

## Curriculum Vitae

Mark Ronald Wilson

### Addresses:

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### Personal Information

Birth: August 23, 1954, Melbourne, Australia.

### Awards, Fellowships, etc.

National Council for Educational Measurement (NCME) Career Contributions to Educational Measurement Award, 2020.

E. F. Lindquist Award, American Educational Research Association, 2019.

Bob Linn Distinguished Address Award, American Educational Research Association, Division D, 2017-18.

Top Downloaded Publication in 2017. *Journal of Educational Measurement*, for “Modeling data from collaborative Assessments: Learning in digital interactive social networks” with K. Scalise and P. Gochyyev.

Board member, Board of Educational Affairs, American Psychological Association, 2016-19.

Convenor. 2016 IMEKO TC1–TC7–TC13 Joint Symposium: *Metrology Across the Sciences: Wishful Thinking?* Berkeley, CA, August 2016.

President, US National Council for Measurement in Education (NCME), April 2016 (Vice-President, April 2015; Past President, 2017).

Career Achievement Award, California Educational Research Association, December 2015,

Fellow, American Educational Research Association, April 2012.

National Associate, National Research Council of the National Academies, November 2011.

President, Psychometric Society (2011-12).

Member, National Academy of Education, April 2011.

Frank B. Womer Lecture, University of Michigan, School of Education, March 2011.

William Angoff Memorial Lecture, Educational Testing Service, Princeton, NJ, May 2007.

Fellow, Division 5 (Evaluation, Measurement and Statistics), American Psychological Association, 2006.

Samuel J. Messick Memorial Lecture Award, from TOEFL/ETS, at the Learning Testing Research Colloquium, University of Melbourne, June, 2006.

Visiting Professor, Department of Education and Professional Studies, Kings College, University of London, UK. February-August, 2006.

Founding Editor: *Measurement: Interdisciplinary Research and Perspectives*, 2001.

Visiting Professor, Center for the Study of Research Training and Impact (SORTi), Faculty of Education and Arts, The University of Newcastle, Australia. June-July, 2002.

Visiting Professor (Gasthoogleraar), Faculty of Psychology, Katholieke Universiteit Leuven, Belgium, May-August, 2001.

Visiting Research Fellow, Department of Psychology, University of Melbourne, Australia. March-July, 1997.

Visiting Research Fellow, Department of Psychology, University of Melbourne, Australia. Feb-July, 1992.

University of California Regents' Junior Faculty Fellowship, 1991.

National Academy of Education Spencer Fellowship, 1990-1991.

Marc Perry Galler Prize for best dissertation in 1984-85 in the Division of Social Sciences, University of Chicago.

Rosenberger Award for best dissertation in 1982-85 in the Department of Education, University of Chicago.

Tuition scholarship and stipend, Department of Education, University of Chicago, 1981-83.

Victorian Education Department Teacher Studentship, University of Melbourne, Faculty of Science, 1974-75, Faculty of Education, 1976.

Commonwealth Scholarship, University of Melbourne, Faculty of Science, 1972-73.

## Educational Information

1981-1984

Doctor of Philosophy from the Measurement, Evaluation and Statistical Analysis Special Field in the Department of Education at the University of Chicago.

Majors: Measurement and Educational Statistics

Title of Dissertation: A psychometric model of hierarchical development.

Supervisory Committee: Larry V. Hedges, Janellen Huttenlocher, Thomas R. Trabasso, Zalman Usiskin, Benjamin D. Wright (Chairman).

1978-1981

Master of Education from the University of Melbourne.

Major: Educational Statistics and Measurement

Title of Thesis: Adventures in uncertainty: An empirical investigation of the use of a Taylor's series approximation for the assessment of sampling errors in educational research.

1978-1981

Bachelor of Arts (incomplete) studying at the University of Melbourne.

Major: Statistics (another major needed to complete degree)

1976

Diploma in Education from the University of Melbourne.

Major: Elementary Education

1972-1975

Bachelor of Science (with Honours) in Mathematics from the University of Melbourne.

Major: Pure and Applied Mathematics

Sub-major: Information Science

1971

Higher School Certificate at St. Bede's College, Mentone, Victoria, Australia.

Subjects: English Expression, English Literature, Pure Mathematics, Applied Mathematics, and Physics

## Professional Employment

January 2022 - present: Distinguished Professor of Education

July 2017 – 2020: Chair of the Faculty

July 1995 - 2021: Professor

July 1994 - Dec 1996: Associate Dean for Student Affairs and Head Graduate Advisor,

July, 1993 - June 1995: Associate Professor,

July, 1989 - June 1993: Assistant Professor, and

July 1986 - June 1989: Visiting Assistant Professor,

Berkeley School of Education, University of California, Berkeley, California.

Teaching Areas: Educational Measurement, Educational Statistics

- July 2015 - present: Professor, Melbourne Graduate School of Education, University of Melbourne.
- January 1986 - May 1986: Assistant Professor, College of Education, Louisiana State University, Baton Rouge, Louisiana.  
Courses Taught: Educational Research Methods, Theory of Educational Measurement.
- July 1984 - December 1985: Senior Research Officer in the Learning and Teaching Division at the Australian Council for Educational Research, Hawthorn, Australia.  
Principal Areas of Research: Measurement of learning hierarchies, Variance estimation for complex sample designs, Latent trait modelling of attitude scales. Computerized adaptive testing.
- September 1981 - June 1982: Research Assistant to Professor B. D. Wright at the University of Chicago.  
Duties: Consultation on psychometric scaling of ability tests and attitude scales.  
Graphical display of data using computer methods.
- September 1981 - September 1983: Teaching Assistant in Psychometrics courses at the University of Chicago.  
Courses: Introduction of Psychometrics, Advanced Psychometrics, Computer Applications in the Social Sciences
- February 1979 - September 1981: Research Officer at the Australian Council for Educational Research, Hawthorn, Australia.  
Duties: Constructing mathematics tests for elementary and secondary school curricula.  
Data analysis using latent trait computer programs.
- February 1977 - November 1978: Grade 5 teacher at Yarraville West Primary School, Yarraville, Victoria, Australia.  
Duties: Teaching Grade 5 students all subjects, Coordinator of Science and Gardening program.

Articles in Refereed Journals, Refereed Proceedings, etc.

