

# Curriculum Vitae

---

Dr. Matthias von Davier

Monan Professor of Education and  
Executive Director, International Study Center,

Boston College, Lynch School of Education

Email: [mvondavier@gmail.com](mailto:mvondavier@gmail.com)

7/20/2020

Matthias von Davier

Phone: 609 532 7452

E-mail: [mvondavier@gmail.com](mailto:mvondavier@gmail.com)

## Curriculum vitae

### Academic Degrees

- 1996      Doctoral degree (Dr. rer. nat.) in psychology at the faculty for mathematics and science (Mathematisch -Naturwissenschaftlichen Fakultät) of CAU Kiel university with highest honors (*opus eximium, summa cum laude*)
- 1993      Masters degree in psychology with honors (*sehr gut*) at the faculty for mathematics and science (Mathematisch -Naturwissenschaftlichen Fakultät) of CAU Kiel university).

### Academic Education

- 1985 – 1993   Mathematics at Christian Albrechts University Kiel, Germany
- 1986 - 1993   Psychology at Christian Albrechts University Kiel, Germany

7/20/2020

## Leadership Roles

**Executive Director:** TIMSS & PIRLS International Study Center, Lynch School of Education, Boston College. Joined BC in 2020 to take on direction and management of future rounds of the international large scale assessments PIRLS and TIMSS.

**Distinguished Research Scientist:** Center for Advanced Assessment, National Board of Medical Examiners. Representing Psychometric Research, Mentoring, Editorial Activities. Developing methodologies and research agendas for advanced computer delivered assessments.

**Senior Research Director:** *Center for Global Assessment.* Leadership of the research agenda and methodology development of the center, directing the operational psychometric work of the center. Oversight and research agenda, managing staff, budgeting. Projects involve innovations in applied analysis and primary statistical methodologies used in international survey assessments such as PISA, TIMSS, PIRLS and PIAAC, Since September 2013.

**Director, Research:** *International survey assessment research* group, in the center for global assessment, ETS. Oversight and research agenda, managing staff, budgeting. Projects involve innovations in applied analysis and primary statistical methodologies used in international survey assessments such as PISA, TIMSS, PIRLS and PIAAC, 2011 – September 2013.

**Co-Principal Investigator:** IES methodology grant on ‘21<sup>st</sup> century models for 21<sup>st</sup> century large scale assessments. Allocation of funds (1.5 million) to researchers, management of funds and staff, 2011-2014.

**Co-Leader:** ETS research initiative on foundational psychometric and statistical research. Allocation of annual funds (1.1 million) to ETS researchers based on a proposal review process. Management of funds and staff, 2006-2013.

**Member Project Management Team:** International TIMSS and PIRLS assessments, as ETS representative to International Study Center (ISC) at Boston College, 2002 – now.

**Technical Director:** NAEP Task Order Component. Developing research agenda with client (NCES) and oversight of research projects and reporting, timetable and budget done in this area of NAEP program research, 2006 – 2008.

7/20/2020

**Manager:** Research component in the IEA - ETS Research Institute (IERI), coordinate research projects. Activities include directing research agenda, oversight of timelines and execution, as well coordination pipeline for dissemination in IERI publication series, 2007 – now.

**Co-Director:** Cross-divisional working group on “Computers as a tool for learning”, Institute for Science Education (IPN) Kiel, 1998 – 2000.

**Group Leader:** “Evaluation of computer-based instruction in secondary education”, 4 direct reports, and directing a number of 8 additional adjunct teachers, at the Institute for Science Education (IPN) Kiel University, 1998 – 2000.

## Professional Experience

- Since Jan. 2017 *Distinguished Research Scientist, National Board of Medical Examiners, Philadelphia, PA.* Member of the Center for Advanced Assessment. Representing the research, mentoring and dissemination of psychometric and statistical research results.
- Since Oct. 2014 *Senior Research Director & Co-Director, Center for Global Assessment:* Leadership of Research, methodology, training, development and operational psychometric work for all international large scale assessments conducted by the center.
- Since Sept. 2013 *Co-Director, Center for Global Assessment:* Leadership of Research, methodology development and operational psychometric work for all international large scale assessments conducted by the center.
- Since June 2011 *Director Research* in the center for Global Assessment. Director of the international survey assessment research group; ETS Research Initiative *Co-Leader*, Foundational Statistics, Psychometrics and Model Selection Research;

7/20/2020

ETS/IEA Research Institute: *Manager* Virtual Research Laboratory, Editor IERI Monograph Series.

- Since July 2008 *Principal Research Scientist* in the center for global assessment. *Director* of the international survey assessment research group; ETS Research Initiative *Co-Leader*, Foundational Statistics, Psychometrics and Model Selection Research; *Technical Director*: NAEP Task Order Component; ETS/IEA Research Institute: *Manager* Virtual Research Laboratory.
- Since May 2007 *Principal Research Scientist* in the center for statistical theory and practice; ETS Research Initiative Co-Leader, Foundational Statistics, Psychometrics and Model Selection Research; Technical Director: NAEP Task Order Component; ETS/IEA Research Institute: Manager Virtual Research Laboratory.
- Since Jan. 2007 *Senior Research Scientist* in the center for statistical theory and practice; ETS Research Initiative Co-Leader, Foundational Statistics, Psychometrics and Model Selection Research; Technical Director: NAEP Task Order Component; ETS/IEA Research Institute: Manager Virtual Research Laboratory.
- Since Apr. 2004 *Senior Research Scientist* in the center for large scale assessment, then center for psychometric infrastructure, then in the center for statistical theory and practice; Initiative Leader, Outcomes Based Model Evaluations, Educational Testing Service, Princeton, NJ
- Nov. 2000 – Apr. 04 *Research Scientist* in the center for global assessment at Educational Testing Service, Princeton, NJ
- Apr. 98 – Oct. 2000 *Group Leader*: “Evaluation of computer based instruction”, at Institute for Science Education (IPN), Kiel University, and assistant professor, IPN, and Institute for Psychology, Kiel.
- Apr. 97 – Mar. 98 Postdoctoral Fellow at ETS, Educational Testing Service, Princeton, NJ. Development of item fit measures for complex IRT models.

7/20/2020

Aug. 93 - Feb. 97 Assistant Research Scientist at Institute for Science Education (IPN), Kiel University. Position funded as research grant awarded by the German science foundation (DFG).

## Large-Scale Assessment Programs

### Current Advisory Activities (from 2017)

*IEA*: Member of the Technical Expert Group (TEG), since 2017.

*PIAAC 2022*: Chair of the Technical Advisory group, 2018-2022.

*PISA*: Member of the Technical Advisory Group, 2017-2020.

*NEPS*: (National Educational Panel Study): Member of the ‘critical friends’ advisory and research evaluation group, 2019.

*CARPE*: Assessment Research Center, Dublin City University. Member of the expert advisory panel, since 2019.

### Operational and Research Activities (from 2017)

*PISA 2018 – Programme for International Student Assessment*. Co-director, psychometrics and design together with Dr. Kentaro Yamamoto. Psychometric analyses of the PISA field test and main test data. Design considerations for main study integrated design.

*PISA 2015 – Programme for International Student Assessment*. Co-director, psychometrics and design together with Dr. Kentaro Yamamoto. Psychometric analyses of the PISA field test and main test data. Design considerations for main study integrated design.

*PIAAC 2012 – Programme for International Assessment of Adult Competencies*. Co-director, psychometrics and design together with Dr. Kentaro Yamamoto. ETS representative for expert group on context questionnaire development and analysis.

7/20/2020

*NAEP – National Assessment of Educational Progress.* Tasks: Planning and directing research on „Marginal Estimation of Population Characteristics“, participation in planning groups, supervision of data analysis, participation in „Design and Analysis Committee“ meetings with members of ETS NAEP group and the National Center for Educational Statistics (NCES).

*TIMSS - Trends in Mathematics and Science Study.* An International Association for the Evaluation of Educational Achievement (IEA) large-scale survey assessment. Tasks: Member of the International Project Management team as psychometric consultant for the International Study Center (ISC) at Boston College.

*PIRLS - Progress in International Reading Literacy Study.* An IEA large-scale survey assessment. Tasks: Member of the International Project Management team, psychometric consultant for the International Study Center (ISC) at Boston College.

*IALS Health Literacy Study.* Study with the Harvard Department of Public Health. Tasks: Research on extensions of conditioning models. Development of analysis plans and secondary analyses of background questionnaires using latent structure models.

*ALL – Adult Literacy and Lifeskills Assessment.* Conducting psychometric research projects. Supervising analyses, derivation of variables for secondary analyses, latent class analyses (LCA) for large-scale surveys.

*PISA ICT Feasibility Study (2003).* Research on feasibility of technology based data collection on „Information and Communication Technology Literacy“ for the OECD’s Programme for International Student Assessment (PISA). Tasks: Directing Analysis, Coauthoring the final report to OECD

## Grants

*BIGDATA: Collaborative Research: IA: F: Latent and Graphical Models for Complex Dependent Data in Education.* NSF funded project 2017-2020 together with Columbia University Department of Statistics, collaboration with professors Jingchen Liu and Zhiliang Zhang.

*Using response times to model and resolve missing values in item response data.* Cooperation and exchange agreement with Professor S. Pohl, Free University, Berlin, Germany. *Funded by German Research Foundation (Deutsche Forschungs Gemeinschaft - DFG). 2016-2019.*

*Psychometric Models for 21<sup>st</sup> -century Educational Survey Assessments: Funded by the Institute of Education Sciences (IES) in the Statistics and Methodology Grant program.* Roles: Co-principal investigator (with Frank Rijmen) 2011-2014, total budget \$1.2 million.

7/20/2020

*National assessment of educational progress (NAEP) Technical direction of NAEP task order component projects (TOC)* Developing proposals, budgeting, and supervision of TOC projects by NAEP research staff. 2005-2009.

*An tool for improved precision reporting in secondary analysis of national and state level NAEP data.* National Assessment of Educational Progress (NAEP) Secondary Analysis Grant. 8/2002-1/2004.

*Project BLK-PISA – analysis of SINUS (improving science education) project schools assessed with PISA 2000 instruments.* Research and Analysis Project at ETS as a subcontractor of institute for science education (IPN), Germany, 1/2002-4/2002.

*Project on improving Science teaching using technology. Teacher professional development (Project title: Semik – Schleswig Holstein).* – Research Grant – joint proposal with Prof. Dr. Manfred Prenzel – Granted by the German federal Board of Educational Planning (BLK). 1998-2000. Group leader, computer assisted teaching project.

*Enhancing psychometric mixture distribution models (Weiterentwicklung und Validierung psychometrischer Mischverteilungsmodelle).* Ph.D. research grant – joint proposal with thesis advisor Prof. Dr. Jürgen Rost – granted by German Science Foundation (DFG). 8/1993-8/1996. Supervision of data analysis staff, advisor for graduate and undergraduate students.

## Patents

*Parallel computing for data analysis using generalized latent variable models.* Matthias von Davier. Patent Serial No.: 10706188, issued July 7th, 2020

*Systems and Methods for Evaluating Multilingual Text Sequences.* Kentaro Yamamoto, Matthias von Davier & Jana Sukkarieh, Patent Serial No.: 13/848,837, issued July 27<sup>th</sup>. 2016.

*Mixture general diagnostic model.* Matthias von Davier, Kentaro Yamamoto & Xueli Xu. Patent Number US 8639176, issued January 28<sup>th</sup>, 2014.

*System and method for large scale survey analysis.* Matthias von Davier, Xueli Xu & Kentaro Yamamoto: Patent number: 8005712, issued August 23<sup>rd</sup>, 2011.



7/20/2020

## Awards & Honors

*Significant Contributions to Quantitative Methodology Award:* AERA Division D 2017 Awards: For the Handbook International Large Scale Assessments. Together with Leslie & David Rutkowski.

*Elected member: Board of Trustees of the Psychometric Society. 2013 - 2016*

*Honorary Senior Research Fellow:* Department of Education, 2013-2015, Oxford University, United Kindom.

*NCME Bradley Hanson Award 2012:* Awarded for contributions to educational measurement for “The General Diagnostic Model Project”.

*ETS Presidential Award 2011:* PIAAC project team award for superior efforts and accomplishments.

*ETS Spot Awards:* For outstanding presentation during a management training and for accomplishments as associate editor of the ETS research report series.

*Honorary Senior Research Fellow:* Department of Education, 2011-2013, Oxford University, United Kindom.

*Outstanding Reviewer 2010: Journal of educational and behavioral statistics (JEBS)* a joint publication by American educational research association (AERA) and American statistican association (ASA).

*ETS Scientist Award.* Recipient of the Research & Development ETS Scientist Award, for outstanding contributions by ETS research scientists, 2006.

*ETS Post-Doctoral Fellowship Grant:* A Person Fit Index for Polytomous Rasch Models, Latent Class Models, and their Extensions. Mentor: Kentaro Yamamoto. 1997-1998.

*German Science Foundation:* Additional Grant for the Post Doctoral Fellowship year. 1997-1998.

*German Psychological Association Special Interest Group Methodology.* Young Scientist Award, 3<sup>rd</sup> place: A Monte-Carlo Study on Bootstrapping Goodness-of-Fit Statistics for Sparse Categorical Data. 1997.

## Positions Offered

7/20/2020

*Michigan State University, Lansing, MI (2014):* Full professorship, Educational Measurement and Psychometrics, Successor of Prof. Mark Reckase.

*ACT: (2014)* Assistant Vice President – Statistical Services and Survey Research Division.

