

Wim J. van der Linden
Professor Emeritus



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Education

- 1986-1990 Netherlands Carillon School, Utrecht Conservatory. Major: Carillon
- 1982 Master's Degree in Sociology (Cum Laude), Utrecht University. Major: Theoretical and Mathematical Sociology. Minor: Social Philosophy
- 1980 Doctor of Philosophy in Psychology (Cum Laude), University of Amsterdam. Title of Dissertation: "Psychometric contributions to the analysis of criterion-referenced measurements"
- 1973 Master's Degree in Psychology, Utrecht University. Major: Experimental Social Psychology. Minor: Research Methodology and Statistics
- 1971 Bachelor's Degree in Sociology, Utrecht University. Minor: Economics
- 1970 Bachelor's Degree in Psychology, Utrecht University. Minor: Philosophy

Professional Career

- 2013-date Professor Emeritus of Measurement and Data Analysis, Faculty of Behavioral, Management and Social Sciences, University of Twente
- 2017-2018 Distinguished Scientist & Director of Research and Innovation, Center for CAT Research, ACT, Inc., Monterey, CA, USA

- 2015-2017 Distinguished Scientist & Director of Research Innovation, Pacific Metrics Corporation, Monterey CA, USA
- 2008-2015 Chief Research Scientist, CTB/McGraw-Hill, Monterey, CA, USA
- 1983-2013 Professor of Measurement and Data Analysis, Faculty of Behavioral Sciences, University of Twente
- 2006 Visiting Scholar, Department of Psychometrics and Research, Law School Admission Council, Newtown, PA, USA (July-August)
- 2004 JSPS Fellow, Department of Life Sciences, University of Tokyo, Japan (August-September)
- 2002-2003 Fellow in Residence, Center for Advanced Study in the Behavioral Sciences, Stanford, CA, USA
- 1983-2002 Chair, Department of Research Methodology, Measurement and Data Analysis, University of Twente
- 1997 Visiting Professor, Law School Admission Council, Newtown, PA, USA
- 1992-1993 Distinguished Visiting Scholar, American College Testing, Iowa City, IA, USA
- 1988-1991 Dean, University of Twente, Faculty of Educational Sciences and Technology
- 1989 Visiting Professor, University of Toronto, Ontario Institute for Studies in Education, Department of Measurement, Evaluation, and Computer Applications, Toronto, Canada (July-August)
- 1977-1983 Assistant/Associate Professor, University of Twente, Faculty of Educational Science and Technology
- 1981-1982 Associate Dean for Academic Affairs, Faculty of Educational Science and Technology
- 1979 Fulbright-Hays Visiting Scholar, School of Education, University of Chicago, Chicago, IL, USA and School of Education, Stanford University, CA, USA (January-May)
- 1973-1976 Assistant Professor, University of Utrecht, Faculty of Psychology

Awards

- 2016 Career Award for Lifetime Achievement, Psychometric Society
- 2009 E. F. Lindquist Award, American Educational Research Association
- 2008 Honorary Member, Nederlandse Vereniging voor Examens (NVE)
- 2007 Honorary Doctorate, Faculty of Social Sciences, Umeå University, Sweden

2006	Career Achievement Award, Association of Test Publishers (ATP)
2005	Career Achievement Award, National Council on Measurement in Education (NCME)
2004	Fellowship, Invitational Fellowship Program for Research in Japan, Japanese Society for the Promotion of Science (JSPS)
2002-2003	Fellowship, Center for Advanced Study in the Behavioral Sciences, Stanford, CA
1996	Triennial National Council on Measurement in Education (NCME) Award for Application of Educational Measurement Technology.
1983	1983 Award for Outstanding Papers (Category: Measurement Theory and Practice), American Educational Research Association, Division D.
1979	Fulbright-Hays Award

Editorial Appointments

2012-date	Consulting Editor, <i>Journal of Computerized Adaptive Testing</i>
2011-date	Series Editor, <i>Statistics in the Social and Behavioral Sciences</i> , Chapman & Hall/CRC, London
2004-date	Advisor, Editorial Board of <i>Testing Research</i>
2003-2011	Series Editor, <i>Statistics for Social and Behavioral Sciences</i> , Springer, New York
2001-2011	Consulting Editor, <i>International Journal of Testing</i>
1992-2007	Associate Editor, <i>Psychometrika</i>
1980-2006	Advisory Editor, <i>Applied Psychological Measurement</i>
2001-2004	Member, Editorial Advisory Board of <i>Encyclopedia of Social Measurement</i> , Academic Press, San Diego, CA
1995-2000	Member, Scientific Committee of <i>European Review of Applied Psychology</i>
1993-2000	Member, Editorial Board of <i>Educational Research Quarterly</i>
1995-1999	Member, Editorial Board of <i>Tijdschrift voor Onderwijsresearch</i> [Dutch Journal of Educational Research]
1984-1996	Member, Editorial Council of <i>Nederlands Tijdschrift voor Opvoeding, Onderwijs en Vorming</i> [Dutch Journal of Education]

1984-1991 Member, Editorial Board of *Contributions to Educational Research*, Swets & Zeitlinger, Lisse, The Netherlands

1983-1991 Advisory Editor, *Journal of Educational Measurement*

Manuscript Review

Regular reviewer for such international journal as *Annals of Statistics*, *Applied Measurement in Education*, *British Journal of Mathematical and Statistical Psychology*, *European Journal of Psychological Assessment*, *Journal of Educational and Behavioral Statistics*, *Journal of Educational Measurement*, *Kwantitatieve Methoden*, *Psychological Review*, and *Psychological Methods*.

Professional Appointments

2016-date Member, Editorial Council, Psychometrika

2016-2018 Member, Digital Advisory Panel, ACT Inc., Iowa City, IA

2014-2015 Past President, National Council on Measurement in Education (NCME)

2013-2014 President, National Council on Measurement in Education (NCME)

2012-2013 Vice President, National Council on Measurement in Education (NCME)

2011 Program Chair, 2nd International Conference of the International Association for Computerized Adaptive Testing (IACAT), Pacific Grove, CA, USA, October 3-5, 2011

1991-2011 Member, International Board of the Swedish University Admission Test (SweSAT), Umeå, Sweden

2006-2008 Member, GMAT Technical Advisory Committee, Graduate Management Admission Council, McLean, VA, USA

2001-2008 Member, Technical Research Issues Oversight Committee, American Institute of Certified Public Accountants (AICPA), Jersey City, NJ, USA

2006-2007 Member, International Program Advisory Board, International Meeting of the Psychometric Society, Tokyo, Japan, July 9-13, 2007

2004-2007 Member, Board of Trustees, National Institute for Educational Measurement (Cito), Arnhem, Netherlands

2005-2006 Member, Scientific Advisory Council on Selection Experiments, Leiden University

2002-2006 Advisory Member, Board, Japanese Institute of Educational Measurement, Tokyo, Japan

- 2005 Member, Vici Committee, Maatschappij- en Gedragwetenschappen, National Science Foundation (NWO)
- 1999-2005 Member, Advisory Board, Hong Kong Institute of Educational Research, Hong Kong.
- 2003-2004 Chair, Award for Technical or Scientific Contributions to the Field of Educational Measurement Committee, National Council on Measurement in Education (NCME)
- 2002-2004 Member, Board of Trustees, Psychometric Society
- 2002-2004 Member, Dissertation Award Committee, Psychometric Society
- 2000-2004 Member, Research Advisory Group, Assessment Tools for Teaching and Learning Project, University of Auckland, New Zealand
- 2003 Member, Vici Committee, Maatschappij- en Gedragwetenschappen, Dutch National Science Foundation (NWO)
- 2002-2003 Member, Award for Technical or Scientific Contributions to the Field of Educational Measurement Committee, National Council on Measurement in Education (NCME)
- 2001-2003 Member, Research Review Panel, National Board of Medical Examiners (NBME), Philadelphia, PA, USA
- 2001-2003 Chair, Advisory Committee on International Educational Research, Dutch National Science Foundation (NWO)
- 1999-2002 Chair and Founding Member, Nederlandse Examen Vereniging (Dutch Society for Educational Measurement)
- 2001 Program Chair, Third National Conference on Examinations, University of Twente, Enschede, The Netherlands
- 2000-2001 Past President, Psychometric Society
- 1999-2001 Member, Program Committee, International Meeting of the Psychometric Society, Osaka, Japan.
- 1997-2001 Member, Board of iec ProGAMMA, Groningen, The Netherlands
- 1995-2001 Member, Editorial Council, *Psychometrika*
- 1986-2001 Chair, Interuniversity Graduate School of Psychometric and Sociometric Research (IOPS), The Netherlands
- 1999-2000 President, Psychometric Society
- 1997-2000 Member, Technical Advisory Committee on Standard Setting, National Assessment Governing Board, Washington, DC

- 1996-2000 Member, Technical Advisory Panel, National Board of Medical Examiners (NBME), Philadelphia, PA
- 1999 Program Chair, Second National Conference on Examinations, University of Twente
- 1998-1999 President-Elect, Psychometric Society
- 1998-1999 Member, Task Force on Feasibility of Linking the Voluntary National Test to NAEP, National Assessment Governing Board, Washington, DC
- 1998-1999 Member, Task Force on Computer-Based Testing, National Institute for Educational Measurement (Cito), Arnhem, The Netherlands
- 1997-1999 Chair, International Measurement Issues Committee, National Council on Measurement in Education (NCME)
- 1996-1999 Member, Technical Advisory Committee, Evaluation of Junior Secondary Education, Inspectorate of Education, The Netherlands
- 1997-1998 Member, Doctoral Dissertation Award Committee, National Council on Measurement in Education (NCME)
- 1994-1998 Member, Board of Trustees, Psychometric Society
- 1997 Program Chair, First National Conference on Examinations, University of Twente, Enschede, The Netherlands
- 1996-1997 Chair, International Measurement Issues Committee, National Council on Measurement in Education (NCME)
- 1983-1997 Member, Board of the National Institute for Educational Measurement (Cito), Arnhem, The Netherlands
- 1993-1995 Member, Task Force on Revision of National Exams for Secondary Education, Ministry of Education, The Netherlands
- 1991-1994 Member, Committee for the Evaluation of Primary Education (CEB), Ministry of Education, The Netherlands
- 1986-1993 Member, Board of the Interuniversity Graduate School of Educational Evaluation (ICO), The Netherlands
- 1992 Co-program Chair, Division of Research Methodology and Evaluation Research, European Conference on Educational Research, University of Twente, Enschede, The Netherlands
- 1984-1991 Chair, Annual Award Committee of the Dutch Educational Research Association (VOR)
- 1986-1988 Vice-Chair, Dutch Foundation for Research in Psychology and Psychonomics

- (Psychon), National Science Foundation (NWO)
- 1985-1988 Member, Board of the Center for Education and Information Technology (COI), Enschede, The Netherlands
- 1983-1988 Member, Steering Committee of Testing Service System Project, Dutch Foundation for Educational Research (SVO), The Hague, The Netherlands
- 1987 Program Chair, European Meeting of the Psychometric Society, University of Twente, Enschede, The Netherlands
- 1984-1986 Member, Board of the Dutch Foundation for Research in Psychology and Psychonomics (NWO/Psychon)
- 1978-1986 Member, Board of the Dutch Foundation for Psychometrics (NSP)
- 1985 Program Chair, Annual Meeting of the Dutch Educational Research Association (VOR), University of Twente, Enschede, The Netherlands
- 1982-1984 Member, Steering Committee of Item Banking Project, International Association for the Evaluation of Educational Achievement (IEA)
- 1976-1982 Chair, Special Interest Group on Criterion-Referenced Measurement, Dutch Educational Research Association (VOR)
- 1977-1979 Member, Board of the Dutch Educational Research Association (VOR)
- 1977-1979 Chair, Committee on Post-Doctoral Training, Dutch Educational Research Association (VOR)

University Management and Committees

- 2005-2008 Chair, Examination Committee, Bachelor's Program of Educational Design, Media, and Management, Faculty of Behavioral Sciences
- 2002-2003 Director-Elect, Institute of Behavioral Research (IBR), University of Twente
- 2000-2002 Member, Management Team, Faculty of Educational Science and Technology
- 1995-1997 Member, Council, Faculty of Educational Science and Technology
- 1994-1997 Chair, Center for Educational Research (OCTO), University of Twente
- 1993-1995 Chair, Research Committee, Faculty of Educational Science and Technology
- 1984-1992 Member, Examination Committee, Faculty of Educational Science and Technology
- 1988-1991 Secretary, Board of Deans, University of Twente

1986-1988	Chair, Center for Educational Research (OCTO), University of Twente
1983-1986	Chair, Research Committee, Faculty of Educational Science and Technology
1978-1983	Member, Curriculum Committee, Faculty of Educational Science and Technology
1979-1981	Member, University Library Committee
1979-1981	Member, Laboratory Committee, Faculty of Educational Science and Technology
1979-1981	Member, Research Committee, Faculty of Educational Science and Technology
1979-1981	Member, Editorial Board of Twente Educational Reports
1978-1981	Member, Council, Faculty of Educational Science and Technology
1973-1976	Member, Curriculum Committee, Department of Psychology, University of Utrecht

Professional Affiliations

1978-date	Psychometric Society
1978-date	American Educational Research Association (AERA)
1977-date	National Council on Measurement in Education (NCME)
1976-2008	European Branch Society for Multivariate Analysis in Behavioral and Social Sciences (SMABSS) (Before 1982: Society for Multivariate and Experimental Psychology)
1976-2008	European Mathematical Psychology Group (EMPG)
1973-2008	Netherlands Society for Statistics and Operations Research (VVS), Division of Social Sciences
1999-2007	American Psychological Association (APA)
1975-2006	Dutch Educational Research Association (VOR)
1974-1986	Dutch Foundation for Psychometrics (NSP)

Research Interests

Test theory and its applications to educational and behavioral measurement, adaptive testing, optimal test design, response-time modeling, item and test security analysis, statistical procedures for test equating, IRT parameter linking, and statistical decision theory

and its applications to standard setting, selection, classification, mastery, and placement decisions.

