the working of the system. It shows that the new computer adaptive method leads to reliable and valid ability and item difficulty estimates. For example, large proportions of variance in the item difficulties of addition, subtraction, and multiplication problems could be explained by a limited set of problem characteristics, and these estimates were robust over time. This supports the claim that this new method leads to stable and well interpretable item difficulty estimates. The dissertation also presents a classification method for classifying children's arithmetical errors. Finally, the research within this dissertation supports the claim that both educational and scientific aims can be met within one instrument and that these fields (scientific research and education) may even benefit from each other.

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**Janke C. Ten Holt**

*A comparison between factor analysis and item response theory modeling in scale analysis*



23 June 2014

Heijmans Institute, Faculty of Behavioural and Social Sciences  
University of Groningen

Supervisors: Prof. T.A.B. Snijders, Dr A. Boomsma  
Dr M.A.J. Van Duijn, Dr M.E. Timmerman

Financed by NWO

**Summary of thesis**

Factor analysis (FA) and item response theory (IRT) modeling are compared (a) theoretically by examining the model definitions and considering the most commonly applied estimation methods for the models, (b) empirically by reviewing journal articles on scaling research to show what is actually done in practice, (c) in model estimation performance by means of a Monte Carlo simulation study to investigate the robustness of either approach against violations of distributional assumptions, and (d) in practice by applying the models to empirical data sets.

In a simulation study, the effects of four explanatory variables (latent variable (LV) distribution, item response

distribution, scale strength, and sample size) on model estimation are investigated by applying four selected scaling models on samples of generated data: FA of the sample covariance matrix (FA-lin), FA of the estimated polychoric correlation matrix (FA-poly), the graded response IRT model (IRT-grm), and the nonparametric Mokken IRT model extended to polytomous items (IRT-mok).

For normal data it is shown that both FA-poly and IRT-grm perform well. Under conditions of a skew-normal LV, the performance of all parametric models deteriorates compared to normal LV conditions, most notably when combined with skewed item variables. IRT-grm performs best in such circumstances. Nonnormal LV and item distributions do not pose any estimation problems for IRT-mok.

Guidelines are provided for applied researchers employing scale analysis: Take a large enough sample size, use available substantive knowledge, inspect the sample data, choose a model based on specific characteristics of the data, assess model fit, and use model-estimated LV scores.

### **Maaike M. Van Groen**

#### ***Adaptive testing for making unidimensional and multidimensional classification decisions***



21 November 2014

Cito / Psychometric Research Center (POC), University of Twente

Supervisor: Prof. T.J.H.M. Eggen & Dr B.P. Veldkamp

Financed by Cito /RCEC (University of Twente)

Period: 1 September 2009 – 1 September 2014

### **Summary of thesis**

Computerized adaptive tests (CATs) were originally developed to obtain an efficient estimate of the examinee's ability, but they can also be used to classify the examinee into one of two or more levels (e.g. master/non-master). These computerized classification tests have the advantage that they can also be tailored to the individual student's ability.

Computerized classification tests require a method that decides whether testing can stop and which decision with the desired confidence can be made. Furthermore, a method to select the items is required.

In classification testing for unidimensional constructs, items are often selected that attempt to measure optimal at either the cutoff point(s) or the student's current ability estimate. Four methods were developed that combined the efficiency of the first approach with the adaptive item selection of the second approach. Their efficiency and accuracy was investigated using simulations.

Several methods are available to make the classification decisions for constructs modeled with an unidimensional item response theory model. But if the construct is multidimensional, few classification methods are available. A classification method based on Wald's Sequential Probability Ratio Test was developed for application to CAT with a multidimensional item response theory model in which each item measures multiple abilities. Seitz and Frey's (2013) method to make classifications per dimension, when each item measures one dimension, was adapted to make classifications on the entire test and on parts of the test. Kingsbury and Weiss's (1979) popular unidimensional classification method, which uses the confidence interval surrounding the ability estimate, was also adapted for multidimensional decisions. Simulation studies were used to investigate the efficiency and accuracy of the classification methods. Comparisons were made between different item selection methods, between different classification methods and between different settings for the classification methods.

Tests can be used for formative assessment, formative evaluation, summative assessment, and summative evaluation. For seven types of tests, including computerized classification tests and educational games; the design, the possibility to adapt the test, and the possible use for each of the test goals was explored.

## 4.3 New projects

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### Advanced Neuropsychological Diagnostics Infrastructure (ANDI)



**Joost Agelink van Rentergem Zandvliet**

Brain & Cognition / Psychology, Faculty of Social and Behavioural Sciences  
University of Amsterdam

Supervisors: prof.dr. Ben Schmand (UvA, AMC), prof.dr Hilde Huizenga (UvA),  
Prof. Jaap Murre (UvA)

Financed by NOW/MaGW

Period: 1 September 2013 – 1 September 2017

#### Summary

The goal of the ANDI-project is to design and make available methodologically state-of-the-art, user-friendly univariate and multivariate methods to compare individual patients to normative data. That is, a database of normative data is created by combining healthy control group data from several neuropsychological research groups in the Netherlands and Belgium, sophisticated techniques are developed to perform normative comparisons, and a website is developed that allows clinicians and researchers to easily make comparisons between data from potential patients and the normative database. Some of the methodological challenges in this project are in

- variance in test scores between different sources of data, i.e. the multilevel structure of the database,
- different kinds of missing data that such a composite database would entail,
- visualization of the results for clinical practice.

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### Capturing time-varying response patterning and synchronicity through Switching PCA model



**Jed Cabrieto**

Methodology of Educational Research, Faculty of Psychology and Educational Sciences, KU Leuven

Supervisors Dr Eva Ceulemans, Prof. Francis Tuerlinckx, Dr Peter Kuppens

Financed by

Period: 1 October 2014 – 1 October 2018

#### Summary

Functionalist definitions of emotions state that they consist of synchronized or patterned changes in multiple experiential, physiological, and behavioral response channels which enable the organism to quickly and efficiently cope with environmental threats or opportunities. Yet, detecting response patterning and synchronicity in empirical data represents a formidable challenge (Gross, 2010). Indeed, while technological advances have enabled the collection of intensive time-series data on multiple response channels, the development of suited statistical tools is lagging behind, as some key challenges that come with the complex nature of the research questions and associated data, are not easy to address. Specifically, methods are needed that can determine when and what exactly changes (e.g., mean level, covariation), which subsystems

(e.g., experiential, behavioral, physiological, neurological) are involved and in what way, and how this differs across individuals.

The aim of this project is to tackle these challenges by developing a new modeling framework for capturing time-varying response patterning and synchronicity that combines the key principles of regime-switching models and principal component analysis. The framework will be applied to empirical data and disseminated to substantive researchers by, amongst others, building easy-to-use software.

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### Circular data in longitudinal designs



**Jolien Cremers**

Methods & Statistics, Faculty of Social Sciences, Utrecht University

Supervisors Prof. Herbert Hoijtink & Dr Irene Klugkist

Financed by NWO Vidi

Period: September 2014 – 1 September 2018

#### **Summary**

This project focuses on developing Bayesian methods for the analysis of circular longitudinal data. Several methods have already been proposed in the literature and the research in this project will focus on investigating and elaborating on those methods. In the first part of the project, a Bayesian embedding approach to circular longitudinal data using a mixed effects model is investigated. Tools for interpreting the results from this model will be developed in such a way that applied researchers may use them for their own data (e.g. to assess the size of a circular fixed or random effect and perform hypothesis tests). Additionally, tools for model comparison will be developed. In the future alternative approaches and extensions to the embedding approach to circular longitudinal data will be investigated.

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### Why speeding on your scooter is a good idea: Decision strategies in childhood and adolescence



**Laura Dekkers**

Psychology, Faculty of Social and Behavioural Sciences, University of Amsterdam

Supervisors Prof. H.M. Huizenga, Dr B.R.J. Jansen

Financed by

Period: 1 September 2013 – 1 September 2017

#### **Summary**

This thesis builds on the hypothesis that decision processes in children and adolescents, as compared to those in adults, are better described by formal sequential models than by formal integrative models of decision making. Specifically, in three-interrelated subprojects, in which we (formally) model behavioral as well as neural data, we plan to study individual and developmental differences in decision strategies by (1) inducing decision heuristics, (2) decision biases evoked by prior information, as well as (3) updating of decisions and decision strategies.

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## Social network modeling using Bayesian statistics



**Dino Dittrich**

MTO, Tilburg School of Social and Behavioral Sciences, Tilburg University

Supervisors: Prof. J.K. Vermunt, Prof. R.T.A.J. Leenders, Dr J. Mulder

Financed by

Period: 1 June 2014 – 1 June 2017

### **Summary**

Social network research plays an important role to understand how persons influence each other on behaviors, opinions, and well-being. The main interest is the structure of social influence which is studied using the network autocorrelation model. Currently available methods for analyzing this model cannot be adequately used (1) to analyze small networks, (2) to analyze models with different subgroups, and (3) to test a specific order of influence in a network. This project resolves these limitations by developing one encompassing Bayesian framework that will allow social network researchers to answer important research questions that cannot be answered at this moment.

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## The psychometrics of stereotype threat



**Paulette C. Flore**

MTO, Tilburg School of Social and Behavioral Sciences, Tilburg University

Supervisors Dr J.M. Wicherts & Prof. J.K. Vermunt

Financed by NWO Talent Grant

Period: 1 September 2013 – 1 September 2017

### **Summary**

#### **The psychometrics of stereotype threat**

Stereotype threat refers to a form of test anxiety that is attributed to the testee's fear to inadvertently confirm a negative stereotype concerning his or her group (e.g., "females can't do mathematics"). Based on theory and empirical results, we develop an advanced item response model for studying this effect as a source of differential item functioning in mathematics tests. The formal model enables comprehensive tests of characteristics that render items and persons susceptible to the effects of stereotype threat. The new model is applied to experimental data and test data from CITO. Results contribute to substantive theory and test development.

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## Streaming estimation of response heterogeneity



**Lianne Ippel**

MTO, Tilburg School of Social and Behavioral Sciences, Tilburg University

Supervisors Dr M.C. Kaptein and Prof. J.K. Vermunt

Financed by Tilburg University

Period 1 October 2013- 31 August 2017

### Summary

In social science, we often encounter hierarchical or grouped data (e.g. observations within individuals). Taking this grouped structure into account enables the estimation of an effect per unit (e.g. per person). During this project we will study the estimation of these individual level effects, while the data enter. This is especially advantageous in interactive web applications. These applications often gather extremely large datasets and require a short computation time. The existing methods to estimate individual level effects are insufficient, because the estimation procedure is lengthy and/or they require all data in computer memory which can become problematic due to memory limitations. We will use methods that do not require all data in memory, because they use summations such as an average which can be updated a point at a time.

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## The Delphi method: methodological issues and its application to the development of rankings



**Jurian Meijering**

Research Methodology Group, Wageningen University

Supervisors: Prof. Adri Van den Brink, Prof. Kristine Kern, & Dr Hilde Tobi

Financed by

Period: 1 September 2011 – 1 September 2016

### Summary

The Delphi method is a structured data-collection process aimed at acquiring a certain level of agreement among experts on a given topic. The method seems to provide opportunities for developing expert-based and indicator-based rankings. However, research into its application to the development of rankings seems to be non-existent. Furthermore, the Delphi method has several unresolved methodological issues. Therefore, this PhD project aims to improve the methodology of the Delphi method and investigate its application to the development of rankings by conducting four studies. In the first study, simulations were performed to find out how various agreement indices behave within and across the rounds of a Delphi study. In the second study, the Delphi method was applied to acquire an expert-based ranking. An experiment within the study investigated the effect of two types of controlled opinion feedback on the drop-out rate, experts' degree of opinion change, and the level of agreement among experts. Additionally, the study provided insight into the opportunities and challenges of the Delphi method for developing an expert-based ranking. In the third study, content analysis and interviews were conducted to identify and evaluate the methodological characteristics of six indicator-based European green city rankings. In a subsequent and final study the Delphi method will be applied to gain insight into the opportunities and challenges of the method for selecting and weighing indicators for an indicator based ranking..

## Bayesian analysis of circular data in between-subjects designs



**Kees Mulder**

Methods & Statistics, Faculty of Social Sciences, Utrecht University

Supervisors: Prof. Herbert Hoijtink & Dr Irene Klugkist

Financed by NWO-Vidi

Period: 1 September 2014 – 1 September 2018

### Summary

Researchers often analyze data that is either numerical, e.g. length, or is divided into (ordered) categories, e.g. level of education. However, researchers also run into data that consists of angles, measured in degrees. In that case, the data is called circular data.

This has traditionally been a field with slow development, in part due to the difficulty of deriving null distributions for test statistics. Logical solutions might include bootstrapping or, as in this project, MCMC methods in a Bayesian framework. The goal of the project is twofold: First, allow inference in a broader range of models than was previously possible for circular data. In particular, flexible GLM-type models will be developed, based on the von Mises distribution, with their associated methods for Bayesian inference, as well as models to incorporate dependence of observations in a within-between framework. Second, Bayesian hypothesis tests are developed, which provide straightforward and easily accessible methods which researchers can use to assess hypotheses that commonly occur in the analysis of circular data..

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## Developing a statistical methodology for optimal treatment assignment



**Aniek Sies**

Quantitative Psychology and Individual Differences, Faculty of Psychology and Educational Sciences, KU Leuven, Belgium

Supervisor: Prof. Iven van Mechelen

Financed by

Period: No exact data available

### Summary

When multiple treatment alternatives are available for a certain problem or disease, one may wish to look for a treatment regime, which is a decision rule that specifies for each patient the preferred treatment given his or her pretreatment characteristics. An important challenge is to find optimal treatment regimes, which are the ones leading to the greatest benefit if the entire population would be subjected to them. An interesting class of treatment regimes is that of the tree-based ones, because they provide a straightforward and most insightful representation of the decision structure underlying the associated regimes.

Recently, several methods for the construction of tree-based regimes have been proposed. Up to now, however, only partial information is available concerning their absolute and relative performance. To address this issue, my first project will be to compare and evaluate four tree-based methods by means of a simulation study. There is some preliminary evidence that skewness and outliers might influence the performance of these methods. I will look into this to get a better understanding of how and why these properties play a role. Subsequently, I will examine to what extent the methods' performance would be improved by robustifying them in one way or another.

A second project relates to the outcome variables on which the treatment regimes are based. Many existing tree-based methods can only handle continuous outcomes. Extending these methods in a way they can handle categorical outcomes as well, is part of my second project. Another part of it will be dealing with multiple outcome variables.

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### **Meta-analysis in the presence of publication bias and researcher degrees of freedom**

**Robbie Van Aert**

MTO, Tilburg School of Social and Behavioral Sciences, Tilburg University

Supervisors: Prof. K. Sijtsma, Dr M.A.L.M. van Assen &amp; Dr J.M. Wicherts

Financed by NWO (Research Talent Grant)

Period: 1 September 2013 – 1 September 2017

### **Summary**

Two substantial and momentous problems in meta-analysis are publication bias and researcher degrees of freedom. Both problems result in overestimation of the effect size in traditional meta-analysis, particularly in small studies that are ubiquitous in psychology. This project proposes developing a new meta-analysis method that (i) detects publication bias, (ii) provides an accurate estimate of effect size whenever there is publication bias, and (iii) does not overestimate effect size in case of researcher degrees of freedom. The proposed method will be straightforward to implement since it only uses regular study characteristics used in any meta-analysis.

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### **A network approach to mood disorders**

**Claudia Van Borkulo**

Psychological Methods, Psychology/Psychiatry, University of Amsterdam &amp; Medical University Center Groningen

Supervisors: Prof. Robert A. Schoevers (UMCG) &amp; Prof. Denny Borsboom (UvA)

Financed by

Period: 1 November 2012 – 1 November 2016

### **Summary**

In recent years, network approaches to psychopathology have been rising in popularity. In these approaches, symptoms are modeled as components in a complex system, which (mutually) reinforce each other. The goals of the current project are (1) to extend and refine network modeling approaches so that they become more suitable for the analysis of data in clinical psychology, (2) to apply the resulting models to relevant datasets (cross-sectional and longitudinal) to uncover the architecture of disorders like major depression, and (3) to use this information to construct simulation models that can be used to model the development of disorders and the effect of interventions.

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## Divisive latent class modeling



**Mattis van den Berg**

MTO, Tilburg School of Social and Behavioral Sciences, Tilburg University

Supervisors: Prof. J.K. Vermunt, Dr V.D. Schmittmann

Financed by NWO – Vici

Period: 1 May 2014 – 1 September 2017

### Summary

Latent class (LC) analysis is used by social and behavioral scientists as a statistical method for building typologies, taxonomies, and classifications based on a set of observed characteristics. Examples include attitudinal typologies of citizens based on survey questions measuring their attitudes toward freedom of speech, subtypes of schizophrenia patients derived from recorded mood symptoms, classifications of developmental stages of children based on tests taken at different ages, taxonomies of delinquent youths derived from criminal records, classifications of consumers inferred from stated or revealed preferences, and taxonomies of temporal project networks based on characteristics of these projects and the related organizations.

Because of the obvious usefulness of these methods, during the last two decades, there has been an impressive increase in LC applications in social and behavioural sciences. Yet, because of the technical expertise required, the vast majority of the researchers experience difficulties applying LC methods correctly despite the wide availability of user-friendly software. The aim of this VICI project is to resolve this problem through the development of easy to use stepwise model-fitting methods for LC analysis.

Each of the three main parts of the proposed project examines the application of stepwise methods in an important area where such new approaches are needed; that is, in 1) traditional modeling, 2) model adjustments, and 3) hierarchical modeling. Part 1 develops diagnostics for testing the key LC model assumptions, and investigates how these can be used for stepwise model building in simple and complex LC analysis. Part 2 expands recently proposed adjustment methods needed when using assigned class memberships in a next step of the data analysis. Part 3 studies the possibility of applying LC models in a manner similar to hierarchical cluster analysis, where in each step the solution from the previous step is refined.

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## Formalization and evaluation of prior knowledge based on prior/posterior predictive inference



**Mariëlle Zondervan-Zwijnenburg**

Methods & Statistics, Faculty of Social Sciences, Utrecht University

Supervisors: Prof. H. Hoijtink, Dr A. G. J. Van de Schoot

Financed by NWO Gravitation

Period: 1 July 2014 – 1 July 2018

### Summary

Research replication is increasingly becoming an important topic. It has two main goals: to reduce the probability of false positives and false negatives; and, to test the generalizability of research conclusions to other (sub)populations and related (but not necessarily exactly the same as in the original study) contexts. Currently the methodologies that are available for research replication are rather limited. In this project a new

methodology will be developed, evaluated, and applied. Knowledge derived from existing animal studies, completed waves of cohorts, and expert elicitation will be formalized into effect size models. Subsequently the support in new data for these effect size models will be quantified using prior and posterior predictive checks. The performance of this new approach will be evaluated by means of a simulation study and through its use (in cooperation with other CID researchers) in three case studies: translating the results of animal studies into effect size models with respect to the development of children; replication of results from a study with respect to attention style as conditional adaptation with different subpopulations and contexts; and, replication of expert expectations with respect to the relation between exposure to stories and the development of social competence and self-regulation.

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## 4.4 Running projects



**Zsuzsa Bakk**

***Stepwise model-fitting approaches for latent class analysis and related methods***

MTO, Tilburg School of Social and Behavioral Sciences, Universiteit van Tilburg

Financed by NWO, part of Vici grant Prof. Dr J.K. Vermunt

Period: 15 September 2011 - 15 September 2016

Supervisors: Prof. J.K. Vermunt (Tilburg University) & Dr F.B. Tekle (Tilburg University)



**Annelies Bartlema**

***Measuring the complexity of psychological models***

Quantitative Psychology and Individual Differences, Fac. of Psychology and Educational Sciences, KU Leuven

Financed by KU Leuven

Period: 1 October 2011 - 1 October 2016

Supervisors: Prof. W. Vanpaemel



**Susan Boerma**

***A dynamic approach to analysing and predicting human behaviour after intervention***

Heijmans Institute, Faculty of Behavioural and Social Sciences

University of Groningen

Financed by NWO (Netherlands Foundation of Scientific Research)

Period: 1 September 2013 - 1 September 2016

Supervisors: Prof. R.R. Meijer & Dr C.J. Albers



**Florian Böing-Messing**

***Testing order-constrained hypotheses on variance components***

MTO, Tilburg School of Social and Behavioral Sciences, Tilburg University

Financed by Tilburg University

Period: 1 September 2012 - 1 September 2016

Supervisors : Prof. J.K. Vermunt & Dr J. Mulder



**Maria Bolsinova**

***New applications of Rasch models in educational measurement***

Methods & Statistics, Faculty of Social Sciences, Utrecht University

Financed by Utrecht University

Period: 15 September 2011 - 1 September 2015

Supervisors: Prof. H. Hoijtink, Prof. G.K.M. Maris



**Laura Bringmann**

***Networks! New insights into time series data***

Quantitative Psychology and Individual Differences, Faculty of Psychology and Educational Sciences, KU Leuven

Financed by KU Leuven

Period: 1 October 2011 - 1 October 2015

Supervisors: Prof. F. Tuerlinckx, Prof. D. Borsboom

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**Kirsten Bulteel**



***Dynamic network models for dyadic data***

Faculty of Psychology and Educational Sciences, Methodology of Educational Sciences

Research Group, KU Leuven

Financed by FWO

Period: 1 October 2013 - 1 October 2017

Supervisors: Dr E. Ceulemans, Prof. F. Tuerlinckx

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**Dries Debeer**



***Psychometric models for differential item performance***

Quantitative Psychology and Individual Differences, Faculty of Psychology and Educational Sciences, KU Leuven,

Financed by KU Leuven

Period: 1 October 2010 - 1 October 2016

Supervisor: Prof. R. Janssen

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**Mathijs Deen**



***Resampling methodology for longitudinal data analysis***

Methodology and Statistics Unit, Institute of Psychology, Faculty of Social and Behavioural Sciences, Leiden University

Financed by Leiden University / Parnassia Groep

Period: 1 August 2013 - 1 August 2019

Supervisors: Dr M. De Rooij & Prof. W.J. Heiser

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**Sebastiaan de Klerk**



***Multimedia-Based Performance Assessment (MBPA) in Vocational Education and Training (VET) in The Netherlands***

(Univertsity of Twente) Work: Kenniscentrum ECABO, Afd. Examinering

Period: 1 December 2012 - 1 December 2015

Supervisor: Prof. T.J.H.M. Eggen

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**Janneke De Kort**



***Do our genes pave our way? Modeling GE-covariance, GxE interaction and moderated GE-covariance in longitudinal twin-models***

Department of Biological Psychology, Faculty of Psychology and Education, VU University Amsterdam

Financed by NOW Social Sciences, Research Talent Grant

Period: 1 October 2013 – 1 October 2017

Supervisors: Prof. C.V. Dolan & Prof. D.I. Boomsma

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**Lisa Doove**



***Methodology for detecting treatment-subgroup interactions***

Faculty of Psychology and Educational Sciences, Quantitative Psychology and Individual Differences, KU Leuven

Financed by KU Leuven

Period: 1 October 2012 - 1 October 2016

Supervisors: Prof. I. Van Mechelen, Dr E. Dusseldorp & Dr K. Van Deun

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**Sacha Epskamp**



***Network psychometrics***

Department of Methodology, University of Amsterdam

Financed by NWO, Research Talent Grant

Period: 15 August 2012 - 15 August 2016

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Supervisors: Prof. D. Borsboom & Prof. P.A.L. de Boeck

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**Marije Fagginger Auer**



***Mathematics instruction in the classroom and students' strategy use and achievement in primary education***

Methodology and Statistics Unit, Institute of Psychology, Faculty of Social and Behavioural Sciences, Leiden University