170. Boyce S. C., Minnis A. M., Deardorff J., McCoy S., Challa S., Johns N., Aliou S., Brooks M., Nouhou A-M., Gochyyev P., Wilson M., Baker H., Silverman JG. (2023). Measuring social norms of intimate partner violence to exert control over wife agency, sexuality, and reproductive autonomy: An item response modelling of the IPV-ASRA scale. *BMC Reproductive Health*.
169. Sussman, J., Draney, K., & Wilson, M. (2023). Language and literacy trajectories for dual language learners (DLLs) with different home languages: Linguistic distance and

- implications for practice. *Journal of Educational Psychology*. Advance online publication. <https://doi.org/10.1037/edu0000791>
168. Santelices, M. V., & Wilson, M. (2022). Aligning teacher assessments and teacher learning through a Teacher Learning Progression. *Educational Assessment, Evaluation and Accountability*, 34(4), 509 - 532.
  167. Han, Y., & Wilson, M. (2022). Analyzing student response processes to evaluate success on a technology-based problem-solving task. *Applied Measurement in Education*, 35(1), 33-45.
  166. Jolin, J., & Wilson, M. (2022). Developing a theory of two latent soft skills progress variables using the BEAR Assessment System: Validity evidence for the internal structure of the *Social Evaluation in the Workplace* instrument. *Journal of Psychoeducational Assessment*, 40(3), 381-399.
  165. Wilson, M., Bathia, S., Morell, L., Gochyyev, P., Koo, B. W., & Smith R. (2022). Seeking a better balance between efficiency and interpretability: Comparing the Likert response format with the Guttman response format. *Psychological Methods*.  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9854400>
  164. Cardace, A., Wilson, M., & Metz, K. (2021). Designing a learning progression about micro-evolution to inform instruction and assessment in elementary science. *Education Sciences*, 11(10), 609. DOI: 10.3390/educsci11100609
  163. Feuerstahler, L., & Wilson, M. (2021). Scale alignment in the between-items multidimensional partial credit model. *Applied Psychological Measurement*, 45(4), 268–282.
  162. Koo, B. W., Bathia, S., Morell, L., Gochyyev, P., Phillips, M., Wilson, M., & Smith R. (2021). Examining the effects of a peer-learning research community on the development of students' researcher identity, confidence, and STEM interest & engagement. *Journal of STEM Outreach*, 4(1).
  161. Scalise, K., Wilson, M., & Gochyyev, P. (2021). A taxonomy of critical dimensions at the intersection of learning analytics and educational measurement. *Frontiers in Education*, 6:656525. doi: 10.3389/feduc.2021.656525
  160. Wilson, M., & Lehrer, R. (2021). Improving learning: Using a learning progression to coordinate instruction and assessment. *Frontiers in Education*, 6: 654212. doi.org/10.3389/feduc.2021.654212
  159. Intasoi, S., Junpeng, P., Ketchatturat, J., Tang, K.N., & Wilson, M. (2020). Developing an assessment framework of multidimensional scientific competencies. *International Journal of Evaluation and Research in Education*, 9(4), DOI: <http://doi.org/10.11591/ijere.v9i4.20542>

158. Kesorn, N., Junpeng, P., Marwiang, M., Pongboriboon, K., Tang, K. N., & Wilson, M. (2020). Development of an assessment tool for mathematical reading, analytical thinking and mathematical writing. *International Journal of Evaluation and Research in Education*, 9(4), DOI: <http://doi.org/10.11591/ijere.v9i4.20505>
157. Chen, Y. J-I., Wilson, M., Ireya, R.C., & Requa, M. K. (2020). An innovative approach to measuring orthographic processing. *Language Testing*, 37(3), 435-452. doi:10.1177/0265532220909310
156. Kantahan, S., Junpeng, P., Punturat, S., Tang, K. N., Gochyyev, P., Wilson, M. (2020). Designing and verifying a tool for diagnosing scientific misconceptions in genetics topic. *International Journal of Evaluation and Research in Education*, 9(3), 564-571. DOI: 10.11591/ijere.v9i3.20544
155. Junpeng, P., Marwiang, M., Chiajunthuk, S., Suwannatrai, P., Chanayota, K., Pongboriboon, K., Tang, K.N., & Wilson, N. (2020). Validation of a digital tool for diagnosing mathematical proficiency. *International Journal of Evaluation and Research in Education*, 9(3), 665-674. DOI: 10.11591/ijere.v9i3.20503
154. Kim, J., & Wilson, M. (2020). Polytomous item explanatory IRT models with random item effects: Concepts and an application. *Measurement*, 151, 107062. doi.org/10.1016/j.measurement.2019.107062
153. Wilson, M., & Gochyyev, P. (2020). Having your cake and eating it too: Multiple dimensions and a composite. *Measurement*, 151, 107247. <https://doi.org/10.1016/j.measurement.2019.107247>
152. Junpeng, P., Krotha, J., Chanayota, K., Tang, K-N., & Wilson, M. (2019). Constructing progress maps of digital technology for diagnosing mathematical proficiency. *Journal of Education and Learning*, 8(6), 90-102.
151. Sussman J., & Wilson M. (2019). The use and validity of standardized achievement tests for evaluating new curricular interventions in mathematics and science. *American Journal of Evaluation*, 40(2), 190-213. doi:10.1177/1098214018767313
150. Wilson, M, Scalise, K., and Gochyyev, P. (2019). Domain modelling for advanced learning environments: the BEAR Assessment System Software. *Educational Psychology*, 39(10), 1199-1217. <https://doi.org/10.1080/01443410.2018.1481934>.
149. Kim, J., & Wilson, M. (2019). Polytomous item explanatory item response theory models. *Educational and Psychological Measurement*, 80(4), 726-755 <https://doi.org/10.1177/0013164419892667>
148. Shin, H. J., Wolfe, E., Wilson, M. (2019). Human rater monitoring with automated scoring engines. *Psychological Test and Assessment Modeling*, 61(2), 127-148.