*Christian Albrechts University, Kiel, Germany (2011):* Full Professorship: Chair, Educational Measurement and Psychometrics, Leibniz Institute for Science Education.

*Columbia University, New York City (2008):* Professorship for Statistics and Education (Associate Professor), Department of Human Development, Teachers College, Columbia University.

## **Memberships in Professional Associations**

Psychometric Society

National Council for Measurement In Education (NCME)

American Educational Research Association (AERA)

## **Review Activities**

### **Journals**

Annals of Statistics

Annals of Applied Statistics

Applied Psychological Measurement

British Journal of Mathematical and Statistical Psychology

Communications in Statistics

Computational Statistics and Data Analysis

Journal for Computational Statistics

Journal of Classification

Journal of Educational and Behavioral Statistics

7/20/2020

European Journal for Psychological Assessment  
 Methodology – European Journal of Research Methods  
 Methods of Psychological Research – Online –  
 Organizational Research Methods  
 Psychometrika  
 Psychological Methods  
 Psychological Test and Assessment Modeling  
 Statistics in Medicine

### **Other Review Activities**

AERA Annual Meeting Reviewer  
 NCME Annual Meeting Reviewer  
 ETS Research Report Series Reviewer  
 Institute for Educational Sciences (IES) Review Panel Member  
     Statistics and Methodology, Special Education Research 2010  
 Institute for Educational Sciences (IES) Principal Panel Member 2011-2013  
 National Science Foundation

### **Board Memberships**

Editorial Board: Methodology - European Journal of Research Methods  
 Editorial Board: Journal of Educational and Behavioral Statistics 2010-2013  
 Editorial Board: Journal of Intelligence  
 IEA/ETS Research Institute Executive Board 2007-2017  
 IEA Research Conference Program Committee 2010  
 Psychometric Society Program Committee 2010-2012  
 Board of Trustees, Psychometric Society, 2013-2016

### **Editorial Duties**

Executive Editor – **Psychometrika**, 2019-2022  
 Associate Editor – **ETS Research Report Series**, 2010-2017  
 Editor in Chief – **British Journal of Mathematical and Statistical Psychology**, 2013–2018

7/20/2020

Founding Co-Editor – **Large Scale Assessments in Education**, 2008–2017

Founding Co-Editor– Book Series **Methodologies in Educational Measurement and Assessment**, Springer Science Publishers, 2013–

## **Supervision of Masters and Doctoral Thesis, Summer Interns and ETS Fellows**

### **Academic Advisory roles**

- |      |  |
|------|--|
| 2019 | Ph.D. committee member, Gulsah Gurkan, Boston College  |
| 2019 | Ph.D. committee member, Linette Ross, University of Delaware   |
| 2019 | Ph.D. committee member, Selene Lee, UPenn  |
| 2019 | Ph.D. committee member, Esther Ulitzsch, Free University, Berlin   |
| 2019 | Ph.D. committee member, Ummugul Bezirhan, Columbia University  |
| 2018 | Ph.D. committee member, Dandan Liao, University of Maryland, College Park,   |
| 2017 | Ph.D. committee member, Rutgers University, Graduate School of Education and<br>University of the Phillipines, Department of Statistics, candidate Kevin Carl P.<br>Santos |
| 2016 | Ph.D. committee member, Columbia University, Department of Statistics,<br>candidate Yunxiao Chen   |
| 2016 | Ph.D. committee member, Rutgers University, Graduate School of Education,<br>candidate Wenchao Ma  |
| 2015 | Ph.D. opponent to Ann Katrin Mittelhaeuser, Tilburg University, NL   |
| 2015 | Ph.D. opponent to Maarten Maasman, Twente University, NL   |
| 2014 | Ph.D. committee member and advisor: Tongyun Li, University of Maryland,<br>College Park, MD  |
| 2014 | Ph.D. committee member and reader: Yuanchao (Emily) Bo, Fordham<br>University, NYC   |
| 2013 | Ph.D. committee member and advisor: Youngmi Cho, University of Maryland,<br>College Park, MD   |

7/20/2020

- 2012 Ph.D. committee member and advisor: Norman Rose, Jena University, Germany
- 2011 Ph.D. committee member and reader: Jodi Casabianca, Fordham University,  
NYC
- 2006 Ph.D. committee member and reader: Alka Aurora, Boston College, Boston, MA
- 1995 - 1996 Supervision of Masters Thesis: Zize Mazrekaj, Kiel, Germany
- 1998 - 2000 Advising Ph.D. candidates at Institute for Science Education:  
Martin Senkbeil, Barbara Drechsel, Claudia Cramer, Detlev Urhahne

7/20/2020

**Mentoring Graduate Interns**

2018	NBME Summer Intern: Yanyan Tan
2017	NBME Summer Intern: Dandan Liao
2015	ETS Graduate Intern: Tiger Han
2014	ETS Graduate Intern: Yunxiao Chen
2013	ETS Graduate Fellow: Tongyun Li ETS Gulliksen Fellow: Yuanchao Bo
2012	ETS Graduate Intern: Eunike Wetzel
2011	ETS Graduate Intern: Martin Humburg ETS Graduate Intern: Inhee Choi
2010	ETS Graduate Intern: Yajuan Si ETS Graduate Intern: Ting Zhang
2009	ETS Graduate Intern: Norman Rose
2008	ETS Graduate Intern: Chueh-An Hsieh
2007	ETS Graduate Intern: Kyung Tyek Han ETS Graduate Intern: Min Hee Seo
2006	ETS Graduate Intern: Yue Zhao ETS Graduate Intern: Chia-Yi, Chiu
2005	ETS Graduate Intern: Xiaomin Huang
2003	ETS Gulliksen Fellow: Phillip Gagne ETS Graduate Intern: Haniza Yon
2002	ETS Graduate Intern: Hsiu Ting Yu

7/20/2020

## Skills

### Technology

Programming: Open-MP, Fortran, C, C++, Pascal, BASIC, PHP, Python

Software: SPLUS, SPSS, R,  
Microsoft Office, OpenOffice,  
Various IRT packages, Parscale, Conquest,  
WINMIRA (main developer) mdltm (main developer)

OS: Windows, Sun Solaris, Linux, BSD,  
Mac OSX

### Languages

German	native, excellent
English	second language, excellent
French	rudimentary
Romanian	rudimentary

7/20/2020

## List of Publications

### Academic Theses

1. von Davier, M. (1997) Methods for checking probabilistic models. (Methoden zur Prüfung probabilistischer Testmodelle, doctoral dissertation, in German).
2. von Davier, M. (1993) Psychometric properties of the stimulus response coping inventory ABI-ER-S/P (Die psychometrischen Eigenschaften des ABI-ER-S/P und seine Erweiterung auf Umweltgefahren, in German) Masters thesis, institute for psychology, Christian Albrechts university Kiel, Germany.

### Books and Special Issues

3. von Davier, M. & Lee, Y.S. (2019). Handbook Diagnostic Classification Models. Springer: New York. <https://www.springer.com/us/book/9783030055837>
4. Bennett, R. & von Davier, M. (2017). Shaping the Landscape of Educational Measurement and Evaluation. *Springer Book Series: Methodology of Educational Measurement and Assessment*. 1st ed. 2017, XIV, 711 p. 15 illus. ISBN 978-3-319-58689-2
5. Rutkowski, L., von Davier, M., & Rutkowski, D. (2014). Handbook International Large-scale Assessment: Background, Technical Issues, and Methods of Data Analysis. CRC Press (Chapman & Hall).
6. von Davier, M. & Hastedt, D. (2012). *IERI Monograph Series – Issues and Methodologies in Large Scale Assessments – Volume V*. (Editor). IEA/ETS Research Institute (IERI): Hamburg, Princeton. ISBN: 978-088685411-9
7. von Davier, M., Gonzalez, E., Kirsch, I., & Yamamoto, K. (2012). *The Role of International Large-Scale Assessments: Perspectives from Technology, Economy, and Educational Research*. Springer: New York.
8. von Davier, M. & Hastedt, D. (2011). *IERI Monograph Series – Issues and Methodologies in Large Scale Assessments – Volume IV*. (Editor). IEA/ETS Research Institute (IERI): Hamburg, Princeton. ISBN: 978-088685411-9
9. von Davier, M. (2011, Guest Editor). Special Issue on Methodological Advances in Educational and Psychological Testing. *Psychological Test and Assessment Modeling*.



7/20/2020

10. von Davier, M. & Hastedt, D. (2010). *IERI Monograph Series – Issues and Methodologies in Large Scale Assessments – Volume III*. (Editor). IEA/ETS Research Institute (IERI): Hamburg, Princeton. ISBN: 978-0886854096-8
11. von Davier, M. & Hastedt, D. (2009). *IERI Monograph Series – Issues and Methodologies in Large Scale Assessments – Volume II*. (Editor of the volume). IEA/ETS Research Institute (IERI): Hamburg, Princeton. ISBN: 978-0886-85404-1
12. von Davier, M. & Hastedt, D. (2008). *IERI Monograph Series – Issues and Methodologies in Large Scale Assessments – Volume I*. (Editor of the volume). IEA/ETS Research Institute (IERI): Hamburg, Princeton. ISBN: 978-0886-85402-7
13. von Davier, M. & Carstensen, C. H. (2007). *Multivariate and Mixture Distribution Rasch Models – Extensions and Applications*. (Editor of the volume) Springer, New York. ISBN: 978-0387-32916-1
14. von Davier, M. (1997). *Methoden zur Prüfung probabilistischer Testmodelle (Methods for checking probabilistic models*, doctoral dissertation, in German). *IPN Schriftenreihe, Band 157*. ISBN: 3-89088-113-0
15. Rost, J. & von Davier, M. (1992) *MIRA – A PC Program for the Mixed Rasch Model - User Manual*. IPN: Kiel, Germany. ISBN 3-89088-065-7

### **Journal Articles & Peer-Reviewed Research Reports**

16. von Davier, M., Khorramdel, L., He, Q., Shin, H. J., & Chen, H. (2019). Developments in Psychometric Population Models for Technology-Based Large-Scale Assessments: An Overview of Challenges and Opportunities. *Journal of Educational and Behavioral Statistics*, 44(6), 671–705. <https://doi.org/10.3102/1076998619881789>
17. Ulitzsch, E., von Davier, M. & Pohl, S. (in press). A multi-process item response model for not-reached items due to time limits and quitting. *Educational and Psychological Measurement*.
18. Lee, S. & von Davier, M. (in press). Improving Measurement Properties of the PISA Home Possessions Scale through Partial Invariance Modeling. *Psychological Test and Assessment Modeling*, Winter, 2019.
19. Han, Z., He, Q. & von Davier, M. (in press). Predictive Feature Generation and Selection Using Process Data from PISA Interactive Problem-Solving Items: An Application of Random Forests. *Frontiers of Psychology*.

7/20/2020

20. Ulitzsch, E., von Davier, M., & Pohl, S. (in press). A hierarchical latent response model for inferences about examinee engagement in terms of guessing and item-level nonresponse. *British Journal of Mathematical and Statistical Psychology*.
21. von Davier, M. (2019). Training Optimus Prime, M.D.: Generating Medical Certification Items by Fine-Tuning OpenAI's gpt2 Transformer Model. <https://arxiv.org/abs/1908.08594>
22. Khorramdel, L., von Davier, M., & Pokropek, A. (2019). Combining mixture distribution and multidimensional IRTree models for the measurement of extreme response styles. *Br J Math Stat Psychol.* 2019; 00: 000– 000. <https://doi.org/10.1111/bmsp.12179>
23. Ulitzsch, E., von Davier, M., & Pohl, S. (2019). Using response times for joint modeling of response and omission behavior. *Multivariate Behavioral Research.* doi: 10.1080/00273171.2019.1643699
24. Pohl, S., Ulitzsch, E. & von Davier, M. *Psychometrika* (2019). Using Response Times to Model Not-Reached Items due to Time Limits. <https://doi.org/10.1007/s11336-019-09669-2>
25. von Davier, M, Yamamoto, K., Shin, H.-J., Chen, H., Khorramdel, L., Weeks, J., Davis, S. Kong, N. Kandathil, M. (2019) Evaluating item response theory linking and model fit for data from PISA 2000–2012, *Assessment in Education: Principles, Policy & Practice*, DOI: 10.1080/0969594X.2019.1586642
26. Santos, K., de la Torre, J. & von Davier, M. (2019). Adjusting person fit index for skewness in cognitive diagnosis modeling. *Journal of Classification.* DOI <https://doi.org/10.1007/s00357-019-09325-5>
27. von Davier, M., Cho, Y., & Pan, T. (2019) Effects of Discontinue Rules on Psychometric Properties of Test Scores. <https://doi.org/10.1007/s11336-018-09652-3>.
28. Pohl, S. & von Davier, M. (2018). Commentary: On the Importance of the Speed-Ability Trade-Off When Dealing With Not Reached Items. *Frontiers in Psychology*, 9. DOI=10.3389/fpsyg.2018.01988
29. von Davier, M. (2018). Automated Item Generation with Recurrent Neural Networks. *Psychometrika.* doi: 10.1007/s11336-018-9608-y
30. von Davier, M. (2018) Diagnosing Diagnostic Models: From von Neumann's Elephant to Model Equivalencies and Network Psychometrics, *Measurement: Interdisciplinary Research and Perspectives*, 16:1, 59-70, DOI: 10.1080/15366367.2018.1436827
31. Kirsch, I.S., Thorn, W., & von Davier, M. (2018). Introduction to the Special Issue on Survey Quality, *Quality Assurance in Education*, <https://doi.org/10.1108/QAE-01-2018-0010>
32. von Davier, M. (2018). Detecting and treating errors in tests and surveys, *Quality Assurance in Education*, <https://doi.org/10.1108/QAE-07-2017-0036>