Courses and Seminars Taught

The following courses and seminars have been taught, both at introductory and advanced level: Research Methodology, Psychometrics, Test Design, Research Design, Educational Measurement, Experimental Design and Analysis of Variance, Computerized Testing Technology, Mathematical Statistics, Introductory Statistics, Methods of Scaling, Matrix Algebra, Factor Analysis, Applications of Graph Theory. In addition, courses and seminars on research methods, measurement, and multilevel modeling were taught for: Interuniversity Graduate School of Educational Research (ICO), Interuniversity Graduate School of Psychometric and Sociometric Research (IOPS) and as part of the Professional Training and Development Programs at the Annual Meetings of the American Educational Research Association (AERA) and National Council on Measurement in Education (NCME).

Doctoral Dissertations Supervised

Barrett, M. D. *Response model parameter linking*. University of Twente, October 7, 2015.

Geerlings, H. *Psychometric methods for automated test design*. University of Twente, March 23, 2012. (With C. A. W. Glas)

Klein Entink, R. H. *Statistical models for responses and response times*. University of Twente, January 22, 2009.

Verschoor, A. J. *Genetic algorithms for automated test assembly*. University of Twente, April 26, 2007.

Ariel, A. *Contributions to test-item bank design and management*. University of Twente, September 23, 2005.

Sotaridona, L. S. *Statistical methods for the detection of answer copying on achievement tests*. University of Twente, September 5, 2003.

Fox, J. P. *Multilevel item response theory: A Bayesian perspective on estimating parameters and testing statistical hypotheses*. University of Twente, September 7, 2001. (With C. A. W. Glas)

van Krimpen-Stoop, E. M. L. A. *Detecting of misfitting item-score patterns in computerized adaptive testing*. University of Twente, April 19, 2001.

Veldkamp, B. P. *Principles and methods of constrained test assembly*. University of Twente, March 30, 2001.

Béguin, A. *Robustness of equating high-stakes tests*. University of Twente, May 12, 2000. (With C. A. W. Glas)

Akkermans, L. M. W. *Studies on statistical models for polytomously-scored test items*. University of Twente, December 17, 1998.

- de Vos, H. *Educational effects: A simulation-based analysis*. University of Twente, April 3, 1998. (With J. Scheerens)
- Veerkamp, W. J. *Computerized adaptive testing*. University of Twente, January 23, 1997. (With M. P. F. Berger)
- Rijkes, C. *Testing hypotheses on cognitive processes using IRT models*. University of Twente, April 18, 1996. (With J. M. Pieters)
- Vos, H. J. *Simultaneous optimization of test-based decisions in education*. University of Twente, December 8, 1994.
- Westers, P. (1993). *The solution-error response-error model: A method for the examination of test item bias*. University of Twente, December 10, 1993.
- de Jong, J. H. A. L. *Defining a variable of foreign language ability: An application of item response theory*. University of Twente, June 21, 1991.
- Adema, J. J. *Models and algorithms for the construction of achievement tests*. University of Twente, November 23, 1990.
- Boekkooi-Timminga, E. *Models for computerized test construction*. University of Twente, December 14, 1989.
- Engelen, R. J. H. *Parameter estimation in the logistic item response model*. University of Twente, December 7, 1989.
- Pelgrum, W. J. *Educational Assessment: Monitoring, evaluation, and the curriculum*. University of Twente, January 19, 1989. (With Tj. Plomp)
- Glas, C. A. W. *Contributions to estimating and testing Rasch models*. University of Twente, October 12, 1989. (With W. Albers)
- van der Burg, E. *Nonlinear canonical correlation and some related techniques*. University of Leiden, September 15, 1988. (With J. de Leeuw)
- Kelderman, H. *Quasi-loglinear models for test and item analysis*. University of Twente, June 12, 1987. (With G. J. Mellenbergh)

Consultation

Broad experience as a consultant on educational and psychological testing, admission and selection, evaluation, research design, and data analysis to numerous research projects. Projects involved both methodological and substantive as well as more applied types of research on a great variety of areas in the behavioral and social sciences. External consultant to various projects, for instance, at the Dutch Inspectorate of Education, Education Department, Hong Kong; American College Testing, Iowa City, IA, USA; National Assessment Governing Board, Washington, DC, USA; National Board of Medical Examiners, Philadelphia, PA, USA; Law School Admission Council, Newtown, PA, USA; Educational

Testing Services, Princeton, NJ, USA; National Institute for Educational Measurement (Cito), Arnhem, The Netherlands; NgeeAnn Polytechnique, Singapore; European Board of Urologists, Rotterdam, The Netherlands; University of Massachusetts, Amherst, Massachusetts, USA; Graduate Management Admission Council, McLean, VA; USA; Swedish Scholastic Aptitude Test, Umeå, Sweden; Professional Examination Services, New York; American Institute of Certified Public Accountants, Jersey City, NJ, USA.

Other Appointments

2000-2002	Member, Board of Trustees, Rijksmuseum Twente, Enschede, Netherlands
1982-2001	City Carillonneur, Almelo, Netherlands
1988-1996	Member, Executive Committee, World Carillon Federation
1985-1985	Treasurer, Dutch Guild of Carillonneurs

List of Publications

- van der Linden, W. J. (Ed.) (in press). *Handbook of item response theory: Models, statistical tools, and applications* (Vols.1-3). Beijing, China: Harbin Institute of Technology Press Ltd. (In Chinese).
- van der Linden, W. J. & Choi, S. W. (2020). Improving item-exposure control in adaptive testing. *Journal of Educational Measurement*, 57, 405-422.
- van der Linden, W. J. & Jiang, B. (2020). A shadow-test approach to adaptive item calibration. *Psychometrika*, 85, 301-321.
- van der Linden, W. J., & Ren, H. (2020). A fast and simple algorithm for Bayesian adaptive testing. *Journal of Educational and Behavioral Statistics*, 48, 58-85.
- Ren, H., Choi, S. W., & van der Linden, W. J. (2020). Bayesian adaptive testing with polytomous items. *Behaviormetrika*, 47, 427-449.
- Shigemasu, K. & van der Linden, W. J. (Eds.) (2020). Bayesian applications in educational and psychological testing [Special issue]. *Behaviormetrika*, 47, 335-518.
- van der Linden, W. J. (2019). Lord's equity theorem revisited. *Journal of Educational and Behavioral Statistics*, 44, 415-430.
- Barrett, M. D. & van der Linden, W. J. (2019). Estimating linking functions for response model parameters. *Journal of Educational and Behavioral Statistics*, 44, 190-209.
- van der Linden, W. J. (2018). IRT observed-score equating. In W. J. van der Linden (Ed.), *Handbook of item response theory: Volume 3. Applications* (pp. 143-164). Boca Raton, FL: Chapman & Hall/CRC.
- van der Linden, W. J. (2018). Optimal test design. In W. J. van der Linden (Ed.), *Handbook of item response theory: Volume 3. Applications* (pp. 167-195). Boca Raton, FL: Chapman & Hall/CRC.
- van der Linden, W. J. (2018). Adaptive testing. In W. J. van der Linden (Ed.), *Handbook of item response theory: Volume 3. Applications* (pp.197-227). Boca Raton, FL: Chapman & Hall/CRC.
- van der Linden, W. J. (2018). Test speededness and time limits. In W. J. van der Linden (Ed.), *Handbook of item response theory: Volume 3. Applications* (pp. 249-265). Boca Raton, FL: Chapman & Hall/CRC.
- van der Linden, W. J. (2018). Item and test security. In W. J. van der Linden (Ed.), *Handbook of item response theory: Volume 3. Applications* (pp. 267-293). Boca Raton, FL: Chapman & Hall/CRC.
- van der Linden, W. J. & Barrett, M. D. (2018). Parameter linking. In W. J. van der Linden (Ed.), *Handbook of item response theory: Volume 3. Applications* (pp. 21-45). Boca Raton, FL: Chapman & Hall/CRC.
- Choi, S. W., & van der Linden, W. J. (2018). Ensuring content validity of patient-reported

- outcomes: A shadow-test approach to their adaptive measurement. *Quality of Life Research*, 27, 1683-1693.
- Li, J. & van der Linden, W. J. (2018). A comparison of constraint programming and mixed-integer programming for automated test-form generation. *Journal of Educational Measurement*, 55, 435-456.
- Barrett, M. D. & van der Linden, W. J. (2017). Optimal linking design for response model parameters. *Journal of Educational Measurement*, 54, 285-305
- Jeon, K., De Boeck, P., & van der Linden, W. J. (2017). Modeling answer change behavior: An application of a generalized item response tree model. *Journal of Educational and Behavioral Statistics*, 42, 467-490.
- Ren, H., van der Linden, W. J., & Diao, Q. (2017). Continuous online item calibration: Parameter recovery and item utilization. *Psychometrika*, 82, 498-522.
- van der Linden, W. J. (2016). Optimal test assembly. In S. Lane, M. Raymond & T. M. Haladyna (Eds.), *Handbook of test development* (2nd Ed.) (pp. 507-530). New York: Routledge.
- van der Linden, W. J. (Ed.) (2016, 2018). *Handbook of item response theory: Models, statistical tools, and applications* (Vols.1-3). Boca Raton, FL: Chapman & Hall/CRC.
- van der Linden, W. J. (2016). Introduction. In W. J. van der Linden (Ed.), *Handbook of item response theory: Volume 1. Models* (pp. 1-9). Boca Raton, FL: Chapman & Hall/CRC.
- van der Linden, W. J. (2016). Unidimensional logistical models. In W. J. van der Linden (Ed.), *Handbook of item response theory: Volume 1. Models* (pp. 13-30). Boca Raton, FL: Chapman & Hall/CRC.
- van der Linden, W. J. (2016). Lognormal response-time model. In W. J. van der Linden (Ed.), *Handbook of item response theory: Volume 1. Models* (pp. 261-282). Boca Raton, FL: Chapman & Hall/CRC.
- van der Linden, W. J. (2016). Distributions of sums of nonidentical random variables. In W. J. van der Linden (Ed.), *Handbook of item response theory: Volume 2. Statistical tools* (pp. 87-103). Boca Raton, FL: Chapman & Hall/CRC.
- van der Linden, W. J. & Barrett, M. D. (2016). Linking item response model parameters. *Psychometrika*, 81, 650-673. (Erratum, 83, 273)
- van der Linden, W. J. & Fox, J.-P. (2016). Joint hierarchical modeling of responses and response times. In W. J. van der Linden (Ed.), *Handbook of item response theory: Volume 1. Models* (pp. 481-500). Boca Raton, FL: Chapman & Hall/CRC.
- van der Linden, W. J. & Li, J. (2016). Comment on Three-element item selection procedures for multiple forms assembly: An item matching approach. *Applied Psychological Measurement*, 40, 641-649.
- Choi, S, Moellering, K., Li, J., & van der Linden, W. J. (2016). Optimal reassembly of shadow tests in CAT. *Applied Psychological Measurement*, 40, 469-485.