147. Metz, K. E., Cardace, A., Berson, E., Ly, U., Wong, N., Sisk-Hilton, S., Metz, S. E., & Wilson, M. (2019). Primary grade children's capacity to understand microevolution: The power of leveraging their fruitful intuitions and engagement in scientific practices. *Journal of the Learning Sciences*, 28(4-5), 556-615. DOI: 10.1080/10508406.2019.1667806
146. Kaiser, F. G., & Wilson, M. (2019). The Campbell Paradigm as a behavior-predictive reinterpretation of the classical tripartite model of attitudes. *European Psychologist*, 24, 359-374. doi:10.1027/1016-9040/a000364
145. Jeon, M., Draney, K., Wilson, M., & Sun, Y. (2019). Investigation of adolescents' developmental stages in deductive reasoning: An application of a specialized confirmatory mixture IRT approach. *Behavior Research Methods*, 52, 224–235. doi.org/10.3758/s13428-019-01221-5
144. Hermisson, S., Gochyyev, P., & Wilson, M. (2019). Assessing pupils' attitudes towards religious and worldview diversity – Development and validation of a nuanced measurement instrument. *British Journal of Religious Education*, 41, 371-387. DOI: 10.1080/01416200.2018.1556604
143. Rocca, C. H., Wilson, M., Jeon, M., & Foster, D. G. (2019). Stability of retrospective pregnancy intention reporting among women with unwanted pregnancies in the United States. *Maternal and Child Health Journal*, 11, 147-1555. doi.org/10.1007/s10995-019-02782-9.
142. Feuerstahler, L., & Wilson, M. (2019). Scale alignment in between-item multidimensional Rasch models. *Journal of Educational Measurement*, 56(2), 280–301.
141. Fisher, W. P., & Wilson, M. (2019). An online platform for sociocognitive metrology: the BEAR Assessment System Software. *Measurement Science and Technology*, 31(3). [Special Section on the 19th International Congress of Metrology (CIM 2019)] DOI: 10.1088/1361-6501/ab5397
140. Dray, A. J., Brown, N. J. S., Diakow, R., Lee, Y., & Wilson, M. (2019). A construct modeling approach to the assessment of reading comprehension for adolescent readers. *Reading Psychology*, 40(2), 191-241. DOI: 10.1080/02702711.2019.1614125
139. Maul, A., Mari, L., & Wilson, M. (2019). Intersubjectivity of measurement across the sciences. *Measurement*, 131, 764-770.  
<https://doi.org/10.1016/j.measurement.2018.08.068>
138. Shin, H.-J., Rabe-Hesketh, S., & Wilson, M. (2019). Trifactor models for multiple-ratings data. *Multivariate Behavioral Research*. 54(3), 360-381. DOI: 10.1080/00273171.2018.1530091

137. Choi, J., & Wilson, M. (2018). Modeling rater effects using a combination of Generalizability Theory and IRT. *Psychological Test and Assessment Modeling*, 60(1), 53-80.
136. Harjanto, J., Lie, A., Wihardini, D., Pryor, P., & Wilson, M. (2018). Community-based teacher professional development in remote areas in Indonesia, *Journal of Education for Teaching*, 44(2), 212-231, DOI: 10.1080/02607476.2017.1415515
135. Rocca, C. H., Ralph, L. J., Wilson, M., Gould, H., & Foster, D. G. (2018). Psychometric evaluation of an instrument to measure prospective pregnancy preferences: The Desire to Avoid Pregnancy Scale. *Medical Care*, 57(2), 152-158.  
doi: 10.1097/MLR.0000000000001048
134. Mari, L., Maul, A., & Wilson, M. (2018). On the existence of general properties as a problem of measurement science. *Journal of Physics: Conf. Series* 1065 072021.  
doi:10.1088/1742-6596/1065/7/072021
133. Gochyyev, P., & Wilson, M. (2018). Hierarchical and higher-order factor structures in the Rasch tradition: A didactic. *Journal of Applied Measurement*, 19(4), 338-362
132. Wilson, M. (2018). Making measurement important for education: The crucial role of classroom assessment. *Educational Measurement: Issues and Practice*, 37(1), 5-20.
131. Junpeng, P., Inprasitha, M., & Wilson, M. (2018). Modeling of the open-ended items for assessing multiple proficiencies in mathematical problem solving. *The Turkish Online Journal of Educational Technology*, Special Issue for INTE-ITICAM-IDEC 2018 (Volume 2), 142-149.
130. Fleming, D., Wilson, M., & Ahlgrin-Delzell, L. (2018). Using item response theory to describe the Nonverbal Literacy Assessment (NVLA). *Psychology in the Schools*. 55, 341-349.
129. Collier, T., Morell, L., & Wilson, M. (2018). Exploring the item features of a science assessment with complex tasks. *Measurement*, 114, 16-24.
128. Schwartz, R., Ayers, E., & Wilson, M. (2017). Mapping a learning progression using unidimensional and multidimensional item response models. *Journal of Applied Measurement*, 18(3), 268-298.
127. Duckor, B., Draney, K., & Wilson, M. (2017). Assessing assessment literacy: An item response modeling approach for teacher educators. *Pensamiento Educativo: Journal of Latin American Educational Research*, 54(2), 1-26.
126. Shin, H.-J, Wilson, M., & Choi, I.-H. (2017). Structured constructs models based on change-point analysis. *Journal of Educational Measurement*, 54(3), 306-332.