7/20/2020

33. Braun, H. & von Davier, M. (2017). The use of test scores from large-scale assessment surveys: psychometric and statistical considerations. *Large-scale Assess Educ* (2017) 5: 17. <https://doi.org/10.1186/s40536-017-0050-x>
34. von Davier, M., Shin, H.J., Khorramdel, L., & Stankov, L. (2017). The Effects of Vignette Scoring on Reliability and Validity of Self Reports. *Applied Psychological Measurement* First Published September 27, 2017. <https://doi.org/10.1177/0146621617730389>
35. Rose, N., von Davier, M., Nagengast, B. (2017). Modeling omitted and not-reached items in IRT models. *Psychometrika*, 82, 795-819. doi:10.1007/s11336-016-9544-7
36. Yamamoto, K. , He, Q. , Shin, H. J. and von Davier, M. (2017), Developing a Machine-Supported Coding System for Constructed- Response Items in PISA. *ETS Research Report Series*, 2017: 1-15. doi:10.1002/ets2.12169
37. Stankov, L. , Lee, J., von Davier, M. (2017). A Note on Construct Validity of the Anchoring Method in PISA 2012. *Journal of Psychoeducational Assessment*. First published date: April-04-2017. DOI: 10.1177/0734282917702270.
38. Weeks, J. P., von Davier, M., & Yamamoto, K. (2016). Using response time data to inform the coding of omitted responses. Special Issue: Current Methodological Issues in Large-Scale Assessments. *Psychological Test and Assessment Modeling, Volume 58, 2016 (4), 671-701*.
39. von Davier, M. (2016), High-Performance Psychometrics: The Parallel-E Parallel-M Algorithm for Generalized Latent Variable Models. *ETS Research Report Series, 2016: 1–11*. doi:10.1002/ets2.12120
40. von Davier, M. , Yamamoto, K., Shin, H.J., Chen, H., Weeks, J., Davis, S., Kong, N. & Kandathil, M. (2016). Evaluating IRT Linking and Model Fit for Data from PISA 2000-2012. *ETS Research Report RR-XX-16, in press*.
41. Rose, N., von Davier, M., Nagengast, B. (2015). Commonalities and differences in IRT-based methods for nonignorable item nonresponses. *Psychological Test and Assessment Modeling*, 57, 472-498.
42. Rotou, O., Qian, X. & von Davier, M. (2015). Ranking Systems Used in Gaming Assessments and/or Competitive Games. *Research Memorandum RM-15-03 Educational Testing Service, Princeton, New Jersey*.
43. Oliveri, M. E. & von Davier, M. (2014) Toward Increasing Fairness in Score Scale Calibrations Employed in International Large-Scale Assessments. *International Journal of Testing*, 14:1, 1-21, DOI:10.1080/15305058.2013.825265.

7/20/2020

44. von Davier, M., & Haberman, S. (2014). Hierarchical Diagnostic Classification Models Morphing into Unidimensional 'Diagnostic' Classification Models—A Commentary. *Psychometrika*. <http://dx.doi.org/10.1007/s11336-013-9363-z>
45. Khorramdel, L. & von Davier, M. (2014). Measuring Response Styles Across the Big Five: A Multiscale Extension of an Approach Using Multinomial Processing Trees. *Multivariate Behavioral Research*, 49, 2, p. 161-177. <http://dx.doi.org/10.1080/00273171.2013.866536>
46. Rijmen, F., Jeon, M., von Davier, M. & Rabe-Hesketh, S. (2014). *A third order item response theory model for modeling the effects of domains and subdomains in large-scale educational assessment surveys*. *Journal of Educational and Behavioral Statistics*, 38, 32-60. <http://dx.doi.org/10.3102/1076998614531045>
47. Wetzel, E., Xu, X., & von Davier, M. (2014). An Alternative Way to Model Population Ability Distributions in Large-Scale Educational Surveys. *Educational and Psychological Measurement*, 1–25. <http://epm.sagepub.com/content/early/2014/11/19/0013164414558843.abstract>
48. von Davier, M. (2014), The Log-Linear Cognitive Diagnostic Model (LCDM) as a Special Case of the General Diagnostic Model (GDM). *ETS Research Report Series*. <http://onlinelibrary.wiley.com/doi/10.1002/ets2.12043/abstract>
49. von Davier, M. (2013). The DINA Model as a Constrained General Diagnostic Model - Two Variants of a Model Equivalency. *BJMSP*, 67, 49–71. <http://onlinelibrary.wiley.com/doi/10.1111/bmsp.12003/abstract>
50. Marsh, Herbert W., Lüdtke, Oliver, Nagengast, Benjamin, Morin, Alexandre J. S., von Davier, Matthias (2013). Why item parcels are (almost) never appropriate: Two wrongs do not make a right—Camouflaging misspecification with item parcels in CFA models. *Psychological Methods*, Vol 18(3), Sep 2013, 257-284. doi: 10.1037/a0032773
51. Gonzalez, Jorge, & von Davier, M. (2013). Statistical models and inference for the true equating transformation in the context of local equating. *Journal of Educational Measurement*. Fall 2013, Vol. 50, No. 3, pp. 315–320.
52. von Davier, M., Gonzalez, J. & von Davier, A.A. (2013). Local equating using the Rasch model, the OPLM, and the 2PL IRT model or What is it anyway if the model captures everything there is to know about the test takers? *Journal of Educational Measurement*. Fall 2013, Vol. 50, No. 3, pp. 295–303.
53. von Davier, M., Naemi, B. & Roberts, R. D. (2012). Factorial Versus Typological Models: A Comparison of Methods for Personality Data, *Measurement: Interdisciplinary Research and Perspectives*, 10:4, 185-208.

7/20/2020

54. Sukkarieh, J., von Davier, M. & Yamamoto, K. (2012). From Biology to Education: Scoring and Clustering Multilingual Text Sequences and Other Sequential Tasks. ETS Research Report Series. ETS RR–12-25.
55. von Davier, M., Xu, X. & Carstensen, C. H. (2011). Measuring Growth in a Longitudinal Large Scale Assessment with a General Latent Variable Model. *Psychometrika*. 76: 318. doi:10.1007/s11336-011-9202-z
56. von Davier, M. (2011). Review of “Cross-Country Evidence on Teacher Performance Pay.” Boulder, CO: National Education Policy Center. Retrieved 3/31/2011 from <http://nepc.colorado.edu/thinktank/review-pisa-performance-pay>.
57. Oliveri, M. E. & von Davier, M. (2011). Investigation of Model Fit and Score Scale Comparability in International Assessments. *Psychological Test and Assessment Modeling*, 53 (3) 315-333. Retrieved 9/29/2011 from: [http://www.psychologie-aktuell.com/fileadmin/download/ptam/3-2011\\_20110927/04\\_Oliveri.pdf](http://www.psychologie-aktuell.com/fileadmin/download/ptam/3-2011_20110927/04_Oliveri.pdf)
58. von Davier, M. (2011). Equivalency of the DINA Model and a Constrained General Diagnostic Model. ETS-RR-11-37. Princeton: ETS Research Report Series. <https://doi.org/10.1002/j.2333-8504.2011.tb02273.x>
59. von Davier, M. (2010). Why sum scores may not tell us all about test takers. In Wang, Leigh (Ed.): *Special issue on Quantitative Research Methodology. Newborn and Infant Nursing Reviews*. Vol. 10, Issue 1, Pages 27-36.
60. Rutkowski, L., Gonzalez, E., Joncas, M. & von Davier, M. (2010) International Large-scale Assessment Data: Issues in Secondary Analysis and Reporting. *Educational Researcher*, Vol. 39, No. 2, March 2010, pp. 142-151.
61. von Davier, M. & Sinharay, S. (2010). Stochastic Approximation for Latent Regression Item Response Models. *Journal of Educational and Behavioral Statistics*, Vol. 35, No. 2, 174-193.
62. Rose, N., von Davier, M. & Xu, X. (2010). Modeling non-ignorable missing data with IRT. ETS-RR-10-10. Princeton: ETS Research Report Series, 2010: i-53. doi:10.1002/j.2333-8504.2010.tb02218.x
63. Xu, X., & von Davier, M. (2010). Linking Errors in Trend Estimation in Large Scale Surveys: A Case Study. ETS-RR-10-11. Princeton: ETS Research Report Series.
64. von Davier, M. (2010). Hierarchical mixtures of diagnostic models. *Psychological Test and Assessment Modeling*, Volume 52, 2010 (1), 8-28. Retrieved May 10<sup>th</sup>, 2010 from [http://www.psychologie-aktuell.com/fileadmin/download/ptam/1-2010/02\\_vonDavier.pdf](http://www.psychologie-aktuell.com/fileadmin/download/ptam/1-2010/02_vonDavier.pdf)
65. von Davier, M., Xu, X. & Carstensen, C. H. (2009). Using the General Diagnostic Model for Measuring Learning and Change in a Longitudinal Large Scale Assessment. *ETS Research*

7/20/2020

Report Series ETS-RR-09-28. Retrieved 11/9/2009 from  
<http://www.ets.org/Media/Research/pdf/RR-09-28.pdf>

66. von Davier, M. (2009). Some Notes on the Reinvention of Latent Structure Models as Diagnostic Classification Models. *Measurement – Interdisciplinary Research and Perspectives*. Vol. 7, No. 1, March, p.67-74. <https://doi.org/10.1080/15366360902799851>
67. von Davier, M. (2009). Is there need for the 3PL IRT model? Guess what? *Measurement – Interdisciplinary Research and Perspectives*. Vol. 7, No. 2, March, p.110-114.
68. von Davier, M. & Sinharay, S. (2009). Stochastic Approximation for Latent Regression Item Response Models. *ETS-RR-09-09*. Princeton: ETS Research Report Series.
69. von Davier, M., Gonzalez, E. & Mislevy, R. (2009) *What are Plausible Values and why are they useful?* In: M. von Davier & D. Hastedt (Eds.): IERI Monograph Series: Issues and Methodologies in Large Scale Assessments, Vol. 2.
70. Hsieh, C., Xu, X., & von Davier, M (2009). *Variance Estimation for NAEP Data Using a Resampling-Based Approach: An Application of Cognitive Diagnostic Models*. In: M. von Davier & D. Hastedt (Eds.): IERI Monograph Series: Issues and Methodologies in Large Scale Assessments, Vol. 2.
71. von Davier, M. (2008). *A general diagnostic model applied to language testing data*. *British Journal of Mathematical and Statistical Psychology*, Vol. 61, No. 2. (November), pp. 287-307. <https://doi.org/10.1348/000711007X193957>
72. Xu, X. & von Davier, M. (2008). Linking with the General Diagnostic Model. *Research Report, RR-08-08*. ETS: Princeton, NJ. <http://onlinelibrary.wiley.com/doi/10.1002/j.2333-8504.2008.tb02094.x/full>
73. Xu, Xueli & von Davier, Matthias (2008). Fitting the Structured General Diagnostic Model to NAEP Data. *RR-08-27, ETS Research Report*.
74. Xu, Xueli & von Davier, Matthias (2008). Comparing Multiple-Group Multinomial Loglinear Models for Multidimensional Skill Distributions in the General Diagnostic Model. *RR-08-35, ETS Research Report*.
75. Haberman, S. J., von Davier, M., & Lee, Y. (2008). Comparison of Multidimensional Item Response Models: Multivariate Normal Ability Distributions Versus Multivariate Polytomous Ability Distributions. *RR-08-45. ETS Research Report*.
76. Xu, X. & von Davier, M. (2008). Linking with the General Diagnostic Model. *IERI Monograph Series – Issues and Methodologies in Large Scale Assessments – Volume I, October 2008, 97-112*.

7/20/2020

77. Mazzeo, J., & Davier, M. von (2008). Review of the Programme for International Student Assessment (PISA) Test Design: Recommendations for Fostering Stability in Assessment Results. *doc.ref. EDU/PISA/GB(2008)28*; Retrieved 12/12/2008 from <http://www.oecd.org/dataoecd/44/49/41731967.pdf>
78. von Davier, A. & von Davier, M. (2007). A Micro-Survey of Models for Individual Change. *Submitted to the ETS Research Report Series...*
79. von Davier, M. (2007). Hierarchical General Diagnostic Models. *Research Report, RR-07-19. ETS: Princeton, NJ.* <https://doi.org/10.1002/j.2333-8504.2007.tb02061.x>
80. von Davier, M. (2007). Mixture General Diagnostic Models. *Research Report, RR-07-32. ETS: Princeton, NJ.* <https://doi.org/10.1002/j.2333-8504.2007.tb02074.x>
81. von Davier, M. & Sinharay, S. (2007). An Importance Sampling EM Algorithm for Latent Regression Models. *Journal of Educational and Behavioral Statistics, 32, 3, 233-251.*
82. von Davier, M. & Sinharay, S. (2007) Statistical Procedures used in the National Assessment of Educational Progress: Recent Developments and Recommendations for Future Directions. NAEP contract deliverable 2.2.8 - Research Position Paper.
83. von Davier, M. & von Davier, A. (2007). A Unified Approach to IRT Scale Linkage and Scale Transformations. *Methodology, 3, 3, 115-124.* <https://econtent.hogrefe.com/doi/abs/10.1027/1614-2241.3.3.115?journalCode=med>
84. Xu, X. & von Davier, M. (2006). Cognitive Diagnosis for NAEP proficiency data. *Research Report, RR-06-08. ETS: Princeton, NJ.*
85. von Davier, M. (2006). Book Review: Introduction to Rasch Measurement. *Applied Psychological Measurement, 30, 5, 443-446.*
86. von Davier, M. & DiBello, L., & Yamamoto, K. (2006). Reporting test outcomes using models for cognitive diagnostics. *Research Report RR-06-28. ETS: Princeton, NJ.*
87. von Davier, M. (2005). Recent Additions to the MGROUP Set of Programs. *Research Memorandum RM 05-02. ETS: Princeton, NJ.*
88. von Davier, M. (2005). A General Diagnostic Model Applied to Language Testing Data. *Research Report RR-05-16. ETS: Princeton, NJ.* <https://doi.org/10.1002/j.2333-8504.2005.tb01993.x>
89. Sinharay, S. & von Davier, M. (2005). Extension of the NAEP BGROUP program to higher dimensions. *Research Report RR-05-27. ETS: Princeton, NJ.*
90. Senkbeil, M. & von Davier, M. (2005). Do students want to use computers in the science classroom? The role of familiarity, control beliefs, and attitudes. (Wollen Studenten Computer

7/20/2020

im naturwissenschaftlichen Unterricht nutzen? Die Rolle von Vorwissen, Kontrollueberzeugung, und Einstellung, in German). *Unterrichtswissenschaft – Zeitschrift fuer Lernforschung*. 33, 4, 359-382.