Financed by NWO, PROO grant

Period: 1 September 2011 - 1 September 2015

Supervisor: Dr C.M. van Putten, Dr M. Hickendorff, Prof. W.J. Heiser & Prof. A. Béguin

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**Susanna Gerritse**



***The estimation of population size and population characteristics using incomplete registries***

Methods & Statistics, Faculty of Social Sciences, Utrecht University

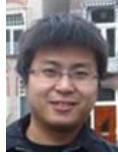
Financed by Utrecht University / Statistics Netherlands (CBS)

Period: 15 January 2012 - 15 January 2016

Supervisors: Prof. P.G.M. Van der Heijden & Prof. B.F.M. Bakker

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**Xin Gu**



***Bayesian evaluation of informative hypotheses in general statistical models***

Methods & Statistics, Faculty of Social Sciences, Utrecht University

Financed by CSC (China Scholarship Council)

Period: 5 December 2011 - 5 December 2015

Supervisor: Prof. H. Hoijtink

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**Dereje Gudicha**



***Power analysis for simple and complex mixture models***

MTO, Tilburg School of Social and Behavioral Sciences, Tilburg University

Supervisors: Prof. J.K. Vermunt & Dr F.B. Tekle

Financed by NWO

Period: 1 September 2012 - 1 September 2015

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**Joke Heylen**



***Modeling multilevel time-resolved emotion data***

Methodology of Educational Research, Faculty of Psychology and Educational Sciences, KU Leuven

Financed by KU Leuven

Period: 1 October 2011 - 1 October 2015

Supervisors: Dr E. Ceulemans & Prof. I. Van Mechelen

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**Abe Hofman**



***Analyzing developmental change with time-series data of a large scale monitoring system***

Psychological Methodology, Department of Psychology, FMG, University of Amsterdam

Financed by NWO, Research Talent grant

Period: 1 September 2012 - 1 September 2016

Supervisors: Prof. H.L.J. Van der Maas, Dr I. Visser & Dr B. R. J. Jansen

**Marianne Hubregtse****Competence based assessment in vocational education in The Netherlands**

Department of Educational Measurement and Data Analysis, Faculty of Educational Science and Technology, University of Twente

Financed by University of Twente / KCH

Period: 1 September 2009 - 1 September 2013

Supervisor: Prof. T.J.H.M. Eggen

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**Ruslan Jabrayilov****Improving assessment of individual change in clinical, medical and health psychology**

MTO, Tilburg School of Social and Behavioral Sciences, Tilburg University

Financed by NWO, Open Competition grant

Period: 1 December 2011 - 1 December 2016

Supervisors: Dr W.H.M. Emons, Prof. K. Sijtsma & Dr F.B. Tekle

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**Joran Jongerling****Modelling individual differences in intraindividual change and variability**

Methods & Statistics, Faculty of Social Sciences, Utrecht University

Financed by Utrecht University

Period: 1 September 2009 - 1 April 2015

Supervisors: Prof. H. Hoijtink & Dr E. Hamaker

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**Maarten Kampert****Distance based analysis on (gen)omics data**

Mathematical & Applied Statistics Group, collaboration with Netherlands Metabolomics

Center (Leiden Univ.), Dept. of Biological Psychology (VU Univ. Amsterdam), Biometris (Wageningen University & Research Center; WUR)

Financed by IBM / SPSS Leiden

Period: 1 December 2012 - 1 December 2017

Supervisor: Prof. J.J. Meulman

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**Geert van Kollenburg****Diagnostics for latent class models**

MTO, Tilburg School of Social and Behavioral Sciences, Tilburg University

Financed by NOW, part of Vici grant Prof. dr J.K. Vermunt

Period: 1 July 2012 - 1 July 2017

Supervisors: Prof. J.K. Vermunt & Dr J. Mulder

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**Tanja Krone****Understanding human behavioural processes with Bayesian dynamic models**

Psychometrie & Statistiek, Fac. BSS, University of Groningen

Financed by NWO, Research Talent grant

Period: 1 July 2012 - 1 March 2016

Supervisors: Prof. R.R. Meijer & Dr M.E. Timmerman

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**Tam Thi Thanh Lam****Multi-way decompositions: Existence and uniqueness**

Psychometrics & Statistics, Heijmans Institute, Fac. BSS, University of Groningen

Financed by NWO (Netherlands Foundation of Scientific Research), part of the *Vidi* grant of Dr. Alwin Stegeman

Period: 1 February 2011 – 1 February 2015

Supervisors: Prof. R.R. Meijer & Dr A. Stegeman

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**Merijn Mestdagh**



***Modeling and control of dynamical within-person networks***

Faculty of Psychology and Educational Sciences, Quantitative Psychology and Individual Differences, KU Leuven

Financed by FWO

Period: 1 October 2013 – 1 October 2017

Supervisors: Prof. F. Tuerlinckx, Prof. D. Borsboom & Dr P. Kuppens

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**Camelia Minica**



***On modeling genetic association with addiction phenotypes***

VU University Amsterdam, Department of Biological Psychology, Faculty of Psychology and Education, Room 2b-03

Supervisors: Prof. D.I. Boomsma, Prof. C.V. Dolan & Dr J. Vink

Financed by VU University Amsterdam

Period: 1 January 2012 - 1 January 2016

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**Erwin Nagelkerke**

***Diagnostics for latent class models with dependent univariate and multivariate observations***

MTO, Tilburg School of Social and Behavioral Sciences, Universiteit van Tilburg

Supervisors: Prof. J.K. Vermunt & Dr D. Oberski

Financed by NWO, Research Talent Grant

Period: 1 February 2013 – 1 Febraruay 2017

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**Michèle Nuyten**



***Human factors in statistics***

MTO, Tilburg School of Social and Behavioral Sciences, Universiteit van Tilburg

Supervisors: Dr J.M. Wicherts, Dr M.A.L.M. Van Assen & Prof. J.K. Vermunt

Financed by NWO, Vidi grant nr 452-11-004

Period: 1 December 2012 - 1 December 2016

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**Hannah Oosterhuis**



***Improving norms for psychological and educational tests***

MTO, Tilburg School of Social and Behavioral Sciences, Universiteit van Tilburg

Supervisors: Dr L.A. Van der Ark & Prof. K. Sijtsma

Financed by NWO, Research Talent Grant

Period: 1 September 2012 - 1 September 2016

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**Pieter Oosterwijk**



***Improving global and local reliability estimation in nonparametric item response theory***

MTO, Tilburg School of Social and Behavioral Sciences, Tilburg University

Financed by Tilburg University

Period: 1 September 2011 - 1 September 2015

Supervisors: Prof. J.K. Vermunt & Dr F.B. Tekle

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**Silvia Rietdijk**



***Time for a change: Studying individual differences in dynamics***

Methods & Statistics, Utrecht University

Financed by NWO, part of Vidi grant of Dr. Ellen Hamaker

Period: 1 September 2012 - 1 September 2016

Supervisors: Prof. H. Hoijtink & Dr E. Hamaker

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**Maryam Safarkhani**


**Heterogeneity in studies with discrete-time survival endpoints: Implications for optimal designs and statistical power analysis**

Methods & Statistics, Faculty of Social Sciences, Utrecht University

Financed by NWO

Period: 1 January 2011 - 1 January 2015

Supervisors: Prof. P.G.M. Van der Heijden & Dr M. Moerbeek

**Noémi Schuurman**

**Time for a change: Studying individual differences in dynamics with multilevel multivariate autoregressive models**

Methods & Statistics, Utrecht University

Financed by NWO, part of Vidi grant of Dr. Ellen Hamaker

Period: 1 September 2012 - 1 September 2015

Supervisors: Prof. H. Hoijtink & Dr E. Hamaker

**Inga Schwabe**


**Nurturing natural talents: A twin study**

Department of Research Methodology, Measurement and Data Analysis, Faculty of Behavioural Sciences, University of Twente

Supervisors: Prof. C.A.W Glas, Dr S.M. Van den Berg, Dr A.A. Beguin & Prof. D.I. Boomsma

Financed by NWO, PROO grant

Period: 1 January 2013 - 1 January 2016

**Florian Sense**


**Bayesian inferential methods for state-trace plots**

Heijmans Institute, Faculty of Behavioural and Social Sciences, University of Groningen

Supervisors: Prof. R.R. Meijer & Dr R.D. Morey

Financed by NWO

Period: 1 September 2012 – 1 September 2016

**Leonie Van Grootel**


**Not as we know it: Developing and evaluating synthesis methods that incorporate quantitative and qualitative research**

Methods & Statistics, Faculty of Social Sciences, Utrecht University

Financed by Utrecht University

Period: 1 August 2011 - 1 August 2017

Supervisors: Dr H.R. Boeije, Dr F. van Wesel & Prof. J. Hox

**Eva Van Vlimmeren**


**The mapping of national cultures: Examining the robustness of measurements of cross-national cultural dimensions**

MTO, Tilburg School of Social and Behavioral Sciences, Universiteit van Tilburg

Financed by NWO

Period: 1 January 2012 – 1 January 2017

Supervisors: Prof. J.K. Vermunt & Dr G.D.B. Moors

**Coosje Veldkamp**


**Human factors in statistics**

MTO, Tilburg School of Social and Behavioral Sciences, Universiteit van Tilburg

Supervisors: Dr J.M. Wicherts, Dr M.A.L.M. Van Assen & Prof. J.K. Vermunt

Financed by NWO, Vidi grant nr 452-11-004

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Period: 1 December 2012 - 1 December 2016

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**Mathilde Verdam**



**Using Structural Equation Modeling to detect measurement bias in patient-reported quality-of-life outcomes to improve their interpretation**

Department of Child Development and Education, University of Amsterdam

Supervisors: Prof. F.J. Oort & Prof. M.A.G. Sprangers

Financed by Dutch Cancer Society (KWF)

Period: 1 June 2012 - 1 June 2016

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**Marlies Vervloet**



**Model construction in (multilevel) regression analysis**

Methodologie van het Pedagogisch Onderzoek, Faculty of Psychology and Educational Sciences, KU Leuven

Financed by KU Leuven

Period: 1 October 2010 - 1 October 2016

Supervisors: Dr W. Vanpaemel

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**Davide Vidotto**



**Multiple imputation of nested missing data using extended latent class models**

MTO, Tilburg School of Social and Behavioral Sciences, Universiteit van Tilburg

Supervisor: Prof. J.K. Vermunt

Project financed by NWO, Research Talent Grant

Period: 1 September 2013 - 1 September 2017

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**Ingrid Vriens**



**Comparing rating and ranking procedures for the measurement of values in surveys**

MTO, Tilburg School of Social and Behavioral Sciences, Tilburg University

Financed by NWO

Period: 1 March 2011 - 1 March 2015

Supervisors: Prof. J.K. Vermunt, Dr J.P.T.M. Gelissen & Dr G.B.D. Moors

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**Rivka de Vries**



**A Bayesian approach to the analysis of individual change**

Psychometrie & Statistiek, Heijmans Instituut, Fac. Gedrags- en Maatschappijwetenschappen, Rijksuniversiteit Groningen

Financed by University of Groningen

Period: 1 September 2010 - 1 September 2014

Supervisors: Prof. R.R. Meijer, Dr R.D. Morey & Dr M. Huisman

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**Haile Michael Worku**



**Multivariate logistic regression using the ideal point classification model**

Methodology and Statistics Unit, Institute of Psychology, Faculty of Social and Behavioral Sciences, Leiden University

Financed by Leiden University

Period: 1 October 2010 - 1 October 2014

Supervisors: Dr M. De Rooij, Prof. W.J. Heiser & Prof. P. Spinhoven

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## 5 Graduate training program

### 5.1 Courses in the IOPS curriculum

In 2014 four courses of the IOPS curriculum were organized:

1. **Meta-analysis** (elective)  
 Maastricht University  
 Instructor: Wolfgang Viechtbauer  
 Dates: 30 April, 1 and 2 May 2014 (3 days)
2. **Applied Bayesian Statistics** (elective)  
 Utrecht University  
 Instructors: Herbert Hoijtink, Irene Klugkist and Rens Van de Schoot  
 Dates: 12 – 16 May 2014 (5 days)
3. **Optimization & Numerical Methods in Statistics** (elective)  
 KU University of Leuven  
 Instructors: Francis Tuerlinckx, Geert Molenberghs, Katrijn van Deun and Tom Wilderjans  
 Dates: 13-14 and 30-31 October 2014 (4 days)
4. **Analysis of Measurement Instruments** (elective)  
 University of Twente  
 Instructors: Cees Glas and Hanneke Geerlings  
 Dates: 16-19 December 2014 (4 days)

### 5.2 Conferences

#### 5.2.1 29th IOPS summer conference

The 29th IOPS summer conference was held at Tilburg University on 26-27 June 2014.

##### Invited speaker

Jeroen Vermunt (Tilburg University) *Multilevel latent Markov modeling in continuous time, with an application to the analysis of ambulatory mood assessment data*

##### IOPS PhD students presentations

- Zsuzsa Bakk (Tilburg University). *Bias-adjusted three-step latent class modeling with distal outcome variables*
- Marisda Barendse (University of Groningen). *Measurement bias detection through Bayesian factor analysis*
- Matthieu Brinkhuis (University of Amsterdam/CITO). *Filtering data for detecting differential development*
- Marjolein Fokkema (VU University Amsterdam). *Connecting clinical and actuarial prediction with rule-based methods*
- Renske Kuijpers (Tilburg University). *Bias in estimates and standard errors of Mokken's scalability coefficients*

- Marie-Anne **Mittelhaëuser** (Tilburg University). *Differential motivation in educational measurement: conclusions and considerations*
- Maaike **Van Groen** (University of Twente). *Computerized Adaptive Testing for classifying examinees using MIRT for items that measure one or multiple abilities*
- Hailemichael **Worku** (Leiden University). *Issues with Latent Variable Modeling: A Simulation Study*

#### **IOPS PhD students poster presentations**

- Susan **Boerma**, University of Groningen
- Kirsten **Bulteel**, KU Leuven
- Matthijs **Deen**, Leiden University
- Silvia **De Haan-Rietdijk**, Utrecht University
- Janneke **De Kort**, University of Amsterdam
- Joran **Jongerling**, Utrecht University
- Erwin **Nagelkerke**, Tilburg University
- Hannah **Oosterhuis**, Tilburg University
- Davide **Vidotto**, Tilburg University

#### **IOPS Best paper award 2013**

During the 29th IOPS summer conference, the IOPS Best Paper Award 2013 was delivered to **Annelies Bartlema**, KU University of Leuven, for her paper:  
 Bartlema, A., Lee, M.D., Wetzels, R., & Vanpaemel, W. (2013). A Bayesian hierarchical mixture approach to individual differences: Case studies in selective attention and representation in category learning. *Journal of Mathematical Psychology*.

### **5.2.2 24th IOPS winter conference**

The 24th IOPS winter conference was held on 11 and 12 December 2014 at the University of Amsterdam.

#### **Invited speaker presentations**

- Han **Van der Maas**, University of Amsterdam  
*Psychometrics of adaptive online learning tools*
- Gunter **Maris**, CITO / University of Amsterdam  
*What is the question to which IRT is the answer?*
- Annelies **Bartlema** (KU Leuven), winner of the IOPS Best Paper Award 2013  
*Individual differences in cognitive modelling: A Bayesian hierarchical mixture approach*

#### **IOPS PhD students presentations**

- Thomas **Klausch** (Utrecht University). *Evaluating mixed-mode redesigns strategies against single- and hybrid-mode benchmarks: the case of the Crime Victimization Survey*
- Tam Thi Thanh **Lam** (University of Groningen). *Multi-set factor analysis by means of Parafac2*

- Maryam **Safarkhani** (Utrecht University). Optimal designs in longitudinal trials with linearly divergent treatment effects and discrete-time survival endpoints
- Gerko **Vink** (Utrecht University). *Predictive ratio matching imputation of nested compositional data with semicontinuous variables*
- Ingrid **Vriens** (Tilburg University). *Comparability and consistency of ranking and rating methods for the measurement of work values: A latent class choice modeling approach*

#### **IOPS PhD students poster presentations**

- Joost **Agelink van Rentergem Zandvliet**, University of Amsterdam
- Lianne **Ippel**, Tilburg University
- Merijn **Mestdagh**, Leuven University
- Robbie **Van Aert**, Tilburg University
- Claudia **Van Borkulo**, University of Amsterdam

## 6 Research output

### 6.1 Scientific publication

#### 6.1.1 Dissertations by IOPS PhD students

- Bakker**, M. (2014, April 24). *Good science, bad science. Questioning research practices in psychological research*. University of Amsterdam. Prom./coprom.: Prof. H.L.J. **Van der Maas** & Dr. J.M. **Wicherts**
- Bennink**, M. (2014, October 10). *Micro-macro multilevel analysis for discrete data*. Tilburg University. Prom./coprom.: Prof. J.K. **Vermunt**, Dr F.B. **Tekle**
- Brinkhuis**, M. (2014, December 9). *Tracking educational progress*, CITO/University of Amsterdam. Prom./coprom.: Prof. G.K.M. **Maris**
- Kievit**, R. (2014, April 23). *Turtles all the way down? Psychometric approaches to the reduction problem*, University of Amsterdam. Prom./coprom.: Prof. D. **Borsboom**, Dr L.J. **Waldorp**, Dr J.W. Romeijn, Prof. H.L.J. **Van der Maas**
- Klausch**, T. (2014, October 10). *Design of Mixed-Mode Surveys: Evaluating mode effects on measurement and selection error*, Utrecht University. Prom./coprom.: Prof. J. **Hox**, Dr B. **Schouten**
- Koppenol-Gonzalez Marin**, G.V. (2014, January 31). *Verbal and Visual Short Term Memory Processes in Children: Capturing their Complexities Using Latent Class Models*, Tilburg University. Prom./coporm.: Prof. J.K. **Vermunt**, Dr S. Bouwmeester
- Marsman**, M. (2014, November 19). *Plausible Values in Statistical Inference*, CITO/University of Twente. Prom./coporm.: Prof. C.A.W. **Glas**, Prof. K.A. Brookhuis, Dr M.J.H. Van Onna
- Mittelhaëuser**, M.A. (2014, December 12). *Modeling the Effect of Differential Motivation on Linking Educational Tests*, Tilburg University. Prom./coporm.: Prof. K. **Sijtsma**, Dr A.A. **Béguin**
- Smits**, I.A.M. (2014, February 20). *A methodological perspective on the analysis of clinical and personality questionnaires*, University of Groningen. Prom./coporm.: Prof. R.R. **Meijer**, Dr M.E. **Timmerman**
- Straatemeier**, M. (2014, April 25). *Math garden. A new educational and scientific instrument*, University of Amsterdam. Prom./coporm.: Prof. H.L.J. **Van der Maas**, Dr B.R.J. Jansen
- Ten Holt**, J.C. (2014, June 23). *A comparison between factor analysis and item response theory modeling in scale analysis*, University of Groningen. Prom./coprom.: Prof. T.A.B. **Snijders**, Dr A. Boomsma, Dr M.A.J. **Van Duijn** & Dr M.E. **Timmerman**
- Van Groen**, M.M. (2014, November 21). *Adaptive testing for making unidimensional and multidimensional classification decisions*, CITO/University of Twente. Prom./coprom.: Prof. T.J.H.M. **Eggen**

#### 6.1.2 Other dissertations under supervision of IOPS staff members

- Feenstra**, Hiske Marianne (2014, September 05). *Assessing writing ability in primary education: on the evaluation of text quality and text complexity*. UT Universiteit Twente (200 pag.) (Enschede: Universiteit Twente). Prom./coprom.: Prof. T.J.H.M. **Eggen** & T.J.M. Sanders
- Matzke**, D. (2014, December 5). *Bayesian explorations in mathematical psychology*. University of Amsterdam. Prom./coprom.: Dr E.-J. **Wagenmakers** & Prof. C.V. **Dolan**
- Nshemereirwe**, Connie Vivien (2014, November 20). *The relationship between pre-university schooling and university grades in Uganda*. UT Universiteit Twente (206 pag.) (Enschede: Universiteit Twente). Prom./coprom.: Prof. C.A.W. **Glas**
- Van Bers**, B.M.C.W. (2014, Maart 20). *Dynamics, models, and mechanisms of the cognitive flexibility of preschoolers*. University of Amsterdam (203 pag.). Prom./coprom.: Prof. M.E.J. **Raijmakers** & Dr I. **Visser**

Van Gendt, Kitty Angelique Faridah (2014, November 27). *Dissectie en observatie: visueel toetsen van visueel leren*. UT Universiteit Twente (250 pag.) (Enschede: Universiteit Twente). Prom./coprom.: Prof. C.A.W. Glas & Prof. P.W. Verhagen

### 6.1.3 Refereed article in a journal

- Abebe, H.T., **Tan, F.E.S.**, **Van Breukelen, G.J.P.**, **Berger, M.P.F.** (2014). Robustness of Bayesian D-optimal design for the logistic mixed model against misspecification of autocorrelation. *Computational Statistics*, 29, 1667-1690.
- Abebe, H.T., **Tan, F.E.S.**, **Van Breukelen, G.J.P.**, **Berger, M.P.F.** (2014). Bayesian D-optimal designs for the twoparameter logistic mixed effects model. *Computational Statistics and Data Analysis*, 71, 1066-1076.
- Abebe, H.T., **Tan, F.E.S.**, **Van Breukelen, G.J.P.**, Serroyen, J., **Berger, M.P.F.** (2014). On the choice of a prior for Bayesian D-optimal designs for the logistic regression model with a single predictor. *Communications in Statistics - Simulation and Computation*, 43, 1811-1824
- Adolf, J., **Schuurman, N.K.**, Borkenau, P., **Borsboom, D.** & **Dolan, C.V.** (2014). Measurement invariance within and between individuals: a distinct problem in testing the equivalence of intra- and inter-individual model structures. *Frontiers in Psychology*, 5:883
- Albers, C.J.**, & Gower, J.C. (2014). A contribution to the visualisation of three-way arrays. *Journal of Multivariate Analysis*, 132, 1-8. 10.1016/j.jmva.2014.07.013
- Albers, C.J.**, & Gower, J.C. (2014). Canonical Analysis: Ranks, Ratios and Fits. *Journal of Classification*, 31(1), 2-27. 10.1007/s00357-014-9146-y
- Almansa, J., **Vermunt, J.K.**, Forero, C.G., & Alonso, J. (2014). A factor mixture model for multivariate survival data: An application to the analysis of lifetime mental disorders. *Journal of the Royal Statistical Society, Series C*, 63, 85-102. 10.1111/rssc.12026
- Andersen, L.M., **Visser, I.**, Crone, E.A., Koolschijn, P.C.M.P. & **Raijmakers, M.E.J.** (2014). Cognitive strategy use as an index of developmental differences in neural responses to feedback. *Developmental Psychology*, 50 (12), 2686-2696. doi: 10.1037/a0038106
- Asehun Leonida, T., **Van Duijn, M.**, Jansen, E. (2014). Reliability and difficulty indices of the Eritrean secondary education certificate examinations (ESECE). *Eritrean Journal of Science and Engineering*, 1(1), 41-52
- Asendorpf, J.B., **Van de Schoot, R.**, Denissen, J.J.A. & Hutteman, R. (2014). Reducing bias due to systematic attrition in longitudinal studies: The benefits of multiple imputation. *International Journal of Behavioral Development*, 38(5), 453-460. 10.1177/0165025414542713
- Baayen, C. & **Klugkist, I.** (2014). Evaluating Order-Constrained Hypotheses for Circular Data From a Between-Within Subjects Design. *Psychological Methods*, 19(3), 398-408. 10.1037/a0037414
- Bakk, Z.**, **Oberski, D.L.**, & **Vermunt, J.K.** (2014). Relating latent class assignments to external variables: Standard errors for correct inference. *Political Analysis*, 22, 520-540. 10.1093/pan/mpu003
- Bakker, A., **Van der Heijden, P.G.M.**, Van Son, M.J.M., **Van de Schoot, R.**, Vandermeulen, E., Helsen, A. & Van Loey, N.E.E. (2014). The relationship between behavioural problems in preschool children and parental distress after a paediatric burn event. *European child & adolescent psychiatry*, 23(9), 813-822. 10.1007/s00787-014-0518-y
- Bakker, J.M., Lieverse, R., Menne-Lothmann, C., **Viechtbauer, W.**, Pishva, E., Kenis, G., Geschwind, N., Peeters, F., Van Os, J. & Wichers, M. (2014). Therapygenetics in mindfulness-based cognitive therapy: Do genes have an impact on therapy-induced change in real-life positive affective experiences? *Translational Psychiatry*, 4(e384)
- Bakker, M.**, & **Wicherts, J.M.** (2014). Outlier removal and the relation with reporting errors and quality of psychological research. *PLoS one*, 9(7), [e103360]. 10.1371/journal.pone.0103360
- Bakker, M.**, & **Wicherts, J.M.** (2014). Outlier removal, sum scores, and the inflation of the type I error rate in independent samples t tests: The power of alternatives and recommendations. *Psychological Methods*, 19(3), 409-427. 10.1037/met0000014
- Barendse, M.T.**, **Albers, C.J.**, Oort, F.J., & **Timmerman, M.E.** (2014). Measurement bias detection through Bayesian factor analysis. *Frontiers in Psychology*, 5, 1087. 10.3389/fpsyg.2014.01087
- Bartlema, A.**, Lee, M.D., Wetzels, R., & **Vanpaemel, W.** (2014). A Bayesian hierarchical mixture approach to individual differences: Case studies in selective attention and representation in category learning. *Journal of Mathematical Psychology*, 59, 132-150. doi:10.1016/j.jmp.2013.12.002