125. Siddiq, F., Gochyyev, P., & Wilson, M. (2017). Learning in digital networks—ICT literacy: A novel assessment of students' 21st century skills. *Computers & Education*, *109*, 11-37.
124. Morell, L., Collier, T., Black, P., & Wilson, M. (2017). A Construct-Modeling approach to develop a learning progression of how students understand the structure of matter. *Journal of Research in Science Teaching*, *54*(8), 1024-1048. doi:10.1002/tea.21397.
123. Mari, L., Maul, A., Irribarra, D. T., & Wilson, M. (2017). Quantities, quantification, and the necessary and sufficient conditions for measurement. *Measurement*, *100*, 115-121. <http://dx.doi.org/10.1016/j.measurement.2016.12.050>
122. Lee, Y., & Wilson, M. (2017). Random item MIRID modeling and its application. *Applied Psychological Measurement*, *41*(2), 97-114.
121. Wilson, M., Scalise, K., & Gochyyev, P. (2017). Modeling data from collaborative assessments: learning in digital interactive social networks. *Journal of Educational Measurement*, *54*(1), 85-102.
120. Maul, A., Irribarra, D. T., & Wilson, M. (2017). On the philosophical foundations of psychological measurement. *Measurement*, *75*, 311-320.
119. Choi, I-H., & Wilson, M. (2016). Incorporating mobility in growth: modeling for multilevel and longitudinal item response data, *Multivariate Behavioral Research*, *51*(1), 120-137.
118. Mari, L., Maul, A., Irribarra, D. T., & Wilson, M. (2016). A meta-structural understanding of measurement. *Journal of Physics: Conference Series* **772** 012009. doi:10.1088/1742-6596/772/1/012009
117. Morell, L., & Wilson, M. (2016). Assessment as a tool to understand students' conceptions of the structure of matter. *Journal of Physics: Conference Series* **772** 012049. doi:10.1088/1742-6596/772/1/012049
116. Wilson, M., Scalise, K., & Gochyyev, P. (2016). Assessment of learning in digital interactive social networks: A learning analytics approach. *Online Learning*, *20*(2), 97-119. doi: <http://dx.doi.org/10.24059/olj.v20i2.799>.
115. Castellano, K. E., Duckor, B., Wihardini, D., Tellez, K., & Wilson, M. (2016). Assessing academic language in an elementary mathematics teacher licensure exam. *Teacher Education Quarterly* *43*(1) 3-27. <http://files.eric.ed.gov/fulltext/EJ1097624.pdf>
114. Santelices, M. V., & Wilson, M. (2015). The Revised SAT Score and its potential benefits for the admission of minority students to higher education. *Education Policy Analysis Archives*, *23*(113). [whole issue]
113. Wilson, M., Scalise, K., & Gochyyev, P. (2015). Rethinking ICT literacy: From computer

- skills to social network settings. *Thinking Skills & Creativity*, 18, 65-80.
112. Yao, S-Y., Wilson, M., Henderson, J. B., & Osborne, J. (2015). Investigating the function of content and argumentation items in a science test: A multidimensional approach. *Journal of Applied Measurement*, 16(2), 171-192.
111. Pellegrino, J. W., & Wilson, M. (2015): Assessment of complex cognition: Commentary on the design and validation of assessments. *Theory Into Practice*, 54(3), 263-273. DOI: 10.1080/00405841.2015.1044377
110. Jeon, M., Draney, K., & Wilson, M. (2015). Multidimensional Saltus linear logistic test model for modeling children's cognitive development. In Millsap, R.E., Bolt, D.M., van der Ark, L.A., Wang, W.-C. (Eds.), *New Developments in Quantitative Psychology: Presentations from the 78<sup>th</sup> Annual Meeting of the Psychometric Society Meeting* (pp. 73-90). New York, Springer.
109. Choi, I-H., & Wilson, M. (2015). Multidimensional classification of examinees using the mixture random weights linear logistic test model. *Educational and Psychological Measurement*, 75(1), 78-101.
108. Torres Iribarra, D., Diakow, R., Freund, R., & Wilson, M. (2015). Modeling for directly setting theory-based performance levels. *Psychological Test and Assessment Modeling*, 57(3), 396-422.
107. Mari, L., & Wilson, M. (2014). An introduction to the Rasch measurement approach for metrologists. *Measurement*, 51, 315-327.
106. Huang, X., Wilson, M., & Wang, L. (2014). Exploring plausible causes of differential item functioning in the PISA science assessment: language, curriculum or culture. *Educational Psychology: An International Journal of Experimental Educational Psychology*, 36(2), 378-390. DOI: 10.1080/01443410.2014.946890
105. Wilson, M. (2014). Considerations for measuring learning progressions where the target learning is represented as a cycle. *Pensamiento Educativo. Revista De Investigación Educativa Latinoamericana*, 51(1), 156-174.
104. Duckor, B., Castellano, K. E., Telez, K., Wihardini, D., & Wilson, M. (2014). Examining the internal structure evidence for the performance assessment for California teachers: A validation study of the elementary literacy teaching event for tier I teacher licensure. *Journal of Teacher Education*. 65(5), 402-420. doi: 10.1177/0022487114542517
103. Wilson, M., Hallam, P. J., Pecheone, R. L., & Moss, P. A. (2014). Evaluating the Validity of Portfolio Assessments for Licensure Decisions. *Education Policy Analysis Archives*, 22(6). (doi:10.14507/epaa.v22n6.2014)
102. Roczen, N., Kaiser, F. G., Bogner, F. X., & Wilson, M. (2014). A competence model for environmental education. *Environment and Behavior*, 46(8), 972-992.

101. Lin, Y-H, & Wilson, M. (2013). Two IRT methods for multidimensional latent class parameter estimation. *Tzu-Chi University Journal of the Educational Research*, 9, 223-254.
100. Wilson, M. (2013). Seeking a balance between the statistical and scientific elements in psychometrics. *Psychometrika*, 78(2), 211-236.
99. Diakow, P. R., Irribarra, D. T., & Wilson, M. (2013). Some comments on representing construct levels in psychometric models. In R. E. Millsap, L. A. van der Ark, D. M. Bolt, & C. M. Woods (Eds.), *New Developments in Quantitative Psychology: Presentations from the 77<sup>th</sup> Annual Meeting of the Psychometric Society Meeting* (pp. 319-334). New York, Springer.
98. Lin, Y-H., Wilson, M., & Cheng, C-L. (2013). An investigation of the nature of the influences of item stem and option representation on student responses to a mathematics test. *European Journal of Psychology of Education*, 28(4), 1141-1161.
97. Mari, L., Maul, A., Irribarra, D. T., & Wilson, M. (2013). Quantification is neither necessary nor sufficient for measurement. *Journal of Physics: Conference Series* **459** 012007. doi:10.1088/1742-6596/459/1/012007
96. Maul, A., Irribarra, D. T., & Wilson, M. (2013). On the conceptual foundations of psychological measurement. *Journal of Physics: Conference Series* **459** 012008. doi:10.1088/1742-6596/459/1/012008
95. Wilson, M. (2013). Using the concept of a measurement system to characterize measurement models used in psychometrics. *Measurement*, 46(9), 3766-3774.  
Available at: <http://dx.doi.org/10.1016/j.measurement.2013.04.005>,
94. Adams, R., Wu, M., & Wilson, M. (2012). The Rasch rating model and the disordered threshold controversy. *Educational and Psychological Measurement*, 72(4), 547-573.
93. Paek, I., Baek, S., & Wilson, M. (2012). An IRT modeling of change over time for repeated measures item response data using a random weights linear logistic test model approach. *Asia Pacific Education Review*. 13(3), 487-494.
92. Wilson, M., Zheng, X., & McGuire, L. (2012). Formulating latent growth using an explanatory item response model approach. *Journal of Applied Measurement*, 13(1), 1-22.
91. Santelices, M. V., & Wilson, M. (2012). The relationship between differential item functioning and item difficulty: An issue of methods? *Educational and Psychological Measurement*. 72(1), 5-36.
90. Nichanong, C., & Wilson, M. (2011). Efficiency of parameter estimation using Bayesian