91. von Davier, M. & von Davier, A.A. (2004). A Unified Approach to IRT Scale Linkage and Scale Transformations. *Research Report RR-04-09*. ETS: Princeton, NJ.
92. von Davier, M. & Sinharay, S. (2004). A stochastic EM algorithm for Latent Regression Models. *Research Report RR-04-34*. ETS: Princeton, NJ.
93. von Davier, M. & Yamamoto, K. (2004). Developing a Tool for Secondary Analysis of National and State Level NAEP Data. *Final project grant report to the National Center for Educational Statistics (NCES)*.
94. von Davier, M. & Yamamoto, K. (2004). Partially Observed Mixtures of IRT Models: An Extension of the Generalized Partial Credit Model. *Applied Psychological Measurement* Vol. 28, No.6, 389-406.
95. von Davier, M. (2003). Comparing Conditional and Marginal Direct Estimation of Subgroup Distributions. *Research Report RR-03-02*. ETS: Princeton, NJ.
96. von Davier, M. & Strauß, B. (2003). New developments in testing probabilistic models. *International Journal of Sport and Exercise Psychology*, 1, 61-82.
97. von Davier, M. & Yamamoto, K. (2003). Partially Observed Mixtures of IRT Models: An Extension of the Generalized Partial Credit Model. *Research Report RR-03-22*. ETS: Princeton, NJ.
98. von Davier, M. & Molenaar, I.W. (2003). A Person-Fit Index for Polytomous Rasch Models, Latent Class Models, and their Mixture Generalizations. *Psychometrika*, 68, No. 2, 213-228.
99. Rost, J., Carstensen, C.H. & von Davier, M. (1999). Is the Big Five personality inventory Rasch scalable? (Sind die Big Five Rasch-Skalierbar?, in German) *Diagnostica*, 45, 3, 119-127.
100. von Davier, M. (1997). Bootstrapping goodness-of-fit statistics for sparse categorical data: Results of a Monte Carlo study. *Methods of Psychological Research*. Vol 2(2),1997, 29-48. Retrieved 1/14/2010 from: <http://www.dgps.de/fachgruppen/methoden/mpr-online/issue3/art5/davier.pdf>
101. von Davier, M. (1997). WINMIRA - program description and recent enhancements. *Methods of Psychological Research*. Vol 2(2),1997, 25-28. Retrieved 1/14/2010 from: <http://www.dgps.de/fachgruppen/methoden/mpr-online/issue3/art4/davier.pdf>
102. von Davier, M. & Rost, J. (1996). The assessment of coping styles across situations using stimulus response inventories (Die Erfassung transsituativer Copingstile durch Stimulus-Response Inventare, in German) *Diagnostica*, 42, 4, 313-332.



7/20/2020

103. *Langeheine, R. & von Davier, M. (1996). Bootstrap methods: The art of pulling yourself out of the swamp (Bootstrap Verfahren: Die "Kunst" sich am Schopf aus dem Sumpf zu ziehen, in German) Newsletter Methoden, IV, 1, 5-7.*
104. *Rost, J. & von Davier, M. (1994). A Conditional Item Fit Index for Rasch Models. Applied Psychological Measurement, 18, 171-182.*

### Book Chapters

105. *von Davier M. (2017) New Results on an Improved Parallel EM Algorithm for Estimating Generalized Latent Variable Models. In: van der Ark L., Wiberg M., Culpepper S., Douglas J., Wang WC. (eds) Quantitative Psychology. IMPS 2016. Springer Proceedings in Mathematics & Statistics, vol 196. Springer*
106. *Bennett, R. & von Davier, M. (2017). Synthesis. Chapter 19 in: Bennett, R. & von Davier, M. (eds.) Shaping the Landscape of Educational Measurement and Evaluation. Springer Book Series: Methodology of Educational Measurement and Assessment.*
107. *Carlson, J. & von Davier, M. (2017). Item Response Theory. Chapter 5 in: Bennett, R. & von Davier, M. (eds.) Shaping the Landscape of Educational Measurement and Evaluation. Springer Book Series: Methodology of Educational Measurement and Assessment.*
108. *Kirsch, I., Lennon, M. L., Yamamoto, K., and von Davier, M. (2017). Chapter 9 Large-Scale Assessments of Adult Literacy. Chapter 9 in: Bennett, R. & von Davier, M. (eds.) Shaping the Landscape of Educational Measurement and Evaluation. Springer Book Series: Methodology of Educational Measurement and Assessment.*
109. *Xu, Xueli, & von Davier, Matthias (expected 2017). Comparing Multiple-Group Multinomial Loglinear Models for Multidimensional Skill Distributions in the General Diagnostic Model. In: Hancock, G. & Macready, G. (Eds.) Advances in Latent Class Modeling -- Festschrift for C. Dayton. University of Maryland: College Park.*
110. *Haberman, S. J., von Davier, M., & Lee, Y. (expected 2017). Comparison of Multidimensional Item Response Models: Multivariate Normal Ability Distributions Versus Multivariate Polytomous Ability Distributions. In: Hancock, G. & Macready, G. (Eds.) Advances in Latent Class Modeling -- Festschrift for C. Dayton. University of Maryland: College Park.*
111. *He, Q., von Davier, M., Greiff, S., Steinhauer, E. W., & Borysewicz, P. B. (2016/7). Collaborative Problem Solving Measures in the Programme for International Student Assessment (PISA). In A. A. von Davier, P. C. Kyllonen, & M. Zhu (Eds.), Innovative*

7/20/2020

*Assessment of Collaboration. Dordrecht, Netherlands: Springer.*

112. He, Q., & von Davier, M. (2016). *Analyzing Process Data from Problem-Solving Items with N-Grams: Insights from a Computer-Based Large-Scale Assessment*. In Y. Rosen, S. Ferrara, & M. Mosharraf (Eds.) *Handbook of Research on Technology Tools for Real-World Skill Development* (pp. 749-776). Hershey, PA: Information Science Reference. doi:10.4018/978-1-4666-9441-5.ch029
113. Khorramdel, L. & von Davier, M. (2016). Item Response Theory as a Framework for Test Construction. In Schweizer, K. & Distefano, C. (Eds.), *Principles and methods of test construction: standards and recent advancements*.
114. von Davier, M. & Rost, J. (2016). Logistic Mixture-Distribution Response Models. Chapter 23 in: van der Linden, W. (ed.) *Handbook of Item Response Theory, Vol. 1. Second Edition*. CRC Press, p. 393-406. <http://www.crcnetbase.com/doi/abs/10.1201/9781315374512-24>
115. von Davier, M. (2016). The Rasch Model. Chapter 3 in: van der Linden, W. (ed.) *Handbook of Item Response Theory, Vol. 1. Second Edition*. CRC Press, p. 31-48. <http://www.crcnetbase.com/doi/abs/10.1201/9781315374512-4>
116. von Davier, M. (2016). CTT and No-DIF and ? = (Almost) Rasch Model. *Chapter 14 in: Monica Rosén, Kajsa Yang Hansen, Ulrika Wolff (Eds.). Cognitive Abilities and Educational Outcomes -- A Festschrift in Honour of Jan-Eric Gustafsson*. (p. 249-272). *A volume in the Springer book series: Methodology of Educational Measurement and Assessment*.
117. He, Q., & von Davier, M. (2015). Identifying Feature Sequences from Process Data in Problem-Solving Items with N-grams. In A. van der Ark, D. Bolt, S. Chow, J. Douglas & W. Wang (Eds.), *Quantitative Psychology Research: Proceedings of the 79th Annual Meeting of the Psychometric Society* (pp.173-190). New York: Springer. Doi: 10.1007/978-3-319-19977-1\_13
118. von Davier, M., & Cheng, Y. (2014). *Multistage testing using diagnostic models*. In D. L. Yan, A. A. von Davier, & C. Lewis (Eds.), *Computerized multistage testing: Theory and applications* (pp. 219–227). New York: CRC Press.
119. Chen, H., Yamamoto, K. and von Davier, M. (2014). *Controlling Multistage Testing Exposure Rates in International Large-Scale Assessments*. In D. L. Yan, A. A. von Davier, & C. Lewis (Eds.), *Computerized multistage testing: Theory and applications* (pp. 319–347). New York: CRC Press.
120. von Davier, M. & Khorramdel, L. (2014). Differentiating Response Styles and Construct Related Responses: A new IRT Approach using Bifactor and Higher-Order Models. In: Millsap, R. van der Ark, L. A., Bolt, D. M. & Woods, C. M. (Eds.) *New Developments in Quantitative Psychology*, p. 463-488. New York: Springer.

7/20/2020

121. Allen, J. van der Velden, R., Helmschrott, S., Martin, S., Massing, N., Rammstedt, B., Zabal, A., and von Davier, M. (2013). Chapter 3: The Development of the PIAAC Background Questionnaires. In: Technical Report of the Survey of Adult Skills (PIAAC). Available at: [http://www.oecd.org/site/piaac/ Technical%20Report\\_17OCT13.pdf](http://www.oecd.org/site/piaac/Technical%20Report_17OCT13.pdf)
122. Yamamoto, K., Khorramdel, L., & von Davier, M. (2013) Chapter 17: Scaling PIAAC Cognitive Data. In: Technical Report of the Survey of Adult Skills (PIAAC). Available at: [http://www.oecd.org/site/piaac/ Technical%20Report\\_17OCT13.pdf](http://www.oecd.org/site/piaac/Technical%20Report_17OCT13.pdf)
123. Yamamoto, K., Khorramdel, L., & von Davier, M. (2013). Chapter 18: Scaling Outcomes. In: Technical Report of the Survey of Adult Skills (PIAAC). Available at: [http://www.oecd.org/site/piaac/ Technical%20Report\\_17OCT13.pdf](http://www.oecd.org/site/piaac/Technical%20Report_17OCT13.pdf)
124. Yamamoto, K., Khorramdel, L., & von Davier, M. (2013). Chapter 19: Proficiency Scale Construction. In: Technical Report of the Survey of Adult Skills (PIAAC). Available at: [http://www.oecd.org/site/piaac/ Technical%20Report\\_17OCT13.pdf](http://www.oecd.org/site/piaac/Technical%20Report_17OCT13.pdf)
125. von Davier, M., Weeks, J., Chen, H., Jim Allen, J., & van der Velden, R. (2013). Chapter 20: Creating Simple and Complex Derived Variables and Validation of Background Questionnaire Data. In: Technical Report of the Survey of Adult Skills (PIAAC). Available at: [http://www.oecd.org/site/piaac/ Technical%20Report\\_17OCT13.pdf](http://www.oecd.org/site/piaac/Technical%20Report_17OCT13.pdf)
126. Rutkowski, D., Rutkowski, L., & von Davier, M. (2013). A Brief Introduction to Modern International Large-Scale Assessment. In Rutkowski, L., von Davier, M., & Rutkowski, D. (Eds.). *Handbook International Large-scale Assessment: Background, Technical Issues, and Methods of Data Analysis*. CRC Press (Chapman & Hall).
127. Rutkowski, L., Gonzalez, E., von Davier, M., & Zhou, Y. (2013). Assessment Design for International Large-Scale Assessments. In Rutkowski, L., von Davier, M., & Rutkowski, D. (Eds.). *Handbook International Large-scale Assessment: Background, Technical Issues, and Methods of Data Analysis*. CRC Press (Chapman & Hall).
128. von Davier, M. & Sinharay, S. (2013). Analytics in International Large-Scale Assessments: Item Response Theory and Population Models. In Rutkowski, L., von Davier, M., & Rutkowski, D. (Eds.). *Handbook International Large-scale Assessment: Background, Technical Issues, and Methods of Data Analysis*. CRC Press (Chapman & Hall).
129. von Davier, M. (2013). Imputing Proficiency Data under Planned Missingness in Population Models. In Rutkowski, L., von Davier, M., & Rutkowski, D. (Eds.). *Handbook International Large-scale Assessment: Background, Technical Issues, and Methods of Data Analysis*. CRC Press (Chapman & Hall).
130. Mazzeo, J. & von Davier, M. (2013). Linking Scales in International Large-Scale Assessments. In Rutkowski, L., von Davier, M., & Rutkowski, D. (Eds.). *Handbook International Large-scale Assessment: Background, Technical Issues, and Methods of Data Analysis*. CRC Press (Chapman & Hall).