- Glas, C. A. W., van der Linden, W. J., & Geerlings, H. (2016). Item-family models. In W. J. van der Linden (Ed.), *Handbook of item response theory: Volume 1. Models* (pp. 437-447). Boca Raton, FL: Chapman & Hall/CRC.
- van der Linden, W. J. & C. Lewis (2015). Bayesian checks on cheating on tests. *Psychometrika*, 80, 689-706.
- van der Linden, W. J., & Ren, H. (2015). Optimal Bayesian adaptive design for item calibration. *Psychometrika*, 80, 263-288.
- van der Linden, W. J. & Diao, Q. (2014). Using a universal shadow-test assembler with multistage testing. In D. Yan, A. A. von Davier, & C. Lewis (Eds.), *Computerized multistage testing: Theory and applications* (pp. 101-118). Boca Raton, FL: Chapman & Hall/CRC.
- van der Linden, W. J. & Wise, L. (2014). Erosion of peer review? *Educational Measurement: Issues and Practice*, 33(4), 3.
- Wiberg, M., van der Linden, W. J., & von Davier, A. A. (2014). Local observed-score kernel equating. *Journal of Educational Measurement*, 51, 57-74.
- van der Linden, W. J. (2013). Some conceptual issues in observed-score equating. *Journal of Educational Measurement*, 50, 249-285.
- van der Linden, W. J. (2013). More issues in observed-score equating. *Journal of Educational Measurement*, 50, 324-337.
- van der Linden, W. J., & Xiong, X. (2013). Speededness and adaptive testing. *Journal of Educational and Behavioral Statistics*, 38, 418-438.
- Diao, Q., & van der Linden, W. J. (2013). Integrating test-form formatting into automated test assembly. *Applied Psychological Measurement*, 37, 361-374.
- Geerlings, H., van der Linden, W. J., & Glas, C. A. W. (2013). Optimal test design with rule-based item generation. *Applied Psychological Measurement*, 37, 140-161.
- van der Linden, W. J. (2012). On compensation in multidimensional response modeling. *Psychometrika*, 77, 21-30.
- van der Linden, W. J., & Jeon, M. (2012). Modeling answer changes on test items. *Journal of Educational and Behavioral Statistics*, 37, 180-199.
- van der Linden, W. J. (2011). Modeling response times with latent variables: Principles and applications. *Psychological Test and Assessment Modeling*, 53, 334-358.
- van der Linden, W. J. (2011). Setting time limits on tests. *Applied Psychological Measurement*, 35, 183-199.
- van der Linden, W. J. (2011). Test design and speededness. *Journal of Educational Measurement*, 48, 44-60.
- van der Linden, W. J. (2011). Local observed-score equating. In A. A. von Davier (Ed.), *Statistical models for equating, scaling, and linking* (pp. 201-223). New York: Springer.

- van der Linden, W. J. & Diao, Q. (2011). Automated test-form generation. *Journal of Educational Measurement*, 48, 206-222.
- van der Linden, W. J., Jeon, M., & Ferrara, S. (2011). A paradox in the study of the benefits of test-item review. *Journal of Educational Measurement*, 48, 380-398. (Erratum, 49, 466)
- Diao, Q., & van der Linden, W. J. (2011). Automated test assembly using Ip_solve version 5.5 in R. *Applied Psychological Measurement*, 35, 398-409.
- Geerlings, H., Glas, C. A. W., & van der Linden, W. J., & (2011). Modeling rule-based item generation. *Psychometrika*, 76, 337-359.
- Wiberg, E., & van der Linden, W. J. (2011). Local linear observed-score equating. *Journal of Educational Measurement*, 48, 229-254.
- van der Linden, W. J. (2010). Linking response-time parameters onto a common scale. *Journal of Educational Measurement*, 47, 92-114.
- van der Linden, W. J. (2010). Constrained adaptive testing with shadow tests. In W. J. van der Linden & C. A. W. Glas (Eds.), *Elements of adaptive testing* (pp. 31-55). New York: Springer.
- van der Linden, W. J. (2010). Sequencing an adaptive test battery. In W. J. van der Linden & C. A. W. Glas (Eds.), *Elements of adaptive testing* (pp. 103-119). New York: Springer.
- van der Linden, W. J. (2010). On bias in linear observed-score equating. *Measurement: Interdisciplinary Research and Perspectives*, 8, 21-26.
- van der Linden, W. J. (2010). Bayes'sche Methoden in der Statistik [Bayesian methods in statistics]. In H. Holling & B. Schmitz (Eds.), *Handbuch Statistik, Methoden und Evaluation* (pp. 730-742). Göttingen, Germany: Hogrefe. (In German)
- van der Linden, W. J. (2010). Item response theory. In P. Peterson, E. Baker, & B. McGaw. (Eds.), *International Encyclopedia of Education* (3d ed., Vol. 4; pp. 81-89). Oxford, UK: Elsevier.
- van der Linden, W. J., & Glas, C. A. W. (Eds.) (2010). *Elements of adaptive testing*. New York: Springer.
- van der Linden, W. J., & Glas, C. A. W. (2010). Statistical tests of conditional independence between responses and/or response times on test items. *Psychometrika*, 75, 120-139.
- van der Linden, W. J., Klein Entink, R. H., & Fox, J.-P. (2010). IRT parameter estimation with response times as collateral information. *Applied Psychological Measurement*, 34, 327-347.
- van der Linden, W. J., & Pashley, P. J. (2010). Item selection and ability estimation adaptive testing. In W. J. van der Linden & C. A. W. Glas (Eds.), *Elements of adaptive testing* (pp. 3-30). New York: Springer.

- van der Linden, W. J., & Wiberg, M. (2010). Local observed-score equating with anchor-test designs. *Applied Psychological Measurement, 34*, 620-640.
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gesimuleerde organisaties. *Nederlands Tijdschrift voor de Psychologie*, 31, 305-320.
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List of Presentations

Recent advances in research on response times. Virtual Meeting of the National Council on Measurement in Education, July 15, 2020. (Discussant)

Adaptive testing as a universal automated test assembler. IEA Technical Executive Group, Washington, DC, November 7-8, 2019.

What I always thought I knew about test equating but was wrong. Law School Admission Council, Newtown, PA, June 19, 2019.

Transitioning from fixed-form to adaptive testing. National Restaurant Organization, Chicago, IL, June 14, 2019.

The changing paradigm of educational testing. Law School Admission Council, Newtown, PA, June 12, 2019.

How to use time information to improve test design? Law School Admission Council, Newtown, PA, June 5, 2019.

Optimal design or big data? Farewell Symposium for Professor Heinz Holling, Westfälische Wilhelms-Universität Münster, Germany, February 8, 2019 (Keynote address).

Bayesian approaches to real-time testing. Symposium on Bayesian Approaches for Behavior Metrics. University of Electro-Communications, Tokyo, Japan, December 1, 2018.

What I always thought about test equating but was wrong. National Center for University Entrance Examinations, Tokyo, Japan, November 30, 2018.

A two-level adaptive test battery. International Meeting of the Psychometric Society, New York City, July 10-13, 2018. (With Q. Diao)

Bayesian approach to embedded item calibration. Annual meeting of the National Council on Measurement in Education, New York City, April 18-16, 2018. (With B. Jiang)

Bayesian item-exposure control using item-ineligibility probabilities. Annual meeting of the National Council on Measurement in Education, New York City, April 18-16, 2018. (With S. W Choi)

Using timing information to improve test development and scoring. ATP Conference, San Antonio, TX, February 18-21, 2018.

Test design and speededness. Conference on Timing Impact on Measurement in Education, Philadelphia, PA, October 9-10, 2017.

Near-real time psychometrics: Realizing the value of assessment event streaming. E-ATP Conference, Noordwijk, The Netherlands, September 27-29, 2017. (With M. D. Barrett)

Continuity, equity, and equatability. Iowa Equating Summit, Iowa City, IA. September 13, 2017

Adaptive testing with Bayesian parameter updating and optimal design. Conference of the

International Association for Computerized Adaptive Testing, Niigata, Japan, August 18-20, 2017. (With B. Jiang)

Shadow-test approach to adaptive testing and its generalization to other testing formats. International Meeting of the Psychometric Society, Zürich, Switzerland, July 17-21, 2017. (With S. W. Choi)

Adaptive testing with Bayesian parameter updating and optimal design. International Meeting of the Psychometric Society, Zürich, Switzerland, July 17-21, 2017. (With H. Ren & B. Jiang)

Shadow test approach to joint Bayesian adaptive testing and item calibration. Annual meeting of the National Council on Measurement in Education, San Antonio, TX, April 26-30, 2017. (With B. Jiang)

Bayesian ability estimation in operational adaptive testing. Annual meeting of the National Council on Measurement in Education, San Antonio, TX, April 26-30, 2017. (With D. R. King)

Evaluation of penalty-based scoring methods for incomplete adaptive tests. Annual meeting of the National Council on Measurement in Education, San Antonio, TX, April 26-30, 2017. (With Q. Diao)

Bayesian adaptive testing with polytomous items. Annual meeting of the National Council on Measurement in Education, San Antonio, TX, April 26-30, 2017. (With H. Ren & S. W. Choi)

A universal test assembler for the automated production of fixed-form, adaptive and any mixture of the two. ATP Conference, Scottsdale, AZ, March 5-8, 2017

Bayesian detection of cheating on test. Conference on Test Security, Cedar Rapids, IA, October 18-20, 2016

A universal test assembler for the automated production of fixed-form, adaptive and any mixture of the two. E-ATP Conference, Lisbon, Portugal, September 28-20, 2016. (With M. D. Barrett)

Big data, small steps. International Meeting of the Psychometric Society, Asheville, NC, July 12-15, 2016. (Lifetime Achievement Award Address)

The myth of equal units of educational measurement. International Meeting of the Psychometric Society, Asheville, NC, July 12-15, 2016. (Invited debate)

Best practice examples and challenges in statistical and psychometric consultation. International Meeting of the Psychometric Society, Asheville, NC, July 12-15, 2016. (Symposium)

Scoring incomplete adaptive tests. International Meeting of the Psychometric Society, Asheville, NC, July 12-15, 2016. (With Q. Diao)

Linking polytomous response model parameters with optimal linking design application. International Meeting of the Psychometric Society, Asheville, NC, July 12-15, 2016. (With M. D. Barrett)

Automated test form generation with constraint programming. Annual meeting of the National

Council on Measurement in Education, Washington, DC, April 7-11, 2016. (With J. Li)

Applications of combinatorial optimization to educational measurement: An introduction. Annual meeting of the National Council on Measurement in Education, Washington, DC, April 7-11, 2016.

How to achieve comparability of testing across different testing modes? 15th Annual Maryland Assessment conference. October 29-30, 2015, College Park, MD. (Keynote address)

Response time modeling and applications. IRT Workshop, University of Twente, October 5-7, 2015.

A self-replenishing adaptive test. Conference of the International Association for Computerized Adaptive Testing, Cambridge, UK, September 14-16, 2015. (Keynote address).

Detection of cheating on test. Invited symposium at the International Meeting of the Psychometric Society, Beijing, China, July 12-17, 2015. (Organizer)

Exact null and posterior distributions for the detection of cheating. International Meeting of the Psychometric Society, Beijing, China, July 12-17, 2015.

How to deal with timing issues in adaptive testing? National Conference on Student Assessment, San Diego, CA, June 22-24, 2015.

The myth of equal-interval scales in educational testing. Annual Meeting of the National Council on Measurement in Education, Chicago, IL, April 15-19, 2015. (Debate)

Optimal reassembly of shadow tests in computerized adaptive testing. Annual Meeting of the National Council on Measurement in Education, Chicago, IL, April 15-19, 2015. (With S. Choi, K. Moellering & J. Li).

Computerized adaptive testing for passage-based reading assessments with complex test specifications. Annual Meeting of the National Council on Measurement in Education, Chicago, IL, April 15-19, 2015. (With S. Choi & H. Ren).