- inference reliability of item response models [in Thai]. *SDU Research Journal Humanities and Social Sciences*, 7(2), 59-76.
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88. Wilson, M. (2011). The role of mathematical models in measurement: A perspective from psychometrics. In Scharff, P., & Linß, G. (Eds.), *Intelligent Quality Measurements - Theory, Education and Training* (Proceedings of the 14<sup>th</sup> Joint International IMEKO TC1 + TC7 + TC13 Symposium. Ilmenau University of Technology, Jena, Germany). Proceedings available at: [http://www.db-thueringen.de/servlets/DerivateServlet/Derivate-24575/IMEKO2011\\_TOC.pdf](http://www.db-thueringen.de/servlets/DerivateServlet/Derivate-24575/IMEKO2011_TOC.pdf)  
Paper available at: [urn:nbn:de:gbv:ilm1-2011imeko-005:8](http://nbn-resolving.org/urn:nbn:de:gbv:ilm1-2011-imeko-005:8)
87. Draney, K., & Wilson, M. (2011). Understanding Rasch measurement: Selecting cut scores with a composite of item types: The Construct Mapping procedure. *Journal of Applied Measurement*, 12(3), 298-309.  
Also available as:  
Draney, K. & Wilson, M. (2010). Selecting cut scores with a composite of item types: The Construct Mapping procedure. In E. V. Smith, & G. E. Stone (Eds.), *Criterion-referenced testing: Practice analysis to score reporting using Rasch measurement* (pp. 276-293). Maple Grove, MN: JAM Press.
86. Black, P., Wilson, M., & Yao, S-Y. (2011). Road maps for learning: A guide to the navigation of learning progressions. *Measurement: Interdisciplinary Research and Perspectives*, 9, 71-123.
85. Paek, I., & Wilson, M. (2011). Formulating the Rasch differential item functioning model under the marginal maximum likelihood estimation context and its comparison with Mantel-Haenszel procedure in short test and small sample conditions. *Educational and Psychological Measurement*, 71(6) 1023–1046.  
Available at: <http://epm.sagepub.com/content/early/2011/03/29/0013164411400734>
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83. Scalise, K. & Wilson, M. (2011). The nature of assessment systems to support effective use of evidence through technology. *E-Learning and Digital Media*, 8(2), 121-132.
82. Wilmot, D.B., Schoenfeld, A., Wilson, M., Champney, D., Zahner, W. (2011). Validating a learning progression in mathematical functions for college readiness. *Mathematical Thinking and Learning*, 13(4), 259-291.
81. Ewert, T., Allen, D. D., Wilson, M., Üstün, B., & Stucki, G. (2010). Validation of the International Classification of Functioning Disability and Health framework using multidimensional item response modeling. *Disability and Rehabilitation*, 32(17), 1397-

1405. (doi: 10.3109/09638281003611037)
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14. Wilson, M. (1994). Assessment nets: An alternative approach to assessment in mathematics achievement. In T. Romberg (Ed.) *Reform in School Mathematics and Authentic Assessment*. New York: SUNY Press.
13. Ross, K., & Wilson, M. (1994). Sampling errors. In T. Husen & T.N. Postlethwaite (Eds.) *International Encyclopedia of Education (2nd. Ed.)*. Oxford: Pergamon Press.
12. Wilson, M. (1994). Community of judgement: A teacher-centered approach to educational accountability. In Office of Technology Assessment (Ed.) *Issues in Educational Accountability*. Washington, D.C.: Office of Technology Assessment, United States Congress.
11. Wilson, M. (1994). Comparing attitude across different cultures: Two quantitative approaches to construct validity. In M. Wilson (Ed.) *Objective Measurement II: Theory into Practice*. Norwood, NJ: Ablex.
10. Wilson, M. (1992). Measurement models for new forms of assessment in mathematics education. In J.F. Izard & M. Stephens (Eds.) *Reshaping assessment practices: Assessment in the mathematical sciences under challenge*. Hawthorn, Australia: ACER.
9. Wilson, M. (1992). Measuring levels of mathematical understanding. In T. Romberg (Ed.) *Mathematics assessment and evaluation: Imperatives for mathematics educators*. New York: SUNY Press.
8. Wilson, M. (1992). Measuring changes in the quality of school life. In M. Wilson (Ed.) *Objective measurement: Theory into practice*. Norwood, NJ: Ablex.
7. Wilson, M. (1992). Objective measurement: The state of the art. In M. Wilson (Ed.) *Objective measurement: Theory into practice*. Norwood, NJ: Ablex.
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2. Masters, G. N., Morgan, G., & Wilson, M. (1989). Charting student progress. In D. M. Mertens (Ed.) *Creative Ideas for Teaching Evaluation: Activities, Assignments and Resources* (pp. 287-289). Dordrecht, Germany: Springer.
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#### Computer Programs

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5. Adams, R.J., Wu, M., & Wilson, M. (2015). *ConQuest 4.0* [computer program]. Hawthorn, Australia: ACER.
4. Adams, R.J., Wu, M., & Wilson, M. (2012). *ConQuest 3.0* [computer program]. Hawthorn, Australia: ACER.
3. Kennedy, C.A., Wilson, M., Draney, K., Tutuncuyan, S., & Vorp, R. (2008). *ConstructMap Version 4.4.0* (computer program). BEAR Center: UC Berkeley, CA. (formerly “GradeMap”)
2. Wu, M., Adams, R.J., Wilson, M., Haldane, S. (2007). *ACERConQuest 2.0* [computer program]. Hawthorn, Australia: ACER.