7/20/2020

131. Weeks, J., von Davier, M. & Yamamoto, K. (2013). Design Considerations for the Program for International Student Assessment. In Rutkowski, L., von Davier, M., & Rutkowski, D. (Eds.). *Handbook International Large-scale Assessment: Background, Technical Issues, and Methods of Data Analysis*. CRC Press (Chapman & Hall).
132. Rijmen, F. Jeon, M., von Davier, M. & Rabe-Hesketh, S. (2013). A General Psychometric Approach for Educational Survey Assessments: Flexible Statistical Models and Efficient Estimation Methods. In Rutkowski, L., von Davier, M., & Rutkowski, D. (Eds.). *Handbook International Large-scale Assessment: Background, Technical Issues, and Methods of Data Analysis*. CRC Press (Chapman & Hall).
133. von Davier, M. (2012). Schachprogramme, Testaufgaben, Populationsunabhängigkeit und das Rasch-Modell – oder: Es ist Zeit für das Rost-Modell (*Chess software, text problems, population invariance, and the Rasch model – or – it is time for the Rost model, in German language*) Chapter 1 in: Kempf, W. & Langeheine, R. (eds.) Festschrift für Jürgen Rost.
134. von Davier, M. (2012). Introduction: What Are Trends and Why Are They Important for PISA? In: Prenzel, M., Kobarg, M., Schöps, K. & Rönnebeck, S. (eds.) Research on PISA Research Outcomes of the PISA Research Conference 2009 ISBN: 978-94-007-4457-8  
<http://rd.springer.com/content/pdf/bfm%3A978-94-007-4458-5%2F4%2F1>
135. von Davier, M. & von Davier, A.A. (2011). *A General Model for IRT Scale Linking and Scale Transformations*. In von Davier, A.A.(Ed.): *Statistical Models for Test Equating, Scaling and Linking*. New York: Springer.
136. von Davier, M. (2010). *Item Response Modelle für Ordinale Daten [Item-Response Models for ordinal data]*. In H. Holling & B. Schmitz (Eds.), *Handbuch Statistik, Methoden und Evaluation* (pp. 667-678). Göttingen, Germany: Hogrefe.
137. von Davier, M. (2009). *Mixture Distribution Item Response Theory, Latent Class Analysis, and Diagnostic Mixture Models*. In: S. Embretson (Ed.): *Measuring Psychological Constructs: Advances in Model-Based Approaches*. APA Press. ISBN: 978-1-4338-0691-9. pp. 11-34.
138. von Davier, M. (2008). *The Mixture General Diagnostic Model*. In Hancock. G. R. & Samuelson, K. M. (Eds.) *Advances in Latent Variable Mixture Models*. Information Age Publishing. pp. 255-274.
139. von Davier, M., DiBello, L. & Yamamoto, K. (2008) *Reporting Test Outcomes Using Models for Cognitive Diagnosis*. Chapter 7 in: Hartig, J. Klieme, E, & Leutner. D. (eds.) *Assessment of competencies in educational contexts*. Hogrefe & Huber Publishers. pp. 151-176.
140. von Davier, A.A., Carstensen. C. H. & von Davier, M. (2008) *Linking competencies in horizontal, vertical, and longitudinal settings, and measuring growth*. Chapter 6 in: Hartig, J. Klieme, E, & Leutner. D. (eds.) *Assessment of competencies in educational contexts*. Hogrefe & Huber Publishers. pp. 121-150.

7/20/2020

141. von Davier, M. & Rost, J. & Carstensen, C. H. (2007) *Extending the Rasch Model or Abandoning the Rasch Model?* Chapter 2 in: von Davier, M. & Carstensen, C.H.: *Multivariate and Mixture Distribution Rasch Models*. Springer: New York, pp. 1-12.
142. von Davier, M. & Yamamoto, K. (2007). *Mixture distribution Rasch models and Hybrid Rasch models*. Chapter 6 in: von Davier, M. & Carstensen, C.H.: *Multivariate and Mixture Distribution Rasch Models*. Springer: New York, pp. 99-115.
143. von Davier, M. Sinharay, S., Oranje, A. & Beaton, A. (2006) *Statistical Procedures used in the National Assessment of Educational Progress (NAEP): Recent Developments and Future Directions*. In C.R. Rao and S. Sinharay (Eds.), *Handbook of Statistics (Vol. 26): Psychometrics*. Amsterdam: Elsevier.
144. von Davier, M. & Rost, J. (2006) *Mixture Distribution Item Response Models*. In C.R. Rao and S. Sinharay (Eds.), *Handbook of Statistics (Vol. 26): Psychometrics*. Amsterdam: Elsevier.
145. Haberman, S. J. & von Davier, M. (2006) *Some Notes on Models for Cognitively Based Skills Diagnosis*. In C.R. Rao and S. Sinharay (Eds.), *Handbook of Statistics (Vol. 26): Psychometrics*. Amsterdam: Elsevier. p. 1031-1038.
146. Kirsch, I. & von Davier, M. (2005) *Literacy and Health*. Chapter 11 in: *Learning a Living. First Results of the Adult Literacy and Life Skills Survey*. Statistics Canada, OECD Publishing. pp. 247-261.
147. Prenzel, M., von Davier, M., Bleschke, M.G., Senkbeil, M. & Urhahne, D. (1999) *Didaktisch optimierter Einsatz neuer Medien: Entwicklung von computergestützten Unterrichtskonzepten für die naturwissenschaftlichen Fächer* Proceedings of the 37. AEPF meeting in Erfurt.
148. von Davier, M, Urhahne, D, Prechtel, H, Schenzer, M & Prenzel, M. (1999). *Self-regulation, motivation, learning preferences, and animations in a computer-based learning environment*. In M. Komorek, H. Behrendt, H. Dahncke, R. Duit, W. Gräber, A. Kross (Eds.), *Research in Science Education: Past, Present, and Future. Proceedings of the Second International Conference of ESERA* (pp. 238 - 240). Kiel: IPN.
149. von Davier, M. & Hansen, H. (1998) *Prüfen: Erfassen und Rückmelden von Kompetenzzuwachs*. *IPN Research Memorandum 10 for the BLK study SINUS*.
150. von Davier, M. & Rost, J. (1996) *Self Monitoring - A class variable?* In J. Rost & R. Langeheine (Eds.): *Applications of Latent Trait and Latent Class Models in the Social Sciences*. Münster: Waxmann. Available at: <http://www.ipn.uni-kiel.de/aktuell/buecher/rostbuch/c28.pdf>
151. Rost, J., Carstensen, C. & von Davier, M. (1996) *Applying the Mixed Rasch Model to Personality Questionnaires*. In J. Rost & R. Langeheine (Eds.): *Applications of Latent Trait*

7/20/2020

and Latent Class Models in the Social Sciences . Münster: Waxmann. Available at:  
<http://www.ipn.uni-kiel.de/aktuell/buecher/rostbuch/c31.pdf>

152. von Davier, M. (1996) *Mixtures of Polytomous Rasch Models and Latent Class Models for Ordinal Variables*. In F. Faulbaum & W. Bandilla (Eds.): *Softstat 95 - Advances in Statistical Software 5*, Stuttgart: Lucius & Lucius.
153. Rost, J. & von Davier, M. (1995) *Mixture Distribution Rasch Models*. In G. H. Fischer & I. W. Molenaar (Eds.): *Rasch Models - Foundations, Recent Developments and Applications*. (pp. 257-268). New York: Springer.
154. von Davier, M. & Rost, J. (1995) *Polytomous Mixed Rasch Models*. In G. H. Fischer & I. W. Molenaar (Eds.): *Rasch Models - Foundations, Recent Developments and Applications*. (pp. 371-379). New York: Springer.
155. Rost, J. & von Davier, M. (1993) *Measuring different traits in different populations with the same items*. In R. Steyer, K. F. Wender & K. F. Widaman (Eds.): *Psychometric Methodology. Proceedings of the 7th European Meeting of the Psychometric Society in Trier* (pp. 446-450). Stuttgart: Gustav Fischer Verlag.
156. Rost, J., Eigenbrodt, D., von Davier, M. & Senkbeil, M. (1992): *Ein Situationsfragebogen zur Erfassung von Bewältigungsstrategien beim Umgang mit bedrohlichen Informationen über die Umwelt*. In: G. Eulefeld (Hrsg.), *Empirische Studien im Bereich Umwelterziehung, Voraussetzungen, Zwischenberichte, Ergebnisse*. (S. 247-260). IPN-Institut für Pädagogik der Naturwissenschaften an der Universität Kiel.

## Software

157. von Davier, M. (2016). *gdm-OMP*. A parallel processing algorithm for estimating multidimensional IRT, Mixture and multiple group models, and diagnostic models.
158. Narcowich, M. & von Davier, M. (2012) *GDM++ a graphical user interface for the General Diagnostic Modeling software*.
159. von Davier, M. (2005) *mdltm. Software for the general diagnostic model and for estimating mixtures of multidimensional discrete latent traits, based on WINMIRA*. ETS, Princeton.
160. von Davier, M. (2003) *eGPCM. A research scaling software for large scale assessment data for mixture distribution generalized partial credit models with missing data*. ETS, Princeton.

7/20/2020

161. von Davier, M. (2002) *YGROUPE – an extension of NAEP’s MGROUPE for estimating multivariate conditioning models and generating plausible values using seemingly unrelated regressions, a stochastic EM algorithm, and robust standard errors*. ETS, Princeton.
162. von Davier, M. (2000) *WINMIRA 2001. A Windows-Program for Analyses with the Rasch Model, with the Latent Class Analysis and with the Mixed Rasch Model*. Software commercially distributed by ASC - Assessment Systems Corporation (USA) and iec ProGAMMA (The Netherlands).
163. von Davier, M. (1994) *WINMIRA - A Program for Analyses with the Rasch Model, with the Latent Class Analysis and with the Mixed Rasch Model*. IPN Software, Institute for Science Education, Kiel, Germany.
164. Rost, J. & von Davier, M. (1992) *MIRA - A PC Program for the Mixed Rasch Model*. IPN Software, Institute for Science Education, Kiel, Germany.

## Presentations

165. von Davier, M. (2018). von Neumann’s Elephant, Diagnostic Model Equivalencies, and is Network Psychometrics different? *Invited Speech at the International Meeting of the Psychometric Society, New York, City, July 2018*.
166. Pohl, S., Ulitzsch, E. & von Davier, M. (2018). Disentangling Missingness due to Lack of Speed from Missingness due to Quitting. *Presentation at the International Meeting of the Psychometric Society, New York, City, July 2018*.
167. Shin, H.J. & von Davier, M. (2018). Mixture Models for Response Accuracy and Categorized Response Times. *Presentation at the International Meeting of the Psychometric Society, New York, City, July 2018*.
168. Khorramdel, L. & von Davier, M. (2018). *Relating Response Times and Response Styles using Mixture IRT models. Presentation at the International Meeting of the Psychometric Society, New York, City, July 2018*.
169. Feinberg, R. & von Davier, M. (2018). *What do you get when mixing profile analysis and local equating? Presentation at the International Meeting of the Psychometric Society, New York,*

7/20/2020

City, July 2018.

170. Ulitzsch, E, Pohl, S., & von Davier, M. (2018, July) *Disentangling missingness due to lack of speed from missingness due to quitting. Paper presented at the 8th European Congress of Methodology, Jena*
171. von Davier, M., Khorramdel, L. Shin, H.J. (2018). *A Hierarchical Mixture IRT Approach for Measuring Response Styles. Presentation at International Test Commission 2018, Montreal, CA*
172. von Davier, M. & Yamamoto, K. (2018). *Using Timing and Process Data to examine Data Fabrication in International Large-Scale Assessments. Presentation at International Test Commission 2018, Montreal, CA*
173. Khorramdel, L. & von Davier, M. (2018). *Relating Response Times and Process Data to Response Styles using mixture IRTree models. Presentation at International Test Commission 2018, Montreal, CA*
174. Shin, H.J., Khorramdel, L., Robin, F., Yamamoto, K. & von Davier, M. (2018). *Incorporating Response Time into Population Modeling for Large-Scale Assessments. Presentation at International Test Commission 2018, Montreal, CA.*
175. Ulitzsch, E., Pohl, S. & von Davier, M. (2018). *Using Nonresponse Times to Account for Omitted Items in Competence Tests. Paper presentation at the 2018 NCME meeting, New York City.*
176. He, Q., Shin, H.J., Lennon, M. L, Chen, H., von Davier, M. (2018). *Producing a Reliable Collaborative Problem Solving Scale in PISA. Paper presentation at the 2018 NCME meeting, New York City.*
177. Liao, D., von Davier, M., & Rubright, J. (2018). *Exploring Alternative Scoring Methods for Large-Scale Computer-Based Case Simulations. Paper presentation at the 2018 NCME meeting, New York City.*
178. Shin, H.J., von Davier, M., Kentaro Yamamoto. (2018). *Investigating Rater Effects in International Large-Scale Assessments. Paper presentation at the 2018 NCME meeting, New York City.*
179. von Davier, M., Cho, Y., & Pan, T. (2018). *Discontinuation Rules in Testing: New Results on Ignorability, Local Dependency, and Bias. Paper presentation at the 2018 NCME meeting, New York City.*
180. Braun, H. & von Davier, M. (2018). *The Use of Test Scores from Large-scale Assessments: Psychometric and Statistical Considerations. Paper presentation at the 2018 NCME meeting, New York City.*