Current issues in test assembly. Symposium to at the Annual Meeting of the National Council on Measurement in Education, Chicago, IL, April 15-19, 2015. (Discussant)

Using response times to detect test fraud. Conference on Test Security, Iowa City, IA, October 1-2, 2014.

Forensic erasure analysis on optimal mark recognition documents. Conference on Test Security, Iowa City, IA, October 1-2, 2014. (With R. Kanneganti, R. Fry & L. Gupta)

IRT parameter linking: Definitions, foundational results, and linking function estimation. International Meeting of the Psychometric Society, Madison, WI, July 22-25, 2014. (With M. D. Barrett)

IRT parameter linking: Standard errors of linking and optimal linking design. International Meeting of the Psychometric Society, Madison, WI, July 22-25, 2014. (With M. D. Barrett)

Bigger is often simpler: Using shadow elements in test construction. 9th Conference of the

International Testing Committee, San Sebastian, Spain, July 2-5, 2014. (Keynote address)

Scaling educational assessments: Top down or bottom up? Annual Meeting of the National Council on Measurement in Education, Philadelphia, PA, April 2-6, 2014. (Presidential Address)

Subscore reporting in adaptive testing. Symposium at the Annual Meeting of the National Council on Measurement in Education, Philadelphia, PA, April 2-6, 2014. (Organizer)

Why we don't need Stevens' theory of scales of measurement to link IRT parameters. Center for Research Methods and Data Analysis, University of Kansas, Lawrence, KS, April 18, 2014.
Linking item response model parameters. Law School Admission Council, Newtown, PA, April 7, 2014.

The shadow-test method of adaptive testing. 3rd Brazilian Congress on Item Response Theory, Belém, Brazil, December 4-6, 2013. (Keynote address)

Adaptive test-item calibration. 3rd Brazilian Congress on Item Response Theory, Belém, Brazil, December 4-6, 2013. (Keynote address)

Bayes checks on cheating on tests. 2nd Annual Statistical Detection of Potential Test Fraud Conference, University of Wisconsin, Madison, WI, October 17-19, 2013. (With C. Lewis)

Bayes checks on cheating on tests. 4th RCEC Workshop on Item Response Theory and Educational Measurement, University of Twente, Enschede, The Netherlands, October 8-10, 2013. (With C. Lewis)

Estimating linking functions for response model parameters. 4th RCEC Workshop on Item Response Theory and Educational Measurement, University of Twente, Enschede, The Netherlands, October 8-10, 2013. (With M. D. Barrett)

Next generation of testing: Computers, item response models, and Bayesian statistics. National Research Council, Committee on Measuring Human Capabilities. Washington, DC, September 6, 2013.

Multidimensionality in item response theory: Compensatory or conjunctive? International Meeting of the Psychometric Society, Arnhem, The Netherlands, July 22-26, 2013. (Keynote address).

How to measure and control test speededness? International Meeting of the Psychometric Society, Arnhem, The Netherlands, July 22-26, 2013.

Automated assembly of multistage testing systems. International Meeting of the Psychometric Society, Arnhem, The Netherlands, July 22-26, 2013. (With Q. Diao)

Using response times to improve testing. Jagiellonian University, Krakow, Poland, June 25, 2015. (Invited presentation)

Recent developments in automated test assembly. First International Conference on Assessment and Evaluation, Riyadh, Saudi Arabia, December 2-4, 2012. (Invited presentation)

The impact of admission decisions on educational outcomes. First International Conference on Assessment and Evaluation, Riyadh, Saudi Arabia, December 2-4, 2012. (Discussant)

Using item response theory in test development. First International Conference on Assessment and Evaluation, Riyadh, Saudi Arabia, December 2-4, 2012. (Workshop)

Test design as a modeling problem. Teach Your Children Well: A Conference to Honor Ron Hambleton. University of Massachusetts, Amherst, MA, November 9-10, 2012. (Invited presentation)

Identifying and linking response model parameters. 3rd RCEC Workshop on Item Response Theory and Educational Measurement, University of Twente, Enschede, The Netherlands, October 3-5, 2012. (With M. D. Barrett)

Stolen test items, copied answers, and fraudulent erasures: How to use statistics to detect them? Joint Statistical Meetings, San Diego, CA, July 28-August 2, 2012.

A universal automated test assembly engine. Paper presented at the 8th conference of the International Test Commission, Amsterdam, Netherlands, July 3-5, 2012. (With Q. Diao) (Invited symposium)

Linking of response model parameters. Research seminar at the Graduate School of Education, University of California, Berkeley, CA, May 1, 2012. (With M. L. Barrett)

Is multidimensional IRT ready for use in diagnostic assessment? Paper presented at the Workshop on Statistical Methods in Diagnostic Assessments, Department of Statistics, Columbia University, New York City, April 27-28, 2012.

Reflections on multidimensional response modeling. Annual Meeting of the National Council on Measurement in Education, Vancouver, BC, April 13-15, 2012. (Invited presentation)

Using assessments to optimize learning and educational resource availability. Symposium to be presented at the Annual Meeting of the National Council on Measurement in Education, Vancouver, BC, April 13-15, 2012. (Organizer)

Response time modeling. Symposium presented at the Annual Meeting of the National Council on Measurement in Education, Vancouver, BC, April 13-15, 2012. (Discussant)

Key methodological concepts in the optimization of learning and educational resource availability. Paper presented at the Annual Meeting of the National Council on Measurement in Education, Vancouver, BC, April 13-15, 2012.

Using computer simulation to stress test a system to optimize learning and educational resource availability. Paper presented at the Annual Meeting of the National Council on Measurement in Education, Vancouver, BC, April 13-15, 2012. (With Q. Diao)

Integrating kernel and local equating. Paper presented at the Annual Meeting of the National Council on Measurement in Education, Vancouver, BC, April 13-15, 2012. (With M. Wiberg & A. von Davier)

How to defend the integrity of a testing program against cheating? Trinity College, London, UK, March 19, 2012.

Test speededness: History, evaluation, and prevention. Association of Test Publishers

Innovations in Testing Conference, February 27-29, 2012, Palm Springs, CA.

Adaptive test-item calibration. Second Annual Conference of the International Association for Computerized Adaptive Testing, Pacific Grove, CA, October 3-5, 2011. (Keynote address)

Speededness and adaptive testing. Paper presented at the Second Annual Conference of the International Association for Computerized Adaptive Testing, Pacific Grove, CA, October 3-5, 2011. (With X. Xiong)

Pre-operational CAT simulation. Paper presented at the Second Annual Conference of the International Association for Computerized Adaptive Testing, Pacific Grove, CA, October 3-5, 2011. (With L. Shu)

Constraining item exposure in multidimensional adaptive testing. Paper presented at the Second Annual Conference of the International Association for Computerized Adaptive Testing, Pacific Grove, CA, October 3-5, 2011. (With Q. Diao & H. Ren)

A paradox in the study of the benefits of test-item review. Paper presented at the International Meeting of the Psychometric Society, Hong Kong, July 18-22, 2011. (With M. Jeon & S. Ferrara)

Test security. Symposium presented at the National Conference on Student Assessment, Orlando, FL, June 19-22, 2011. (Discussant)

Adaptive testing: A simple idea finally come true. First European Symposium on Item Response Theory and Health Measurement, Amsterdam, The Netherlands, June 14, 2011. (Invited presentation)

Innovations in educational assessment. Qatar Education Conference: Educating, Enabling, Empowering. London, UK, June 7-8, 2011.

How to defend the integrity of a testing program against cheating? 8th Annual Conference of the European Association of Language Testing and Assessment, Siena, Italy, May 5-8, 2011. (Keynote address)

Detecting suspicious erasures on answer sheets. Paper presented at the Annual Meeting of the National Council on Measurement in Education, New Orleans, LA, April 7-11, 2011. (With M. Jeon)

Bayesian checks on cheating on tests. Paper presented at the Annual Meeting of the National Council on Measurement in Education, New Orleans, LA, April 7-11, 2011. (With C. Lewis)

Using erasure analysis to detect address potential cheating. Paper presented at the Annual Meeting of the National Council on Measurement in Education, New Orleans, LA, April 7-11, 2011. (With G. Schaeffer, S. Ferrara & M. Julian)

Optimization in the testing industry. Operations Research Seminar, Naval Postgraduate School, March 31, 2011, Monterey, CA.

Elements of adaptive testing. Invitational symposium at the Association of Test Publishers Innovations in Testing Conference, February 27-March 2, 2011, Chandler, AZ. (With C.A.W. Glas)

State of the art of psychometrics today. International Conference on Outcome Measurement, Bethesda, MA, September 1-3, 2010. (Keynote address)

CAT applications. International Conference on Outcome Measurement, Bethesda, MA, September 1-3, 2010. (Discussant)

The future of measurement. International Conference on Outcome Measurement, Bethesda, MA, September 1-3, 2010. (Panelist)

Bayesian checks on cheating on tests. 4th European Conference on Methodology/27th Biennial Conference of the Society for Multivariate Analysis in the Behavioral Sciences, Potsdam, Germany, July 21-23, 2010. (Keynote address)

Fairness of selection: Paradoxes and dilemmas. Conference on Selection to Higher Education—Fairness, Efficiency, and Consequences, Umea, Sweden, June 15-17, 2010. (Keynote address)

How to make adaptive testing more efficient? First Annual Conference of the International Association for Computerized Adaptive Testing, Arnhem, The Netherlands, June 7-9, 2010. (Keynote address)

Automated test form generation. Paper presented at the Annual Meeting of the National Council on Measurement in Education, Denver, CO, April 29-May 3, 2010. (With Q. Diao)

Automated test assembly using lp_solve version 5.5 from R. Paper presented at the Annual Meeting of the National Council on Measurement in Education, Denver, CO, April 29-May 3, 2010. (With Q. Diao)

Rule-based generation of items for the assessment of statistical literacy. Paper presented at the Annual Meeting of the National Council on Measurement in Education, Denver, CO, April 29-May 3, 2010. (With H. Holling)

Comparing item selection and ability estimation methods in multidimensional adaptive testing with and without nuisance dimensions. Paper presented at the Annual Meeting of the American Educational Research Association, Denver, CO, April 30-May 4, 2010. (With Q. Diao & M. D. Reckase)

Optimal design of tests with automated item generation. Paper presented at the Annual Meeting of the National Council on Measurement in Education, Denver, CO, April 29-May 3, 2010. (With H. Geerlings & C. A. W. Glas)

Exhibition on testing and measurement. Symposium presented at the Annual Meeting of the National Council on Measurement in Education, Denver, CO, April 29-May 3, 2010. (Discussant)

Extreme equating: How far will assumptions bend before they break? Symposium presented at the Annual Meeting of the National Council on Measurement in Education, Denver, CO, April 29-May 3, 2010. (Discussant)

Implementation issues in automated test assembly. Symposium presented at the Annual Meeting of the National Council on Measurement in Education, Denver, CO, April 29-May 3,

2010. (Organizer)

Using hierarchical IRT to improve the efficiency of adaptive testing. 1st Brazilian Congress on Item Response Theory, Florianópolis, Brazil, December 9-11, 2009. (Keynote address)

Using IRT to detect cheating on test items. 1st Brazilian Congress on Item Response Theory, , Florianópolis, Brazil, December 9-11, 2009. (Keynote address)

The use of item banking for school assessment. International Forum on Curriculum Evaluation, East China Normal University, Shanghai, November 5-10, 2009. (Keynote address)

Conceptual issues in observed-score equating. 25th Workshop on Item Response Theory, University of Twente, Enschede, The Netherlands, October 13-15, 2009. (Keynote address)

Conceptual issues in response-time modeling. 25th Workshop on Item Response Theory, University of Twente, Enschede, The Netherlands, October 13-15, 2009. (Keynote address)

Reflection on testing traditions on two different continents. European Association of Test Publishers Conference, Brussels, Belgium, September 30-October 2, 2009. (Keynote address)

Test design and speededness. Paper presented at 9. DGPs-Fachtagung Methoden und Evaluation, Universität Bielefeld, Germany, September 10-12, 2009.

A bivariate lognormal model response-time model for the detection of collusion between test takers. Paper presented at the International Meeting of the Psychometric Society, Cambridge, UK, July 20-23, 2009.