- Bastian, B., Kuppens, P., **De Roover**, K., & Diener, E. (2014). Is valuing positive emotion associated with life satisfaction? *Emotion*, 14, 639-645. doi:10.1037/a0036466
- Bechger**, T.M., Blanca, M.J. & **Maris**, G. (2014). The Analysis of Multivariate Group Differences Using Common Principal Components. *Structural Equation Modeling*, 21 (4), 577-587
- Bennink**, M., **Croon**, M.A., Keuning, J., & **Vermunt**, J.K. (2014). Measuring student ability, classifying schools, and detecting item bias at school level, based on student-level dichotomous items. *Journal of Educational and Behavioral Statistics*, 39(3), 180-202. 10.3102/1076998614529158
- Berndt, N., Bolman, C., Froelicher, E.S., Mudde, A., **Candel**, M., De Vries, H., Lechner (2014). The effectiveness of a telephone delivered and face-to-face delivered counseling intervention for smoking cessation in patients with coronary heart disease: a 6 month follow-up. *Journal of Behavioral Medicine*, 37, 709-724
- Bexkens, A., Ruzzano, L., Collot D'Escury-Koenigs, A.M.L., Van der Molen, M.W. & **Huizenga**, H.M. (2014). Inhibition deficits in individuals with intellectual disability: a meta-regression analysis. *Journal of Intellectual Disability Research*, 58 (1), 3-16. doi: 10.1111/jir.12068
- Bexkens, A., Van der Molen, M.W., Collot D'Escury-Koenigs, A.M.L. & **Huizenga**, H.M. (2014). Interference control in adolescents with Mild-to-Borderline Intellectual Disabilities and/or behavioral disorders. *Child Neuropsychology*, 20 (4), 398-414. doi: 10.1080/09297049.2013.799643
- Bock, H.H., Ingrassia, S., & **Vermunt**, J.K. (2014). Preface. *Advances in Data Analysis and Classification*, 8(1), 1-3. 10.1007/s11634-014-0163-9
- Bock, H.H., Ingrassia, S., & **Vermunt**, J.K. (2014). Special issue on "Model-Based Clustering and Classification". *Advances in Data Analysis and Classification*, 8(1)
- Boeije**, H., **Van Wesel**, F. & Slagt, M. (2014). Guidance for deciding upon use of primary mixed methods studies in research synthesis: Lessons learned in childhood trauma. *Quality and Quantity*, 48(2), 1075-1088. 10.1007/s11135-012-9825-x
- Bögels, S.M., Wijts, P., **Oort**, F.J. & Sallaerts, S.J.M. (2014). Psychodynamic psychotherapy versus cognitive behavior therapy for social anxiety disorder: An efficacy and partial effectiveness trial. *Depression and Anxiety*, 31 (5), 363-373. doi: 10.1002/da.22246
- Bosmans, G., Van de Walle, M., Goossens, L., & **Ceulemans**, E. (2014). (In)variability of attachment in middle childhood: Secure base script evidence in diary data. *Behavior Change*, 31, 225-242. doi:10.1017/bec.2014.18
- Bouwer, R., **Béguin**, A.A., Sanders, T., & Van den Bergh, H. (2014). Effect of genre on the generalizability of writing scores. *Language Testing*. doi:10.1177/0265532214542994
- Boyer, L., Baumstarck, K., Michel, P., Boucekine, M., Anota, A., Bonnetain, F., Coste, J., Falissard, B., Guilleux, A., Hardouin, J.-B., Louondou, A., Mercier, M., Mesbah, M., Rouquette, A., Sebille, V., **Verdam**, M.G.E., Ghattas, B., Guillemain, F. & Auquier, P. (2014). Statistical challenges of quality of life and cancer: new avenues for future research. *Expert review of pharmacoeconomics & outcomes research*, 14 (1), 19-22. doi: 10.1586/14737167.2014.873704
- Brans, K., **Van Mechelen**, I., Rimé, B., & Verduyn, P. (2014). To share, or not to share? Examining the emotional consequences of social sharing in the case of anger and sadness. *Emotion*, 14, 1062-1071. doi:10.1037/a0037604
- Bulteel**, K., **Ceulemans**, E., Thompson, R. J., Waugh, C. E., Gotlib, I. H., **Tuerlinckx**, F., & Kuppens, P. (2014). DeCon: A tool to detect emotional concordance in multivariate time series data of emotional responding. *Biological Psychology*, 98, 29-42. doi:10.1016/j.biopsych.2013.10.011
- Bunte, T.L., Schoemaker, K., Hessen, D.J., **Van der Heijden**, P.G.M. & Matthys, W. (2014). Stability and Change of ODD, CD and ADHD Diagnosis in Referred Preschool Children. *Journal of Abnormal Child Psychology*, 42(7), 1213-1224. 10.1007/s10802-014-9869-6
- Can, S., **Van de Schoot**, R., & **Hox**, J. (2014). Collinear Latent Variables in Multilevel Confirmatory Factor Analysis: A Comparison of Maximum Likelihood and Bayesian Estimations. *Educational and Psychological Measurement*, 1-22. 10.1177/0013164414547959
- Canini, K.R., Griffiths, T.L., **Vanpaemel**, W., & Kalish, M.L. (2014). Revealing human inductive biases for category learning by simulating cultural transmission. *Psychonomic Bulletin & Review*, 21, 785-793. doi:10.3758/s13423-013-0556-3
- Carballo Cárdenas, E. C., Mol, A. P. J., & Tobi, H. (2013). Information systems for marine protected areas: How do users interpret desirable data attributes?. *Environmental Modelling & Software*, 41, 185-198. [10.1016/j.envsoft.2012.11.016](https://doi.org/10.1016/j.envsoft.2012.11.016)

- Cho, S.J., **De Boeck**, P., Embretson, S., & Rabe-Hesketh, S. (2014). Additive multilevel item structure models with random residuals: Item modeling for explanation and item generation. *Psychometrika*, 79, 84-104. doi:10.1007/S11336-013-9360-2
- Conijn, J.M., **Emons**, W.H.M., & **Sijtsma**, K. (2014). Statistic Iz based person-fit methods for non-cognitive multiscale measures. *Applied Psychological Measurement*, 38, 122-136. 10.1177/0146621613497568
- Cooper, R., Doehrmann, O., Fang, A., Gerlach, A.L., **Hoijtink**, H.J.A. & Hofmann, S.G. (2014). Relationship between social anxiety and perceived trustworthiness. *Anxiety, Stress, and Coping : an International Journal*, 27(2), 190-201. 10.1080/10615806.2013.834049
- Cremers, H.P., Oenema, A., Mercken, L., **Candel**, M., De Vries, H. (2014). Explaining Socio-economic Differences in Intention to Smoke among Primary School Children. *BMC Public Health*, 19,191
- Crusio, R., Rao, S., Changawala, N., Paul, V., Tiu, C., **Van Ginkel**, J., Chapnick, E., & Kupfner, Y. (2014). Epidemiology and outcome of infections with carbapenem-resistant Gram-negative bacteria treated with polymyxin B-based combination therapy. *Scandinavian Journal of Infectious Diseases*, 46, 1-8. doi: 10.3109/00365548.2013.844350
- Cruyff**, M.J.L.F. & **Van der Heijden**, P.G.M. (2014). Sensitivity analysis and calibration of population size estimates obtained with the zero-truncated Poisson regression model. *Statistical Modelling*, 14(5), 361-373. 10.1177/1471082X13511168
- Daamen, A.M.J., Brunner-Rocca, H.P., **Tan**, F.E.S., Hamers, J.P.H., Schols, J. (2014). P150: the prevalence of heart failure in nursing home residents. *European geriatric medicine* 5, 5130
- Damen, S., Janssen, M.J., **Huisman**, M., Ruijsenaars, A.J.J.M., & Schuengel, C. (2014). Stimulating Intersubjective Communication in an Adult with Deafblindness: A Single-Case Experiment. *Journal of Deaf Studies and Deaf Education*, 19(3), 366-384
- De Bruin, E.J., **Oort**, F.J., Bögels, S.M. & Meijer, A.M. (2014). Efficacy of internet and group-administered cognitive behavioral therapy for insomnia in adolescents: a pilot study. *Behavioral Sleep Medicine*, 12 (3), 235-254. doi: 10.1080/15402002.2013.784703
- De Bruin, E.I., **Zijlstra**, B.J.H., Geurtzen, N., Van Zundert, R.M.P., Van de Weijer-Bergsma, E., Hartman, E.E., Nieuwsteeg, A.M., Duncan, L.G. & Bögels, S.M. (2014). Mindful parenting assessed further: psychometric properties of the Dutch version of the Interpersonal Mindfulness in Parenting Scale (IM-P). *Mindfulness*, 5 (2), 200-212. doi: 10.1007/s12671-012-0168-4
- De Bruin, E.I., **Zijlstra**, B.J.H. & Bögels, S.M. (2014). The meaning of Mindfulness in children and adolescents: Further validation of the Child and Adolescent Mindfulness Measure (CAMM) in two independent samples from The Netherlands. *Mindfulness*, 5 (4), 442-430. doi: 10.1007/s12671-013-0196-8
- De Groot, A.D., **Wagenmakers**, E.-J., **Borsboom**, D., **Verhagen**, J., **Kievit**, R., **Bakker**, M., **Cramer**, A., **Matzke**, D., **Mellenbergh**, D. & **Van der Maas**, H.L.J. (2014). The meaning of "significance" for different types of research. *Acta Psychologica*, 148, 188-194
- De Geus, E., Aalfs, C.M., **Verdam**, M.G.E., De Haes, H.C.J.M. & Smets, E.M.A. (2014). Informing relatives about their hereditary or familial cancer risk: study protocol for a randomized controlled trial. *Trials*, 15, 86. doi: 10.1186/1745-6215-15-86
- De Haan-Rietdijk**, S., Gottman, J.M., Bergeman, C.S. & **Hamaker**, E.L. (2014). Get Over It! A Multilevel Threshold Autoregressive Model for State-Dependent Affect Regulation. *Psychometrika*. 10.1007/s11336-014-9417-x
- De Hollander, G., **Wagenmakers**, E.-J., **Waldorp**, L. & Forstmann, B. (2014). An Antidote to the Imager's Fallacy, or How to Identify Brain Areas That Are in Limbo. *PLoS One*, 9 (12), e115700
- De Jong S. de Josselin, **Candel**, M., Segar, D., Cremers, H.P., De Vries, H. (2014). Efficacy of a web-based computer-tailored smoking prevention intervention for Dutch adolescents: A randomized controlled trial. *Journal of Medical Internet Research*, 16, e82
- De Jonge, T., Veenhoven, R., & **Arends**, L. (2014). Homogenizing response to different survey questions on the same topic: Proposal of a scale homogenization method using a reference distribution. *Social Indicators Research*, 177, 275-300
- De Klerk**, S., **Eggen**, T.J.H.M. & **Veldkamp**, B.P. (2014). A blending of computer-based assessment and performance-based assessment: Multimedia-Based Performance Assessment (MBPA). The introduction of a new method of assessment in Dutch Vocational Education and Training (VET). *Cadmo*, 22(1), 39-56. 10.3280/CAD2014-001006

- De Koning-Veenstra, B., **Timmerman**, M.E., Van Geert, P.L.C., & Van der Meulen, B. (2014). Identifying Learning Trajectories While Playing a Learning-to-Learn Computer Game in Different Children and Instruction Types. *Journal of Cognitive Education and Psychology*, 13(1), 53-75. doi:10.1891/1945-8959.13.1.53
- De Raad, B., Barelds, D., **Timmerman**, M.E., **De Roover**, K., Mlacic, B., & Church, A.T. (2014). Towards a Pan-cultural Personality Structure: Input from 11 Psycholexical Studies. *European Journal of Personality*, 28(5), 497-510. doi:10.1002/per.1953
- De Roover**, K., **Timmerman**, M.E., Van Diest, I., Onghena, P., & **Ceulemans**, E. (2014). Switching Principal Component Analysis for Modeling Means and Covariance Changes Over Time. *Psychological Methods*, 19(1), 113-132. doi:10.1037/a0034525
- De Roover**, K., **Timmerman**, M.E., De Leersnyder, J., Mesquita, B., & **Ceulemans**, E. (2014). What's hampering measurement invariance: Detecting non-invariant items using clusterwise simultaneous component analysis. *Frontiers in Psychology*, 5, 1-11. doi:10.3389/fpsyg.2014.00604
- Debeer**, D., Buchholz, J., Hartig, J., & Janssen, R. (2014). Student, school, and country differences in sustained test-taking effort in the 2009 PISA reading assessment. *Journal of Educational and Behavioral Statistics*, 39, 502-523. doi:10.3102/1076998614558485
- Dekker, V., Nauta, M., Mulder, E., **Timmerman**, M.E., & De Bildt, A. (2014). A randomized controlled study of a social skills training for preadolescent children with autism spectrum disorders: generalization of skills by training parents and teachers?. *BMC Psychiatry*, 14(1), 189
- Dewald, J.F., Meijer, A.M., **Oort**, F.J., Kerkhof, G.A. & Bögels, S.M. (2014). Adolescents' sleep in low-stress and high-stress (exam) times: a prospective quasi-experiment. *Behavioral Sleep Medicine*, 12 (6), 493-506. doi:10.1080/15402002.2012.670675
- Dewald-Kaufmann, J.F., **Oort**, F.J. & Meijer, A.M. (2014). The effects of sleep extension and sleep hygiene advice on sleep and depressive symptoms in adolescents: a randomized controlled trial. *Journal of Child Psychology and Psychiatry*, 55 (3), 273-283. doi: 10.1111/jcpp.12157
- Doornwaard, S., Van den Eijnden, R., **Lugtig**, P., Ter Bogt, T. & Overbeek, G. (2014). Rectificatie. *Kind & Adolescent*, 35(1), 53-54. doi:10.1007/s12453-014-0004-9
- Doove**, L.L., **Dusseldorp**, E., **Van Deun**, K., & **Van Mechelen**, I. (2014). A comparison of five recursive partitioning methods to find person subgroups involved in meaningful treatment-subgroup interactions. *Advances in Data Analysis and Classification*, 8(4), 403-425. doi:10.1007/s11634-013-0159-x
- Doove**, L.L., **Van Buuren**, S. & **Dusseldorp**, E. (2014). Recursive partitioning for missing data imputation in the presence of interaction effects. *Computational Statistics and Data Analysis*, 72, 92-104. doi:10.1016/j.csda.2013.10.025
- Dowlatabadi, E.A., Wakkee, M., **Arends**, L.R. & Nijsten, T. (2014). The prevalence and odds of depressive symptoms and clinical depression in psoriasis patients: A systematic review and meta-analysis. *Journal of Investigative Dermatology*, 134, 1542-1551
- Dusseldorp**, E., Van Genugten, L., **Van Buuren**, S., Verheijden, M.W. & Van Empelen, P. (2014). Combinations of Techniques That Effectively Change Health Behavior: Evidence From Meta-CART Analysis. *Health Psychology*, 33(12), 1530-1540. doi:10.1037/he0000018
- Dusseldorp**, E., & **Van Mechelen**, I. (2014). Qualitative interaction trees: A tool to identify qualitative treatment-subgroup interactions. *Statistics in Medicine*, 33, 219-237. doi:10.1002/sim.5933
- Ehring, T., Welboren, R., Morina, N., **Wicherts**, J.M., Freitag, J., & Emmelkamp, P.M.G. (2014). Meta-analysis of psychological treatments for posttraumatic stress disorder in adult survivors of childhood abuse. *Clinical Psychology Review*, 34(8), 645-657. doi:10.1016/j.cpr.2014.10.004
- Eilers P.H.C. & **Kroonenberg** P.M. (2014), Modeling and correction of Raman and Rayleigh scatter in fluorescence landscapes, Chemometrics and Intelligent Laboratory Systems. *Chemometrics and Intelligent Laboratory Systems* 130: 1-5
- Elliott, E.M., Morey, C.C., **Morey**, R.D., Eaves, S.D., Shelton, J.T., & Lutfi-Proctor, D.A. (2014). The role of modality: Auditory and visual distractors in Stroop interference. *Journal of cognitive psychology*, 26(1), 15-26. doi:10.1080/20445911.2013.859133
- Erbas, Y., **Ceulemans**, E., Pe, M. L., Koval, P., & Kuppens, P. (2014). Negative emotion differentiation: Its personality and well-being correlates and a comparison of different assessment methods. *Cognition and Emotion*, 28, 1196-1213. doi:10.1080/02699931.2013.875890
- Eusebi, P., Reitsma, J.B., & **Vermunt**, J.K. (2014). Latent class bivariate model for the meta-analysis of diagnostic test accuracy studies. *BMC Medical Research Methodology*, 14, [88]. doi:10.1186/1471-2288-14-88

- Evers, L.J.M., Van Amelsvoort, T.A.M.J., **Candel**, M.J.J.M., Boer, H., Engelen, J.J.M. & Curfs, L.M.G. (2014). Psychopathology in adults with 22q 11 deletion syndrome and moderate and severe intellectual disability. *Journal of Intellectual Disability Research*, 58, 915-925
- Fayant, M-P., Muller, D., **Hartgerink**, C.H.J., & Lantian, A. (2014). Is ostracism by a despised outgroup really hurtful?: A replication and extension of Gonsalkorale and Williams (2007). *Social Psychology*, 45(6), 489-494. 10.1027/1864-9335/a000209
- Fleuren, M.A.H., Paulussen, T.G.W.M., Van Dommelen, P., & **Van Buuren**, S. (2014). Towards a measurement instrument for determinants of innovations. *International Journal for Quality in Health Care*, 26(5), 501-510. 10.1093/intqhc/mzu060
- Forero, C.G., Almansa, J., Adroher, N.D., **Vermunt**, J.K., Vilagut, G., De Graaf, R., ... Alonso Caballero, J. (2014). Partial likelihood estimation of IRT models with censored lifetime data: An application to mental disorders in the ESEMeD surveys. *Psychometrika*, 79(3), 470-488. 10.1007/s11336-013-9400-y
- Fox**, J.P., Klein Entink, R. & Timmers, C. (2014). The Joint Multivariate Modeling of Multiple Mixed Response Sources: Relating Student Performances with Feedback Behavior. *Multivariate behavioral research*, 49(1), 54-66. 10.1080/00273171.2013.843441
- Fox**, J.P., **Marsman**, M., Mulder, J. & Verhagen, J.A. (2014). Complex Latent Variable Modeling in Educational Assessment. *Communications in Statistics - Simulation and Computation*
- Franić, S., **Dolan**, C.V., **Borsboom**, D., Van Beijsterveldt, C.E.M. & Boomsma, D.I. (2014). Erratum to: Three-and-a-Half-Factor Model? The Genetic and Environmental Structure of the CBCL/6-18 Internalizing Grouping. *Behavior genetics*, 44 (3), 269
- Franić, S., **Borsboom**, D., **Dolan**, C.V. & Boomsma, D.I. (2014). The big five personality traits: psychological entities or statistical constructs? *Behavior genetics*, 44 (6), 591-604
- Franić, S., **Dolan**, C.V., **Borsboom**, D., Van Beijsterveldt, C.E.M. & Boomsma, D.I. (2014). Three-and-a-half-factor model? The genetic and environmental structure of the CBCL/6-18 internalizing grouping. *Behavior genetics*, 44 (3), 254-268
- Frappart, S., **Raijmakers**, M. & Frède, V. (2014). What do children know and understand about universal gravitation? Structural and developmental aspects. *Journal of Experimental Child Psychology*, 120, 17-38. doi: 10.1016/j.jecp.2013.11.001
- Fried, E., **Tuerlinckx**, F. & **Borsboom**, D. (2014). Mental health: More than neurobiology. *Nature*, 508, 458-458. doi:10.1038/508458c
- Fries, J.F., Lingala, B., Siemons, L., **Glas**, C.A.W., Cella, D., Hussain, Y.N., Bruce, B. & Krishnan, E. (2014). Extending the Floor and the Ceiling for Assessment of Physical Function. *Arthritis & rheumatology*, 66(5), 1378-1387. 10.1002/art.38342
- Gallego, A., Buscha, F., Sturgis, P., & **Oberski**, D. (2014). Places and preferences: A longitudinal analysis of self-selection and contextual effects. *British Journal of Political Science*, 1-22. 10.1017/S0007123414000337
- Garnier-Villarreal, M., **Rhemtulla**, M. & Little, T. D. (2014). Two-method planned missing designs for longitudinal research. *International Journal of Behavioral Development*, 38, 411-422
- Geerlings, H., Laros, J.A., Tellegen, P.J. & **Glas**, C.A.W. (2014). Testing the difficulty theory of the SON-R 512 –17, a non-verbal test of intelligence. *British journal of mathematical and statistical psychology*, 67(2), 248-265. 10.1111/bmsp.12017
- Giordani, P., **Kiers**, H.A.L., & Del Ferraro, M.A. (2014). Three-Way Component Analysis Using the R Package ThreeWay. *Journal of Statistical Software*, 57(7). Retrieved from <http://www.jstatsoft.org/v57/i07>
- Gobbens, R.J.J., & **Van Assen**, M.A.L.M. (2014). The prediction of ADL and IADL disability using six physical indicators of frailty: A longitudinal study in the Netherlands. *Current Gerontology and Geriatrics Research*, [1-8]. 10.1155/2014/358137
- Gobbens, R.J.J., & Van Assen, M.A.L.M. (2014). The prediction of quality of life by physical, psychological and social components of frailty in community-dwelling older people. *Quality of Life Research*, 23(8), 2289-2300. 10.1007/s11136-014-0672-1
- Gobbens, R.J.J., **Van Assen**, M.A.L.M., & Schalk, R. (2014). The prediction of disability by self-reported physical frailty components of the Tilburg Frailty Indicator (TFI). *Archives of Gerontology and Geriatrics*, 59(2), 280-287. 10.1016/j.archger.2014.06.008
- González, J., **De Boeck**, P., & **Tuerlinckx**, F. (2014). Linear mixed modelling for data from a double mixed factorial design with covariates: A case-study on semantic categorization response times. *Journal of the Royal Statistical Society: Series C (Applied Statistics)*, 63, 289-302.