7/20/2020

181. Pohl, S, Ulitzsch, E., & von Davier, M. (2017, September). *Using response time models to investigating the mechanism of missing values at the end of a test. Paper presented at the 13th Conference of the Expert Group of Methods and Evaluation of the German Psychological Society. Tübingen.*
182. Ulitzsch, E., Pohl, S., von Davier, M. (2017, September). *Using nonresponse times to account for omitted items in competence tests. Paper presented at the 13th Conference of the Expert Group of Methods and Evaluation of the German Psychological Society. Tübingen.*
183. von Davier, M. (2017). *What is Comparability and Why is it Important? Paper Presented at the 82th Meeting of the Psychometric Society. Zurich: Switzerland.*
184. He, Q., Shin, H. J., Lennon, M.L., Chen, H., von Davier, M. (2017). *Producing a Reliable Collaborative Problem Solving Scale in PISA 2015. Paper Presented at the 82th Meeting of the Psychometric Society. Zurich: Switzerland.*
185. Khorramdel, L., von Davier, M., Pokropek, A.(2017). *Mixture and Multi-Process IRTree Models for Measuring Response Styles. Paper Presented at the 82th Meeting of the Psychometric Society. Zurich: Switzerland.*
186. Pohl, S., von Davier, M. (2017). *Using Response Times to Deal With Missing Responses Due to Time Limits. Paper Presented at the 82th Meeting of the Psychometric Society. Zurich: Switzerland.*
187. Ulitzsch, E., Pohl, S., von Davier, M. (2017). *A Dynamic Response Time Model for Speeded Tests. Paper Presented at the 82th Meeting of the Psychometric Society. Zurich: Switzerland.*
188. von Davier, M. (2017). *Methodological Advances in PISA Scale Linking. Annual Meeting of the National Council on Measurement in Education (NCME), San Antonio (Texas), USA, 26.-30. April, 2017 – symposium presentation.*
189. Khorramdel, L., von Davier, M. & Pokropek, A. (2017). *Differentiating between types of response styles and valid responses using mixture and multi-process IRT models. Annual Meeting of the American Educational Research Association (AERA), San Antonio (Texas), USA, 27. April - 1. May, 2017 – symposium presentation.*
190. Khorramdel, L., Pokropek, A., & von Davier, M. (2017). *Measuring response styles in rating data using multi-process IRT models. Annual Meeting of the National Council on Measurement in Education (NCME), San Antonio (Texas), USA, 26.-30. April, 2017 – symposium presentation.*
191. von Davier, M. (2016). *High-Performance Psychometrics – Parallel Computation for the Estimation of Generalized Latent Variable Models. Paper Presented at the International Meeting of the Psychometric Society. July, 2016. Asheville, NJ.*

7/20/2020

192. von Davier, M. (2016). Introduction to Symposium: Methodological Advances for Computer-Based International Assessments. Paper Presented at the International Meeting of the Psychometric Society. July, 2016. Asheville, NJ.
193. Pohl, S. & von Davier, M. (2016). Using Response Times to Model Missing Responses in Competence Tests. Paper presented at the 27<sup>th</sup> IRT Workshop and Conference at RCEC, University of Twente, the Netherlands, September 2016.
194. Khorramdel, L. & von Davier, M. (2016). *Modeling mode effects in international large-scale assessments*. Paper Presented at the International Meeting of the Psychometric Society. July, 2016. Asheville, NJ.
195. Shin, H.J. & von Davier, M. (2016) *An extension of the speed-accuracy model*. Paper Presented at the International Meeting of the Psychometric Society. July, 2016. Asheville, NJ.
196. He, Q., & von Davier, M. (2016, April). Analyzing process data from problem-solving items with n-grams: Insights from a computer-based large-scale assessment. *Division H - Research, Evaluation and Assessment in Schools, at the annual meeting of American Educational Research Association (AERA), Washington DC, USA.*
197. He, Q., & von Davier, M. (2016, April). Identifying feature sequences from process data in PIAAC problem-solving items with n-grams. *Presentation at the 78th National Council on Measurement in Education (NCME) Conference, Washington DC, USA.*
198. Han, Z., He, Q., & von Davier, M. (2016, April). Predictive feature generation and selection from process data in PISA simulation-based environment. *Presentation at the 78th National Council on Measurement in Education (NCME) Conference, Washington DC, USA.*
199. von Davier, M. (2016). Towards Establishing Standards for Spiraling of Contextual Questionnaires in LargeScale Assessments -- Imputing Missing Background Data, How to ... And When to ... *Presentation at the 78th National Council on Measurement in Education (NCME) Conference, Washington DC, USA.*
200. von Davier, M. (2016). Exploring Timing and Process Data in Large-Scale Assessments – Process Data, why do we care? *Presentation at the 78th National Council on Measurement in Education (NCME) Conference, Washington DC, USA.*
201. He, Q., & von Davier, M. (2015, December). *Exploring response patterns in problem-solving items using process data: Insights from log files of Problem Solving in Technology-Rich Environments (PS-TRE) in PIAAC*. Invited presentation at *What We Need Skills for: The PIAAC Research Conference 2015, Arlington, VA, USA.*
202. He, Q., & von Davier, M. (2015, December). *Exploring process data in problem solving items in large scale assessments*. Invited seminar at the Department of Statistics, Columbia University, New York, NY, USA.

7/20/2020

203. He, Q., & von Davier, M. (2015, July). *Exploring process data in problem-solving items in PIAAC and PISA*. Presentation at the Global Assessment Methodologies Seminar, Department of Statistics, Educational Testing Service, Princeton, NJ, USA.
204. He, Q., & von Davier, M. (2015, April). Exploring process data from problem solving items using sequence mining. *Presentation at the 77th National Council on Measurement in Education (NCME) Conference, Chicago, IL, USA*.
205. Khorramdel, L., & von Davier, M. (2015). Validation and optimization of a new IRT approach for measuring response styles using external variables. *80<sup>th</sup> International Meeting of the Psychometric Society (IMPS), Beijing, China, 12.-16. July, 2015*.
206. Khorramdel, L., & von Davier, M. (2015). A new mixture MIRT approach for measuring response styles. *Annual Meeting of the National Council on Measurement in Education (NCME), Chicago, USA, 15.-19. April 2015*.
207. Khorramdel, L., & von Davier, M. (2014). A MIRT approach to measuring response styles in Large-Scale-Assessment data. *Annual Meeting of the National Council on Measurement in Education (NCME), Philadelphia, USA, 2.-6. April 2014*.
208. von Davier, M. & Chen, H. (2014). Effects of Background Questionnaire Rotation on Imputation and Generation of Plausible Values in Large Scale International Assessments. *Annual Meeting of the National Council on Measurement in Education (NCME), Philadelphia, USA, 2.-6. April 2014*.
209. Khorramdel, L., & von Davier, M. (2014). Measuring and correcting for response styles in Large Scale Assessments using HYBRID models and a new MIRT approach. *79th International Meeting of the Psychometric Society (IMPS), Madison (Wisconsin), USA, 21.-25. July, 2014 (symposium)*.
210. von Davier, M. & Cheng, Y. (2014). Multistage Testing Using Diagnostic Models. *Paper presented at the Invited Symposium Cognitive Diagnostic CAT. IACAT Summit 2014. Princeton, NJ*.
211. von Davier, M. (2014). Towards Adaptive Testing in PISA 2015: Challenges and Solutions. *Paper presented at the Invited Symposium Implementing MST in Survey Assessment. IACAT Summit 2014. Princeton, NJ*.
212. von Davier, M. (2013). What do we mean by conjunctive or compensatory models? *NCME 2013, April, San Francisco, CA*.
213. von Davier, M. (2013). Hierarchical Classification Models Morphing into Unidimensional 'Diagnostic' Classification Models—A Commentary. Paper presented at the International Meeting of the Psychometric Society, Arnhem, the Netherlands.

7/20/2020

214. von Davier, M. (2013). Innovations in PIAAC: How Technology and Methodology Differentiates PIAAC. Paper presented at the PIAAC Invitational Conference, November, Washington, D.C.
215. Weeks, J., von Davier, M. & Yamamoto, K. (2013). Using Response Time Data to Inform the Coding of Missing Responses. *Paper presented at the XX. International Meeting of the Psychometric Society (IMPS), Arnhem, the Netherlands.*
216. von Davier, M. (2012). When is a Dimension a Dimension? Paper presented at the meeting of the National Council for Measurement in Education. Vancouver, Canada.
217. Khorramdel, L., & von Davier, M. (2012). Measuring response styles and response processes in rating scales through uni- and multidimensional IRT-models. 8th Conference of the International Test Commission, Amsterdam, 3.-5. July 2012.
218. von Davier, M., & Khorramdel, L. (2012). Measuring response styles and response processes in rating-scales: comparing multidimensional simple structure IRT models with bifactor and higher order factor models. 77th Annual Meeting of the Psychometric Society, Lincoln (Nebraska), 09.-12. July, 2012.
219. Khorramdel, L., & von Davier, M. (2012). Measuring response styles and response processes in rating scales through uni- and multidimensional IRT-models. 16th European Conference on Personality, Trieste, 10.-14 July 2012 (Symposium).
220. von Davier, M., Rijmen, F., Jeon, M. & Rabe-Hesketh, S. (2012). Stochastic Approximation for Estimation of Diagnostic Models. Paper presented at the 77<sup>th</sup> IMPS, Lincoln, NE.
221. Rijmen, F. & von Davier, M. (2011, December). 21<sup>st</sup> century models for 21<sup>st</sup> century educational assessments. Paper presented at the Tucker Workshop. Princeton, NJ.
222. von Davier, M. (2011, August). *A Special Case of the General Diagnostic Model: The DINA Model – Do Diagnostic Models hold more Promise than they Deliver?* Paper presented at the joint statistical meetings (JSM). Miami Beach, Fl.
223. von Davier, M. (2011, August). Do Diagnostic Models Hold More Promise Than They Deliver? Seminar Series, University of Oxford, Department of Education.
224. von Davier, M. (2011, August). Do Diagnostic Models Hold More Promise Than They Deliver? Paper presented at an invited symposium on competency measurement in business education. EARLI 2011, Exeter.
225. von Davier, M., Xu, X. & Yamamoto, K. (2011, July). *Why Diagnostic Models are Latent Class Models – Or the other way around?* Paper presented at the invited symposium: The Many Faces of Latent Class Analysis. 75<sup>th</sup> International Meeting of the Psychometric Society. Hong Kong.

7/20/2020

226. von Davier, M., Naemi, B. & Roberts, R. (2011, April). *Comparing Typological and Factorial Models for Personality Scales and Survey Data*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans.
227. von Davier, M. (2010, April) *Discussion: New Directions for Standard Setting: Using Cognitive Diagnostic Model, Mixture Rasch Model, SALTUS Model, and Synthesized Classification Models – Coordinated Session*. National Council for Measurement in Education. Annual meeting in Denver, CO.
228. Oliveri, M. & von Davier, M. (2010, April). *Investigation of Model Fit and Score Scale Comparability in International Assessments*. National Council for Measurement in Education. Annual meeting in Denver, CO.
229. Jiao, H., von Davier, M. & Wang, S. (2010, May). *Polytomous Mixture Rasch Testlet Model*. Paper presented at the National Council for Measurement in Education. Annual meeting in Denver, CO.
230. von Davier, M. (2010, May). *Linking and Methodologies in International Assessments*. Presentation at the annual seminar on foundational statistics and psychometrics research initiatives, ETS, Princeton, NJ.
231. Rose, N., von Davier, M. & Xu, X. (2010, July) *Modeling Non-ignorable Missing Data with Item Response Theory*. Paper presented at the 75<sup>th</sup> international meeting of the psychometric society, Athens, Georgia.
232. Oliveri, M. & von Davier, M. (2010, April). *Investigation of Model Fit and Score Scale Comparability in International Assessments*. Paper presented at the 75<sup>th</sup> international meeting of the psychometric society, Athens, Georgia.
233. Cho, Y., von Davier, M., Jiao, H. & Macready, G. (2010, July). *A Comparison of Classification Consistency Obtained with Unidimensional Mixture IRT Models and Mixture Generalized Diagnostic Models*. Paper presented at the 75<sup>th</sup> international meeting of the psychometric society, Athens, Georgia.
234. von Davier, M., Naemi, B. & Roberts, R. (2010, July). *Comparing Typological and Factorial Models of Personality Using Latent Structure Models*. Paper presented at the 75<sup>th</sup> international meeting of the psychometric society, Athens, Georgia.
235. Rose, N., Ihme, J.M., & von Davier, M. (2010 July). *Estimating and Testing Two-parameter Item Component Models (2P-ICM) with Multidimensional IRT Models and SEM for Dichotomous Data*. IV European Congress of Methodology in Potsdam.
236. von Davier, M. & Xu, X. (2009, April). *MDLTM – a software for multidimensional discrete latent trait models, diagnostic models, latent class analysis, and multivariate IRT*. Paper presented at the AERA/NCME meeting in San Diego, CA.