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#### Group Publications (Refereed)

American Psychological Association, Board of Educational Affairs Task Force on Education and Training Guidelines for Psychological Assessment in Health Service Psychology. (2020). *APA guidelines for education and training in psychological assessment in health service psychology*. Retrieved from <https://www.apa.org/about/policy/guidelines-assessment-health-service.pdf>. [Member of the Task Force—BEA Liaison]

National Research Council and National Academy of Education. (2010). *Getting value out of value-added: Report of a workshop*. Committee on Value-Added Methodology for Instructional Improvement, Program Evaluation, and Educational Accountability, Henry Braun, Naomi Chudowsky, and Judith Koenig, Editors. Center for Education, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press. [Member of the Committee]

National Research Council (2010). *Best practices for state assessment systems—Part 1: Summary of a workshop*. Alexandra Beatty, Rapporteur. Committee on Best Practices for State Assessment Systems: Improving Assessment While Revisiting Standards. Center for Education, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press. [Member of the Committee]

National Research Council. (2008). *Developmental outcomes and assessments for young children*. Committee on Developmental Outcomes and Assessments for Young Children, Catherine E. Snow and Susan B. Van Hemel, editors. Board on Children, Youth and Families, Board on Testing and Assessment, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press. [Member of the Committee]

National Research Council. 2001. *Knowing what students know: The science and design of educational assessments*. Committee on the Foundations of Assessment. Pellegrino, J., Chudowsky, N., and Glaser, R., editors. Board on Testing and Assessment, Center for Education. Division on Behavioral and Social Sciences and Education. Washington, DC: National Academy Press. [Member of the Committee]

#### Research Reports, etc.

31. Yao, S-Y., Henderson, J. B., Wilson, M., Osborne, J. & MacPherson, A. (2014). *Developing an Assessment in Scientific Argumentation*. BEAR Center Research Report, University of California, Berkeley.

30. Dray, A.J., Brown, N.J., Lee, Y., Diakow, R. & Wilson, M. (2011). *The assessment of reading comprehension in adolescents: The San Diego Striving Readers project*. (Final report). University of California, Berkeley Evaluation and Assessment Research Center. Submitted to the Institute of Education Sciences.
29. Torres Iribarra, D., Scalise, K., Wilson, M., & Stanfield, D. (2010). *CTB/McGraw-Hill Assessment Designer Report: Item Authoring for Coherent Assessment*. Monterey, CA: CTB/McGraw-Hill.
28. Wilson, M., Scalise, K., Galpern, A., & Lin, Y.-H. (2009). *A Guide to the Formative Assessment Delivery System (FADS)*. Berkeley Evaluation and Assessment Research (BEAR) Report, UC Berkeley, Berkeley, California.
27. Paek, I., Lee, J., Stankov, L., & Wilson, M. (2008). *A study of confidence and adequacy using the Rasch modeling procedures*, ETS RR-08-42. Educational Testing Service: Princeton, NJ.
26. Anderson, C. W., Alonzo, A. C., Smith, C., & Wilson, M. (2007, August). *NAEP pilot learning progression framework*. Report to the National Assessment Governing Board.
25. Mislevy, R. J., Chudowsky, N., Draney, K., Fried, R., Gaffney, T., Haertel, G., Hafter, A., Hamel, L., Kennedy, C. Long, K., Morrison, A., Murphy, R., Pena, P., Quellmalz, E., Rosenquist, A., Songer, N., Schank, P., Wenk, A., Wilson, M. (2003). *Design patterns for assessing science inquiry*. Principled Assessment Designs for Inquiry (PADI) Technical Report 1. Menlo Park, CA: SRI International.
24. Wilson, M., Roberts, L., Draney, K., Samson, S., & Sloane, K. (2000). *SEPUP Assessment Resources Handbook*. BEAR Center Research Reports, University of California, Berkeley.
23. Wilson, M. (1999). *A reflection on new frameworks for assessing student knowledge and skills: The PISA approach*. OECD/PISA Discussion paper, ACER, Camberwell, Australia.
22. Roberts, L., Wilson, M., & Draney, K. (1998). *The SEPUP Assessment System: An Overview*. BEAR Center Research Reports, University of California, Berkeley.
21. Patz, R. J., Wilson, M., & Hoskens, M. (1997). *Optimal rating procedures for NAEP open-ended items*. Final report to the National Center of Education Statistics under the redesign of NAEP.
20. Wilson, M., & Case, H. (1996). *Rating a performance task: An examination of rater performance over time*. University of California, Berkeley: BEAR Report Series, CD-96-1.
19. Pirolli, P. & Wilson, M. (1995). *A Technical Note on TREC Evaluation*. Research Report. Palo Alto, CA: Xerox PARC.

18. Mislevy, R.J., & Wilson, M. (1993). *Marginal maximum likelihood estimation for a psychometric model of discontinuous development*. Princeton, NJ: Educational Testing Service.
17. Wilson, M. (1989). *Commentary on an integrated approach to quantifying research synthesis*. In K. Fillmore (Ed.), Final report of the second meeting of the collaborative alcohol-related longitudinal project. San Francisco: Institute for Health and Aging, University of California.
16. Wilson, M., & Ekstrand, K. (1989). *Test Issues: A guide for decisionmakers* [Computer-based tutorial]. National Commission on Testing and Public Policy Research Report, Graduate School of Education, University of California, Berkeley.
15. Ploger, D., & Wilson, M. (1989). *Levels of understanding in modern biology: Cognitive snapshots of student learning*. Research Report, Graduate School of Education, University of California, Berkeley.
14. Wilson, M., Moore, S., Gifford, B., & Gumpel, T. (1989). *On the assessment of validity for a selection rule: Evidence for the linearity assumption, and implications of its failure*. National Commission on Testing and Public Policy Research Report, Graduate School of Education, University of California, Berkeley.
13. Wilson, M. (1988). *Empirical investigations of structured problem solving items using a polytomous IRT model*. Research Report, National Center for Research in Mathematical Sciences Education, School of Education, University of Wisconsin-Madison.
12. Masters, G. N., & Wilson, M. (1988). *PC-CREDIT* [Computer Program]. Melbourne, Australia: University of Melbourne, Centre for the Study of Higher Education.
11. Masters, G. N., & Wilson, M. (1988). *Understanding and using Partial Credit analysis: an IRT method for ordered response Categories*. Notes to accompany mini-course given at the American Educational Research Association annual meeting, New Orleans.
10. Masters, G. N., Morgan, G., & Wilson, M. (1986). *Charting student progress*. Centre for the Study of Higher Education, University of Melbourne.
9. Masters, G. N., Morgan, G., & Wilson, M. (1986). *CHARTS* [Computer program]. Centre for the Study of Higher Education, University of Melbourne.
8. Ziomek, R. and Wilson, M. (1986). *A proposed additional index to Glass' effect size estimator with application to mastery learning experiments*. Des Moines Independent Community School District, Department of *Evaluation* and Research, Technical Report No. 3.
7. Wilson, M. (1985). *Measuring Stages of Growth*. ACER Occasional Paper, No. 19. Melbourne, Australia: ACER.