- Gower, J.C., **Groenen**, P.J.F., Van de Velden, M. & Vines, K. (2014). Better perceptual maps: Introducing explanatory icons to facilitate interpretation. *Food Quality and Preference*, 36, 61-69. doi: <http://dx.doi.org/10.1016/j.foodqual.2014.01.004>
- Gu**, X., **Mulder**, J., Deković, M., & **Hoijtink**, H. (2014). Bayesian evaluation of inequality constrained hypotheses. *Psychological Methods*, 19(4), 511-527. 10.1037/met0000017
- Guillaume, B., Hua, X., Thompson, P.M., **Waldorp**, L. & Nichols, T.E. (2014). Fast and accurate modelling of longitudinal and repeated measures neuroimaging data. *NeuroImage*, 94, 287-302
- Hall, D.G. & **Rhemtulla**, M. (2014). Young children's use of contrast in word learning: the case of proper names. *Journal of Cognition and Development*, 15 (4), 551-568
- He**, Q., **Glas**, C.A.W. & **Veldkamp**, B.P. (2014). Assessing impact of differential symptom functioning on post-traumatic stress disorder (PTSD) diagnosis. *International journal of methods in psychiatric research*, 23(2), 131-141. 10.1002/mpr.1417
- He**, Q., **Glas**, C.A.W., Kosinski, M., Stillwell, D.J. & **Veldkamp**, B.P. (2014). Predicting self-monitoring skills using textual posts on Facebook. *Computers in human behavior*, 33, 69-78. 10.1016/j.chb.2013.12.026
- Heathcote, A., **Wagenmakers**, E.-J. & Brown, S.D. (2014). The falsifiability of actual decision-making models. *Psychological Review*, 121 (4), 676-678
- Hillen, M.A., De Haes, H.C.J.M., **Verdam**, M.G.E. & Smets, E.M.A. (2014). Does source of patient recruitment affect the impact of communication on trust? *Patient Education and Counseling*, 95 (2), 226-230. doi: 10.1016/j.pec.2014.01.008
- Hillen, M.A., De Haes, H.C.J.M., Stalpers, L.J.A., Klinkenbijl, J.H.G., Eddes, E.-H., **Verdam**, M.G.E. & Smets, E.M.A. (2014). How attachment style and locus of control influence patients' trust in their oncologist. *Journal of Psychosomatic Research*, 76 (3), 221-226. doi: 10.1016/j.jpsychores.2013.11.014
- Hoekstra, R., **Morey**, R.D., Rouder, J.N., & **Wagenmakers**, E.-J. (2014). Robust misinterpretation of confidence intervals. *Psychonomic Bulletin & Review*, 21(5), 1157-1164. 10.3758/s13423-013-0572-3
- Hoeve, M., **Jak**, S., Stams, G.J.J.M. & Meeuws, W.H.J. (2014). Financial problems and delinquency in adolescents and young adults: a 6-year three-wave study. *Crime and Delinquency*. doi: 10.1177/0011128714541190
- Hoijtink**, H.J.A., Beland, S. & Vermeulen, J.A. (2014). Cognitive Diagnostic Assessment via Bayesian Evaluation of Informative Diagnostic Hypotheses. *Psychological methods*, 19(1), 21-38. 10.1037/a0034176
- Hoogsteder, P.H., Kotz, D., Van Spiegel, P.I., **Viechtbauer**, W. & Van Schayck, O.C.P. (2014). Efficacy of the nicotine vaccine 3'-AmNic-rEPA (NicVAX) co-administered with varenicline and counselling for smoking cessation: A randomized placebo-controlled trial. *Addiction*, 109(8), 1252-1259
- Hox**, J.J., **Moerbeek**, M., **Kluytmans**, A., & **Van de Schoot**, R. (2014). Analyzing indirect effects in cluster randomized trials. The effect of estimation method, number of groups and group sizes on accuracy and power. *Frontiers in Psychology*, 5(FEB), [Article 78]. 10.3389/fpsyg.2014.00078
- Hu, Q., Schaufeli, W., Taris, T., **Hessen**, D., Hakanen, J.J., Salanova, M. & Shimazu, A. (2014). East is east and west is west and never the twain shall meet: Work engagement and workaholism across Eastern and Western cultures. *Journal of Behavioral and Social Sciences*, 1(1), 6-24
- Huibers, M.J.H., **Van Breukelen**, G.J.P., Roelofs, R., Hollon, S.D., Markowitz, J.C., Van Os, J., Arntz, A., Peeters, F. (2014). Predicting response to cognitive therapy and interpersonal therapy, with or without antidepressant medication, for major depression: a pragmatic trial in routine practice. *Journal of Affective Disorders*, 152 , 146-154
- Huitsing, G., **Snijders**, T.A.B., **Van Duijn**, M.A.J., & Veenstra, R. (2014). Victims, bullies, and their defenders: A longitudinal study of the co-evolution of positive and negative networks. *Development and Psychopathology*, 26(3), 645-659
- Huizenga**, H.M., Van Duijvenvoorde, A.C.K., Van Ravenzwaaij, D., Wetzels, R. & **Jansen**, B.R.J. (2014). Is the unconscious, if it exists, a superior decision maker? *Behavioral and Brain Sciences*, 37 (1), 32-33. doi: 10.1017/S0140525X13000769
- Hulzebos, E.H.J., **Van Buuren**, S., Klarenbosch, J.V., Gigengack-Baars, A., Brutel de la Riviere, A., Helders, P.J.M. & Van Meeteren, N.L.U. (2014). Validation of a Preoperative Risk Model for Pneumonia in Patients undergoing CABG Surgery. *Journal of Novel Physiotherapies*, 4(4), [221]. 10.4172/2165-7025.1000221
- Ippel**, L., **Gelissen**, J.P.T.M., & **Moors**, G.B.D. (2014). Investigating longitudinal and cross cultural measurement Invariance of Inglehart's short post-materialism scale. *Social Indicators Research*, 115(3), 919-932. 10.1007/s11205-013-0241-y

- Jackson, D., Turner, R., Rhodes, K. & **Viechtbauer**, W. (2014). Methods for calculating confidence and credible intervals for the residual between-study variance in random effects meta-regression models. *BMC Medical Research Methodology*, 14(103)
- Jahfari, S., **Waldorp**, L.J., Ridderinkhof, K.R. & Scholte, H.S. (2014). Visual information shapes the dynamics of cortico-basal ganglia pathways during perceptual response selection and inhibition. *Journal of Vision*, 14 (10):308
- Jak**, S. (2014). Testing strong factorial invariance using three-level structural equation modeling. *Frontiers in Psychology*, 5, [745]. 10.3389/fpsyg.2014.00745
- Jak**, S., **Oort**, F.J. & **Dolan**, C.V. (2014). Measurement Bias in Multilevel Data. *Structural Equation Modeling*, 21(1), 31-39. 10.1080/10705511.2014.856694
- Jak**, S., **Oort**, F.J. & **Dolan**, C.V. (2014). Using two-level factor analysis to test for cluster bias in ordinal data. *Multivariate Behavioral Research*, 49(6), 544-553. 10.1080/00273171.2014.947353
- Jansen**, B.R.J., Van Duijvenvoorde, A.C.K. & **Huizenga**, H.M. (2014). Developmental and gender related differences in response switches after nonrepresentative negative feedback. *Developmental Psychology*, 50 (1), 237-246. doi: 10.1037/a0032493
- Jansen**, B.R.J., **Hofman**, A.D., **Straatemeier**, M., Van Bers, B.M.C.W., **Raijmakers**, M.E.J. & **Van der Maas**, H.L.J. (2014). The role of pattern recognition in children's exact enumeration of small numbers. *British Journal of Developmental Psychology*, 32 (2), 178-194. doi: 10.1111/bjdp.12032
- Janssen, M.J., Brink-Groenendijk, N.C.R., Riksen-Walraven, J.M., **Huisman**, M., Van Dijk, J.P.M., & Ruijsenaars, A.J.J.M. (2014). Measuring sustained interaction in adults with deafblindness and multiple disabilities: Development of an observational coding system. *British Journal of Visual Impairment*, 32(2), 68-76
- Jolani**, S. (2014). An analysis of longitudinal data with nonignorable dropout using the truncated multivariate normal distribution. *Journal of Multivariate Analysis*, 131, 163-173. 10.1016/j.jmva.2014.06.016
- Jolani**, S., Frank, L.E. & **Van Buuren**, S. (2014). Dual imputation model for incomplete longitudinal data. *British Journal of Mathematical and Statistical Psychology*, 67(2), 197-212. 10.1111/bmsp.12021
- Jolani**, S. & **Van Buuren**, S. (2014). Doubly robust imputation of incomplete binary longitudinal data. *Journal of Biometrics & Biostatistics*, 5(3), [1000194]. 10.4172/2155-6180.1000194
- Jorgensen, T.D., **Rhemtulla**, M., Schoemann, A., McPherson, B., Wu, W. & Little, T.D. (2014). Optimal assignment methods in three-form planned missing data designs for longitudinal panel studies. *International Journal of Behavioral Development*, 38, 397-410
- Kadengye, D.T., **Ceulemans**, E., & Van den Noortgate, W. (2014). A generalized longitudinal mixture IRT model for measuring differential growth in learning environments. *Behavior Research Methods*, 46, 823-840. doi:10.3758/s13428-013-0413-3
- Kadengye, D.T., **Ceulemans**, E., & Van den Noortgate, W. (2014). Direct likelihood analysis and multiple imputation for missing item scores in multilevel cross-classification educational data. *Applied Psychological Measurement*, 38, 61-80. doi:10.1177/0146621613491138
- Kankaras**, M., & **Moors**, G.B.D. (2014). Analysis of cross-cultural comparability of PISA 2009 scores. *Journal of Cross-Cultural Psychology*, 45(3), 381-399. 10.1177/0022022113511297
- Kaptein**, M.C. (2014). RStorm: Developing and Testing Streaming Algorithms in R. *ACE journal*, 6(1), 123-132
- Kaptein**, M.C., Castaneda, D., Fernandez, N., & Nass, C. (2014). Extending the Similarity-Attraction Effect: The effects of When-Similarity in mediated communication. *Journal of Computer-Mediated Communication*, 19(3), 342-357. 10.1111/jcc4.12049
- Kempenaers, C., **De Boeck**, P., Dehon, C., Braun, S., & Linkowski, P. (2014). Metric invariance of the French version of the contingencies of self-worth scale. *Comprehensive Psychology*, 3, 22, 1-13. doi:10.2466/08.CP.3.22
- Khaled, A., Gulikers, J., **Tobi**, H., Biemans, H., Oonk, C. & Mulder, M. (2014). Exploring the Validity and Robustness of a Competency Self-Report Instrument for Vocational and Higher Competence-Based Education. *Journal of Psychoeducational Assessment*, 32(5), 429-440
- Khalid, M.N. & **Glas**, C.A.W. (2014). A scale purification procedure for evaluation of differential item functioning. *Measurement*, 50, 186-197. 10.1016/j.measurement.2013.12.019
- Khalili-Mahani, N., Van Osch, M.J., **De Rooij**, M., Beckmann, C.F., Van Buchem, M.A., Dahan, A., Van Gerven, J.M. & Rombouts S.A.R.B. (2013). Spatial heterogeneity of the relation between resting-state connectivity and blood flow: An important consideration for pharmacological studies. *Human Brain Mapping*, 35, 929-942. DOI: 10.1002/hbm.22224

- Klabbers, G.A., Wijma, K., Paarlberg, K.M., **Emons**, W.H.M., & Vingerhoets, A.J.J.M. (2014). Treatment of severe fear of childbirth with haptotherapy: Design of a multicenter randomized controlled trial. *BMC Complementary and Alternative Medicine*, 14, [385]. 10.1186/1472-6882-14-385
- Kleijkers, S.H.M., Van Montfoort, A.P.A., Smits, L.J.M., **Viechtbauer**, W., Roseboom, T.J., Nelissen, E.C.M., Coonen, E., Derhaag, J.G., Bastings, L., Schreurs, I.E.L., Evers, J.L.H. & Dumoulin, J.C.M. (2014). VF culture medium affects post-natal weight in humans during the first 2 years of life. *Human Reproduction*, 20(4), 661–669
- Klinkenberg, U.J., Van Oijk, J.W., **Tan**, F.E.S., Van Loon, U.C. (2014). Circulating cardiac troponin T exhibits a diurnal rhythm. *Journal of the American college of cardiology* 63 (17), 1788-1795
- Klugkist**, I., Post, L., Haarhuis, F., & Van Wesel, F. (2014). Confirmatory Methods, or Huge Samples, Are Required to Obtain Power for the Evaluation of Theories. *Open Journal of Statistics*, 4, 710-725. 10.4236/ojs.2014.49066
- Koning, I.M., **Lugtig**, P. & Vollebergh, W.A.M. (2014). Differential effects of baseline drinking status: Effects of an alcohol prevention program targeting students and/or parents (PAS) among weekly drinking students. *Journal of substance abuse treatment*, 46(4), 522-527. 10.1016/j.jsat.2013.11.003
- Kool, M.B., **Van de Schoot**, R., López-Chicheri García, I., Mewes, R., Da Silva, J.A.P., Vangronsveld, K., ... Geenen, R. (2014). Measurement invariance of the Illness Invalidation Inventory (3\*I) across language, rheumatic disease, and gender. *Annals of the Rheumatic Diseases*, 73, 551-556. 10.1136/annrheumdis-2012-201807
- Koopmans, L., Bernaards, C.M., Hildebrandt, V.H., **Van Buuren**, S., Van der Beek, A.J. & De Vet, H.C. W. (2014). Improving the Individual Work Performance Questionnaire using Rasch analysis. *Journal of applied measurement*, 15(2), 160-175
- Koppenol**, G.V., **Bouwmeester**, S., & **Vermunt**, J.K. (2014). Short term memory development: Differences in serial position curves between age groups and latent classes. *Journal of Experimental Child Psychology*, 126, 138-151. 10.1016/j.jecp.2014.04.002
- Kotz, D., Simpson, C., **Viechtbauer**, W., Van Schayck, O.C.P., West, R. & Sheikh, A. (2014). Cardiovascular and neuropsychiatric safety of varenicline and bupropion compared with nicotine replacement therapy for smoking cessation: Study protocol of a retrospective cohort study using the QResearch general practice database. *BMJ Open*, 4(8), e005281
- Kotz, D., Simpson, C. R., **Viechtbauer**, W., Van Schayck, O.C.P. & Sheikh, A. (2014). Development and validation of a model to predict the 10-year risk of general practitioner-recorded COPD. *NPJ Primary Care Respiratory Medicine*, 24(14011)
- Kramer, I., Simons, C.J.P., Hartmann, J., Menne-Lothmann, C., **Viechtbauer**, W., Peeters, F., Schreuers, K., Van Bemmel, A. L., Myint-Germeyns, I., Delespaul, P., Van Os, J., & Wichers, M. (2014). A therapeutic application of the experience sampling method in the treatment of depression: A randomized controlled trial. *World Psychiatry*, 13(1), 68–77
- Kroese, F.M., Adriaanse, M.A., Vinkers, C.D.W., **Van de Schoot**, R. & de Ridder, D.T.D. (2014). The effectiveness of a proactive coping intervention targeting self-management in diabetes patients. *Psychology & health*, 29(1), 110-125. 10.1080/08870446.2013.841911
- Kruisjen-Terstra, A.J.A., Ketelaar, M., **Boeije**, H., Jongmans, M. J., Gorter, J. W., Verheijden, J., ... Verschuren, O. (2014). Parents' experiences with physical and occupational therapy for their young child with cerebral palsy: A mixed studies review. *Child Care Health and Development*, 40(6), 787-796. 10.1111/cch.12097
- Kruyken, P.M., **Emons**, W.H.M., & **Sijtsma**, K. (2014). Assessing individual change using short tests and questionnaires. *Applied Psychological Measurement*, 38(3), 201-216. 10.1177/0146621613510061
- Krysinska, K., **De Roover**, K., Bouwens, J., **Ceulemans**, E., Corveleyn, J., Dezutter, J., Duriez, B., Hutsebaut, D., & Pollefeyt, D. (2014). Measuring religious attitudes in secularized Western European context: A psychometric analysis of the post-critical belief scale. *International Journal for the Psychology of Religion*, 24, 263-281. doi:10.1080/10508619.2013.879429
- Kuiper**, R.M., Gerhard, D., & Hothorn, L.A. (2014). Identification of the Minimum Effective Dose for Normally Distributed Endpoints Using a Model Selection Approach. *Statistics in Biopharmaceutical Research*, 6(1), 55-66. 10.1080/19466315.2013.847384
- Lataster, T., Verweij, K., **Viechtbauer**, W. & GROUP (2014). Effect of illness expression and liability on familial associations of clinical and subclinical psychosis phenotypes. *Acta Psychiatrica Scandinavica*, 129(1), 44–53

- Light, J.M., Rusby, J.C., Nies, K.M., & **Snijders**, T.A.B. (2014). Antisocial behavior trajectories and social victimization within and between school years in early adolescence. *Journal of Research on Adolescence*, 24, 332-336
- Lo, S.H., Peters, G.J., **Van Breukelen**, G.J.P., Kok, G.J. (2014). Only reasoned action? an interorganizational study of energy-saving behaviors in office buildings. *Energy Efficiency*, 7 (5), 761-775
- Logan, G.D., Van Zandt, T., Verbruggen, F. & **Wagenmakers**, E.-J. (2014). On the ability to inhibit thought and action: General and special theories of an act of control. *Psychological Review*, 121 (1), 66-95
- Lommen, M.J.J., Engelhard, I.M., **Van de Schoot**, R. & Van den Hout, M.A. (2014). Anger: Cause or Consequence of Posttraumatic Stress? A Prospective Study of Dutch Soldiers. *Journal of Traumatic Stress*, 27(2), 200-207. doi:10.1002/jts.21904
- Lommen, M.J.J., **Van de Schoot**, R. & Engelhard, I.M. (2014). The experience of traumatic events disrupts the measurement invariance of a posttraumatic stress scale. *Frontiers in Psychology*, 5, 1-7. [ 5:1304]. doi:10.3389/fpsyg.2014.01304
- López-López, J.A., Marín-Martínez, F., Sánchez-Meca, J., Van den Noortgate, W. & **Viechtbauer**, W. (2014). Estimation of the predictive power of the model in mixed-effects meta-regression: A simulation study. *British Journal of Mathematical and Statistical Psychology*, 67(1), 30-48
- Lüftenegger, M., **Van de Schoot**, R., Schober, B., Finsterwald, M., & Spiel, C. (2014). Promotion of students' mastery goal orientations: does TARGET work?. *Educational psychology*, 34(4), 451-469. doi:10.1080/01443410.2013.814189
- Lugtig**, P. (2014). Panel Attrition: Separating Stayers, Fast Attritors, Gradual Attritors, and Lurkers. *Sociological Methods and Research*, 43(4), 699-723. doi:10.1177/0049124113520305
- Lugtig**, P., & Jäckle, A. (2014). Can i just check...? Effects of edit check questions on measurement error and survey estimates. *Journal of Official Statistics*, 30(1), 45-62. doi:10.2478/jos-2014-0003
- Lugtig**, P. & Lensvelt-Mulders, G.J.L.M. (2014). Evaluating the Effect of Dependent Interviewing on the Quality of Measures of Change. *Field Methods*, 26(2), 172-190. doi:10.1177/1525822X13491860
- Maes P.J., Van Dyck E., Lesaffre M., Leman M. & **Kroonenberg** P.M. (2014), The coupling of action and perception in musical meaning formation. *Music Perception* 32(1): 67-84
- Magis, D., & **De Boeck**, P. (2014). Type I error inflation in DIF identification with Mantel-Haenszel: An explanation and a solution. *Educational and Psychological Measurement*, 74, 713-728. doi:10.1177/0013164413516855
- Marianti, S., **Fox**, J-P., Avetisyan, M., **Veldkamp**, B.P., & **Tijmstra**, J. (2014). Testing for aberrant behavior in response time modeling. *Journal of Educational and Behavioral Statistics*, 39(6), 426-451. doi:10.3102/1076998614559412
- Martens, M.A.W., Janssen, M.J., Ruijsenaars, W.A.J.J.M., **Huisman**, M., & Riksen-Walraven, J.M. (2014). Applying the intervention model for fostering affective involvement with persons who are congenitally deafblind: An effect study. *Journal of Visual Impairment & Blindness*, 108(5), 399-413
- Martens, M.A.W., Janssen, M.J., Ruijsenaars, A.J.J.M., **Huisman**, M., & Riksen-Walraven, J.M. (2014). Intervening on Affective Involvement and Expression of Emotions in an Adult With Congenital Deafblindness. *Communication Disorders Quarterly*, 36(1), 12-20
- Matute, H., **Steegen**, S., & Vadillo, M.A. (2014). Outcome probability modulates anticipatory behavior to signals that are equally reliable. *Adaptive Behavior*, 22, 207-216. doi:10.1177/1059712314527005
- Maus, B., **Van Breukelen**, G.J.P. (2014). POBE: a computer program for optimal design of multi-subject blocked fMRI experiments. *Journal of Statistical Software*, 56 (9)
- Müller, A., Claes, L., **Wilderjans**, T.F., & De Zwaan, M. (2014). Temperament subtypes in treatment seeking obese individuals: A latent profile analysis. *European Eating Disorders Review*, 22, 260-266. doi:10.1002/erv.2294
- Meijering**, J.V., Kern, K, **Tobi**, H. (2014) Identifying the methodological characteristics of European green city rankings. *Ecological Indicators* 2014: 43 132- 142. ISSN 1470-160X, DOI:10.1016/j.ecolind.2014.02.026
- Meijers, J.M.M., **Tan**, F.E.S., Schols, J.M.G.A., Halfens, R.J.G. (2014). Nutritional care; do process and structure indicators influence malnutrition prevalence over time? *Clinical nutrition* 33 (3), 459-465
- Menne-Lothmann, C., **Viechtbauer**, W., Höhn, P., Kasanova, Z., Haller, S.P., Drukker, M., Van Os, J., Wichers, M. & Lau, J. Y. (2014). How to boost positive interpretations? A meta-analysis of the effectiveness of cognitive bias modification for interpretation. *PLOS ONE*, 9(6), e100925
- Moerbeek**, M. (2014). Multilevel modeling in the context of growth modeling. *Annals of nutrition and metabolism*, 65(2-3), 121-128. doi:10.1159/000360485