7/20/2020

237. von Davier, M., Xu, X. & Carstensen, C. H. (2009, July). *Using the General Diagnostic Model for Measuring Learning and Change in a Longitudinal Large Scale Assessment*. Paper presented at the annual IMPS meeting in Cambridge, England.
238. von Davier, M. & Mazzeo, J. (2009, September). *Review of the Programme for International Student Assessment (PISA) Test Design: Recommendations for Fostering Stability in Assessment Results*. Paper presented at the 1<sup>st</sup> PISA research conference, Kiel, Germany.
239. von Davier, M. & Sinharay, S. (2008, November). *Stochastic Approximation Methods for Latent Regression Item Response Models*. Paper presented at the Tucker Workshop, ETS, Princeton, NJ.
240. von Davier, M. (2008, June). *Advances in psychometric modeling of large scale educational survey data*. Invited symposium at the international meeting of the psychometric society, Dover, NH.
241. von Davier, M. & Sinharay, S. (2008, June). *Stochastic Approximation Methods for Latent Regression Item Response Models*. Paper presented at the international meeting of the psychometric society, Dover, NH.
242. von Davier, M. (2008, February). *Diagnostic Item Response Models*. Teachers College, Columbia University.
243. Chiu, C. Y., Xu, X. & von Davier, M. (2007) *Linking general diagnostic models*. Paper presented at the annual meeting of the National Council of Measurement in Education, NCME, Chicago.
244. von Davier, M. & von Davier, A. (2007) *A unified approach to IRT scale linkage and scale transformations*. Paper presented at the annual meeting of the American Educational Research Association, AERA, Chicago.
245. von Davier, M. (2007) *Extending the Rasch Model or Abandoning the Rasch Model?* Paper presented at the annual meeting of the National Council of Measurement in Education, NCME, Chicago.
246. Xu, X. & von Davier, M. (2007) *Structured General Diagnostic Models*. Paper presented at the annual meeting of the National Council of Measurement in Education, NCME, Chicago.
247. Huang, X. & von Davier, M. (2006, April) *Comparing Latent Trait Models for Large-scale Survey Background Data*. Paper presented at the annual meeting of the National Council of Measurement in Education, NCME, San Francisco.
248. von Davier, M. & Xu, X. (2006, April) *Cognitive Diagnosis Models for Large Scale Surveys*. Paper presented at the annual meeting of the National Council of Measurement in Education, NCME, San Francisco.

7/20/2020

249. von Davier, M. . & Xu, X (2006, December) *Parsimonious Skill Distributions for the General Diagnostic Model*. Paper presented at the Tucker Workshop, ETS, Princeton, NJ.
250. von Davier, M. (2005, May) *A General Diagnostic Model applied to Language Testing Data*. Paper presented at the Tucker Workshop, ETS, Princeton, NJ.
251. von Davier, M. & Braun, H. (2005, October) *Modeling Proficiency over Time*. Presentation to the ETS advisory panel on research, Princeton, NJ.
252. von Davier, M., von Davier, A., Xu, X. and Yamamoto, K. (2005, December) *Multiple Populations and Scale Linkage in the General Diagnostic Model*. Paper presented at the Tucker Workshop, ETS, Princeton, NJ.
253. Sinharay, S. & von Davier, M. (2004, January) *Application of Stochastic EM Methods to Latent Distribution Models*. ETS Research and Development Seminar Series, Princeton.
254. von Davier, M. (2004, March) *Numerical Optimization 101*. Presentation to the statistical methods learn at lunch series. ETS.
255. von Davier, M. & Yon, H. (2004, April) *A Conditioning Model with Relaxed Assumptions*. Paper presented at the 2004 annual meeting of the National Council of Measurement in Education. San Diego.
256. von Davier, M. (2004, May) *Which model of change or which software? "Mini Battles" between SEM and HLM (and other) approaches*. In: ETS Evaluation special interest group seminar series: Three Perspectives on Measurement of Change.
257. von Davier, A. , & von Davier, M. (2004, June) *A unified approach to IRT scale linkage and Scale Transformation*. Paper presented at the 2004 meeting of the psychometric society, Monterey, CA.
258. von Davier, M., Donoghue, J., & Sinharay, S. (2004, June) *Current Developments in Estimating Latent Distributions*. Paper presented at the 2004 meeting of the psychometric society, Monterey, CA.
259. Sinharay, S., & von Davier, M. (2004, June) *Application of Stochastic EM Methods to Latent Distribution Models*. Paper presented at the 2004 meeting of the psychometric society, Monterey, CA.
260. von Davier, M. & Yamamoto, K. (2004, November) *A Class of Models for Cognitive Diagnosis – and some notes on estimation*. Paper presented at the Tucker workshop, ETS, Princeton, NJ.
261. von Davier, M. & von Davier, A.A. (2003, October) *A Unified Approach to IRT Scale Linkage and Scale Transformations*. ETS Research and Development Tucker Works Series, Princeton.

7/20/2020

262. von Davier, M. & Yu, H. T. (2003, April) *Recovery of population characteristics from sparse matrix samples of simulated item responses*. Paper presented at the 83rd annual AERA meeting, *Chicago*.
263. von Davier, M. (2003, March) *Bootstrapping Goodness-of-Fit Statistics for Sparse Multivariate Categorical Data*. ETS Research and Development Seminar Series, *Princeton*.
264. Yamamoto, K. & von Davier, M. (2003, February) *A Latent Class Cognitive Diagnosis Model with Applications to Adult Literacy Data*. ETS Research and Development Seminar Series, *Princeton*.
265. von Davier, M. (2002, January) *Conditional and Marginal Estimation of Group Statistics in Large Scale Assessments*. ETS Research and Development Seminar Series, *Princeton*.
266. von Davier, M. & Senkbeil, M. (2001), *Long Term effects of Computer-Based Science Classes*. Paper presented on 82nd Annual Meeting of the American Educational Research Association (AERA). Seattle, April 10-14.
267. von Davier, M. (2000, April) *The WINMIRA 32 software*. Paper presented at the 81st annual AERA meeting, *New Orleans*.
268. von Davier, M. (1999, July) *The WINMIRA 32 software*. Software presentation at the 11th european meeting of the of the psychometric society. *Lüneburg*.
269. von Davier, M. (1999, July) *A Normally Distributed Person Fit Index for Polytomous IRT models and their Mixture Generalizations*. Paper presented at the 11th european meeting of the of the psychometric society. *Lüneburg*.
270. von Davier, M., Urhahne, D., Precht, H., Schenzer, M. & Prenzel, M. (1999, September) *Self Regulation, Motivation, Learning Preferences and Animations in a Computer Based Learning Environment*. Paper presented at the 2nd ESERA conference in *Kiel*.
271. von Davier, M. (1999, September) *Bootstrapping Goodness-of-Fit Statistics for Sparse Multivariate Categorical Data*. Paper presented at the 5th annual latent class workshop *Rothenberge, Münster*.
272. von Davier, M. (1998, September) *Bootstrapping Goodness-of-Fit Statistics for Sparse Multivariate Categorical Data*. Paper presented at the annual DGPs meeting, *Dresden*.
273. von Davier, M. (1997, January) *Hypothesis testing 101 (Wie werden Hypothesen geprüft? In German)* Seminar for graduate student training on “Empirical Research Methods “ at IPN, *CAU Kiel*.
274. Rost, J. & von Davier, M. (1995, November) *Assessing rigid and flexible coping strategies. A second order latent class analysis. (Die Erfassung rigider und Flexibler*



7/20/2020

- Angstbewältigungstypen. Eine Latent Class Analyse Zweiter Ordnung, in German*). Presented at the 3rd conference of the DGPS SIG personality psychology, Trier.
275. von Davier, M. (1995, December) *Bootstrapping Goodness-of-Fit Statistics for Sparse Multivariate Categorical Data*. Paper presented at the 5th international IOPS meeting, Ludwigshafen.
276. von Davier, M. (1995, September) *Die Prüfung psychometrischer Modelle für grosse, schwach besetzte Kontingenztabellen*. Paper presented at the 2nd meeting of the DGPs SIG Fachgruppe Methoden, Bremen.
277. von Davier, M. (1995, September) Latent Class Analysis and Mixed Rasch Models with *WINMIRA*. Software demonstration at the 2nd meeting of the DGPs SIG Fachgruppe Methoden, Bremen.
278. von Davier, M. (1995, September) *Resimulating Power Divergence Statistics for Sparse Multivariate Categorical Data*. Paper presented at the 3rd meeting of the Fachgruppe Methoden, Berlin.
279. von Davier, M. & Rost, J. (1995, August) The Assessment of Coping Styles: Trans-Situational Consistency of Coping Strategies. 3rd European Conference on Psychological Assessment, Trier.
280. von Davier, M. (1995, April) *Estimating Hybrid Mixtures of Rasch Models and Latent Class Models with WINMIRA*. Paper presented at the 76th AERA meeting, San Francisco.
281. von Davier, M. (1995, March) *Mixtures of Polytomous Rasch Models and Latent Class Models for Ordinal Variables*. Paper presented at the 8th SOFTSTAT meeting, in Heidelberg.
282. von Davier, M. (1994, September) New probabilistic models for item response data and their applications (*Neue probabilistische Testmodelle und ihre Anwendungen, in German*) Paper presented at the 39th DGPs meeting, Hamburg.
283. von Davier, M. (1994, May) *Estimating Mixed Rasch Models with WINMIRA*. Poster presented at the IPN Symposium: Applications of Latent Trait and Latent Class Models in the Social Sciences. Sankelmark.
284. Rost, J. & von Davier, M. (1994, May) *Applications of the Mixed Rasch Model to Questionnaire Data*. Paper presented at the IPN Symposium: Applications of Latent Trait and Latent Class Models in the Social Sciences. Sankelmark.
285. von Davier, M. (1994, May) *Self Monitoring – A Class Variable?* Paper presented at the IPN Symposium: Applications of Latent Trait and Latent Class Models in the Social Sciences. Sankelmark.

7/20/2020

286. Rost, J. & von Davier, M. (1993, November) Are the big-five personality factors Rasch scalable? (*Sind die fünf Persönlichkeitsfaktoren des NEOFFI Rasch skalierbar?*, in German) Paper presented at the 2nd conference of the DGPS SIG personality psychology, Bielefeld.
287. von Davier, M. (1993, September) The Mixed Rasch model and the Identification of 'unscalable' examinees. (*Das Mixed Rasch Modell und die Identifikation Unskalierbarer Personen*, in German). Paper presented at the 1st meeting of the DGPs SIG Fachgruppe Methoden, Kiel.
288. Rost, J. & von Davier, M. (1991, July) *Measuring Different Traits in Different Populations with the Same Items*. Paper presented at the 7th european meeting of the psychometric society. Trier.

### Invited Lectures

289. von Davier, M. (2015). The analysis of innovative items in international large scale assessments. NAER invited seminar, Taipei, Taiwan.
290. von Davier, M. (2015). The General Diagnostic Model and its use in international Large Scale Assessments. Invited Lecture, Hong Kong, Institute of Education.
291. von Davier, M. (2015). PISA analysis methods. Are international assessments fair? Invited Lecture at the Large Scale Assessments Workshop: Working Group on how data are produced. University of East Anglia, United Kingdom.
292. von Davier, M. (2015). PISA analysis methods for Fairness in Testing: Ensuring Comparability and Trends in International Assessments. Invited Lecture at the Invitational International PISA Research Conference, Oslo, Norway, November.
293. von Davier, M. (2014). How LCDM and DINA are special cases of the GDM - or - ... still, the 2PL may fit skill-based test data better. Invited presentation at the 3<sup>rd</sup>. Workshop on Statistical Methods for Diagnostic Assessments. Fudan University: Shanghai.  
<http://stat.columbia.edu/~yunxiao/Workshops.html>
294. von Davier, M. (2012, April). Stochastic Approximation for Estimation of Diagnostic Models. Invited Lecture at the Special Focus Series: Statistical Methods in Diagnostic Assessments. Columbia University. New York.

7/20/2020

295. von Davier, M. (2011, September). Some applications of multilevel diagnostic models to large scale assessment data. Keynote address at the special interest group methodology. University of Bamberg.
296. von Davier, M. (2011, May). *Using General Latent Variable Models for Large-Scale Data Analysis*. Invited Lecture at the Institute for Learning Sciences Graduate Seminar Series. Munich, Germany.
297. von Davier, M. (2009, May) *A class of models for cognitive diagnosis – developments in the past 5 years*. Invited lecture at the Department of Educational Measurement and Statistic (EDMS), University of Maryland, College Park.
298. von Davier, M. (2009, July). *Introduction to Diagnostic Models*. Invited Lecture at the Statistical and Applied Mathematical Sciences Institute (SAMSI) summer program in Psychometrics, Research Triangle Park, South Carolina.
299. von Davier, M. (2009, February) *On International Large Scale Survey Assessments*. Invited Lecture at the Fordham Graduate Program in Psychometrics Lecture Series. Fordham University, New York.
300. von Davier, M. (2008, December) *Generalized Latent Variable Models for Longitudinal Data*. Invited Lecture at the German Institute for International Educational Research. Frankfurt, Germany.
301. von Davier, M. (2008, May). *On International Large Scale Survey Assessments*. Invited Lecture at the Research and Evaluation Methods and the Center for Educational Assessment at UMass Amherst, MA.
302. von Davier, M. (2008, July). *Advances in Multiple Classification Models for Categorical Data Analysis*. Invited Lecture at Summer School on School Effectiveness Research, IPN, Kiel.
303. von Davier, M. (2008, July) *Mixture Diagnostic Models*. Invited presentation at the 41<sup>st</sup> Conference for Mathematical Psychology, Washington, D.C.
304. von Davier, M. (2007, March) *A Hierarchical General Diagnostic Model*. Invited presentation at the annual Technical Advisory Group meeting for the Programme for International Student Assessment (PISA). Melbourne, Australia.
305. von Davier, M. (2007, July) *Structured Item Response Models*. Invited lecture at the MPI Summer Academy 2007 on Educational Measurement, Max Plank Institute for Human Development, Berlin.
306. von Davier, M. (2007, August). *Hierarchical Diagnostic Models for Longitudinal Data*. Invited Lecture at the Conference on Longitudinal Data Analysis. Kiel, Germany.