Optimal design of tests with rule-based item generation. Paper presented at the International Meeting of the Psychometric Society, Cambridge, UK, July 20-23, 2009. (With H. Geerlings & C. A. W. Glas)

Models and designs for tests with explanatory rules for their item difficulties. Symposium presented at the International Meeting of the Psychometric Society, Cambridge, UK, July 20-23, 2009. (Organizer)

Conceptual issues in response-time modeling. Colloquium at the School of Education, Stanford University, Stanford, CA, May 14, 2009.

Response-time based detection of collusion between test takers. Paper presented at the Annual Meeting of the National Council on Measurement in Education, San Diego, CA, April 13-16, 2009.

Exposure control using item ineligibility probabilities in multidimensional adaptive testing with shadow tests. Paper presented at the Annual Meeting of the National Council on Measurement in Education, San Diego, CA, April 13-16, 2009. (With Q. Diao & S. Yen)

Novel applications of response-time modeling in educational measurement. Symposium presented at the Annual Meeting of the National Council on Measurement in Education, San Diego, CA, April 13-16, 2009. (Organizer)

Research directions in equating. Symposium presented at the Annual Meeting of the National Council on Measurement in Education, San Diego, CA, April 13-16, 2009. (Discussant)

Practical applications of response-time modeling. Paper presented at the Association of Test Publishers Innovations in Testing Conference, February 22-25, 2009, Palm Springs, CA.

Statistical tools for the detection of cheating on educational tests. IOPS Winter Conference, Leiden University, The Netherlands, December 11-12, 2008. (Keynote address)

Statistical tools for the detection of cheating on educational tests. Research seminar at the Graduate School of Education, University of California, Berkeley, CA, November 18, 2008.

Sequencing an adaptive test battery. Paper presented at the 24th Workshop on Item Response Theory, University of Twente, Enschede, The Netherlands, October 7-9, 2008.

Monitoring of suspicious response-time patterns on computerized tests. Paper presented at the 29th International Congress of Psychology, Berlin, Germany, July 20-25, 2008.

Monitoring of suspicious response-time patterns on computerized tests. Paper presented at the 6th conference of the International Test Commission, Liverpool, UK, July 14-16, 2008.

Local observed-score equating. Paper presented at the International Meeting of the Psychometric Society, Durham, NH, June 30-July 2, 2008.

Conceptual issues in response-time modeling. Paper presented at the International Meeting of the Psychometric Society, Durham, NH, June 30-July 2, 2008.

IRT parameter estimation with response times as collateral information. Paper presented at the International Meeting of the Psychometric Society, Durham, NH, June 30-July 2, 2008. (With R. H. Klein Entink & J. P. Fox)

Modeling rule-based item generation. Paper presented at the International Meeting of the Psychometric Society, Durham, NH, June 30-July 2, 2008. (With H. Geerlings, C. A. W. Glas, & H. Holling)

Using optimal design principles to control test speededness. Paper presented at the Annual Meeting of the National Council on Measurement in Education, New York City, March 25-27, 2008.

Detection of aberrant candidate patterns: Improving detection by combining response-pattern and response-time data. Paper presented at the Annual Meeting of the National Council on Measurement in Education, New York City, March 25-27, 2008. (With S. C. Chuah)

Response times on test items. Seminar at the Department of Educational Measurement, Umeå University, Umeå, Sweden, October 22, 2007.

A rendezvous with social-science measurement. Honorary doctorate award ceremony lecture, Umeå University, Umeå, Sweden, October 19, 2007.

Test design and speededness. Paper presented at the 23rd Workshop on Item Response Theory, University of Twente, Enschede, The Netherlands, October 9-11, 2007.

Response times on test items: Models and applications. Paper presented at the Sixth Scientific Meeting of the Classification and Data Analysis Group of the Italian Statistical

Society, University of Macerata, Italy, September 12-14, 2007.

Bayesian procedures for detecting aberrances in response time patterns in adaptive testing. Paper presented at the International Meeting of the Psychometric Society, Tokyo, Japan, July 9-13, 2007. (With F. Guo)

Using flexible Box-Cox transformations when modeling response times on test items. Paper presented at the International Meeting of the Psychometric Society, Tokyo, Japan, July 9-13, 2007. (With R. H. Klein Entink and J. F. A. Fox)

The shadow-test approach: A universal framework for implementing adaptive testing. 2007 GMAC Conference on Computerized Adaptive Testing, Minneapolis, MN, June 7-8, 2007. (Keynote address)

Response-time modeling and applications. Colloquium at CTB/McGraw-Hill, Monterey, CA, June 4, 2007.

A Bayesian procedure for detecting response-time aberrance. Paper presented at the Annual Meeting of the National Council on Measurement in Education, Chicago, IL, April 10-12, 2007. (With F. Guo)

Item-level technical quality issues. Symposium presented at the Annual Meeting of the National Council on Measurement in Education, Chicago, IL, April 10-12, 2007. (Discussant)

Raju's differential functioning of items and tests (DFIT): Past and future. Symposium presented at the Annual Meeting of the National Council on Measurement in Education, Chicago, IL, April 10-12, 2007. (Moderator)

Computerized-adaptive testing: Considerations for large-scale international assessments. Paper presented at the plenary meeting of the OECD International Indicators of Education Systems meeting, Oslo, Norway, March 14-16, 2007.

Response-time modeling and test design. Paper presented at the Association of Test Publishers Innovations in Testing Conference, February 5-7, 2007, Palm Springs, CA.

New methods of local observed-score equating. Colloquium of the School of Education, University of Massachusetts, Amherst, November 14, 2006.

Analysis of responses and response times on a computerized version of the Medical College Admission Test. Presentation at Association of American Medical Colleges, Washington, DC, October 26, 2006. (With R. H. Klein Entink)

Conditioning in statistical tests of answer copying. Paper presented at the 22nd Item Response Theory Workshop, University of Twente, October 10-12, 2006.

Response-time modeling and applications. 45. Kongress der Deutsche Gesellschaft für Psychologie, Nürnberg, September 17-21, 2006. (Keynote address)

A history of innovations in psychometrics. Presentation at Educational Testing Service, Princeton, NJ, July 28, 2006.

Identifying aberrant response behavior in adaptive testing. Colloquium at the Graduate

Management Admission Council (GMAC), McLean, VA, July 21, 2006.

Response-time modeling: Conceptual issues, statistical aspects and applications. Three colloquia at the Law School Admission Council (LSAC), Newtown, PA, July 24, August 4 and 11, 2006.

Using response times for item selection in adaptive testing. Paper presented at the International Meeting of the Psychometric Society, Montreal, Canada, June 14-17, 2006.

Diagnosing differential speededness of tests. Paper presented at the International Meeting of the Psychometric Society, Montreal, Canada, June 14-17, 2006. (With K. Breithaupt, D. Chuah, and O. Zhang)

Simultaneous modeling of response and response-time data with covariates for the person parameters. Paper presented at the International Meeting of the Psychometric Society, Montreal, Canada, June 14-17, 2006. (With R. H. Klein Entink and J.P. Fox)

Testing local independence assumptions for responses and response times in an MML framework. Paper presented at the International Meeting of the Psychometric Society, Montreal, Canada, June 14-17, 2006. (With C. A. W. Glas)

Statistical tests of cheating on multiple-choice tests. Colloquium of the Department of Educational Measurement, Umeå University, Umeå, Sweden, June 12-14, 2006.

Statistical issues in adaptive testing. Meeting of the Dutch/Flemish Classification Society (VOC). Rotterdam, Netherlands, April 28, 2006. (Invited presentation)

Two empirical Bayes methods for using response times to improve item selection in adaptive testing. Paper presented at the Annual Meeting of the National Council on Measurement in Education, San Francisco, CA, April 9-11, 2006.

Response-time modeling and applications. Annual Meeting of the National Council on Measurement in Education, San Francisco, CA, April 9-11, 2006. (NCME Career Achievement Award Address)

Issues in computer-based testing. Symposium held at the Annual Meeting of the National Council on Measurement in Education, San Francisco, CA, April 6-10, 2006. (Discussant)

Improving diagnostic subscore estimation and classification. Symposium held at the Annual Meeting of the National Council on Measurement in Education, San Francisco, CA, April 6-10, 2006. (Discussant)

Principles and applications of automated test assembly methods. Colloquium of the Research and Analysis Division, Measured Progress, Dover, NH, March 6, 2006. (Invited presentation)

Three basic principles of test design. Association of Test Publishers Innovations in Testing Conference, February 6-8, 2006, Orlando, FA. (ATP Career Achievement Address)

Trends in testing: The US, Europe and beyond. Association of Test Publishers Innovations in Testing Conference, February 6-8, 2006, Orlando, FA.

Using response times to select items in adaptive testing. Paper presented at the 21th Item

Response Theory Workshop, University of Twente, October 25-27, 2005.

Shadow-test approach to adaptive testing. 7. Tagung der Fachgruppe Methoden und Evaluation. Westfälische Wilhelms-Universität, Münster, Germany, September 29-October 1, 2005.

A two-level model for speed and accuracy on test items. Paper presented at the International Meeting of the Psychometric Society, Tilburg, The Netherlands, July 5-8, 2005.

Sequencing a computerized adaptive test battery. Paper presented at the International Meeting of the Psychometric Society, Tilburg, The Netherlands, July 5-8, 2005. (With R. Ricci)

Selectie van studenten bij de toelating in het hoger onderwijs. Symposium held at ORD 2005, Gent, Belgium, May 30-June 1, 2005. (Discussant)

Modeling speed and accuracy on test items. Colloquium of Faculty of Psychology, Westfälische Wilhelms-Universität, Münster, Germany, May 24, 2005. (Invited presentation)

Minimizing conditional item-exposure rates in adaptive testing. Paper presented at the Annual Meeting of the National Council on Measurement in Education, Montreal, Canada, April 12-14, 2005. (With B. P. Veldkamp)

Multiple categories, steps, dimensions, and levels in item response theory. GSIC Symposium on Trials and Tribulations of Transitioning from Measurement Theory to Practice, Annual Meeting of the National Council on Measurement in Education, Montreal, Canada, April 12-14, 2005. (Invited presentation)

Making computerized adaptive testing more secure. Symposium held at the Annual Meeting of the National Council on Measurement in Education, Montreal, Canada, April 12-14, 2005. (Co-organizer)

Alfred Binet en de intelligentietest. Studium Generale, University of Twente, Enschede, The Netherlands, March 15, 2005.

Making computerized adaptive testing work. Association of Test Publishers Innovations in Testing Conference, Scottsdale, AZ, February 28-March 2, 2005. (Invited presentation)

Keuze van selectie-instrumenten voor toelating tot de Nederlandse universiteiten. Najaarsconferentie van de Nederlandse Examenvereniging, Ede, The Netherlands, November 12, 2004. (Invited presentation)

Statistical models for test diagnosis: A discussion. Fourth Spearman Conference on Diagnostics for Education: Theory, Measurement, and Applications. Philadelphia, PA, October 20-23, 2004. (Invited presentation)

Two statistical tests for detecting answer copying. Paper presented at the 20th Workshop on Item Response Theory, University of Twente, October 12-14, 2004.

A strategy for item-pool management. Paper presented at the 20th Workshop on Item Response Theory, University of Twente, October 12-14, 2004. (With A. Ariel & B. P. Veldkamp)

Making adaptive testing work: Model-based solutions to practical problems. Colloquium of the

National Center for University Entrance Examinations. Tokyo, Japan, September 6, 2004. (Invited presentation)

Linear models for optimal test design. Annual Meeting of the Japan Association for Research on Testing. Tokyo, Japan, August 28-29, 2004. (Keynote address)

Modeling response time in an item response theory framework. 82th Symposium of the Behaviormetric Society of Japan on Recent Developments in Latent Variable Modeling. University of Tokyo, Japan, August 25-26, 2004. (Invited presentation)

Multiple categories, steps, dimensions, and levels in item response theory. 28th International Congress of Psychology, Beijing, China, August 8-13, 2004. (Invited symposium)

Item-pool management using item blueprints. Paper presented at the Joint Meeting of the Society for Multivariate Analysis in the Behavioral Sciences and the European Association of Methodology, Jena, Germany, July 18-21, 2004. (With A. Ariel & B. P. Veldkamp)

Applications of MCMC methods to parameter estimation in IRT. Symposium held at the Annual Meeting of the Psychometric Society, Pacific Grove, CA, June 14-17, 2004. (Invited symposium; with C. A. W. Glas)

Multilevel modeling of speed and accuracy on test items. Colloquium of the Department of Educational Measurement, Umeå University, Umeå, Sweden, June 2, 2004.