6. Wilson, M. (1985). *Using the Design Effect Concept*. Unpublished manuscript, Australian Council for Educational Research.
5. Wilson, M. (1983). *Adventures in Uncertainty: An empirical investigation of the use of a Taylor's series approximation for the assessment of sampling errors in educational research*. ACER Occasional paper, No. 17. Melbourne, Australia: ACER.
4. Izard, J., Farish, S., Wilson, M., Ward, G. & Van der Werf, A. (1983). *Review and Progress Tests in Addition*. Melbourne, Australia: ACER.
3. Izard, J., Farish, S., Wilson, M., Ward, G. & Van der Werf, A. (1983). *Review and Progress Tests in Subtraction*. Melbourne, Australia: ACER.
2. Izard, J., Farish, S., Wilson, M., Ward, G. & Van der Werf, A. (1983) *Review and Progress Tests in Division*. Melbourne, Australia: ACER.
1. Izard, J., Farish, S., Wilson, M., Ward, G. & Van der Werf, A. (1983). *Review and Progress Tests in Multiplication*. Melbourne, Australia: ACER.

Magazine articles, Newspaper reports, etc.

2. Wilson, M. (2009). Assessment from the ground up. *Phi Delta Kappan*, 91 (1), 68-71.
1. Scalise, K., Claesgens, J., Wilson, M., & Stacy, A. (2008). Assessing student understanding in and between courses for higher education: An example of an approach. *Assessment Update*, 20(5), 1-16.

Key-note addresses, Invited presentations, etc.

107. Wilson, M. (2022, November). *Finding the right grain-size for measurement in the classroom*. Keynote Address at the 2<sup>nd</sup> Danish Science Education Research Association (DASERA) Research Seminar, Vejle, Denmark.
106. Wilson, M. (2022, March). *Assessment using Learning Progressions: An Important Concept in Teacher Education*. Keynote Address presented at the International Teacher Education Network Conference (ITEN 2022). Bangkok, Thailand
105. Wilson, M. (2022, March). *Learning Progressions for Assessing 21st Century Skills*. Public lecture presented at the Faculty of Education, University of Hong Kong.
104. Wilson, M. (2021, November). *Finding the right grain-size for measurement in the classroom*. The AERA E. F. Lindquist Award 2020 Lecture.

103. Wilson, M. (2021, August). *Rethinking measurement for accountable assessment*. Keynote Address at the Australian Council for Educational Research (ACER) 2021 Research Conference (online).
102. Wilson, M. (2020, March). *Relating your measurement to your theory: An example*. Invited presentation at the Winter Brown Bag Seminar, Graduate School of Education and Information Sciences, UCLA.
101. Wilson, M, Draney, K. & Jeon, M. (2019, September). *Structural confirmatory mixture modeling in the measurement context*. Invited paper in the Symposium in Honor of Jurgen Rost, at the 14th Conference of the Section on Methods and Evaluation of the German Psychological Society, Kiel, Germany.
100. Wilson, M. (2018, April). *Developing an essential feature of test validity arguments: Alignment among the test design, interpretation of test outcomes, and evidence for validity*. Robert L. Linn Distinguished Address Award, given at the annual meeting of the American Educational Research Association, New York.  
Also presented at: University of Melbourne, Australia (May, 2018); University of California, Berkeley (September, 2018), Beijing Normal University (October 2018).
99. Wilson, M. (2018, February). *Theoretical and empirical foundations of the FIES*. Paper presented at the Food Insecurity Experience Scale (FIES) Expert Meeting, FAO, Rome, Italy.
98. Wilson, M. (2017, April). *Making measurement important for education*. Presidential Address given at the NCME annual meeting, San Antonio, TX.
97. Wilson, M. (2017, April). *Validity evidence: A survivor's tale*. Keynote address at the Validity Evidence for Measurement in Mathematics Education Conference, San Antonio, TX.
96. Sussman, J. & Wilson, M. (2016, December). *The Prevalence of "Off-Label" Assessment*. Invited paper presented at the Institute of Educational Sciences Principal Investigators Conference, Washington, DC.
95. Wilson, M. (2016, December). *What to do about "Off-Label" Assessment*. Invited paper presented at the Institute of Educational Sciences Principal Investigators Conference, Washington, DC.
94. Wilson, M. (2016, November). *Measurement in the context of formative classroom assessment*. Invited address presented at the Research and Evaluation Methodology Colloquium, University of Colorado-Boulder.
93. Wilson, M. (2016, October). *Roadmaps to help develop assessments for learning progressions in science*. Paper presented in the "Assessing experimental science in 11–18 education: New research directions" Conference, Wellcome Trust, London.