7/20/2020

307. von Davier, M. & Xu, X. (2007). Mixtures of Multidimensional Discrete Latent Trait Models. Paper presented at the: Symposium on mixture modeling with special interest to applications in educational measurement and bioinformatics. KU Leuven:  
[https://ppw.kuleuven.be/okp/mixture2007/\\_data/Mixture2007Program.pdf](https://ppw.kuleuven.be/okp/mixture2007/_data/Mixture2007Program.pdf)
308. von Davier, M. (2006, February) *Diagnostic Mixture Distribution Models*. Invited Paper at the inaugural measurement models conference. Georgia Institute of Technology, Atlanta, Georgia.
309. von Davier, M. (2006, May) *Applications of Diagnostic Mixture Distribution Models*. Invited Paper at the mixture models in measurement conference. Department of Educational Measurement and Statistic (EDMS), University of Maryland, College Park.
310. von Davier, M. (2006, June) *A Note on Large Scale Educational Assessments - Assessments, Models, Target(s) of Inference*. ETS Conference Celebrating the Centennial of The Carnegie Foundation for the Advancement of Teaching, Princeton, NJ.
311. von Davier, M. (2005, October) *Estimating the General Diagnostic Model for Partial Credit Data*. Monday Lectures, Department of Educational Measurement and Statistics, University of Maryland, College Park.
312. von Davier, M. & Yamamoto, K. (2004, October) *A Class of Models for Cognitive Diagnosis*. Paper presented at the 4<sup>th</sup> Spearman Conference “Diagnostics for Education: Theory, Measurement, Applications.”, ETS: The Inn at Penn, Philadelphia, PA.
313. von Davier, M. (2003, November) *An Introduction to Statistical Models for Reporting in Educational Large Scale Assessment Programs*. Invited lecture at the TIMSS 2003 National Research Coordinator Meeting, Cape Town, South Africa.
314. von Davier, M. (2002, April) *The Developing Family of Rasch Models*. Symposium organizer and lecture held at the 11th biennial International Objective Measurement Workshop (IOMW), New Orleans.
315. von Davier, M. (2002, July) IRT Scaling. Lecture held at the PISA Training Seminar. National Center for Education Statistics: Potomac, Maryland.
316. von Davier, M. (2002, December) *An Introduction to Conditioning Models and Item Response Theory in Educational Large Scale Assessment Programs*. Invited lecture at the National Center for Educational Statistics (NCES) PISA Workshop, Washington, D.C.
317. von Davier, M. & Yamamoto, K. (2002, October) *Partially Observed Mixtures of IRT Models: An Extension of the Generalized Partial Credit Model*. Invited lecture at invited IPN conference: Latent Class Models - Past, Present, and Future. Kiel.
318. von Davier, M. (2000, June) *Issues in Testing Discrete Mixture Distribution IRT Models for Polytomous Data*. Presentation in the ETS seminar series.

7/20/2020

319. von Davier, M. (1996, November) An introduction to probabilistic models for item response data. (*Grundzüge Probabilistischer Testmodelle, in German*). Lecture at the Fall-Workshop of the School for Education, Kiel University.

## Teaching Experience

### Lectures and Seminars

- 2013: Graduate Seminar: Introduction to Diagnostic Models.  
Fordham University, New York City.
- 2011 Graduate Seminar: EDMS738V: Seminar in Special Problems in  
Measurement: Advanced Topics in Test Theory and Test  
Construction, UMD, College Park
- 1999/2000 Seminar “Test theory – test construction ” , CAU Kiel
- 1999/2000 Seminar “Learning with information technology”, CAU Kiel
- 1999: Seminar “Building websites for psychology and educational  
research majors” , CAU Kiel
- 1999: Seminar „Learning with information technology ” , CAU Kiel
- 1996: Seminar General Psychology II: Applications of neural networks:  
Modeling simple cognitive processes, CAU Kiel
- 1995: Seminar General Psychology II: Foundations of neural networks,  
CAU Kiel

### Contributed Workshops

7/20/2020

320. von Davier, M. & Gonzalez, E. & Khorrarnadel, L. (2016, December) *Workshop PISA 2015 Assessment Design, Item Response Theory, and Population Modeling Methodologies*. ETS, Princeton, NJ.
321. Gonzalez, E., von Davier, M. (2015, December) *Workshop Large Scale Assessment Design, Item Response Theory, and Population Modeling Methodologies*. Istanbul, Turkey.
322. Gonzalez, E., von Davier, M. (2013, March) *Workshop Large Scale Assessment Design, Item Response Theory, and Population Modeling Methodologies*. Westat: Rockville, Maryland.
323. von Davier, M. & Carstensen, C. H. (2012, June). Diagnostic Modeling for Large Scale Assessment Data. Workshop held at the International Meeting of the Psychometric Society, Lincoln, Nebraska.
324. Gonzalez, E., von Davier, M. (2011, January) *Workshop Large Scale Assessment Design, Item Response Theory, and Population Modeling Methodologies*. National University of Singapore, NIE.
325. von Davier, M. (2011, April) *A hands-on introduction to Rasch models, Latent Class Analysis and Diagnostic Mixture IRT models*. Professional development course held at the annual convention of the AERA, New Orleans, LA.
326. Gonzalez, E., von Davier, M. & Yamamoto, K. (2009, February) *Workshop Large Scale Assessment Design, Item Response Theory, and Population Modeling Methodologies*. ETS Headquarters, Princeton, NJ.
327. Gonzalez, E., von Davier, M. & Yamamoto, K. (2008, November) *Workshop Large Scale Assessment Design, Item Response Theory, and Population Modeling Methodologies*. ETS Europe, Amsterdam, The Netherlands.
328. von Davier, M. (2008, March) *An introduction to Rasch models, Latent Class Analysis and Diagnostic Mixture IRT models*. Professional development course held at the annual convention of the AERA, New York, NY.
329. von Davier, M. (2007, April) *A hands-on introduction to Rasch models, Latent Class Analysis and Diagnostic Mixture IRT models*. Professional development course held at the annual convention of the AERA, Chicago, IL.
330. von Davier, M. (2006, April) *A hands-on introduction to Rasch models, Latent Class Analysis and extensions*. Professional development course held at the annual convention of the AERA, San Francisco.
331. von Davier, M. (2005, April) *A hands-on introduction to Rasch models, Latent Class Analysis and extensions*. Professional development course held at the annual convention of the AERA, Montreal, Canada.

7/20/2020

- 332. von Davier, M. (2000, December) *Latent Class Analysis and Mixed Rasch Models with WINMIRA 2001*. Workshop held at ETS, Princeton.
- 333. Rost, J., von Davier, M. & Carstensen, C. (1999, September) *IPN Methods Workshop*. Held at the Institute for Science Education, Kiel, Germany.
- 334. Rost, J. & von Davier, M. (1994, September) *Analysing data with WINMIRA*. Workshop held at the Institute for Science Education (IPN), Kiel, Germany.

### **Invited Workshops**

- 335. von Davier, M. (2017, March). *International Large Scale Assessment Methodology*. Workshop at the National Center for Education Statistics (NCES), Washington, D.C.
- 336. von Davier, M. (2015, January). *An introduction to diagnostic modeling*. University of Hong Kong, Department of Education.
- 337. von Davier, M. (2015, January). *An introduction to diagnostic modeling*. National Taiwan Normal University, Department of Education.
- 338. von Davier, M. (2014, November). *International Large Scale Assessment Methodologies*. Invited Workshop at the 30<sup>th</sup> IRT Workshop (5th RCEC workshop on IRT and Educational Measurement). University of Twente, The Netherlands.
- 339. von Davier, M. (2014, January). Workshop Title: Proficiency Levels and Standards from a Latent Variable Modeling Perspective. Taipei, Taiwan. Workshop website: <http://www.rcpet.ntnu.edu.tw/LatentClass/index.html>
- 340. von Davier, M. (2012, March). *An introduction to diagnostic modeling*. Jena Spring School Educational Measurement, March 28-30. Jena, Germany.
- 341. von Davier, M. (2012, September). Masterclass: Diagnostic Modeling for Large Scale Assessment Data. University of Oxford, Department of Education.
- 342. von Davier, M. (2011, May). *International Large Scale Assessment Methodologies*. Invited Workshop at the Institute for Learning Sciences Graduate Program. Munich, Germany.
- 343. von Davier, M. & Carstensen, C. H. (2011, September) IRT-Modelle mit dem HGDM (Estimating IRT models with the hierarchical general diagnostic model). Workshop conducted at the special interest group methodology in the German society for psychology, Bamberg

7/20/2020

344. von Davier, M. (2010, May) *Workshop Advances in Diagnostic Item Response Modeling*. University of Vienna, Department of Applied Psychometrics and Diagnostic Psychology.
345. von Davier, M. (2010, May) *Workshop Advances in Latent Class and Diagnostic Models*. Département d'éducation et formation / Psychométrie et éduométrie, Liege, Belgium.
346. von Davier, M. (2009, July) *Workshop Large Scale Assessment Methodologies*. International Meeting of the Psychometric Society. Cambridge, England.
347. von Davier, M. (2008, July) *IRT Equating and Linking for State Assessments*. Workshop held at the Institute for Quality Assurance in Schools, Schleswig Holstein (IQSH), Kiel, Germany.
348. von Davier, M. (2008, July) *Advances in Latent Class Modeling for Large Scale Educational Surveys*. Summer School on School Effectiveness Research, Kiel, Germany.
349. von Davier, M. (2007, July) *Fitting Structured Item Response Models*. Workshop held at the MPI Summer Academy 2007 on Educational Measurement, Max Plank Institute for Human Development, Berlin.
350. von Davier, M. (2006, May) *Analysing data with WINMIRA 2001 and diagnostic Mixture Models*. Workshop held at the University of Maryland, College Park.
351. von Davier, M. (2004, May) *Latent Class Analysis for Large Scale Assessment Data*. Joint workshop for Statistics Canada and ETS employees.
352. von Davier, M. (2000, March) *Analysing data with WINMIRA 2001*. Workshop held at the Institute for Psychology, Tromsø, Norway.
353. von Davier, M. (1999, June) *Latent Class Analysis and Mixed Rasch Models with WINMIRA 32*. Institute for Organizational Psychology, Münster.
354. von Davier, M. (1999, August) *Analysing categorical data with WINMIRA 2001*. Workshop held at the Center for Empirical Educational Research, ZEPF, Landau.
355. von Davier, M. (1999, September) *Analysing item response data with WINMIRA*. Invited work held for the PISA research group at the Max Plank Institute for Human Development in Berlin.
356. von Davier, M. (1999, December) *Latent Class Analysis and Mixed Rasch Models with WINMIRA 32*. Workshop held at ETHZ, Center for Social Psychology and Environmental Research Center, Zürich, Switzerland.
357. von Davier, M. (1998, October) *Latent Class Analysis and Mixed Rasch Models with WINMIRA 32*. Workshop held at Institute for Psychology, Jena.



7/20/2020

358. von Davier, M. (1996, December) *Analysing data with WINMIRA*. Center for Caring Sciences, Karolinska Institute, *Stockholm, Sweden*.
359. von Davier, M. (1994, January) *Workshop Rasch Models and Latent Class Analysis*. University Hospital Eppendorf, Rehabilitation Research Unit, *Hamburg*.

## **Attachments**

Ph.D. certificate, Dr. rer. nat, „summa cum laude“ (best grade)

Masters certificate, Psychology, „sehr gut“ (best grade)

# CHRISTIAN-ALBRECHTS-UNIVERSITÄT ZU KIEL

## Die Mathematisch-Naturwissenschaftliche Fakultät

verleiht auf Grund ihrer Promotionsordnung

unter dem Dekanat

des Professors für Geographie

Dr. Jürgen BÄHR

Herrn Diplom-Psychologe Matthias von Davier

geboren am 30. September 1965 in Itzehoe

den Grad eines

## Doktors der Naturwissenschaften

nachdem er in ordnungsgemäßem Promotionsverfahren durch  
die mit Auszeichnung beurteilte Dissertation (opus eximium)

Methoden zur Prüfung probabilistischer Testmodelle

sowie durch die mit Auszeichnung beurteilte mündliche Doktorprüfung

seine wissenschaftliche Befähigung erwiesen und dabei das Gesamturteil

Mit Auszeichnung (summa cum laude)

erhalten hat.

Kiel, den 16. Dezember 1996

Der Dekan

der Mathematisch-Naturwissenschaftlichen Fakultät



7/20/2020

# DIPLOM

Herr Matthias von D A V I E R

geboren am 30. September 1965 in Itzehoe

hat am 28. Juli 1993 die Diplom-Hauptprüfung für Psychologen

gemäß der gültigen Prüfungsordnung mit dem Gesamturteil

" sehr gut "

an der Christian-Albrechts-Universität in Kiel bestanden.

Auf Grund dieser Prüfung wird ihm hiermit der akademische Grad

Diplom - Psychologe

verliehen.

Kiel, den 28. Juli 1993

Der Prüfungsausschuß für die Diplom-Hauptprüfung  
für Psychologen an der Christian-Albrechts-Universität  
in Kiel.



Der Dekan  
der Philosophischen Fakultät

Der Vorsitzende  
des Prüfungsausschusses