Multilevel modeling of speed and accuracy on test items. Paper presented at the Annual Meeting of the Psychometric Society, Pacific Grove, CA, June 14-17, 2004.

Evaluating equating error in observed-score equating. Paper presented at the Annual Meeting of the Psychometric Society, Pacific Grove, CA, June 14-17, 2004.

Lognormal models for response times on test items. Colloquium of the Law School Admission Council, Newtown, PA, May 18, 2003.

A sequential Bayes procedure for item calibration in multi-stage testing. Paper presented at the Annual Meeting of the National Council on Measurement in Education, San Diego, CA, April 13-15, 2004. (With A. D. Mead)

Linear models for optimal test design. Psychometric Seminar Series, Harcourt Assessment, Inc., San Antonio, TX, April 8, 2004. (Invited presentation)

Linear models for optimal test design. Colloquium of the School of Educational Psychology, University of Texas, Austin, April 7, 2004. (Invited presentation)

Automating item generation and test assembly. Annual Association of Test Publishers Computer-Based Testing Conference, Indiana Wells, CA, February 2-4, 2004. (Invited presentation)

How many items do we need? Developing and maintaining an item inventory to support continuous testing. Paper presented at the Association of Test Publishers Computer-Based Testing Conference, Indiana Wells, CA, February 2-4, 2004.

Order properties of observed-score distributions. Paper presented at the 19th Workshop on

Item Response Theory, University of Twente, Enschede, The Netherlands, October 15-17, 2003.

Equating, answer copying, and computerized adaptive testing. Colloquium of Research Department, CTB/McGraw-Hill, May 22, 2003, Monterey, CA.

Designing item pools for use in constrained CAT. Paper presented at the Annual Meeting of the National Council on Measurement in Education, Chicago, IL, April 22-24, 2003. (With A. Ariel & B. P. Veldkamp)

CBT/CAT test construction procedures. Symposium held at the Annual Meeting of the National Council on Measurement in Education, Chicago, IL, April 22-24, 2003. (Discussant)

New methods of item-exposure control in CAT. Symposium held at the Annual Meeting of the National Council on Measurement in Education, Chicago, IL, April 22-24, 2003. (Organizer)

Implementing an alternative to Symptom-Hetter item-exposure control in constrained adaptive testing. Paper presented at the Annual Meeting of the National Council on Measurement in Education, Chicago, IL, April 22-24, 2003. (With B. P. Veldkamp)

Constraining item exposure in computerized adaptive testing with shadow tests. Paper presented at the Annual Meeting of the National Council on Measurement in Education, Chicago, IL, April 22-24, 2003. (With B. P. Veldkamp)

Innovations in item response theory and computerized adaptive testing. Annual Association of Test Publishers Computer-Based Testing Conference, Amelia Island, FL, February 24-26, 2003. (Invited presentation)

Test reliability and validity: A necessary condition or a tradeoff? Conference on Measurement for the Social Sciences: Classical Insights into Modern Approaches. Ontario Institute for Studies in Education, University of Toronto, Canada, December 6, 2002. (Invited presentation)

Estimating equating error in observed-score equating. Defense Manpower Data Center, Seaside, CA, November 25, 2002. (Invited presentation)

On CATs and other animals in test theory. Seminar at the Center for Advanced Study in the Behavioral Sciences, Stanford, CA, October 9, 2002.

Intrajudge inconsistency in standard setting with interdependent evaluation of alternatives. Paper presented at the European Meeting of the Society for Multivariate Analysis in the Behavioral Sciences. Tilburg, The Netherlands, July 1-3, 2002. (With H. J. Vos & L. Chang)

Methods for designing CATs with rotating item pools. Paper presented at the Annual Meeting of the Psychometric Society, Chapel Hill, NC, June 20-23, 2002. (With A. Ariel & B. P. Veldkamp)

Exciting new technologies in computer-based testing. International Conference on Computer-Based Testing and the Internet: Building Guidelines for Best Practice, Winchester, UK, June 13-15, 2002. (Keynote address)

Mathematical programming approaches to test item pool design. Paper presented at the International Conference on Computer-Based Testing and the Internet: Building Guidelines for Best Practice, Winchester, UK, June 13-15, 2002. (With B. P. Veldkamp & A. Ariel)

The key to developing computer-based testing: Automated test assembly procedures. Third Annual Association of Test Publishers Computer-Based Testing Conference, Carlsbad, CA, February 4-6, 2001. (Invited presentation)

Modeling item parameter variability in educational measurement. Paper presented at the NOSMO Methodologendag, November 30, 2001, Amsterdam, The Netherlands. (With C. A. W. Glas)

Detecting intrajudge inconsistency in standard setting. Paper presented at the 17th Workshop on Item Response Theory. University of Twente, Enschede, The Netherlands, October 2-4, 2001. (With H. J. Vos & L. Chang)

Eindtermen en de Trias Politica: Over beschaving in de wereld van onderwijs en opleiding. Lezing voor branche-organisaties in de assurantiebemiddeling, Doorn, The Netherlands, September 19, 2001. (Invited presentation)

Nonparametric item response theory. Symposium held at the International Meeting of the Psychometric Society, Osaka, Japan, July 15-19, 2001. (Discussant)

New research topics in computerized adaptive testing. Symposium held at the International Meeting of the Psychometric Society, Osaka, Japan, July, 15-19, 2001. (Organizer)

Detecting aberrant behavior in CAT using responses times. Paper presented at the International Meeting of the Psychometric Society, Osaka, Japan, July 15-19, 2001. (With E. M. L. A van Krimpen-Stoop)

Adaptive testing from a pool of item shells. Paper presented at the International Meeting of the Psychometric Society, Osaka, Japan, July 15-19, 2001. (With C. A. W. Glas)

Psychometric solutions to practical problems in computerized adaptive testing. Conference on The Development of Assessment Technologies in Computerized Testing, Japanese Society for Testing of English Proficiency, Tokyo, July 12, 2001. (Keynote address)

Psychometric solutions for practical problems in computerized-adaptive testing. Paper presented at the VIIth European Congress on Psychology, London, UK, July 1-6, 2001.

Modeling variability in item parameters in computerized adaptive testing. Paper presented at the Annual Meeting of the Psychometric Society, Valley Forge, PA, June 21-24, 2001. (With C. A. W. Glas)

Statistical evaluation of some new methods of observed-score equating. Paper presented at the Annual Meeting of the Psychometric Society, Valley Forge, PA, June 21-24, 2001.

Methods for conditional equating of observed test scores. Colloquium of Educational Testing Service (ETS), Princeton, NJ, June 21, 2001 (Invited presentation)

Designing computer-based testing programs. Conference on Computer-Based Testing and the Internet, International Test Commission. June 12-15. London, UK. (Keynote address)

Using response times to detect aberrant behavior in computerized adaptive testing. Paper presented at the Annual Meeting of the National Council on Measurement in Education,

Seattle, WA, April 11-13, 2001. (With E. M. L. A van Krimpen-Stoop)

Fitting and evaluating IRT models. Symposium held at the Annual Meeting of the National Council on Measurement in Education, Seattle, WA, April 11-13, 2001. (Discussant)

Enhancing the validity of computerized adaptive tests. Colloquium of the Graduate School of Education, Harvard University, Cambridge, MA, October 13, 2000.

How to equate tests and assessments? Colloquium of the Graduate School of Education, Harvard University, Cambridge, MA, October 13, 2000.

Automated test assembly: Approaches and applications. Colloquium of the School of Education, University of Massachusetts, Amherst, October 11, 2000.

Test-theoretic principles underlying observed-score equating. Colloquium of the School of Education, University of Massachusetts, Amherst, October 10, 2000.

On the psychometric foundation of observed-score equating. Paper presented at the 16th Workshop on Item Response Theory. University of Twente, Enschede, The Netherlands, September 26-28, 2000.

Kullback-Leibler based item selection in constrained multidimensional adaptive testing. Paper presented at the 16th Workshop on Item Response Theory. University of Twente, Enschede, The Netherlands, September 26-28, 2000. (With B. P. Veldkamp)

Automated test assembly: Approaches and applications. Colloquium of the National Board of Medical Examiners, Philadelphia, PA, July 12, 2000. (Invited presentation)

On the psychometric foundation of observed-score equating. Annual Meeting of the Psychometric Society. Vancouver, BC, Canada, July 6-8, 2000. (Presidential address)

Enhancing the validity of computerized adaptive tests. Colloquium of the University of Maryland, College Park, May 16, 2000.

Psychometric considerations in linking the NAEP and VNT scales. Paper presented at the Annual Meeting of the National Council on Educational Measurement, New Orleans, LA, April 25-27, 2000. (With M.J. Kolen)

Constrained adaptive testing with shadow tests. Paper presented at the Annual Meeting of the National Council on Educational Measurement, New Orleans, LA, April 25-27, 2000.

Using zero-one programming in optimal a-stratified CAT designs. Paper presented at the Annual Meeting of the National Council on Educational Measurement, New Orleans, LA, April 25-27, 2000. (With H.-H. Chang)

The development and application of multi-stage testlet-based designs for computerized adaptive testing. Symposium held at the Annual Meeting of the National Council on Educational Measurement, New Orleans, LA, April 25-27, 2000. (Discussant)

A new method for standard setting on criterion-referenced tests. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA, April 24-28, 2000. (With L. Chang & H. J. Vos)

Developments in computerized testing. Public address organized by the HKSAR Education Department, Hong Kong, March 22, 2000. (Invited presentation)

Test equating and parallel test assembly. Colloquium of Ngee Ann Polytechnic, Singapore, November 22, 1999. (Invited presentation)

Latest developments and future direction of computer-based testing. Public address organized by Ngee Ann Polytechnic, Singapore, November 23, 1999. (Invited presentation)

Constrained adaptive testing with shadow tests. Paper presented at the 15th Workshop on Item Response Theory. University of Twente, Enschede, The Netherlands, October 5-7, 1999.

Passing, failing, accepting, rejecting: Setting standards for test-based decisions. Tweede Nationale Examencongres, University of Twente, Enschede, The Netherlands, September 24, 1999. (Keynote presentation)

Constrained adaptive testing using shadow tests. 5th European Conference on Psychological Assessment, Patras, Greece, August 25-29, 1999. (Keynote address)

Computerized-adaptive testing with equated number-right scoring. Paper presented at the 11th European meeting of the Psychometric Society, Lueneburg, Germany, July 19-22, 1999.

Cross-validating item parameter estimation in adaptive testing. Paper presented at the 1999 Annual Meeting of the Psychometric Society, Lawrence, KS, June 24-27, 1999. (With C. A. W. Glas)

Simpson's paradox and culture-fair selection. Paper presented at the Annual Meeting of the SweSAT International Advisory Board, Umeå, Sweden, May 31-June 2, 1997.

New developments for maintaining and scoring computerized adaptive tests. Symposium held at the Annual Meeting of the National Council on Educational Measurement, Montreal, Canada, April 20-22, 1999. (Discussant)

Focus on international testing issues: Goals and activities of the International Test Commission. Symposium held at the Annual Meeting of the National Council on Educational Measurement, Montreal, Canada, April 20-22, 1999.

Computerized-adaptive testing with equated number-right scoring. Paper presented at the Annual Meeting of the National Council on Measurement in Education, Montreal, Canada, April 20-22, 1999.

Designing item pools for computerized adaptive testing: An integer programming approach. Paper presented at the Annual Meeting of the National Council on Measurement in Education, Montreal, Canada, April 20-22, 1999. (With B. P. Veldkamp)

Trends in computerized testing: A synthesis of this year's sessions. Annual Meeting of the National Council on Measurement in Education, Montreal, Canada, April 20-22, 1999. (Invited presentation)

New developments in computerized-adaptive testing. Symposium held at the Annual Meeting of the National Council on Measurement in Education, Montreal, Canada, April 20-22, 1999.

(Organizer)

Computerized-adaptive testing with equated number-right scoring. Paper presented at the 14th Workshop on Item Response Theory. University of Twente, Enschede, The Netherlands, October 6-8, 1998.

Models for computer-based testing: A discussion. ETS Colloquium on Computer-Based Testing: Building the Foundation for Future Assessments. Philadelphia, PA, September 25-26, 1998.

