

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

7/20/2020

Leadership Roles

Executive Director:

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

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

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.

7/20/2020

NAEP – National Assessment of Educational Progress. Tasks: Planning and directing research on „Marginal Estimation of Population Characteristics“, participation in planning groups,

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 .2 (a)00 0.24 489.9281 39.2 (r.52j ET Q ql) 0.2 (s) -0.2 (.) ITJ ET Q q 4 57qls.

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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

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

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|------|-----------------------------------|
| 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 | |

7/20/2020

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-

7/20/2020

33. Braun, H. & von Davier, M. (2017). The use of test scores from large-scale assessment surveys:

7/20/2020

44. von Davier, M., & Haberman, S. (2014). Hierarchical Diagnostic Classification Models

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
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 10th, 2010 from 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 &

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.

7/20/2020

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.

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.)*

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

7/20/2020

131.

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.),

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) *YGROUP – an extension of NAEP's MGROUP 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*

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 prese (s) -0.(ar) -0.2 s the 2018 NCME meeting,*

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.

7/20/2020
203.

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 77th IMPS, Lincoln, NE.
221. Rijmen, F. & von Davier, M. (2011, December). 21st century models for 21st 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.

7/20/2020

226. von Davier, M., Naemi, B. & Roberts, R. (2011, April). *Comparing Typological and Factorial Models for Personality Scales and Survey Data*

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 1st 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.

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*.

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-

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. (

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.*

7/20/2020
307. von Davier, M.

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:

7/20/2020
320.

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.

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)

7/20/2020

DIPLOM

von D. A. V. I. E. R.

Herr Matthias

" sehr gut "

verliehen.

Kiel, den 28. Juli 1993

in Kiel.