- Moerbeek, M.** (2014). Sufficient Sample Sizes for Discrete-Time Survival Analysis Mixture Models. *Structural Equation Modeling*, 21(1), 63-67. 10.1080/10705511.2014.856697
- Molenaar, D. & Dolan, C.V.** (2014). Testing systematic genotype by environment interactions using item level data. *Behavior genetics*, 44, 212-231
- Molto-Puigmarti, C., Van Dongen, M.C.J.M., Dagnelie, P.C., Plat, J., Mensink, R.P., **Tan, F.E.S.**, Heinrich, J., Thijs C. (2014). Maternal but not fetal FADS gene variants modify the association between maternal long-chain PUFA intake in pregnancy and birth weight. *The journal of nutrition* 144 (9), 1430-1437
- Moons, T., De Hert, M., Kennis, G., **Viechtbauer, W.**, Van Os, J., Gohlke, H., Claes, S. & Van Winkel, R. (2014). No association between genetic or epigenetic variation in insulin growth factors and antipsychotic-induced metabolic disturbances in a cross-sectional sample. *Pharmacogenomics*, 15(7), 951–962
- Moors, G.B.D., Kieruj, N.D., & **Vermunt, J.K.** (2014). The effect of labeling and numbering of response scales on the likelihood of response bias. *Sociological Methodology*, 44(1), 369-399. 10.1177/0081175013516114
- Morey, R.D., & Wagenmakers, E-J.** (2014). Simple relation between Bayesian order-restricted and point-null hypothesis tests. *Statistics & probability letters*, 92, 121-124. 10.1016/j.spl.2014.05.010
- Morey, R.D., Rouder, J. N., Verhagen, J., & Wagenmakers, E-J.** (2014). Why hypothesis tests are essential for psychological science: A comment on Cumming . *Psychological Science*, 25(6), 1289-1290. 10.1177/0956797614525969
- Morina, N., Wicherts, J. M., Lobbrecht, J., & Priebe, S. (2014). Remission from Post-Traumatic Stress Disorder without treatment: A meta-analysis of long-term outcome studies. *Clinical Psychology Review*, 34, 249-255. 10.1016/j.cpr.2014.03.002
- Mulder, B.C., Poortvliet, P.M., **Lugtig, P.** & De Bruin, M. (2014). Explaining end-users' intentions to use innovative medical and food biotechnology products. *Biotechnology Journal*, 9(8), 997-999. 10.1002/biot.201400224
- Mulder, J.** (2014). Prior adjusted default Bayes factors for testing (in)equality constrained hypotheses. *Computational Statistics and Data Analysis*, 71, 448-463. 10.1016/j.csda.2013.07.017
- Mulder, J.** (2014). Bayes factors for testing inequality constrained hypotheses: Issues with prior specification. *British Journal of Mathematical and Statistical Psychology*, 67(1), 153-171. 10.1111/bmsp.12013
- Munafo, M., Noble, S., Browne, W.J., Brunner, D., Button, K., Ferreira, J., Holmans, P., Langbehn, D., Lewis, G., Lindquist, M., Tilling, K., **Wagenmakers, E.-J.** & Blumenstein, R. (2014). Scientific rigor and the art of motorcycle maintenance. *Nature Biotechnology*, 32, 871-873
- Nikolaus, S., Bode, C., Taal, E., Vonkeman, H.E., **Glas, C.A.W.** & Van de Laar, M.A.F.J. (2014). Acceptance of new technology: a usability test of a computerized adaptive test for fatigue in rheumatoid arthritis. *Human factors*, 1:e4(1). 10.2196/humanfactors.3424
- Nieuwsteeg, A.M., Hartman, E.E., Pouwer, F., **Emons, W.H.M.**, Aanstoot, H.J., Van Mil, E., & Van Bakel, H.J.A. (2014). Qualitative observation instrument to measure the quality of parent-child interactions in young children with type 1 diabetes mellitus. *BMC Pediatrics*, 14, [145]. 10.1186/1471-2431-14-145
- Oberski, D.L.** (2014). lavaan.survey: An R Package for Complex Survey Analysis of Structural Equation Models. *Journal of Statistical Software*, 57(1), 1-27
- Oberski, D.L.** (2014). Evaluating sensitivity of parameters of interest to measurement invariance in latent variable models. *Political Analysis*, 22(1), 45-60. 10.1093/pan/mpt014
- Oude Voshaar, M.A., Ten Klooster, P.M., **Glas, C.A.W.**, Vonkeman, H.E., Taal, E., Krishnan, E., Moens, H.J., Boers, M., Terwee, C., Van Riel, P.L.C.M. & Van de Laar, M.A.F.J. (2014). Calibration of the PROMIS Physical Function Item Bank in Dutch Patients with Rheumatoid Arthritis. *PLOS one*, 9:e92367(3). 10.1371/journal.pone.0092367
- Oude Voshaar, M.A.H., Ten Klooster, P.M., Taal, E., Wolfe, F., Vonkeman, H.E., **Glas, C.A.W.** & Van de Laar, M.A.F.J. (2014). Linking Physical Function Outcomes in Rheumatology: Performance of a Crosswalk for Converting Health Assessment Questionnaire Scores to Short Form 36 Physical Functioning Scale Scores. *Arthritis care and research*, 66(11), 1754-1758. 10.1002/acr.22357
- Oude Voshaar, M.A.H., Ten Klooster, P.M., **Glas, C.A.W.**, Vonkeman, H.E., Krishnan, E. & Van de Laar, M.A.F.J. (2014). Relative performance of commonly used physical function questionnaires in rheumatoid arthritis and a patient-reported outcomes measurement information system computerized adaptive test. *Arthritis & rheumatology*, 66(10), 2900-2908. 10.1002/art.38759
- Ouwelhand, E., Wong, K., **Boeije, H.** & Braam, A. (2014). Revelation, delusion or disillusion: subjective interpretation of religious and spiritual experiences in bipolar disorder. *Mental Health, Religion & Culture*, 17(6), 615-628. 10.1080/13674676.2013.874410

- Pavlopoulos, D.P., Fouarge, D.J.A.G., Muffels, R.J.A., & Vermunt, J.K. (2014). Who benefits from a job change: The dwarfs or the giants? . *European Societies*, 16, 299-319. 10.1080/14616696.2013.798019
- Peek, S.T.M., Wouters, E.J.M., Van Hoof, J., Luijx, K.G., Boeije, H.R., & Vrijhoef, H.J.M. (2014). Factors influencing acceptance of technology for aging in place: A systematic review. *International Journal of Medical Informatics*, 83(4), 235-248. 10.1016/j.ijmedinf.2014.01.004
- Peeters, M., Monshouwer, K., Van de Schoot, R., Janssen, T., Vollebergh, W., & Wiers, R. (2014). Personality and the Prediction of High-Risk Trajectories of Alcohol Use During Adolescence. *Journal of Studies on Alcohol and Drugs*, 75, 790-798. 10.15288/jsad.2014.75.790
- Peters, S., Koolschijn, P.C.M.P., Crone, E.A., Van Duijvenvoorde, A.C.K. & Raijmakers, M.E.J. (2014). Strategies influence neural activity for feedback learning across child and adolescent development. *Neuropsychologia*, 62, 365-374. doi: 10.1016/j.neuropsychologia.2014.07.006
- Peters, S., Braams, B.R., Raijmakers, M.E.J., Koolschijn, P.C.M.P. & Crone, E.A. (2014). The neural coding of feedback learning across child and adolescent development. *Journal of Cognitive Neuroscience*, 26 (8), 1705-1720. doi: 10.1162/jocn\_a\_00594
- Phaf, R.H., Mohr, S., Rotteveel, M., & Wicherts, J.M. (2014). Approach, avoidance, and affect: A meta-analysis. *Frontiers in Psychology*, 5, [378]. 10.3389/fpsyg.2014.00378
- Pishva, E., Drukker, M., Viechtbauer, W., Decoster, J., Collip, D., Van Winkel, R., Wickers, M., Jacobs, N., Thiery, E., Derom, C., Geschwind, N., Van den Hove, D., Lataster, T., Myin-Germeys, I., Van Os, J., Rutten, B.P. & Kenis, G. (2014). Epigenetic genes and emotional reactivity to daily life events: A multi-step gene-environment interaction study. *PLOS ONE*, 9(6), e100935
- Raijmakers, M.E.J., Schmittmann, V.D., & Visser, I. (2014). Costs and benefits of automatization in category learning of ill-defined rules. *Applied Cognitive Psychology*, 69, 1-24. 10.1016/j.cogpsych.2013.12.002
- Raijmakers, M.E.J., Mandell, D.J., Van Es, S.E. & Counihan, M. (2014). Children's strategy use when playing strategic games. *Synthese*, 191 (3), 355-370. doi: 10.1007/s11229-012-0212-x
- Rhemtulla, M., Jia, F., Wu, W. & Little, T.D. (2014). Planned missing designs to optimize the efficiency of latent growth parameter estimates. *International Journal of Behavioral Development*, 38 (5), 423-434
- Rieffe, C., De Bruine, M., De Rooij, M. & Stockmann, L. (2014) Approach and avoidant emotion regulation prevent depressive symptoms in children with an Autism Spectrum Disorder. *International Journal of Developmental Neuroscience*, 39, 37-43
- Rietbergen, C., Groenwold, R., Hoijtink, H., Moons, C., & Klugkist, I. (2014). Expert Elicitation of Study Weights for Bayesian Analysis and Meta-Analysis. *Journal of Mixed Methods Research*. 10.1177/1558689814553850
- Rodríguez, S.D., Barletta, D.A., Wilderjans, T.F., & Bernik, D.L. (2014). Fast and efficient food quality control using electronic noses: Adulteration detection achieved by Unfolded Cluster Analysis coupled with Time-Windows selection. *Food Analytical Methods*, 7, 2042-2050. doi:10.1007/s12161-014-9841-7
- Roeg, D.P.K., Van de Goor, L.A.M., Voogt, M.C.M., Van Assen, M.A.L.M., & Garretsen, H.F.L. (2014). Effects of interreferential care: A community-based care program for persons with severe problems on several life areas. *International Journal of Social Psychiatry*, 60(6), 584-594. 10.1177/0020764013507247
- Roorda, D.L., Koomen, H.M.Y., Spilt, J.L. & Oort, F.J. (2014). De invloed van affectieve leraar-leerlingrelaties op het schools leren van leerlingen: Verschillen tussen basis- en voortgezet onderwijs. *Pedagogische Studiën*, 91 (2), 97-112
- Roosma, F., Van Oorschot, W.J.H., & Gelissen, J.P.T.M. (2014). The weakest link in welfare state legitimacy: European perceptions of moral and administrative failure in the targeting of social benefits. *International Journal of Comparative Sociology*, 55(6), 489-508 . 10.1177/0020715214565932
- Roosma, F., Van Oorschot, W.J.H., & Gelissen, J.P.T.M. (2014). The preferred role and perceived performance of the welfare state: European welfare attitudes from a multidimensional perspective. *Social Science Research: A quarterly journal of social science methodology and quantitative research*, 44, 200-210. 10.1016/j.ssresearch.2013.12.005
- Rousseau, S., Grietens, H., Vanderfaillie, J., Ceulemans, E., Hoppenbrouwers, K., Desoete, A., & Van Leeuwen, K. (2014). The distinction of 'psychosomatogenic family types' based on parents' self reported questionnaire information: A cluster analysis. *Families, Systems, and Health*, 32, 207-218. doi:10.1037/fsh0000031
- Ruzzano, L., Borsboom, D. & Geurts, H.M. (2014). Repetitive Behaviors in Autism and Obsessive Compulsive Disorder: New Perspectives from a Network Analysis. *Journal of Autism and Development Disorders*, 45 (1), 192-202

- Saccenti, E., Tenori, L., Verbruggen, P., **Timmerman**, M.E., Bouwman, J., Van der Greef, J., Smilde, A.K. (2014). Of Monkeys and Men: A Metabolomic Analysis of Static and Dynamic Urinary Metabolic Phenotypes in Two Species. *PLoS ONE*, 9(9)
- Safarkhani**, M., **Jolani**, S., & **Moerbeek**, M. (2014). Optimal number of accrual groups and accrual group sizes in longitudinal trials with discrete-time survival endpoints. *Statistica Neerlandica*, 68(1), 43-60. 10.1111/stan.12022
- Safarkhani**, M. & **Moerbeek**, M. (2014). The influence of a covariate on optimal designs in longitudinal studies with discrete-time survival endpoints. *Computational Statistics and Data Analysis*, 75, 217-226. 10.1016/j.csda.2014.02.012
- Sassen, B., Kok, G., **Schepers**, J., & Vanhees, L. (2014) Supporting healthcare professionals to improve the processes of shared decision making and self- management in a web-based intervention: Randomized Controlled Trial. *Journal of Medical Internet Research*, 16, e211. DOI: 10.2196/jmir.3170
- Scheibehenne, B., Todd, P.M., **Van den Berg**, S.M., Hatemi, P.K., Eaves, L.J. & Vogler, C. (2014). Genetic influences on dietary variety - Results from a twin study. *Appetite*, 77, 133-140. 10.1016/j.appet.2014.03.001
- Scheltens, F., **Hickendorff**, M., & Eggen, T.J.H.M. (2014). Hoofdrekenen met papier: hoe zit dat met leerlingen die cijferen? *Reken-wiskunde onderwijs: onderzoek, ontwikkeling en praktijk*, 33, 128-140
- Scherphof, C. S., Van den Eijnden, R.J.J.M., **Lugtig**, P., Engels, R.C.M.E., & Vollebergh, W.A.M. (2014). Adolescents' use of nicotine replacement therapy for smoking cessation: predictors of compliance trajectories. *Psychopharmacology*, 231(8), 1743-1752. 10.1007/s00213-014-3511-8
- Schmidt, A.F., **Klugkist**, I., Klungel, O. H., Nielen, M., De Boer, A., Hoes, A.W. & Groenwold, R.H.H. (2014). Bayesian methods including nonrandomized study data increased the efficiency of postlaunch RCTs. *Journal of Clinical Epidemiology*. 10.1016/j.jclinepi.2014.11.015
- Schonbeck, Y., Van Dommelen, P., HiraSing, R.A. & **Van Buuren**, S. (2014). Thinness in the era of obesity: trends in children and adolescents in The Netherlands since 1980. *European Journal of Public Health*. 10.1093/eurpub/cku130
- Schouteden, M., **Van Deun**, K., **Wilderjans**, T.F., & **Van Mechelen**, I. (2014). Performing DISCO-SCA to search for distinctive and common information in linked data. *Behavior Research Methods*, 46(2), 576-587. 10.3758/s13428-013-0374-6
- Schuller, A.A. & **Van Buuren**, S. (2014). Estimation of caries experience by multiple imputation and direct standardization. *Caries Research*, 48(2), 91-95. 10.1159/000353140
- Schlutes, M.T., Stefanek, E., **Van de Schoot**, R., Strohmeier, D. & Spiel, C. (2014). Measuring implementation of a school-based violence prevention program: Fidelity and teachers' responsiveness as predictors of proximal outcomes. *Zeitschrift für Psychologie*, 222(1), 49-57. 10.1027/2151-2604/a000165
- Schulz, D.N., Kremers, S.P.J., Vandeleotte, C., Van Adrichem, M.J.G., Schneider, F., **Candel**, M.J.J.M., & de Vries, H. (2014). Effects of a web-based tailored multiple lifestyle intervention for adults: A two-year randomized controlled trial comparing sequential and simultaneous delivery modes. *Journal of Medical Internet Research*, 16, e26.
- Schwabe**, I. & **Van den Berg**, S.M. (2014). Assessing Genotype by Environment Interaction in Case of Heterogeneous Measurement Error. *Behavior genetics*, 44(4), 394-406. 10.1007/s10519-014-9649-7
- Sieh, D.S., **Oort**, F.J., Visser-Meily, J.M.A. & Meijer, A.M. (2014). Mediators for internalizing problems in adolescents of parents with chronic medical condition. *Journal of Developmental and Physical Disabilities*, 26 (1), 67-82. doi: 10.1007/s10882-013-9345-1
- Siemons, L., Ten Klooster, P.M., Vonkeman, H.E., **Glas**, C.A.W. & Van de Laar, M.A.F.J. (2014). Distinct Trajectories of Disease Activity Over the First Year in Early Rheumatoid Arthritis Patients Following a Treat-to-Target Strategy. *Arthritis care & research*, 66(4), 625-630. 10.1002/acr.22175
- Siemons, L., Ten Klooster, P.M., Vonkeman, H.E., Van de Laar, M.A.F.J. & **Glas**, C.A.W. (2014). Further optimization of the reliability of the 28-joint disease activity score in patients with early rheumatoid arthritis. *PLOS one*, 9:e100544(6). 10.1371/journal.pone.0100544
- Siemons, L., Ten Klooster, P.M., Vonkeman, H.E., Van Riel, P.L.C.M., **Glas**, C.A.W. & Van de Laar, M.A.F.J. (2014). How age and sex affect the erythrocyte sedimentation rate and C-reactive protein in early rheumatoid arthritis. *BMC musculoskeletal disorders*, 15:368. 10.1186/1471-2474-15-368
- Siok, A.H.M., In 't Veen J.C.C.M., Chavannes N.H., Van der Molen T., Rutten-Van Molken M.P.M.H., Kerstjens, H.A.M., Asijee G.M., Salome P.L., Holverda S., Dekhuijzen R.P.N., Schuiten D., Van Breukelen G.J.P., Kotz D., Van Schayck O.C.P. (2014). Effectiveness of the Assessment of Burden of Chronic obstructive

- pulmonary disease (ABC) tool: study protocol of a cluster randomised trial in primary and secondary care. *BMC Pulmonary Medicine*, 14, 131.
- Sleegers, P.J.C., Thoonen, E.E.J., Oort, F.J. & Peetsma, T.T.D. (2014). Changing classroom practices: the role of school-wide capacity for sustainable improvement. *Journal of Educational Administration*, 52 (5), 617-652. doi: 10.1108/JEA-11-2013-0126
- Smits, I.A.M., Timmerman, M.E., Barelds, D.P.H., & Meijer, R.R. (2014). The Dutch Symptom Checklist-90-Revised: Is the Use of the Subscales Justified?. *European Journal of Psychological Assessment*, 1-9. 10.1027/1015-5759/a000233
- Sonnenschein-van der Voort, A., Arends, L.R., De Jongste, J.C., Annesi-Maesano, I., Arshad, S.H., Barros, H., ... Duijts, L. (2014). Preterm birth, infant weight gain, and childhood asthma risk: A meta-analysis of 147,000 European children. *Journal of Allergy and Clinical Immunology*, 133, 1317-1329
- Spinhoven, P., Drost, J., De Rooij, M., Van Hemert, A.M. & Penninx, B.W. (2014). A longitudinal study of experiential avoidance in emotional disorders. *Behavior Therapy*, 45, 840-850
- Spinhoven, P., Elzinga, B.M., Van Hemert, A.M., De Rooij, M. & Penninx, B.W. (2014). A longitudinal study of facets of extraversion in depression and social anxiety. *Personality and Individual Differences*, 71, 39-44
- Spinhoven, P., Penninx, B.W., Hickendorff, M., Van Hemert, A.M., Bernstein, D.P. & Elzinga, B.M. (2014). Childhood Trauma Questionnaire: Measurement invariance, concurrent and external validity across emotional disorders. *Psychological Assessment*, 26, 717-729
- Spinhoven, P., Penninx, B.W., Van Hemert, A.M., De Rooij, M. & Elzinga, B.M. (2014). Comorbidity of PTSD in anxiety and depressive disorders: prevalence and shared risk factors. *Child Abuse & Neglect*, 38, 1320-1330
- Spinhoven, P., Penelo, E., De Rooij, M., Penninx, B.W. & Ormel, J. (2014). Reciprocal effects of stable and temporary components of neuroticism and affective disorders: Results of a longitudinal cohort study. *Psychological Medicine*, 44, 337-348
- Stams, G.J.J.M., Hoeve, M., Jak, S., & Meeus, W. (2014). Hoeve, M., Stams, G. J., Jak, S., & Meeus, W. (2014). Financial Problems and Delinquency in adolescents and Young Adults: A Six-Year Three-Wave Study. *Crime and Delinquency*. 0011128714541190
- Stanczyk, N., Bolman, C., Van Adrichem, M., Candel, M.J.J.M., Muris, J., De Vries, H. (2014). Comparison of Text and Video Computer-Tailored Interventions for Smoking Cessation: Randomized Controlled Trial . *Journal of Medical Internet Research*, 16, e69.
- Stanczyk, N.E., Bolman, C., Smit, E.S., Candel, M.J.J.M., Muris, J.W.M., De Vries, H. (2014). How to encourage smokers to participate in web-based computer-tailored smoking cessation programs: a comparison of different recruitment strategies. *Health Education Research*, 29, 23-40.
- Steegen, S., Dewitte, L., Tuerlinckx, F., & Vanpaemel, W. (2014). Measuring the crowd within again: A pre-registered replication study. *Frontiers in Psychology*, 5, 786, 1-8. doi:10.3389/fpsyg.2014.00786
- Steenis, L.J.P., Verhoeven, M., Hessen, D.J. & Van Baar, A.L. (2014). First steps in developing the Dutch version of the Bayley III: Is the original Bayley III and its item sequence also adequate for Dutch children?. *European Journal of Developmental Psychology*, 11(4), 494-511. 10.1080/17405629.2013.869207
- Stefanek, E., Strohmeier, D. & Van de Schoot, R. (2014). Individual and class room predictors of same-cultural friendship preferences in multicultural schools. *International Journal of Behavioral Development*. 10.1177/0165025414538556
- Stegeman, A.W. (2014). Finding the limit of diverging components in three-way Candecomp/Parafac: A demonstration of its practical merits. *Computational Statistics and Data Analysis*, 75, 203-216. 10.1016/j.csda.2014.02.010
- Stegeman, A.W., & Lam, T.T.T. (2014). Three-Mode Factor Analysis by Means of Candecomp/Parafac. *Psychometrika*, 79(3), 426-443
- Stein, M.L., Van Steenbergen, J.E., Buskens, V., Van der Heijden, P.G.M., Chanyasanha, C., Tipayamongkhoolgul, M., ... Kretzschmar, M.E.E. (2014). Comparison of contact patterns relevant for transmission of respiratory pathogens in Thailand and The Netherlands using respondent-driven sampling. *PLoS ONE* , 9(11), [e11371]. 10.1371/journal.pone.0113711
- Stein, M.L., Van Steenbergen, J.E., Chanyasanha, C., Tipayamongkhoolgul, M., Buskens, V., Van der Heijden, P.G.M., ... Kretzschmar, M. E. E. (2014). Online respondent-driven sampling for studying contact patterns relevant for the spread of close-contact pathogens: A pilot study in Thailand. *PLoS ONE* , 9(1), [e85256]. 10.1371/journal.pone.0085256