Computerized test item banking: A new paradigm in psychological testing. 24th International Congress of Applied Psychology, San Francisco, CA, August 9-14, 1998. (Invited presentation)

An integer-programming approach to item pool design. Colloquium of the Law School Admission Council, Newtown, PA, July 21, 1998. (With B. P. Veldkamp & L. M. Reese)

Using response-time constraints to control for differential speededness in computerized adaptive testing. Paper presented at the Joint Annual Meetings of the Classification Society of North America and the Psychometric Society, Urbana, IL, June 17-21, 1998. (With D. J. Scrams & D. L. Schnipke)

Het gebruik van responstijden in een algoritme voor itemselectie in CAT. Paper presented at ORD 1998, Enschede, The Netherlands, May 13-15, 1998. (With D. J. Scrams & D. L. Schnipke)

Ontwikkeling van een Model Gedragscode Toetsen, Beoordelen en Beslissen in het Voortgezet Onderwijs. Paper presented at ORD 1998, Enschede, The Netherlands, May 13-15, 1998. (With L. Cremers-van Wees, A. Knuver & H. J. Vos)

Observed-score pre-equating: A method and some empirical results. Paper presented at the Annual Meeting of the American Educational Research Association, San Diego, CA, April 13-17, 1998. (With R. M. Luecht)

Comparability issues in international assessments. Symposium held at the Annual Meeting of the National Council on Measurement in Education, San Diego, CA, April 14-16, 1998. (Discussant)

Rasch measurement: Where have we been and where are we going? Symposium held at the Annual Meeting of the American Educational Research Association, San Diego, CA, April 13-17, 1998.

Modern test theory models. Symposium at the Royal Swedish Academy of Sciences, Gothenburg, January 27-28, 1998. (Keynote address)

New models for adaptive testing. Colloquium of Educational Testing Service (ETS), Princeton, NJ, December 8, 17, 1997. (Invited presentation)

Optimal test assembly. Department of Educational Research Methodology, University of North Carolina, Greensboro, December 4-5, 1997. (Invited seminar)

New models for automated test design. Colloquium of Educational Testing Service (ETS), Princeton, NJ, November 24, December 1, 1997. (Invited presentations)

Optimal item pool design. Colloquium of the School of Education, University of Massachusetts, Amherst, November 25, 1997.

New models for test-based decision making. Colloquium of Educational Testing Service (ETS), Princeton, NJ, November 17, 1997. (Invited presentation)

Optimal computerized assembly of achievement tests. Colloquium of the Department of Educational Studies, University of Delaware, Newark, November 6, 1997. (Invited presentation)

Two new topics in optimal test design. Colloquium of the School of Education, University of Massachusetts, Amherst, October 14, 1997.

Assembly of multiple test forms for use in large-scale educational assessments. National Assessment Governing Board Achievement Level Workshop, Boulder, CO, August 20-22, 1997. (Invited presentation)

An optimal model for constrained adaptive testing. Paper presented at the Annual Meeting of the Psychometric Society, Gatlinburg, TN, June 26-29, 1997. (With L. M. Reese)

Observed-score equating as a test assembly problem. Paper presented at the Annual Meeting of the Psychometric Society, Gatlinburg, TN, June 26-29, 1997. (With R. M. Luecht)

Examens en de moderne media. First National Exam Conference, University of Twente, Enschede, The Netherlands, May 30, 1997. (Keynote address)

An optimal model for constrained adaptive testing. Paper presented at the Annual Meeting of the SweSAT International Advisory Board, Umeå, Sweden, May 31-June 2, 1997.

Observed-score equating as a test assembly problem. Paper presented at the Annual Meeting of the SweSAT International Advisory Board, Umeå, Sweden, May 31-June 2, 1997.

Outcomes from the 1996 USMLE Step 2 field test using a computer adaptive sequential testing framework. Symposium held at the Annual Meeting of the National Council on Measurement in Education, Chicago, IL, March 25-27, 1997. (Discussant)

An optimal model for constrained adaptive testing. Paper presented at the Annual Meeting of the National Council on Measurement in Education, Chicago, IL, March 25-27, 1997. (With L.M. Reese)

Multidimensional adaptive testing with a minimum error-variance criterion. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL, March 24-28, 1997.

Two new applications of linear programming to test assembly problems. Paper presented at the 12th Workshop on Item Response Theory, University of Twente, Enschede, The Netherlands, October 30-31, 1996.

Assembling tests for the measurement of multiple abilities. Paper presented at the Annual Meeting of the Psychometric Society, Banff, Alberta, Canada, June 27-30, 1996.

IRT-based test design. Paper presented at the Fall Meeting of the Social Sciences Division,

Dutch Statistical Association (VVS), Utrecht, The Netherlands, November 15, 1995.

Bayesian item selection criteria for CAT. Paper presented at the 11th Workshop on Item Response Theory, University of Twente, Enschede, The Netherlands, November 6-8, 1995.

Assembling tests for the measurement of multiple abilities. Paper presented at the 11th Workshop on Item Response Theory, University of Twente, Enschede, The Netherlands, November 6-8, 1995.

Optimal selection of passage-linked test items. Paper presented at the 9th European meeting of the Psychometric Society, Leiden, The Netherlands, July 4-7, 1995.

Stochastic order in dichotomous IRT. Paper presented at the 9th European meeting of the Psychometric Society, Leiden, The Netherlands, July 4-7, 1995.

Bayesian item selection in adaptive testing. Paper presented at the Annual Meeting of the Psychometric Society, Minneapolis, MN, June 15-18, 1995.

A causal modeling approach to test score and prediction bias. Paper presented at the Annual Meeting of the SweSAT International Advisory Board, Umeå, Sweden, May 28-30, 1995.

Some decision theory for course placement. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA, April 18-22, 1995.

Test score and prediction bias: Artifacts due to the use of incomplete regression models. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA, April 18-22, 1995.

Optimization models for test assembly to match observed-score distributions. Paper presented at the Annual Meeting of the National Council on Educational Measurement, San Francisco, CA, April 19-21, 1995. (With R. M. Luecht)

Psychological assessment. Symposium held at the Second Social Science Information Technology Conference, Amsterdam, December 8-9, 1994. (Organizer)

Stochastic order in dichotomous IRT models. Paper presented at the 10th Workshop on Item Response Theory, University of Twente, Enschede, The Netherlands, November 9-11, 1994.

Standards for standard setting in large-scale assessments. Paper presented at the Joint Conference on Standard Setting for Large-Scale Assessments. Washington, DC, October 5-7, 1994. (Invited presentation)

Test score and prediction bias. Colloquium of the National Board of Medical Examiners, Philadelphia, PA, June 30, 1994. (Invited presentation)

A compensatory approach to optimal selection with mastery scores. Paper presented at the Annual Meeting of the Psychometric Society, Champaign-Urbana, IL, June 23-26, 1994. (With H. J. Vos).

Advances in optimal test construction. Paper presented at the Symposium on Applications of Latent Trait and Class Models in the Social Sciences, May 15-20, 1994, Sankelmark, Germany. (With E. Timminga)

Optimal design of tests under various practical constraints. Colloquium of the School of Education, University of Massachusetts, Amherst, April 11, 1994.

Assessing dimensionality in item response theory models. Symposium held at the Annual Meeting of the National Council on Measurement in Education, New Orleans, LA, April 5-7, 1994. (Discussant)

Methodologische aspecten van de evaluatie van de opbrengsten van het Basisonderwijs. Divisie Methodologie en Evaluatie, Vereniging voor Onderwijsresearch, Arnhem, 23 maart 1994.

Optimization problems in test theory. National Institute for Testing and Evaluation, Jerusalem, Israel, December 21-23. (Invited seminar)

Test score bias, confounding, and model fit. Paper presented at the 9th Workshop on Item Response Theory, University of Twente, Enschede, The Netherlands, November 2-4, 1993.

Test assembly and observed-score distribution matching. Paper presented at the 9th Workshop on Item Response Theory, University of Twente, Enschede, The Netherlands, November 2-4, 1993.

Modern test theory and computerized testing. Symposium New Directions in Educational Research: Contributions from an International Perspective, Interuniversitair Centrum voor Onderwijsonderzoek ICO, University of Twente, September 15, 1993.

Advances in measurement models, methods, and practices. International Test Commission Conference on Test Use with Children and Youth: International Pathways to Progress, Oxford, UK, June 27-30, 1993. (Keynote Address)

Generating target test information and characteristic functions to match observed-score distributions. Paper presented at the Annual Meeting of the Psychometric Society, University of California, Berkeley, June 17-20, 1993. (With R. M. Luecht)

Optimizations models for test assembly to match observed-score distributions. Paper presented at the Annual Meeting of the Psychometric Society, University of California, Berkeley, June 17-20, 1993. (With R.M. Luecht)

Applications of item response theory. Symposium held at the Annual Meeting of the American Educational Research Association, Atlanta, GA, April 12-16, 1993 (Discussant).

The 1992 NAEP achievement levels setting: Process, results, and special studies. Symposium held at the Annual Meeting of the American Educational Research Association, Atlanta, GA, April 12-16, 1993 (Discussant).

Rasch measurement and practice. Symposium held at the Annual Meeting of the American Educational Research Association, Atlanta, GA, April 12-16, 1993 (Discussant).

Zero-one linear programming models for test equating. Paper presented at the Seventh International Objective Measurement Workshop, Emory University, Atlanta, GA, April 10-11, 1993. (With R. M. Luecht)

A causal modeling approach to test and item bias. Colloquium of the College of Education, University of Illinois, Urbana-Champaign, November 13, 1992. (Invited presentation)

CONTEST: A general purpose software package for test assembly. Colloquium of American College Testing Program, Iowa City, IA, September 25, 1992.

Sensitivity of optimal test designs to errors in the item parameter estimates. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA, April 20-24, 1992.

An IRT-based test measure with applications for differential item functioning. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA, April 20-24, 1992. (With N. Raju & P. Flerer)

Approaches to examining the fit of Rasch models. Symposium held at the Annual Meeting of the American Educational Research Association, San Francisco, CA, April 20-24, 1992 (Discussant).

IRT in the 1990s: Which model works best? Invited debate at the Annual Meeting of the American Educational Research Association, San Francisco, CA, April 20-24 (Discussant).

Admission to higher education in The Netherlands: Reflections from an educational measurement perspective. Colloquium of the Department of Education, University of Umeå, Sweden, March 20, 1992.

The Rasch model for educational measurement, with an emphasis on sampling designs with missing data. Colloquium of the Department of Statistics, University of Umeå, Sweden, March 17, 1992.

Optimization models for IRT-based test construction. Institute of Statistical Mathematics, Tokyo, Japan, November 30, 1991. (Invited presentation)

Optimization models for IRT-based test construction. Colloquium of the Department of Psychology, University of Sydney, Australia, November 25, 1991.

Admission decisions in Dutch education. Colloquium of the School of Education, Murdoch University, Perth, Australia, November, 21, 1991.

Optimization models for IRT-based test construction. Colloquium of the School of Education, University of Western Australia, Perth, November 14, 1991

Optimization models for IRT-based test construction. Colloquium of the Australian Council for Educational Research, Melbourne, Australia, November 6, 1991.

Three reflections on developments in multi-level analysis. Symposium Evaluatie van onderwijseffectiviteit, Interuniversitair Centrum voor Onderwijsevaluatie en Onderwijseffectiviteit ICO, Enschede, The Netherlands, October 10, 1991. (Discussant)

Optimization methods in test construction. European Mathematical Psychology Group Meeting, Vienna, Austria, September 9-12, 1991. (Invited presentation)

Fundamental measurement and the fundamentals of Rasch measurement. Paper presented at

the Annual Meeting of the American Educational Research Association, Chicago, IL, April 3-7, 1991.

Indicatorsystemen voor de effectiviteit van het onderwijs. Symposium Indicatoren van Onderwijseffectiviteit, Interuniversitair Centrum voor Onderwijsevaluatie ICO, Utrecht, The Netherlands, September 14, 1990. (Invited presentation)

International perspectives on educational testing. Symposium held at the Annual Meeting of the National Council on Measurement in Education. Boston, MA, April 17-19, 1990. (Invited organizer)

Rasch measurement: Past and future. Symposium held at the Annual Meeting of the American Educational Research Association. Boston, MA, April 16-20, 1990. (Discussant)

An IRT-based procedure for interactive standard setting. Paper presented at the Annual Meeting of the American Educational Research Association, Boston, MA, April 16-20, 1990.