- Steingroever, H., Wetzel, R. & **Wagenmakers**, E.-J. (2014). Absolute performance of reinforcement-learning models for the Iowa Gambling Task. *Decision*, 1 (3), 161-183
- Steingroever, H. & **Wagenmakers**, E.-J. (2014). Performance and awareness in the Iowa Gambling Task. Comment on "Unconscious influences on decision making: A critical review". *Behavioral and Brain Sciences*, 37 (1), 41-42
- Stevenson, C.E., Bergwerff, C.E., **Heiser**, W.J. & W.C.M. Resing (2014). Working memory and dynamic measures of analogical reasoning as predictors of children's math and reading achievement. *Infant and Child Development*, 23, 51-66
- Straat, J.H., **Van der Ark**, L.A., & **Sijtsma**, K. (2014). Minimum sample size requirements for Mokken scale analysis. *Educational and Psychological Measurement*, 74, 809-822. 10.1177/0013164414529793
- Stroebe, M., Stroebe, W., **Van de Schoot**, R., Schut, H., Abakoumkin, G. & Li, J. (2014). Guilt in Bereavement: The Role of Self-Blame and Regret in Coping with Loss. *PLoS ONE*, 9(5), [e96606]. 10.1371/journal.pone.0096606
- Stubbe, J.H., Chorus, A.M.J., Frank, L.E., De Hon, O. & **Van der Heijden**, P.G.M. (2014). Prevalence of use of performance enhancing drugs by fitness centre members. *Drug testing and analysis*, 6(5), 434-438. 10.1002/dta.1525
- Tamboer, P., Vorst, H.C.M. & **Oort**, F.J. (2014). Identifying dyslexia in adults: an iterative method using the predictive value of item scores and self-report questions. *Annals of Dyslexia*, 64 (1), 34-56. doi: 10.1007/s11881-013-0085-9
- Tarakci, M., Ates, N.Y., Porck, J.P., Van Knippenberg, D., **Groenen**, P.J.F. & De Haas, M. (2014). Strategic Consensus Mapping: A New Method for Testing and Visualizing Strategic Consensus Within and Between Teams. *Strategic Management Journal*, 35 (7), 1053-1069. doi: http://dx.doi.org/10.1002/smj.2151
- Tay, L., Woo, S.E., & **Vermunt**, J.K. (2014). A conceptual and methodological framework for psychometric isomorphism:: Validation of multilevel construct measures. *Organizational Research Methods*, 17, 77-106. 10.1177/1094428113517008
- Tendeiro**, J.N., & **Meijer**, R.R. (2014). The usefulness of simple nonparametric statistics. *Journal of Educational Measurement*, 51(3), 239-259. 10.1111/jedm.12046
- Ter Schure, S., Mandell, D.J., Escudero, P., **Raijmakers**, M.E.J. & Johnson, S.P. (2014). Learning Stimulus-Location Associations in 8- and 11-Month-Old Infants: Multimodal Versus Unimodal Information. *Infancy*, 19 (5), 476-495. doi: 10.1111/infra.12057
- Terpstra, M.J., Kuijlen, A.A.A., & **Sijtsma**, K. (2014). How to develop a customer satisfaction scale with optimal construct validity. *Quality & Quantity*, 48, 2719-2737. 10.1007/s11135-013-9920-7
- Tobi**, H. (2014) Measurement in interdisciplinary research: The contributions of widely-defined measurement and portfolio representations. *Measurement 2014*, 48:228-231. DOI 10.1016/j.measurement.2013.11.013
- Toepoel**, V., & **Lugtig**, P. (2014). What Happens if You Offer a Mobile Option to Your Web Panel?: Evidence From a Probability-Based Panel of Internet Users. *Social Science Computer Review*, 32(4), 544-560. 10.1177/0894439313510482
- Tollenaar, N., Van der Laan, A.M. & **Van der Heijden**, P.G.M. (2014). Effectiveness of a prolonged incarceration and rehabilitation measure for high-frequency offenders. *Journal of Experimental Criminology*, 10(1), 29-58. 10.1007/s11292-013-9179-y
- Tooton, A., Hall, R.A.S., Hoffenkamp, H.N., **Braeken**, J., Vingerhoets, A.J.J.M., & Van Bakel, A.M. (2014). Maternal and paternal infant representations: A comparison between parents of term and preterm infants. *Infant Behavior and Development: An international and multidisciplinary journal*, 37(3), 366-379. 10.1016/j.infbeh.2014.05.004
- Topper, M., **Molenaar**, D., Emmelkamp, P. & Ehring, T. (2014). Are rumination and worry two sides of the same coin? A structural equation modelling approach. *Journal of Experimental Psychopathology*, 5 (3), 363-381
- Turner, B., Claes, L., **Wilderjans**, T.F., Pauwels, E., Dierckx, E., Chapman, A.L., & Schoevaerts, K. (2014). Personality profiles in eating disorders: Further evidence of the clinical utility of examining subtypes based on temperament. *Psychiatry Research*, 219, 157-165. doi:10.1016/j.psychres.2014.04.036
- Van Aerden, K., **Moors**, G.B.D., Levecque, K., & Vanroelen, C. (2014). Measuring employment arrangements in the European labour force: A typological approach. *Social Indicators Research*, 116(3), 771-791. 10.1007/s11205-013-0312-0
- Van Assen**, M.A.L.M., **Van Aert**, R.C.M., **Nuijten**, M.B., & **Wicherts**, J.M. (2014). Why publishing everything is more effective than selective publishing of statistically significant results. *PLoS one*, 9(1), [e84896]. 10.1371/journal.pone.0084896

- Van Bers, B.M.C.W., **Visser, I.** & **Raijmakers, M.** (2014). Preschoolers can form abstract rule representations regardless of cognitive flexibility. *Journal of Experimental Child Psychology*, 124, 50-66. doi: 10.1016/j.jecp.2014.01.017
- Van Bers, B.M.C.W., **Visser, I.** & **Raijmakers, M.** (2014). Preschoolers learn to switch with causally related feedback. *Journal of Experimental Child Psychology*, 126, 91-102. doi: 10.1016/j.jecp.2014.03.007
- Van Borkulo, C.D.**, **Borsboom, D.**, **Epskamp, S.**, Blanken, T.F., Boschloo, L., Schoevers, R.A. & **Waldorp, L.J.** (2014). A new method for constructing networks from binary data. *Scientific Reports*, 4:5918
- Van Buuren, S.** (2014). Curve matching: a data-driven technique to improve individual prediction of childhood growth. *Annals of nutrition and metabolism*, 65(2-3), 227-33. 10.1159/000365398
- Van Buuren, S.** (2014). Growth charts of human development. *Statistical methods in medical research*, 23(4), 346-368. 10.1177/0962280212473300
- van Buuren, S.**, Hulzebos, H.J., Valkenert, K., Lindeman, E. & Van Meeteren, N.L.U. (2014). Reference chart of inspiratory muscle strength: a new tool to monitor the effect of pre-operative training. *Physical Therapy*, 100(2), 128-133. 10.1016/j.physio.2013.08.007
- van Buuren, S.** & Perenboom, R. (2014). The fountain of age: A remarkable 3D shape that portrays health and functional differences among the European elderly. *International journal of environmental research and public health*, 11(4), 4078-4090. 10.3390/ijerph110404078
- Van de Leempt, I. A., Wichers, M., **Cramer, A.O.J.**, **Borsboom, D.**, **Tuerlinckx, F.**, Kuppens, P., Van Nes, E.H., **Viechtbauer, W.**, Giltay, E. J., Aggen, S.H., Derom, C., Jacobs, N., Kendler, K.S., **Van der Maas, H.L.J.**, Neale, M. C., Peeters, F., Thiery, E., Zachar, P., & Scheffer, M. (2014). Critical slowing down as early warning for the onset and termination of depression. *Proceedings of the National Academy of Sciences*, 111, 87-92. doi:10.1073/pnas.1312114110
- Van de Pol, J., Volman, M., **Oort, F.** & Beishuizen, J. (2014). Teacher scaffolding in small-group work: an intervention study. *Journal of the Learning Sciences*, 23 (4), 600-650. doi: 10.1080/10508406.2013.805300
- Van de Schoot, R.**, **Kaplan, D.**, Denissen, J., Asendorpf, J. B., Neyer, F. J., & Van Aken, M.A.G. (2014). A Gentle Introduction to Bayesian Analysis: Applications to Developmental Research. *Child Development*, 85(3), 842-860. 10.1111/cdev.12169
- Van de Schoot, R.**, & Depaoli, S. (2014). Bayesian analyses: where to start and what to report. *The European Health Psychologist*, 16(2), 75-84
- Van de Weijer-Bergsma, E., Langenberg, G., Brandsma, R., **Oort, F.J.** & Bögels, S.M. (2014). The effectiveness of a school-based mindfulness training as a program to prevent stress in elementary school children. *Mindfulness*, 5 (3), 238-248. doi: 10.1007/s12671-012-0171-9
- Van den Berg, S.**, Moor, M.H.M., McGue, M., Petterson, E., Terracciano, A., Verweij, K.J.H., Amin, N., Derringer, J., Esko, T., Van Grootheest, G., Hansell, N.K., Huffman, J., Konte, B., Lahti, J., Luciano, M., Matteson, L.K., Viktorin, A., Wouda, J., Agrawal, A., Allik, J., Beirut, L., Broms, U., Campbell, H., Smith, G.D., Eriksson, J.G., Ferrucci, L., Franke, B., **Fox, J.P.**, e.a. (2014). Harmonization of Neuroticism and Extraversion phenotypes across inventories and cohorts in the Genetics of Personality Consortium: an application of Item Response Theory. *Behavior genetics*, 44(4), 295-313. 10.1007/s10519-014-9654-x
- Van den Bos, E., **De Rooij, M.**, Miers, A.C., Bokhorst, C.L. & Westenberg, P.M. (2014) Adolescents' Increasing Stress Response to Social-Evaluation: Pubertal Effects on Cortisol and alpha-Amylaseduring Public Speaking. *Child Development.*, 85, 220-236
- Van den Hout, M., Gangemi, A., Mancini, F., Engelhard, I. M., Rijkeboer, M.M., Van Dams, M., & **Klugkist, I.** (2014). Behavior as information about threat in anxiety disorders: A comparison of patients with anxiety disorders and non-anxious controls. *Journal of Behavior Therapy and Experimental Psychiatry*, 45(4), 489-495. 10.1016/j.jbtep.2014.07.002
- Van Denderen, M., De Keijser, J., Gerlsma, C., **Huisman, M.**, & Boelen, P.A. (2014). Revenge and psychological adjustment after homicidal loss. *Aggressive Behavior*, 40(6), 504-511
- Van der Kleij, F.M., **Eggen, T.J.H.M.** & Engelen, R.J.H. (2014). Towards valid score reports in the Computer Program LOVS: A redesign study. *Studies in educational evaluation*, 43, 24-39. 10.1016/j.stueduc.2014.04.004
- Van der Maas, H.L.J.**, Kan, K.-J. & **Borsboom, D.** (2014). Intelligence is what the intelligence test measures. Seriously. *Journal of Intelligence*, 2 (1), 12-15
- Van der Palm, D.W.**, **Van der Ark, L.A.**, & **Sijtsma, K.** (2014). A flexible latent class approach to estimating test-score reliability. *Journal of Educational Measurement*, 51(4), 339-357. 10.1111/jedm.12053

- Van Dommelen, P., De Kroon, M.L.A., Cameron, N., Schoöbeck, Y. & **Van Buuren**, S. (2014). The impact of height during childhood on the national prevalence rates of overweight. *PLoS ONE*, 9(1), [e85769]. 10.1371/journal.pone.0085769
- Van Dommelen, P., Schönbeck, Y., **Van Buuren**, S., & HiraSing, R.A. (2014). Trends in a life threatening condition: Morbid obesity in Dutch, Turkish and Moroccan children in the Netherlands. *PLoS ONE*, 9(4), [e94299]. 10.1371/journal.pone.0094299
- Van Dommelen, P., & **Van Buuren**, S. (2014). Methods to obtain referral criteria in growth monitoring. *Statistical methods in medical research*, 23(4), 369-389. 10.1177/0962280212473301
- Van Duijvenvoorde, A.C.K., **Huizenga**, H.M. & **Jansen**, B.R.J. (2014). What is and what could have been: experiencing regret and relief across childhood. *Cognition & Emotion*, 28 (5), 926-935. doi: 10.1080/02699931.2013.861800
- Van Ginkel** J.R. & **Kroonenberg** P.M. (2014), Analysis of variance of multiply imputed data. *Multivariate Behavioral Research* 49(1): 78-91. doi:10.1080/00273171.2013.855890
- Van Ginkel** J.R. & **Kroonenberg** P.M. (2014), Using generalized procrustes analysis for multiple imputation in principal component analysis. *Journal of Classification* 31(2): 242-269. doi: 10.1007/s00357-014-9154-y
- Van Ginkel** J.R., **Kroonenberg** P.M. & **Kiers** H.A.L. (2014), Missing data in principal component analysis of questionnaire data: A comparison of methods. *Journal of Statistical Computation and Simulation* 84(11): 2298-2315. doi:10.1080/00949655.2013.788654
- Van Groen**, M.M., **Eggen**, T.J.H.M., & **Veldkamp**, B.P. (2014). Item selection methods based on multiple objective approaches for classification of respondents into multiple levels. *Applied Psychological Measurement*. 38 , 187–200. doi: 10.1177/0146621613509723
- Van Iterson, L., **Zijlstra**, B.J.H., Augustijn, P.B., Van der Leij, A. & De Jong, P.F. (2014). Duration of epilepsy and cognitive development in children: A longitudinal study. *Neuropsychology*, 28 (2), 212-221. doi: 10.1037/neu0000034
- Van Maanen, L., **De Jong**, R. & Van Rijn, H. (2014). How to assess the existence of competing strategies in cognitive tasks: a primer on the fixed-point property. *PLoS One*, 9 (8), e106113
- Van Maanen, A., Dewald-Kaufmann, J.F., **Oort**, F.J., De Bruin, E.J., Smits, M.G., Short, M.A., Gradisar, M., Kerkhof, G.A. & Meijer, A.M. (2014). Screening for sleep reduction in adolescents through self-report: Development and validation of the sleep reduction screening questionnaire (SRSQ). *Child & Youth Care Forum*, 43 (5), 607-619. doi: 10.1007/s10566-014-9256-z
- Van Nierop, M., Lataster, T., Smeets, F., Gunther, N., Van Zelst, C., De Graaf, R., Ten Have, M., Van Dorsselaer, S., Bak, M., Myint-Germeys, I., **Viechtbauer**, W., Van Os, J. & Van Winkel, R. (2014). Psychopathological mechanisms linking childhood traumatic experiences to risk of psychotic symptoms: Analysis of a large, representative population-based sample. *Schizophrenia Bulletin*, 40(S2), S123–S130
- Van Oudenhoven, J.P., de Raad, B., **Timmerman**, M.E., Askevis-Leherpeux, F., Boski, P., Carmona, C., Yik, M. (2014). Are virtues national, supranational, or universal?. *SpringerPlus*, 3, 223. 10.1186/2193-1801-3-223
- Van Ravenzwaaij, D., Boekel, W., Forstmann, B., Ratcliff, R. & **Wagenmakers**, E.-J. (2014). Action video games do not improve the speed of information processing in simple perceptual tasks. *Journal of Experimental Psychology. General*, 143 (5), 1794-1805
- Van Roon, A.H., Van Dam, L., **Arends**, L.R., Zauber, A.G., Young, G.P., Van Ballegooijen, M., . . . Kuipers, E.J. (2014). A systematic review on diagnostic test accuracy of fecal immunochemical tests for colorectal cancer screening. *Gastroenterology*, 146, S409–S410
- Van Schie, S., & **Moerbeek**, M. (2014). Re-estimating sample size in cluster randomized trials with active recruitment within clusters. *Statistics in Medicine*, 33(19), 3253-3268. 10.1002/sim.6172
- Van Wesel, F., Alisic, E. & **Boeije**, H.R. (2014). Using qualitative evidence to optimize child PTSD treatment guidelines. *Psychological trauma: theory, research, practice, and policy*, 6(5), 546-554. <http://dx.doi.org/10.1037/a0035172>
- Veenstra, W.S., **Huisman**, M., & Miller, N. (2014). Age of acquisition and naming performance in Frisian-Dutch bilingual speakers with dementia. *Dementia & Neuropsychologia*, 8(3), 249-259
- Veldkamp**, C.L.S., **Nuijten**, M.B., Dominguez Alvarez, L., **Van Assen**, M.A.L.M., & **Wicherts**, J.M. (2014). Statistical reporting errors and collaboration on statistical analyses in psychological science. *PLoS one*, 9(12), [e114876]. 10.1371/journal.pone.0114876
- Vera, J.F., **De Rooij**, M., & Heiser, W.J. (2014), A latent class distance association model for cross-classified data with a categorical response variable. *British Journal of Mathematical and Statistical Psychology*, 67, 514-540

- Verdam, M.G.E. & Oort, F.J.** (2014). Measurement bias detection with Kronecker product restricted models for multivariate longitudinal data: an illustration with health-related quality of life data from thirteen measurement occasions. *Frontiers in Psychology*, 5, 1022. doi: 10.3389/fpsyg.2014.01022
- Verdam, M.G.E., Oort, F.J. & Sprangers, M.A.G.** (2014). Significance, truth and proof of p values: reminders about common misconceptions regarding null hypothesis significance testing. *Quality of Life Research*, 23 (1), 5-7. doi: 10.1007/s11136-013-0437-2
- Verdonck, S., & Tuerlinckx, F.** (2014). The Ising Decision Maker: A binary stochastic network for choice response time. *Psychological Review*, 121, 422-462. doi:10.1037/a0037012
- Verhagen, A.J. & Wagenmakers, E.-J.** (2014). Bayesian tests to quantify the result of a replication attempt. *Journal of Experimental Psychology. General*, 143 (4), 1457-1475
- Verhulp, E.E., Stevens, G.W.J.M., Van de Schoot, R., & Vollebergh, W.A.M.** (2014). Using the Youth Self-Report internalizing syndrome scales among immigrant adolescents: Testing measurement invariance across groups and over time. *European Journal of Developmental Psychology*, 11(1), 102-110. 10.1080/17405629.2013.806263
- Viechtbauer, W., Kotz, D., Spigt, M., Arts, I.C. & Crutzen, R.** (2014). Response to Keriel-Gascou et al.: Higher efficiency and other alleged advantages are not inherent to the stepped wedge design. *Journal of Clinical Epidemiology*, 67(7), 834-836
- Vink, G., Frank, L.E., Pannekoek, J. & Van Buuren, S.** (2014). Predictive mean matching imputation of semicontinuous variables. *Statistica Neerlandica*, 68(1), 61-90. 10.1111/stan.12023
- Visser, I. & Speekenbrink, M.** (2014). Comments on: Latent Markov models: a review of a general framework for the analysis longitudinal data with covariates. *Test*, 23 (3), 478-483. doi: 10.1007/s11749- 014-0389-z
- Visser, L., Ruiter, S.A.J., van der Meulen, B. F., Ruijssenaars, W.A.J.J.M., & Timmerman, M.E.** (2014). Accommodating the Bayley-III for motor and/or visual impairment: A comparative pilot study. *Pediatric physical therapy : the official publication of the Section on Pediatrics of the American Physical Therapy Association*, 26(1), 57-67.
- Voorspoels, W., Bartlema, A., & Vanpaemel, W.** (2014). Can race really be erased? A pre-registered replication study. *Frontiers in Psychology*, 5, 1035, 1-7. doi:10.3389/fpsyg.2014.01035
- Vreeswijk, C.M.J.M., Maas, A.J.B.M., Rijk, C.H.A.M., Braeken, J., & Van Bakel, A.M.** (2014). Stability of fathers' representations of their infants during the transition to parenthood. *Attachment & Human Development*, 16(3), 292-306. 10.1080/14616734.2014.900095
- Wagenmakers, E.-J. & Forstmann, B.U.** (2014). Rewarding high-power replication research. *Cortex*, 51, 105-106
- Warrens, M.J.** (2014). Corrected Zegers-ten Berge coefficients are special cases of Cohen's weighted kappa. *Journal of Classification* 31:179-193.
- Warrens, M.J.** (2014). Power weighted versions of Bennett, Alpert and Goldstein's S. *Journal of Mathematics*. ID 231909
- Warrens, M.J.** (2014). On Cronbach's alpha as the mean of all possible k-split alphas. *Advances in Statistics*. ID 742863
- Warrens, M.J.** (2014). On agreement tables with constant kappa values. *Advances in Statistics*. ID 853090
- Warrens, M.J.** (2014). New interpretations of Cohen's kappa. *Journal of Mathematics*. ID 203907
- Warrens, M.J.** (2014). On marginal dependencies of the 2x2 kappa. *Advances in Statistics*. ID 759527
- Wanders, R.B.K., Wardenaar, K.J., Kessler, R.C., Penninx, B.W.J.H., Meijer, R.R., & De Jonge, P.** (2014). Differential reporting of depressive symptoms across distinct clinical subpopulations: What DIFFERENCE does it make?. *Journal of Psychosomatic Research*, 78(2), 130-136. 10.1016/j.jpsychores.2014.08.014
- Watson, R., Wang, W., Thompson, D.R., & Meijer, R.R.** (2014). Investigating invariant item ordering in the Mental Health Inventory: An illustration of the use of different methods. *Personality and Individual Differences*, 66, 74-78. 10.1016/j.paid.2014.03.017
- Wetzelaer, P., Farrell, J., Evers, S.M.A.A., Jacob, G., Lee, C.W., Brand, O., Van Breukelen, G.J.P., Fassbinder, E., Fretwell, H., Harper, R.P., Lavender, A., Lockwood, G., Malogiannis, I.A., Schweiger, U., Startup, H., Stevenson, T., Zarbock, G., Arntz, A.** (2014). Design of an international multicentre RCT on group schema therapy for borderline personality disorder. *BMC Psychiatry*, 14, 319
- Wichers, M., Borsboom, D., Tuerlinckx, F., Kuppens, P., Viechtbauer, W., Van de Leempt, I.A., Kendler, K.S., & Scheffer, M.** (2014). Reply to Bos and De Jonge: Between-subject data do provide first empirical support for critical slowing down in depression. *Proceedings of the National Academy of Sciences*, 111, E879, 1-1. doi:10.1073/pnas.1323835111

- Wicherts, J.M., & Bakker, M.** (2014). Broken windows, mediocre methods, and substandard statistics. *Group Processes & Intergroup Relations*, 17, 388-403. 10.1177/1368430213502557
- Wiech, K., Vandekerckhove, J., Zaman, J., Tuerlinckx, F., Vlaeyen, J.W.S., & Tracey, I.** (2014). Influence of prior information on pain involves biased perceptual decision-making. *Current Biology*, 24, 679-681. doi:10.1016/j.cub.2014.06.022
- Wilderjans, T.F., Lambrechts, G., Maes, B., & Ceulemans, E.** (2014). Revealing interdyad differences in naturally occurring staff reactions to challenging behaviour of clients with severe or profound intellectual disabilities by means of Clusterwise Hierarchical Classes Analysis (HICLAS). *Journal of Intellectual Disability Research*, 58, 1045-1059. doi:10.1111/jir.12076
- Winkel, J., Keuken, M.C., Van Maanen, L., Wagenmakers, E.J. & Forstmann, B.U.** (2014). Early evidence affects later decisions: Why evidence accumulation is required to explain response time data. *Psychonomic Bulletin & Review*, 21 (3), 777-784
- Wismeijer, A.A.J., Van Assen, M.A.L.M., & Bekker, M.H.J.** (2014). The relations between secrecy, rejection sensitivity and autonomy-connectedness. *The Journal of General Psychology*, 141(2), 65-79. 10.1080/00221309.2013.862200
- Wissink, I.B., Deković, M., Stams, G.J., Asscher, J.J., Rutten, E. & Zijlstra, B.J.H.** (2014). Moral orientation and relationships in school and adolescent pro- and antisocial behaviors: a multi-level study. *The Journal of School Nursing*, 30 (3), 216-225. doi: 10.1177/1059840513497402
- Zeguers, M.H.T., Snellings, P., Huizenga, H.M. & Van der Molen, M.W.** (2014). Time course analyses of orthographic and phonological priming effects during word recognition in a transparent orthography. *Quarterly Journal of Experimental Psychology. A, Human Experimental Psychology*, 67 (10), 1925-1943. doi: 10.1080/17470218.2013.879192
- Zhang, S., Lee, M.D., Vandekerckhove, J., Maris, G. & Wagenmakers, E.-J.** (2014). Time-varying boundaries for diffusion models of decision making and response time. *Frontiers in Psychology*, 5:1364
- Zur Wiesch, P.A., Kouyos, R., Abel, S., Viechtbauer, W. & Bonhoeffer, S.** (2014). Cycling empirical antibiotic therapy in hospitals: Meta-analysis and models. *PLOS Pathogens*, 10(6), e1004225

## 6.1.4 Non refereed article in a journal

- Lo, S.H., Peters, G.J., Van Breukelen, G.J.P., Kok, G.J.** (2014). Teleconference use among office workers: an interorganizational comparison of an extended theory of planned behavior model. *Administrative Sciences*, 41, 51-70.
- Meeus, W., Van de Schoot, R., Keijsers, L., Schwartz, S.J., & Branje, S.** (2014). Erratum to: On the Progression and Stability of Adolescent Identity Formation: A Five-Wave Longitudinal Study in Early-to-Middle and Middle-to-Late Adolescence. *Child Development*, 85(3), 1320. 10.1111/cdev.12256
- Meeus, W., Van de Schoot, R., Klimstra, T., & Branje, S.** (2014). Erratum to: Personality Types in Adolescence: Change and Stability and Links With Adjustment and Relationships: A Five-Wave Longitudinal Study. *Developmental Psychology*, 50(5), 1563. 10.1037/a0036422
- Van de Schoot, R., Verhoeven, M., & Hoijtink, H.** (2014). Corrigendum to: Bayesian evaluation of informative hypotheses in SEM using Mplus. *European Journal of Developmental Psychology*, 11(3), 396. 10.1080/17405629.2014.885645
- Vink, G., & Buuren, S.V.** (2014). Pooling multiple imputations when the sample happens to be the population. *arXiv:1409.8542*