Verzekerd van een goed examen? Stichting Vakontwikkeling Verzekeringsbedrijf, Utrecht, The Netherlands, March 16, 1990. (Invited presentation)

Optimal sampling for estimating IRT model parameters. Colloquium of the Department of Measurement, Evaluation and Computer Applications, Ontario Institute for Studies in Education, Toronto, Canada, August 2, 1989. (Invited presentation)

A derivation of the Rasch model. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA, March 27-31, 1989.

A simple procedure for optimizing item calibration designs. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA, March 27-31, 1989.

Statistical issues in estimating and testing IRT models. Symposium held at the Annual Meeting of the American Educational Research Association, San Francisco, CA, March 27-31, 1989. (Organizer)

An (empirical) Bayes approach to test-based decision making with multiple criteria. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA, March 27-31, 1989

A simple procedure for optimizing item calibration designs. Paper presented at the Fifth International Objective Measurement Workshop. University of California, Berkeley, March 25-26, 1989

A derivation of the logistic response model. Paper presented at the 5th Workshop on Item Response Theory, Enschede, The Netherlands, October 11-13, 1988.

De casus als examenmethode: een dubieus geval? Nederlands Instituut voor Marketing, Amsterdam, The Netherlands, October 6, 1988. (Invited presentation)

Een pleidooi voor het leren voor de toets. Symposium on Evaluatie: Om de Kwaliteit van het Onderwijs, Interuniversitair Centrum voor Onderwijsevaluatie ICO, Utrecht, The Netherlands, September 30, 1988. (Invited presentation)

The Rasch model as a model for paired comparisons with an individual tie parameter. Paper presented at the Annual Meeting of the Psychometric Society, Los Angeles, CA, June 27-29, 1988.

Linear programming models for test construction using classical item parameters. Paper presented at the Annual Meeting of the Psychometric Society, Los Angeles, CA, June 27-29, 1988. (With J. J. Adema)

Item information in the Rasch model. Paper presented at the Annual Meeting of the Psychometric Society, Los Angeles, CA, June 27-29, 1988. (With R. J. H. Engelen)

Estimating IRT parameters from incomplete data. Symposium held at the Annual Meeting of the American Educational Research Association, New Orleans, LA, April 5-9, 1988. (Organizer)

Optimizing incomplete sample designs for estimating IRT parameters. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA, April 5-9, 1988.

Optimizing incomplete sample designs for estimating IRT parameters. Colloquium of the Department of Electrical and Computer Engineering, University of South Carolina, Columbia, March 30, 1988.

Optimizing incomplete sample designs for estimating IRT parameters. Colloquium of the College of Education, University of Maryland, College Park, March 28, 1988.

Optimizing incomplete sample designs for estimating IRT parameters. Colloquium of Educational Testing Service, Princeton, NJ, March 25, 1988.

Het spel der vrije krachten in het Nederlandse examenstelsel. Lezingencyclus De Nederlandse universiteiten komen naar u toe, Zwolle, The Netherlands, December 13, 1987. (Invited presentation)

School en klasseklimaat. ORD 1987, Groningen, The Netherlands, May 26-27, 1987. (Discussant)

Moet eerste-geldstroomonderzoek geprogrammeerd worden? Symposium held at ORD 1987, Groningen, The Netherlands, May 26-27, 1987.

Het zwalkende niveau van ons onderwijs. University Foundation Day Address, University of Twente, Enschede, The Netherlands, November 27, 1987.

Automated test construction using (generalized) minimax programming. Paper presented at the Annual Meeting of the American Educational Research Association, Washington, DC, April 20-24, 1987.

Algorithms for IRT-based test construction. Symposium held at the Annual Meeting of the American Educational Research Association, Washington, DC, April 20-24, 1987. (Organizer)

Developments in IRT estimation. Symposium held at the Annual Meeting of the American Educational Research Association, Washington, DC, April 20-24, 1987. (Discussant)

Optimal sampling design for estimating Rasch model parameters. Paper presented at the Fourth International Objective Measurement Workshop, University of Chicago, Chicago, IL, April 15-17, 1987.

Optimal sampling design for parameter estimation in item response models. Paper presented at the Annual Meeting of the Psychometric Society, Toronto, Canada, June 21-24, 1986.

Algorithms for automated test design. Paper presented at the Second Workshop on Computers in Psychology, Nijmegen, The Netherlands, May 29-30, 1986. (With E. Boekkooi-Timminga)

Algorithms for efficient item bank calibration. Paper presented at the Second Workshop on Computers in Psychology, Nijmegen, The Netherlands, May 29-30, 1986. (With T. J. H. M. Eggen)

Some rules for treatment allocation on the basis of test scores. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA, April 16-20, 1986.

Een methode voor het optimaliseren van steekproeven in peilingsonderzoek. Paper presented at ORD 1986, Utrecht, The Netherlands, May 15-16, 1986.

Rules for test-based decision making. Colloquium of the School of Education, University of Massachusetts, Amherst, September 27, 1985.

Applications of item response theory to computer-aided testing. Colloquium of the School of Education, University of Massachusetts, Amherst, September 26, 1985.

Applications of item response theory to computer-aided testing. Colloquium of the School of Education, Stanford University, Palo Alto, CA, September 24, 1985.

Applications of item response theory to computer-aided testing. Colloquium of American Educational Testing Program, Iowa City, Iowa, September 18, 1985.

Applications of item response theory to computer-aided testing. Colloquium of the Department of Educational Psychology, University of Illinois, Urbana-Champaign, September 16, 1985.

Applications of item response theory to computer-aided testing. Colloquium of the Department of Educational Psychology, University of Wisconsin, Madison, September 13, 1985.

Applications of item response theory to computer-aided testing. Colloquium of the Department of Psychology, University of Minnesota, MN, September 10, 1985.

Optimale regels voor toetsgebruik in individuele studiesystemen. Paper presented at ORD 1985, Enschede, May 21-22, 1985. (With H. J. Vos)

Het sequentieel calibreren van een item bank. Paper presented at ORD 1985, Enschede, The Netherlands, May 21-22, 1985. (With T. J. H. M. Eggen)

Besliskundige optimalisering van individuele studiesystemen. Colloquium of the Faculty of Psychology and Pedagogics, Katholieke Universiteit Leuven, Belgium, April 26, 1985. (Invited presentation)

Paarsgewijze vergelijking tussen testitems. Colloquium of the Faculty of Psychology and Pedagogics, Katholieke Universiteit Leuven, Belgium, April 26, 1985. (Invited presentation)

Recent developments in test theory in The Netherlands. Symposium held at the Annual Meeting of the American Educational Research Association, Chicago, IL, March 31-April 4, 1985. (Invited organizer)

Advances in the application of decision theory to test-based decision-making. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL, March 31-April 4, 1985.

Application of the Rasch model to paired comparisons experiments with ties between test items. Paper presented at the Third International Objective Measurement Workshop, University of Chicago, Chicago, IL, March 27-30, 1985.

The use of models for paired comparisons with ties. Paper presented at the International Conference on Methodological Research, The Netherlands, Amsterdam, October 3-5, 1984. (With T. J. H. M. Eggen)

Toetsfuncties en -constructiecriteria. Colloquium of the National Institute for Educational Measurement (Cito), Arnhem, The Netherlands, September 25, 1984. (Invited presentation)

A unified approach to test-based selection, mastery, placement, and classification decisions. International Test Commission, XXIII International Congress of Psychology, Acapulco, Mexico, September 2-7, 1984. (Invited presentation)

Het Raschmodel als een model voor paarsgewijze vergelijkingen. Themagroep Raschmodellen van de ZWO-Werkgemeenschap Psychometrie, Arnhem, The Netherlands, May 25, 1984. (With T. H. J. M. Eggen)

Equating methodologies. Symposium held at the Annual Meeting of the National Council on Measurement in Education, New Orleans, LA, April 24-26, 1984. (Discussant)

Choosing the best among different treatment-criterion combinations: The classification problem in educational testing. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA, April 23-27, 1984.

Een item banking opzet voor landelijk assessment-onderzoek. Werkgroep Evaluatie Research, Faculteit der Sociale Wetenschappen. Rijksuniversiteit Groningen, The Netherlands, October 14, 1983.

Het besliskundig kiezen van grensscores op studietoetsen. Colloquium of the National Institute for Educational Measurement (Cito), Arnhem, The Netherlands, April 13, 1983. (Invited presentation)

Hoe meten we de kwaliteit van het onderwijs? RION conference De kwaliteit van het Onderwijs, Haren, The Netherlands, March 28-29, 1983. (Invited presentation)

A criterion-referenced conception of test score validity. Fifth International Symposium on Educational Testing, University of Stirling, Scotland, June 29-July 2, 1982. (Keynote presentation)

Intrabeoordelaar inconsistentie bij het gebruik van de Angoff en Nedelsky methode voor grensscorebepaling. Paper presented at ORD 1982, Tilburg, The Netherlands, May 10-11, 1982.

Technical issues in domain-referenced testing. Symposium held at the Annual Meeting of the National Council on Measurement in Education, New York, March 20-22, 1982. (Discussant)

Assessing inconsistencies in standard setting with the Angoff or Nedelsky technique. Paper presented at the Annual Meeting of the American Educational Research Association, New York, March 19-23, 1982.

Het gebruik van itemresponsmodellen bij de bepaling van grensscores op studietoetsen. Nederlandse Stichting voor Psychometrie, Amsterdam, The Netherlands, December 10, 1981. (Invited presentation)

Nieuwe ontwikkelingen binnen de psychometrie, met name de latente trek theorie. Paper presented at ORD 1981, Maastricht, The Netherlands, April 23-24, 1981.

Item selection for criterion-referenced tests. Colloquium of the Faculty of Psychology and Pedagogics, Rheinisch-Westfälische Technische Hochschule, Aachen, Germany, November 18, 1980. (Invited presentation).

Passing score and length of a mastery test. Paper presented at the 11th European Mathematical Psychology Group Meeting, Liege, Belgium, September 3-4, 1980.

Simple estimators for the simple latent class mastery-testing model. Paper presented at the Fourth International Symposium on Educational Testing, Antwerp, Belgium, June 24-27, 1980.

Statistical aspects of optimal treatment assignment. Paper presented at the European Meeting of the Psychometric Society, Groningen, The Netherlands, June 19-21, 1980.

De keuze van testlengte en grensscore bij domeingeoriënteerde toetsen. Colloquium van de Vakgroep Methodenleer, Subfaculteit Psychologie, Universiteit van Amsterdam, The Netherlands, April 14, 1980. (Invited presentation)

Three applications of decision making with a linear loss function to educational testing problems. Colloquium of the Department of Educational Psychology, University of Wisconsin, Madison, March 29, 1979. (Invited presentation)

Using decision theory to find optimal cut-off scores. Colloquium of the Department of Education, University of Chicago, February 20, 22 and 27, 1979.

Itemselectie voor criteriumgeoriënteerde evaluatie-instrumenten. Cito Symposium Aspecten van Leerplanevaluatie, Veldhoven, The Netherlands, October 3-4, 1978. (Invited presentation)

Decisions based on tests: Some results with a linear loss function. Paper presented at the European Meeting on Psychometrics and Mathematical Psychology, Uppsala, Sweden, June 15-17, 1978. (With G. J. Mellenbergh)

Het klassieke testmodel, latente trek modellen en evaluatie-onderzoek. Werkgroep Methoden en Technieken van Curriculum-evaluatie, Vereniging voor Onderwijsresearch, Utrecht, The Netherlands, May 16, 1978.

Slagen/zakken, aannemen/afwijzen: beslissen met een lineaire verliesfunctie. Paper presented at Statistische Dag, Eindhoven, The Netherlands, March 22, 1978. (With G. J. Mellenbergh)

Psychometrische aspecten van criteriumgeoriënteerde toetsen. Nederlandse Stichting voor Psychometrie, Amsterdam, The Netherlands, September 8, 1977. (Invited presentation)

Pretest-posttest validatie van criteriumgeoriënteerde toetsen. Paper presented at ORD 1977, Amsterdam, The Netherlands, April 6-7, 1977.

Kriteriumgeoriënteerd toetsen: afscheid van het klassieke testmodel? Paper presented at ORD 1976, Groningen, The Netherlands, April 14-15, 1976.