## 6.1.5 Book

- Boeije, H.** (2014). *Analyseren in kwalitatief onderzoek*. (Tweede druk ed.) Den Haag: Boom Lemma

## 6.1.6 Book section

- Alonso, A.A., Molenberghs, G., **Van Breukelen**, G.J.P. (2014). Statistical validation of surrogate markers in clinical trials. In: C Van Montfort, J Oud, G Wendumagegn (eds.). *Developments in Statistical Evaluation of Clinical Trials*. Springer (chapter 13)
- Bastiaens, T., Claes, L., **Ceulemans**, E., Vanwalleghem, D., & De Hert, M. (2014). DAPP-BQ personality prototypes in a general psychiatric inpatient population: Associations with symptom expression and treatment indicators. In M. C. Olmstead (Ed.), *Psychology of impulsivity: new research* (pp. 33-48). New York: Nova Science
- Chow, S.-M., Witkiewitz, K., **Grasman**, R., Hutton, R.S. & Maisto, S.A. (2014). A regime-switching longitudinal model of alcohol lapse-relapse. In P.C.M. Molenaar, R.M. Lerner & K.M. Newell (Eds.), *Handbook of developmental systems theory & methodology* (pp. 397-424). New York: Guilford Press
- Fayant, M-P., Muller, D., **Hartgerink**, C.H.J., & Lantian, A. (2014). Is ostracism by a despised outgroup really hurtful?. In T.R. Levine (Ed.), *Encyclopedia of deception*. (pp. 1-6). London: Sage
- Glas**, C.A.W. (2014). Adaptive Mastery Testing Using a Multidimensional IRT Model. In Duanli Yan, Alina.A. von Davier & Charles Lewis (Eds.), *Computerized Multistage Testing: Theory and Applications* (Chapman & Hall/CRC Statistics in the Social and Behavioral Sciences) (pp. 205-218). Chapman and Hall/CRC
- Hox**, J., & Wijngaards, L. (2014). The multilevel regression model. In H. Best, & C. Wolf (Eds.), *Sage Handbook of Regression Analysis and Causal Inference*. [Chapter 7] Los Angeles: Sage. 10.4135/9781446288146
- Huisman**, M. (2014). Imputation of missing network data. In R. Alhajj, & J. Rokne (Eds.), *Encyclopedia of Social Network Analysis and Mining*. (Vol. 2, pp. 707-715). Heidelberg: Springer-Verlag
- Jolani, S., & Van Buuren, S. (2014). *A new way to multiply impute nonignorable missing outcomes*. Abstract from JSM, Boston, MA, United States
- Kankaras, M., & Vermunt, J.K. (2014). Simultaneous latent class analysis across groups. In A. C. Michalos (Ed.), *Encyclopedia of quality of life and well-being research*. (pp. 5969-5974). Dordrecht: Springer
- Kroonenberg, P.M. (2014), Foreword. In: Beh E.J., Lombardo R. (Eds.) *Correspondence Analysis: Theory, Practice and New Strategies*. Chichester, UK: Wiley
- Kroonenberg, P.M. (2014), History of multiway component analysis and three-way correspondence analysis. In: Blasius J., Greenacre M.J. (Eds.) *Visualization and Verbalization of Data*: Chapman & Hall/CRC Press. 77-94
- Linehan, C., Naaldenberg, N., Van Schrojenstein Lantman de Valk, H. & **Tobi**, H. (2014) Editorial: Health Inequity: from Evidence to Action. Jarid , volume 28, issue 1, pages 1-2. DOI: 10.1111/jar.12136
- Lugtig, P., Das, M. & Scherpenzeel, A. (2014). Nonresponse and attrition in a probability-based online panel for the general population. In M. Callegaro, P. Lavrakas, J. Krosnick, R. Baker, J. Bethlehem, & A. Goritz (Eds.), *Online panel research: a data quality perspective*. (pp. 135-153). New York: Wiley
- Matteucci, M. & **Veldkamp**, B.P. (2014). Bayesian estimation of IRT models with power priors. In Maurizio Carpita, Eugenio Brentari & El.Mostafa Qannari (Eds.), *Advances in latent variables* (Studies in Theoretical and Applied Statistics). Springer. <http://purl.utwente.nl/publications/88537>
- Meijer, R.R., Tendeiro, J.N., & Wanders, R. (2014). The use of nonparametric item response theory to explore data quality. In S. P. Reise & D. Revicki (Eds.). *Handbook of item response theory modeling: Applications to typical performance assessment*. (pp. 85-110). Routledge
- Pircalabelu, E., Claeskens, G. & **Waldorp**, L. (2014). Constructing Graphical Models via the Focused Information Criterion. In A. Antoniadis, X. Brossat & J.-M. Poggi (Eds.), *Modeling and Stochastic Learning for Forecasting in High Dimension* (Lecture notes in statistics). New York: Springer
- Raijmakers, M.E.J., Kan, K.J., Ploeger, A. & **Van der Maas**, H.L.J. (2014). Nonlinear epigenetic variance in developmental processes. In P.C.M. Molenaar, R.M. Lerner & K.M. Newell (Eds.), *Handbook of developmental systems theory and methodology* (pp. 171-187). New York: Guilford Press

- Scheerens, J., Luyten, J.W. & **Glas**, C.A.W. (2014). Time in internationally comparative studies. In J. Scheerens (Ed.), *Effectiveness of time investments in education* (SpringerBriefs in education) (pp. 31-53). Cham: Springer. <http://purl.utwente.nl/publications/87294>
- scherpenzeel, A. & **Toepoel**, V. (2014). Informing Panel Members about Study Results. In M. callegrao, R. baker, J. bethlehem, A. goritz, J. krosnick, & P. lavrakas (Eds.), *Online Panel Research: A Data Quality Perspective*. (pp. 192). (survey methodology). Wiley. 10.1002/9781118763520.ch9
- Schoemann, A.M., **Rhemtulla**, M. & Little, T.D. (2014). Multilevel and longitudinal modeling. In H.T. Reis & C.M. Judd (Eds.), *Handbook of Research Methods in Personality and Social Psychology* (pp. 571-588). Cambridge: Cambridge University Press
- Sijtsma**, K. (2014). Who needs psychometrics?. In M. de Rooij, & C. M. van Putten (Eds.), *Psychology and statistics: Ready for the future?*. (pp. 167-173). Leiden: Institute of Psychology, Leiden University
- Snijders**, T.A.B. (2014). Siena: Statistical Modeling of Longitudinal Network Data. In R. Alhajj, & J. Rokne (Eds.), *Encyclopedia of Social Network Analysis and Mining*. (pp. 1718-1725). [312] New York: Springer Reference
- Van der Ark**, L.A. (2014). Visualizing uncertainty of estimated response functions in nonparametric item response theory. In R. E. Millsap, L. A. van der Ark, D. Bolt, & C. M. Woods (Eds.), *New developments in quantitative psychology* (pp. 59-68). New York, NY: Springer
- Van der Heijden**, P.G.M., **Cruyff**, M., & Bockenholt, U. (2014). Randomized response methods. In G. J. N. Bruinsma, & D. L. Weisburd (Eds.), *Encyclopedia of Criminology and Criminal Justice*. (pp. 4291-4297). Springer. 10.1007/978-1-4614-5690-2\_661
- Van der Heijden**, P.G.M., **Cruyff**, M., & Böhning, D. (2014). Capture-recapture to estimate criminal populations. In G. J. N. Bruinsma, & D. L. Weisburd (Eds.), *Encyclopedia of Criminology and Criminal Justice*. (pp. 267-276). Berlin, DE: Springer
- Van der Maas**, H.L.J., Kan, K.J., **Hofman**, A. & **Raijmakers**, M.E.J. (2014). Dynamics of development: a complex systems approach. In P.C.M. Molenaar, R.M. Lerner & K.M. Newell (Eds.), *Handbook of developmental systems theory and methodology* (pp. 270-286). New York: Guilford Press
- Van Rijn, P.W., **Béguin**, A.A. & Verstralen, H.H.F.M. (2014). Educational measurement issues and implications of high stakes decision making in final examinations in secondary education in the Netherlands. In Th.J.M.G. Eggen & Stobart, G. (Eds.). *High-Stakes Testing in Education: Value, fairness and consequences*. London: Routledge
- Veldkamp**, Bernard P. (2014). Item Pool Design and Maintenance for Multistage Testing. In Duanli Yan, Alina.A. von Davier & Charles Lewis (Eds.), *Computerized Multistage Testing: Theory and Applications*. Chapman and Hall/CRC Press. <http://purl.utwente.nl/publications/88756>
- Veldkamp**, B.P. (2014). Item pool development and maintenance. In Duanli Yan, Alina.A. von Davier & Charles Lewis (Eds.), *Computerized Multistage Testing: Theory and Applications* (Chapman & Hall/CRC Statistics in the Social and Behavioral Sciences) (pp. 39-54). Chapman and Hall/CRC.
- Veldkamp**, B.P. (2014). Test Construction: Automated. In *Wiley StatsRef: Statistics Reference Online*. Wiley. <http://dx.doi.org/10.1002/9781118445112.stat06385>
- Vermunt**, J.K. (2014). Latent class model. In A. C. Michalos (Ed.), *Encyclopedia of quality of life research and well-being research*. (pp. 3509-3515). Dordrecht: Springer
- Visser**, I. & Speekenbrink, M. (2014). It's a Catastrophe! Testing dynamics between competing cognitive states using mixture and hidden Markov models. In P. Bello, M. Guarini, M. McShane & B. Scassellati (Eds.), *COGSCI 2014: cognitive science meets artificial intelligence: human and artifical agents in interactive contexts: 36th Annual Cognitive Science Conference: Quebec City, Canada, Jul 23-Jul 26* (pp. 1688-1693). Austin, TX: Cognitive Science Society
- Witteman, C.L.M. & **Koele**, P. (2014). Het diagnostische redeneerproces: Normatieve logica en cognitieve beperkingen. In G. Bosmans, L. Claes, P. Bijttebier & I. Noens (Eds.), *Diagnostiek bij Kinderen, Jongeren en Gezinnen. Deel 1: Een theoretisch kader voor de praktijk*. (pp. 45-64). Leuven/Den Haag: Acco

## 6.1.7 Conference contribution (proceeding)

- Bakker, B., **Gerritse, S.**, **Van der Heijden**, P.G.M., Van der Laan, J., Van der Vliet, R. & **Cruyff, M.** (2014). Estimation of Non-Registered Usual Residents in the Netherlands, ultimo September 2010. In *Conference of European Statistics Stakeholders, Rome, 24-25 November 2014*
- Delaney, A., Tamas, P.A., & **Tobi, H.** (2014). How to choose methods for evaluation research: a test of the relevance of systematic review. Abstract from 14th EADI General Conference, Bonn, Germany
- Dik, G., Kampen, J.K., & **Tobi, H.** (2014). Teaching research methodology for multidisciplinary student populations: lessons to be learned for the developing of multidisciplinary research methodology. Abstract from VI European Congress of Methodology, Utrecht, The Netherlands
- Jolani, S.** & **Van Buuren, S.** (2014). Imputation of Missing Outcomes under Missing not at Random. In G. T. Papanikos (Ed.), *Eighth Annual International Conference on Mathematics & Statistics: Education & Applications 30 June & 1-3 July 2014, Athens, Greece: Mathematics Abstracts*. (pp. 31). Athens Institute for Education and Research
- Kampen, J.K., **Tobi, H.**, & Tamas, P.A. (2014). Measurement in interdisciplinary research: the case of measurement error. Abstract from VI European Congress of Methodology, Utrecht, The Netherlands
- Meijering, J.V.**, **Tobi, H.**, Van den Brink, A. (2014). Using the Delphi method in an interdisciplinary setting: opportunities and implications. Proceedings of the VI European Congress of Methodology. VI European Congress of Methodology, Utrecht, The Netherlands, 2014-07-22/2014-07-25.
- Moerbeek, M.** (2014). Cost calculations and sample size issues of stepped-wedge vs CRTs and the optimal level of randomization. In *Cluster randomized trials, stepped-wedge randomized trials: the ultimate form of pragmatic trials?*
- Nikolaus, S., Bode, C., Taal, E., Vonkeman, H.E., **Glas, C.A.W.** & Van de Laar, M.A.F.J. (2014). Usability of a computerized adaptive test to measure fatigue in rheumatoid arthritis. ARPH conference, Groningen, February 2014
- Nuijten, M.B.**, **Van Assen, M.A.L.M.**, **Van Aert, R.C.M.**, & **Wicherts, J.M.** (2014). Standard analyses fail to show that US studies overestimate effect sizes in softer research. *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*, 111, E712-E713. 10.1073/pnas.1322149111
- Pelle, E., Hessen, D.J. & **Van der Heijden**, P.G.M. (2014). Log-linear multidimensional Rasch model for capture-recapture. In M. Gilli, G. Gonzalez-Rodriguez, & A. Nieto-Reyes (Eds.), *Proceedings of COMPSTAT 2014: 21st International Conference on Computational Statistics*. (pp. 435-442). Genéve
- Schuurman, N.**, Ferrer, E., De Boer-Sonnenschein, M. & **Hamaker, E.** (2014). Comparing the strength of cross-lagged associations by standardizing coefficients of multilevel autoregressive models. In *How to compare cross-lagged associations in a multilevel autoregressive model*
- Schuurman, N.**, Ferrer, E., De Boer-Sonnenschein, M. & **Hamaker, E.** (2014). Studying individual differences cross-lagged associations by standardizing multilevel autoregressive models. In *How to compare cross-lagged associations in a multilevel autoregressive model*
- Shantz, A., Alfes, K., & **Oberski, D.L.** (2014). *The perpetuity of overqualification and the modifying effects of age and gender*. 1-5. Paper presented at Annual meeting of the Academy of Management, Boston, USA
- Stegeman, A.W.** (2014). Nonexistence of best low-rank approximations for real-valued three-way arrays and what to do about it. In *21st International Symposium on Mathematical Theory of Networks and Systems*. (pp. 954-957)
- Van de Leemput, I.A., Wichers, M., **Cramer, A.O.J.**, **Borsboom, D.**, **Tuerlinckx, F.**, Kuppens, P., Van Nes, E.H., **Viechtbauer, W.**, Giltay, E.J., Aggen, S.H., Derom, C., Jacobs, N., Kendler, K.S., **Van der Maas, H.L.J.**, Neale, M.C., Peeters, F., Thiery, E., Zachar, P. & Scheffer, M. (2014). Critical slowing down as early warning for the onset and termination of depression. *National Academy of Sciences. Proceedings*, 111 (1), 87-92

- Van den Berg**, S.M., **Schwabe**, I., Fikse, W.F., Heuven, H.C.M. & **Glas**, C.A.W. (2014). Bayesian Analysis of Heterogeneous Residual Variance in Canine Behaviour. In *Proceedings, 10th World Congress of Genetics Applied to Livestock Production*. Vancouver
- Van Maanen, A., Dewald-Kaufmann, J.F., Smits, M.G., **Oort**, F.J. & Meijer, A.M. (2014). Chronic sleep reduction in adolescents with delayed sleep phase disorder and effects of melatonin treatment. In T. de Boer, V. van Kasteel, C. Leenaars, P. Meerlo, E. Most, F. van Oosterhout & J. Verbraecken (Eds.), *Sleep-Wake Research in the Netherlands. Annual Proceedings of the NSWO*.
- Van Maanen, A., Wijga, A.H., Gehring, U., Postma, D.S., Smit, H.A., **Oort**, F.J., Rodenburg, H.R. & Meijer, A.M. (2014). Sleep in children with asthma: Results of the PIAMA study. In T. de Boer, V. van Kasteel, C. Leenaars, P. Meerlo, E. Most, F. van Oosterhout & J. Verbraecken (Eds.), *Sleep-Wake Research in the Netherlands. Annual Proceedings of the NSWO (abstract)*.
- Veldkamp**, B.J. & **Eggen**, T.J.H.M. (2014). Toetskwaliteit is jouw verantwoordelijkheid. Conferentie 'Construeren en vaststellen examens: een vak apart' - 21 maart 2014, Utrecht: Utrecht (2014, maart 21)
- Wichers, M., **Borsboom**, D., **Tuerlinckx**, F., Kuppens, P., **Viechtbauer**, W., Van de Leemput, I.A., Kendler, K.S. & Scheffer, M. (2014). Reply to Bos and De Jonge: Between-subject data do provide first empirical support for critical slowing down in depression. *National Academy of Sciences. Proceedings*, 111 (10):E879

## 6.2 Professional publication

### 6.2.1 Article in journal

- De Leeuw**, E. (2014). Mobieltjes en smartphones rijp voor surveys. *CLOU : het magazine voor marketing research & digital analytics*, 70, 34
- De Leeuw**, E. (2014). Kanssteekproef, of toch maar de gemakssteekproef?. *CLOU : het magazine voor marketing research & digital analytics*, 69, 37
- De Leeuw**, E. (2014). Wat iedere journalist moet weten van marktonderzoek: Doorvragen bij wie. *CLOU : het magazine voor marketing research & digital analytics*, 68, 33
- Gobbens, R.J.J., & **Van Assen**, M.A.L.M. (2014). Het voorspellen van beperkingen in ADL en IADL door lichamelijke componenten van de Tilburg Frailty Indicator. *Fysiotherapie & Ouderenzorg*, 28, 26-36
- Heiser**, W.J., Editorial. *Journal of Classification*, 31(2) (2014), 137
- Heiser**, W.J., Editorial. *Journal of Classification*, 31(3) (2014), 273
- Rietbergen, C., **Klugkist**, I., & Groenwold, R. (2014). Kwantitatieve synthese van kennis. *STAtOR*, 15(2), 8-12
- Van Dommelen, P., **Van Buuren**, S., & Roelants, M. (2014). Nederland is het land van de reuzen. *JGZ (Houten)*, 46(1), 2-4. 10.1007/s12452-014-0002-6
- Veenstra, R., Ruiter, S.A.J., Van Hunen, P., & **Timmerman**, M.E. (2014). Evaluatie van de psychometrische kwaliteiten van de BAYLEY-III-NL Adaptief gedrag vragenlijst voor jonge kinderen. *Tijdschrift voor Orthopedagogiek*, 53(4), 155-166.
- Visser, L., Ruiter, S., Van der Meulen, B., Ruijssenaars, A.J.J.M., & **Timmerman**, M.E. (2014). De Bayley-III-NL Special Needs Addition (SNA): Eigenschappen en onderzoek. *Orthopedagogiek: Onderzoek en Praktijk*, 53(12), 493-505
- Wools, S. & **Béguin**, A.A. (2014). Het toetsen van referentieniveaus [measuring reference levels]. *Examens*, 11-1, 5-8
- Yerkes, M., **Van de Schoot**, R., & Sonneveld, H. (2014). From a PhD to What? The Importance of the education-employment transition: Lessons from the Netherlands. *ADAPT Labor Bulletin*, 3, 1-3

## 6.2.2 Report

- Glas, C.A.W., & Meijer, R.R. (2014). *Commentaar op review normering 2009- 2014: Rapportage van kwaliteitsonderzoek naar normering van het Centraal Eindexamen*. Rapport voor het College voor Examens ([www.cve.nl](http://www.cve.nl).)
- Heitink, M.C., Veldkamp, B.P., Dobson, S. & Argusti, G. (2014). *Review effective feedback and formative assessment in e-learning*. (Extern rapport). : European union funded project Supporting life long learning with inquiry based education
- Marianti, S., Fox, J.P., Avetisyan, M. & Veldkamp, B.P. (2014). *Testing for aberrant behavior in response time modeling*. (Extern rapport, LSAC Research Report Series, no 14-02). Newton, PA: Law School Admission Council
- Meijer, R.R., & Tendeiro, J.N. (2014). *The Use of Person-Fit Scores in High-Stakes Educational Testing: How to Use Them and What They Tell Us*. law school admission council (USA)
- Pircalabelu, E., Claeskens, G., Jahfari, S. & Waldorp, L. (2014). Focused Information Criterion for Graphical Models. Large p, small n considerations.. (extern rapport). Leuven: University of Leuven
- Schildkamp, K., Heitink, M., Van der Kleij, F.M., Hoogland, I., Dijkstra, A., Kippers, W. & Veldkamp, B.P. (2014). *Voorwaarden voor effectieve formatieve toetsing: een praktische review*. (Extern rapport). Enschede: Universiteit Twente
- Steur, H.G.J., Mellenbergh, G.J., Veldkamp, B.P., Vos, J.M., Werf, M.P.C. & Van de Vorle, R.B.M. (2014). *Doordacht doorzetten naar een hoger rekenniveau: advies van de commissie verantwoorde invoering rekentoets in vo en mbo*. (Extern rapport). Enschede: SLO
- Van Bergen, A.P.L., Aangeenbrug, M., Cruyff, M., Boehning, D., & Van der Heijden, P.G.M. (2014). *Factsheet: Resultaten omvangsschatting daklozenpopulatie in Utrecht: Raming aantal feitelijke daklozen valt lager uit*. Utrecht: Gemeente Utrecht Volksgezondheid
- Van den Burg, G.J.J. & Groenen, P.J.F. (2014). *GenSVM: A Generalized Multiclass Support Vector Machine*. (Internal report, Econometric Institute Research Papers, no EI2014-33). Erasmus University Rotterdam
- Van den Burg, G.J.J. & Groenen, P.J.F. (2014). *GenSVM: A Generalized Multicalss Support Vector Machine*. (Internal report, EI report serie, no EI 2014-33). Rotterdam: Econometric Institute
- Van der Heijden, P.G.M., Buma, O., Hessen, D. & Van Kampen, G. (2014). *Het voorspellen van studiesucces met statische en dynamische data; wat werkt?: Eindrapportage bij SURF Stimuleringsregeling Learning Analytics 2013*. Universiteit Utrecht, Faculteits Sociale Wetenschappen, Afdeling Methoden en Statistiek.
- Van der Heijden, P.G.M., Cruyff, M. & Van Gils, G. (2014). *Schattingen van de omvang van huiselijk geweld in Nederland*. Utrecht: Universiteit Utrecht, Faculteit Sociale Wetenschappen, Afdeling Methoden en Statistiek
- Veldkamp, B.P. (2014). *Some practical issues in computerized adaptive testing with response times*. (Extern rapport, LSAC Research Report Series). Newton, PA: Law School Admission Council
- Wiegersma, S., Veldkamp, B.P. & De Vries, T. (2014). *Omvang en detectie uitkeringsfraude: pilotonderzoek*. (Extern rapport). Enschede: University of Twente

## 6.3 Popular publications

- Albers, C.J. (Contributor). (2014). Using statistics for truly understanding psychological processes. *MindWise*. Retrievable from <http://mindwise-groningen.nl/using-statistics-for-truly-understanding-psychological-processes/>
- Albers, C.J. (2014). Wie beter onderwijs wil, moet er meer geld voor over hebben. *De Volkskrant*.
- Meijer, R.R., & Niessen, S. (2014). Kritiek op Citotoets niet terecht. *Dagblad van het Noorden, Opinie*, 10.

- Niessen, S., & **Meijer**, R.R. (2014). Selectie maakt studenten niet beter. *Universiteitskrant. Onafhankelijk weekblad voor de Rijksuniversiteit Groningen*. Retrievable from <http://www.ukrant.nl/universiteit/selectie-maakt-studenten-niet-beter.html>
- Niessen, S., & **Meijer**, R.R. (2014). Verdwijnt de loting? Laat ze een tentamen doen (NRC, Opinie en Debat). *NRC Handelsblad*, 2.
- Post, W. & **Van Duijn**, M. (2014). How Willem Heiser influenced our professional attitude: The past, the present, and the future. In M. de Rooij, & C.M. van Putten (Eds.), *Psychology and Statistics: Ready for the Future? Liber Amicorum for Willem J. Heiser*. Leiden University Press
- Veldkamp**, B.P. (,). Examenfraude opsporen: een technische uitdaging, interview Didactief, 44, 5, 20-21. *Didactief*, pp. 20-21
- Zand Scholten**, A. & Van Hees, J. (2014, November 02). 'Jullie hoorcollege is voortaan online!' Ervaringen van de UvA met het vervangen van de hoorcolleges door een MOOC. *SURF Thema-uitgave Open en Online Onderwijs*, pp. 15-17

## 6.4 Other results

### 6.4.1 Editorship of a book

- Adèr**, H.J. & **Mellenbergh**, G.J. (2015). Advising on research methods: selected topics 2014. Huizen: Johannes van Kessel Publishing
- De Leeuw**, E., & Bronner et al, F. (Eds.) (2014). *Ontwikkelingen in het Marktonderzoek 2014: 39<sup>e</sup> Jaarboek van de MOA*. Haarlem: Spaarenhout
- De Rooij**, M. & **Van Putten**, C.M. (Eds.). *Psychology and Statistics: Ready for the future?* Liber Amicorum for Willem J. Heiser
- Kiers**, H.A.L. (associate editor), *Psychometrica*
- Meijer**, R.R. (editor statistical section), *Journal of Personality Assessment*
- Meijer**, R.R. (editorial board member), *Assessment*
- Meijer**, R.R. (editorial board member), *International Journal of Testing*
- Meijer** R.R. (editorial board member), *Psychological Measurement*
- Meijer**, R.R. (editorial board member), *Journal of Educational Measurement*
- Millsap, R. E., **Van der Ark**, L.A., Bolt, D.M., & Woods C.M. (Eds.) (2014). *New developments in quantitative psychology: Presentations from the 77th Annual Psychometric Society Meeting*. New York, NY: Springer.
- Timmerman**, M.E. (associate editor), *Psychometrica*
- Van den Berg**, S.M. & Van der Kolk, H. (Eds.). (2014). *Data collection and scale development*. London, UK: Sage.
- Westerhof, G., Bohlmeijer, E. & **Van den Berg**, S.M. (Eds.). (2014). *The Individual*. New York, USA: McGraw-Hill

### 6.4.2 Software and test manuals

- Morey**, R.D. (Developer), & Rouder, J. N. (Developer). (2014). BayesFactor version 0.9.9: An R package for computing Bayes factor for a variety of psychological research designs.
- Morey**, R.D. (Developer), & Schönbrodt, F. (Developer). (2014). BayesFactorExtras version 0.1: An R package containing educational tools for use with BayesFactor: (available on github).
- Oberski**, D.L.. (Author). (2014). lavaan.survey: Complex survey Structural Equation Modeling (SEM). 10.5281/zenodo.10656
- Tendeiro**, J.N. (Developer), & **Meijer**, R.R. (Developer). (2014). PerFit version 1.2: An R package for conducting person fit analysis with educational and psychological data.

- Ruiter, S., Visser, L., Van der Meulen, B.F., & **Timmerman, M.E.** (2014). **Bayley-III-NL: handleiding Special Needs Addition.** Amsterdam: Pearson Assessment and Information B.V.
- Van der Ark, L.A.** (2014). Mokken version 2.7.7 [computer software]. Vienna, Austria: CRAN

### 6.4.3 (Paper) presentation

- Aktar, E., Mandell, D.J., Majdandzic, M., De Vente, W., **Raijmakers, M.E.J.** & Bogels, S.M. (2014, september 11). *Infants' processing of emotion and head/gaze direction via pupillometry: The role of infant temperament and parental depression/anxiety.* The Hague, Netherlands, Presentation at the European Association for Behavioural and Cognitive Therapies Conference
- Aktar, E., Mandell, D.J., Majdandzic, M., De Vente, W., **Raijmakers, M.** & Bogels, S.M. (2014, september 03). *Infants' processing of emotion and head/gaze direction: The effect of maternal and paternal depression/anxiety via pupillometry.* Amsterdam, Netherlands, Presentation at the British Psychological Association Developmental Section Annual Conference
- Aktar, E., Mandell, D.J., Majdandzic, M., De Vente, W., **Raijmakers, M.E.J.** & Bogels, S.M. (2014, november 13). *Infants' processing of facial expressions and referential cues: Exploring the effect of infants' negative temperament, parental depression and anxiety via pupillometry.* Amsterdam, Netherlands, Presentation at the the ISED International Research Days
- Aktar, E., Mandell, D.J., De Vente, W., Majdandzic, M., **Raijmakers, M.E.J.** & Bogels, M. (2014, juni 05). *Infants' temperament and parents' depression/anxiety predict infants' pupil reactivity to negative faces.* Berlin, Germany, Presentation at the International Society on Infant Studies Conference
- Béguin, A.A.** & Wools, S. (2014). *Measuring of growth using reference sets.* Paper presented at the 15<sup>th</sup> annual conference of the AEA-Europe, Tallinn, Estonia.
- Béguin, A.A.** & Wools, S. (2014). *Inhoudsanalyse rekenen in de Rekentoets VO en Centraal ontwikkelde examens MBO.* Paper presented at the 41<sup>th</sup> annual conference of VOR, Groningen, the Netherlands.
- Béguin, A.A.** & Keuning, J.(2014). *Analyse van prestatieverschillen via een inhoudelijke paarsgewijze vergelijking.* Paper presented at the 41<sup>th</sup> annual conference of VOR, Groningen, the Netherlands.
- Béguin, A.A.** & Wools, S. (2014). *Application and justification of vertical comparison instead of vertical linking.* Paper presented at the Annual meeting of the American Educational Research Association, Philadelphia, April 4, 2014
- Borsboom, D.** (2014, November 6, keynote). All quiet on the psychometric front? Kerkrade, the Netherlands, 25th Jubilee Conference of the Society for Ordering and Classification (VOC)
- Borsboom, D.** (2014, August 22, keynote). Farewell to reductionism: Network analysis as a holistic research strategy. Amsterdam, Free University, Workshop "Causal explanation in psychiatry"
- Borsboom, D.** (2014, November 13, keynote). Network models for psychopathology. Zeist, the Netherlands, Symposium 'Wetenschappelijk onderzoek in de GGZ; een kwestie van (net)werken'
- Borsboom, D.** (2014, May 21, keynote). Rethinking DSM-categories: A network approach. Nijmegen, the Netherlands, Invited lecture at the Hanze Hogeschool
- Borsboom, D.** (2014, June 04, keynote). Validity as the realist views it. Samuel Messick Memorial Lecture. Amsterdam, Free University, The 36th Language Testing Research Colloquium (LTRC)
- Duits, P., Lissek, S., Cath, D., **Hox, J.**, Hamm, A., Engelhard, I., ... Baas, J. (2014). *An Updated Meta-Analysis of Classical Fear Conditioning in the Anxiety Disorders.* Poster session presented at 27th ECNP congress, Berlin, Germany
- Fagginger Auer, M.F.**, **Hickendorff, M.**, Van Putten, C., **Jansen, B.R.J.**, **Straatemeier, M.** & **Van der Maas, H.L.J.** (2014). De Expertmeeting trekt rekenonderzoekers uit Benelux en Duitsland. Organisation of "6th Expert meeting on mathematical thinking and learning": Leiden, The Netherlands

- Heiser, W.J.** (31 januari 2014). *Psychologie van het Statistisch Denken*. Rede uitgesproken bij zijn afscheid als hoogleraar Psychologie, met inbegrip van Statistische Methoden en Datatheorie. Universiteit Leiden,
- Heiser, W.J., Amodio, S. & D'Ambrosio A.** (3-7 March 2014). *Multidimensional Unfolding and Clustering of Preferences: A new simulation Design*. Invited paper at the Dagstuhl Seminar "Preference Learning", Leibniz Center for Informatics, Dagstuhl, Germany
- Heiser, W.J. & Busing, F.** (22-27 July 2014). *Regularization with Coefficient of Variation in Loss Functions for Nonmetric Unfolding*. Contributed paper at the Annual Meeting of the Psychometric Society, Madison, Wisconsin
- Heiser, W.J.** (6-7 November 2014). *From Preference Mapping to Preference Learning, with an Example of a Prediction Tree for Rankings*. Invited paper at the 25<sup>th</sup> Anniversary Jubilee Meeting of the VOC (Dutch Classification Society), Kerkrade, the Netherlands
- Heiser, W.J. & Meulman, J.J.** (14 November 2014). *Borrowing Strength from Multi-Way Thinking by Attacking Two-Way Problems with Multi-Way Methods*. Invited paper at the Symposium in honor of P.M. Kroonenberg, Leiden University
- Hickendorff, M.** (June 2014, Invited presentation). *Hoe rekenen groep-8-leerlingen?* at 'KNAW-themabijeenkomst Rekenen: het onderwijs, het vak en de toets': Amsterdam
- Klausch, T., Schouten, B., & Hox, J.** (2014). *Evaluating mixed-mode redesign strategies against single-mode benchmarks: The case of the Crime Victimization Survey*. Poster session presented at EAM conference, Utrecht, Netherlands
- Kroonenberg P.M.** (13 March 2014, lecture), Professor by special appointment in multivariate analysis in particular of three-way data. What does he do all day? AGP-colloquium, Leiden, The Netherlands
- Kroonenberg P.M.** (21 July 2014, lecture), Assessing factorial invariance of two-way rating designs using three-way methods. Meeting of the International Psychometric Society, Madison, USA
- Kroonenberg P.M.** (29 April 2014, lecture), Exploratory analysis of multivariate longitudinal data. Lecture ESSEC Business School of Paris, Gergy-Pontoise, France
- Kroonenberg P.M.** (6 December 2014, lecture), Three-mode analysis of multimode covariance matrices. Meeting of the European Research Council for Informatics and Mathematics, Pisa, Italy
- Kroonenberg P.M.** (2014), Afscheidscollege De driewegwereld kent geen grenzen. Leiden University. Leiden, The Netherlands, (Universiteit Leiden)
- Maris, G.K.J.** (2014, December 12). What is the question to which IRT is the answer? Amsterdam, 24th IOPS Winter Conference
- Meijering, J.V., Kern, K., & Tobi, H.** (2014). Identifying the methodological characteristics of European green city rankings. Presentation at the European Congress of Methodology, Utrecht, The Netherlands, July 24
- Meijering, J.V., Kern, K., & Tobi, H.** (2014). Identifying the methodological characteristics of European green city rankings. Presentation (invited) for the Joint Research Centre of the European Commission, Turin, Italy, November 25.
- Mittelhaëuser, M., Béguin, A. A., Sijtsma, K.** (2014, July). *When anchor items are administered under different conditions: modeling differences in motivation*. Presentation at the Biannual Meeting of the International Test Commission, San Sebastian, Spain
- Morey, C., Cong, Y., **Morey, R.D.**, Price, M., & Zheng, Y. (2014). Explaining the repetition-based bonus in visual working memory. Poster session presented at International Conference on Working Memory, Cambridge, United Kingdom
- Morey, R.D.** (2014). *Bayes factors for linear mixed models*. Poster session presented at 2014 Bayes Lectures conference, University of Edinburgh, Edinburgh, United Kingdom
- Nikolaus, S., Bode, C., Taal, E., Vonkeman, H.E., **Glas, C.A.W.** & Van de Laar, M.A.F.J. (2014, februari 06). *Demonstration of a computerized adaptive test to measure fatigue in patients with rheumatoid arthritis*. Groningen, 3th Annual Conference of The Association for Researchers in Psychology and Health

- Nieuwenstein, M., Wierenga, T., **Morey**, R.D., **Wicherts**, J., Blom, T., **Wagenmakers**, E-J., & Van Rijn, H. (2014). *On making the Right Choice: A Meta-Analysis and Large-Scale Replication Attempt of the Unconscious Thought Advantage*. Poster session presented at 35th Annual Conference of the Society for Judgment and Decision Making, Long Beach, California, United States
- Sense**, F., Morey, C.C., **Morey**, R.D., Prince, M., & Heathcote, A. (2014). *Opportunity for verbalization does not improve visual change detection performance: A state-trace analysis*. Poster session presented at MathPsych 2014, Quebec City, Canada
- Smits**, I.A.M., **Timmerman**, M.E. & **Stegeman**, A. (2014, maart 21). *On the importance of the skewness parameter in modeling latent traits*. Frankfurt, Germany, Paper presented at the meeting of the working group Structural Equation Modeling.
- Smits**, I.A.M., **Timmerman**, M.E., Barelds, D.P.H. & **Meijer**, R.R. (2014, juli 17). *SCL-90-R: Is the use of the subscales justified? Journeys into exploratory (EFA), confirmatory (CFA) and combined (ESEM) frameworks in Personality Research*. Lausanne, Switzerland, Paper presented at 17th European Conference on Personality.
- Smits**, I.A.M., **Timmerman**, M.E. & **Stegeman**, A. (2014, juli 24). *The importance of the skewness parameter for the establishment of measurement invariance across groups*. Utrecht, The Netherlands, Paper presented at 6th European Congress of Methodology
- Stegeman**, A.W. (2014). *Factor indeterminacy and its implications for Item Response Theory*. Abstract from 5th RCEC Workshop on IRT and Educational Measurement, Enschede, Netherlands
- Trompette, H.R., Bohlmeijer, E.T., Veehof, M.M., **Fox**, J.P. & Schreurs, K.M.G. (2014, augustus 21). *Positive mediators and moderators of change in web-based acceptance & Commitment Therapy for chronic pain*. Groningen, The Netherlands, 13th International Congress of Behavioral Medicine
- Van Borkulo**, C.D. (2014). Fitting like a glove: a new method for construction networks from binary data. In 24th IOPS Winter Conference
- Van der Ark**, L.A. (2014, juli 21). *Accuracy, bias, and precision in classical test theory*. Madison (WI), USA, Paper presented 79th Annual Meeting of the Psychometric Society
- Van der Ark**, L.A. (2014, juni 12). *Handling complex dependencies*. Amsterdam, NL, Paper presented at The M&S Research Meeting, University of Amsterdam
- Van der Ark**, L.A. (2014, september 29). *Meaningful measurement by means of multiple items*. Amsterdam, NL, Paper presented at the AmsteRdam Meetup
- Van der Bles, A.M., Postmes, T., & **Meijer**, R.R. (2014). *Understanding Declinism: Making Sense of Zeitgeist and Measuring It..* Abstract from Kurt Lewin Institute Conference, Utrecht, Netherlands
- Van der Bles, A.M., Postmes, T., & **Meijer**, R.R. (2014). *Where are we at? Demonstrating and measuring the importance of Zeitgeist for individuals and societies..* Abstract from 17th General Meeting of the European Association of Social Psychology, Amsterdam, Netherlands
- Van der Bles, A.M., Postmes, T., & **Meijer**, R.R. (2014). *Where are we at? Demonstrating and measuring the importance of Zeitgeist for individuals and societies*. Poster session presented at Kurt Lewin Institute Conference, Utrecht, Netherlands
- Van der Maas**, H.L.J. (2014, April 4, keynote). Educational data mining: Five years of Math garden. Leiden, The sixth Expert Meeting on Mathematical Thinking and Learning
- Van der Maas**, H.L.J. (2014, June 30, keynote). Onderzoek met de Rekentuin. Amsterdam, KNAW symposium Rekenen
- Van der Maas**, H.L.J. (2014, December 11, keynote). Psychometrics of adaptive online learning tools. Amsterdam, 24th IOPS Winter Conference
- Van der Maas**, H.L.J. (2014, December 13, keynote). The development of a new computer adaptive Intelligence test. Graz, Conference of ISIR
- Van der Maas**, H.L.J. (2014, November 13, keynote). The story of Math Garden. Amsterdam, Invited talk William James Graduate school, VU

- Van Ginkel J.R. & Kroonenberg P.M.** (21 July 2014, lecture), The influence of multiple imputation on the Tucker2 model. Lecture at the 79th Annual Meeting of the International Psychometric Society, Madison, USA
- Van Groen, M.M., Eggen, T.J.H.M. & Veldkamp, B.P.** (2014, June). *Computerized Adaptive Testing for Classifying Examinees Using MIRT for Items that Measure One or Multiple Abilities*. Paper presented at the 29th IOPS Summer Conference, Tilburg, the Netherlands.
- Van Groen, M.M., Eggen, T.J.H.M. & Veldkamp, B.P.** (2014, July). *Computerized Adaptive Testing for Classifying Examinees using MIRT for Items that Measure One or Multiple Abilities*. Paper presented at the International Meeting of the Psychometric Society, Madison, Wisconsin, USA.
- Van Groen, M.M., Eggen, T.J.H.M. & Veldkamp, B.P.** (2014, October). *Computerized Adaptive Testing for Classifying Examinees for Multidimensional Constructs*. Paper presented at the 2014 Computerized Adaptive Testing Summit, Princeton, New Jersey, USA
- Van Maanen, A., Roest, B., Moen, M., **Oort, F.J.**, Vergouwen, P., Paul, I., Groenenboom, P. & Smits, M.G. (2014, september 17). *Extreme violation of sleep hygiene: The effect of sleeping against the biological clock on sleep duration during a multiday relay event*. Tallinn, Estland, Paper presented at the 22nd Congress of the European Sleep Research Society
- Van Maanen, A., Meijer, A.M., Smits, M.G. & **Oort, F.J.** (2014, september 19). *Melatonin treatment and classical conditioning in children with delayed sleep phase: A pilot study*. Tallinn, Estland, Paper presented at the 22nd Congress of the European Sleep Research Society
- Van Maanen, A., Meijer, A.M., Smits, M.G. & **Oort, F.J.** (2014, september 12). *Melatonin treatment and classical conditioning in children with delayed sleep phase: A pilot study*. The Hague, the Netherlands, Paper presented at the 44th Congress of the European Association for Behavioural & Cognitive Therapies
- Wiegersma, S., **He, Q.** & **Veldkamp, B.P.** (2014). Screening for PTSD: A text mining approach. International Symposium "The impact of great wars and beyond" Leiden, 22 May 2014: Leiden (Poster, 22 May 2014)
- Wiegersma, S. & **He, Q.** (2014, juli 02). *Screening for PTSD using verbal features in self-narratives. A text mining approach*. onbekend, Presentation at the Summer School "Big Data in Clinical Medicine", organized by the Department of Psychology, Health & Technology of the University of Twente
- Zwitser, R.J., Glaser, S.S.F. & **Maris, G.** (2014, november 20). Monitoring Countries in a Changing World. A New Look at DIF in International Surveys. Enschede, Presentation at the Research Center for Examinations and Certification (RCEC) workshop 2014

## 6.4.4 In press

- Abebe, H.T., Tan, F., **Van Breukelen, G.J.P., Berger, M.P.F.** (2014). Bayesian design for dichotomous repeated measures with autocorrelation. *Statistical Methods in Medical Research* (in press). Published on line before print October 28, 2013, doi: 10.1177 /0962280213508850
- Lemme F, Van Breukelen GJP, Berger MPF (2014). Efficient treatment allocation in twoway nested designs. *Statistical Methods in Medical Research* (in press). Published online before print September 12, 2013, doi: 10.1177/0962280213502145
- Van Breukelen, GJP, Candel, MJM (2014). Efficient design of cluster randomized and multicentre trials with unknown intraclass correlation. *Statistical Methods in Medical Research* (in press). Published on line before print September 20, 2011 , doi: 10.1177/0962280211421344
- Viechtbauer, W.** (2014). Meta-analysis of product-moment, tetrachoric, and biserial correlations. European Congress of Methodology, Utrecht, The Netherlands
- Viechtbauer, W.** (2014). Multilevel, multivariate, and network meta-analysis with R. Annual Meeting of the Society for Research Synthesis Methodology, York, UK

**Viechtbauer, W.** (2014). Multivariate, multilevel, and network meta-analysis with R. Second Workshop on Synthesizing Complex Statistical Models, Institute for Sociology and Social Psychology, University of Cologne, Germany

## 6.4.5 Under revision

**Van Ginkel, J.R.**, Juffer, F., Bakermans-Kranenburg, M.J., & Van IJzendoorn, M.H. (2014). *Do internationally adopted children use more medication than their non-adopted peers?* Manuscript submitted for publication in Journal of Pediatrics

## 6.4.6 Prizes

**Veldkamp, B.P.** (2014). Fraud detection in QMP

**Veldkamp, B.P.** (2014). Ipsative CAT

**Veldkamp, B.P.** (2014). Pilot fraude detection

**Veldkamp, B.P.** (2014). review study voorwaarden voor effectieve formatieve toetsing/ review study conditions for effective formative assessment

## 6.4.7 Miscellaneous

**Jansen, B.R.J.**, Salemink, E. & Wiers, R.W. (2014). The missing factor in Math Anxiety: The role and modification of cognitive biases and executive functioning. Interne AIO-competitie Ontwikkelingspsychologie: Erkenning

**Murre, J.M.J.**, Schmand, B. & **Huizenga, H.M.** (2014). *doorontwikkeld ANDI.nl website voor de ANDI infrastructuur*

**Visser, I.** (2014). *Reproducible research.* (blog).

## 7 Finances

### 7.1 Financial statement 2014

#### Receipts

The participating institutes of Leiden University, University of Amsterdam, VU University of Amsterdam, University of Groningen, University of Twente, Tilburg University, Utrecht University, KU Leuven, University of Leuven, Statistics Netherlands (CBS), and Cito Arnhem contributed financially according to the number of their PhD students that participated in IOPS on 1 July 2014. The participation fee for 2014 was € 700 per PhD student. Associated institutes with PhD students in the IOPS Graduate School, participated on the same terms.

Apart from the above mentioned annual contributions, no other funds are available for the IOPS Interuniversity Graduate School.

This resulted in a credit balance for the year 2014 of € 20.362,26

### 7.2 Summary of receipts and expenditures in 2014

<b>Receipts</b>		<b>Expenditures</b>		
		Salaries IOPS office		
		Secretary, 16 hours per week	22.557,34	
Contribution participating institutions	38.000,00	Salary director	24.926,84	
(57 PhD students)		Other personnel costs	1.200,00	
			subtotal	48.684,18
		IOPS office		
Contribution others 2014	1.500,00	Office supplies	200,20	
(to correct in 2015)		Printed matter	345,24	
		Hosting website	75,95	
			subtotal	621,39
		Representation costs		
		Representation costs	277,99	
		Travelcosts	2.084,60	
Subtotal Receipts	39.500,00		subtotal	2.362,59
		Congres		6.376,30
		Meetings		317,80
negative financial outcome 2014	18.862,26			

<b>Total receipts (include result 2014)</b>	58.362,26	<b>Total expenditures</b>		58.362,26
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## 7.3 Balance sheet 2014

### IOPS Own Funds 2013

<b>Debet</b>	<b>Euro</b>	<b>Credit</b>	<b>Euro</b>
Own Funds 31-12-2014	96.745,29	Own Funds 01-01-2014	115.607,55
		Preliminary Results 2013	18.862,26-
Total Debet	96.745,29	Totaal Credit	96.745,29

To correct in 2015 € 1.500,00; the own funds 31-12-2014 will be **€ 95.245,29**

This resulted in a credit balance for the year 2014 of € 20.362,26