92. Wilson, M. (2016, August). *Rejecting normal: Reversing the relationship between large-scale assessment and classroom assessments*. Inaugural Professorial Lecture, University of Melbourne, Melbourne, Australia.
91. Wilson, M. (2016, June). *The case of measurement and assessment*. Invited talk in a debate entitled “How do we decide what and how to evaluate?” University of Melbourne, Melbourne, Australia.
90. Wilson, M. (2016, March). *What should be our “Foundations,” and why should we care anyway?* Invited address at the 18<sup>th</sup> International Objective Measurement Workshop, Washington, DC.
89. Wilson, M., Scalise, K., & Gochyyev, P. (2016, March). *Modeling data from collaborative assessments: Learning in digital interactive social networks*. Paper presented at the ARC Research Update, Assessment Research Center, Melbourne Graduate School of Education, University of Melbourne, Australia.
88. Wilson, M. (2016, January). *Rejecting normal: Reversing the relationship between large-scale assessment and classroom assessments*. Keynote address given at the 24<sup>th</sup> Measurement, Evaluation and Educational Relations Research Conference, Pibulsongkram Rajabhat University, Phitsanulok, Thailand
87. Wilson, M. (2016, January). *New measures for an old friend: A learning progression for ICT Literacy*. Keynote address given at the 24<sup>th</sup> Measurement, Evaluation and Educational Relations Research Conference, Pibulsongkram Rajabhat University, Phitsanulok, Thailand.
86. Wilson, M. (2015, December). *Reconciling formative and summative assessments*. Keynote address at the annual meeting of the California Educational Research Association, Anaheim, California.
85. Wilson, M. (2015, September). *Applications in educational monitoring and practice: the logic of standard-setting*. Invited address at the Standard-setting in the Nordic Countries Conference, CEMO, University of Oslo, Norway.
84. Wilson, M. (2015, August). *The four building blocks of assessment*. Keynote address at a seminar on “Assessment in the Reform of Educational Evaluation,” Ministry of Education and Culture, Jakarta, Indonesia.
83. Wilson, M. (2015, August). *The role of measurement and assessment in accountability of organisation management*. Invited lecture at the seminar on “Strategy and evaluation to obtain sustainable competitive advantage” at Widya Mandala Catholic University, Surabaya, Indonesia.
82. Wilson, M. (2014, October). *Capitalizing on the strength of classroom assessment to improve*

- large-scale assessment*. Invited Open Lecture, University of Gdansk. Gdansk, Poland.
81. Wilson, M. (2014, June). *Navigating between large-scale assessment and classroom assessments*. Invited paper at the “Towards a New Generation of Standardized Student Assessments” Workshop, National Institute for the Evaluation of Education, Mexico and The World Bank, Mexico City, Mexico.
80. Pellegrino, J., & Wilson, M. (2014, April). *Developing Assessments for the Next Generation of Science Standards—An NRC Report*. Invited presentation at the American Educational Research Association annual conference, Philadelphia, Pennsylvania.
79. Wilson, M. (2013, October). *Early childhood development: measurement and program quality*. Paper presented at the “Pensamiento Educativo” annual conference, Santiago, Chile.
78. Wilson, M., & Osborne, J. (2013, September). *Some examples of the development of assessments for learning progressions in science*. Presentation in the “Assessing Learning Progressions in Mathematics and Science” session at the Institute of Education Sciences Principal Investigator Conference, Washington DC.
77. Wilson, M. (2013, September). *Update on the work of the NRC Committee on Science Assessment*. Keynote address presented at the Educational Testing Service Science Assessment Symposium, Washington, DC.
76. Mari, L. & Wilson, M. (2013, September). *A gentle introduction to Rasch measurement models for metrologists*. Keynote address at the Joint IMEKO (International Measurement Confederation) TC1-TC7-TC13 Symposium, Genoa, Italy.  
doi:10.1088/1742-6596/459/1/012002  
(Download abstract from: <http://iopscience.iop.org/1742-6596/459/1/012002/>)
75. Wilson, M. (2013, August). *Measurement must balance its statistical and scientific elements*. Keynote address presented at the Taiwan Educational Research Association and Pacific Rim Objective Measurement Conference, Kaoshung, Taiwan.
74. Wilson, M., & Scalise, K. (2013, May). *Measuring collaborative digital literacy*. Paper presented at the Invitational Research Symposium on Technology Enhanced Assessments, Washington, DC.
73. Wilson, M., & Osborne, J. (2013, April). *Learning trajectories and formative assessments for physical science and argumentation*. Paper presented at the SERP Sandpit, San Francisco, California.
72. Wilson, M. (2012, August). *Developing assessment tasks that lead to better instruction and learning*. Keynote presentation at the International Conference on Enhancing National Competitiveness—Upgrading Science Education, Bangkok, Thailand.

71. Wilson, M. & Scalise, S. (2012, April). *Assessment of learning in digital social networks*. Invited address at the ATC21S Research Symposium, Vancouver. Also presented at the ETS Invitational Research Symposium on Technology Enhanced Assessments, Washington DC, May, 2012. [available at: <http://www.k12center.org/rsc/pdf/session5-wilson-paper-tea2012.pdf>].
70. Wilson, M. (2011, October). *Measurement for learning: Part II*. Invited paper presented at the Trans-Atlantic Science Week Conference, (Sponsored by the Norwegian Embassy). Berkeley, California.
69. Wilson, M. (2011, September). *The role of mathematical models in measurement: A perspective from psychometrics*. Plenary address at the 14<sup>th</sup> Joint International IMEKO TC1 & TC7 Symposium. Ilmenau University of Technology, Jena, Germany.
68. Wilson, M. (2011, July). *How do I know when I have a good measure: Why, What, How?* Invited address at a conference on educational accountability, Peking University, Beijing, China.
67. Wilson, M. (2011, May). *Explanatory Item Response Modeling: A Perspective on Psychometrics*. Invited paper at the 23<sup>rd</sup> Annual convention of the American Psychological Society, Washington, DC.
66. Wilson, M. (2011, May). *Navigating between large-scale assessment and classroom assessments*. Invited Plenary Address at the MIDE-UC Seminar on Accountability in Education, Pontificia Universidad Católica de Chile (UC), Santiago, Chile.
65. Wilson, M. (2009, December). *Developing Assessment Tasks That Lead to Better Instruction and Learning*. Presentation prepared for the workshop of the Committee on Best Practices for State Assessment Systems: Improving Assessment While Revisiting Standards, National Research Council, Washington, DC.
64. Wilson, M. (2009, December). *Assessment for learning AND for accountability*. Keynote presentation at the Exploratory Seminar: Next Generation K-12 Assessment Systems. Educational Testing Service, Princeton, New Jersey.
63. Wilson, M. (2009, June). *Structured Constructs Models (SCM): A family of statistical models related to learning progressions*. Invited Plenary Address at the Learning Progressions in Science (LeaPS) Conference, Iowa City, Iowa.
62. Scalise, K., Wilson, M., Matovinovic, D, Boughton, K. (2009, June). *Item authoring for coherent assessment*. Invited presentation at the CTB McGraw-Hill Methodology Workshop, Monterey, California.
61. Wilson, M. (2009, March). *On the relationship between large-scale assessment and classroom assessments*. The California High School Science Summit, University of California—Riverside, Riverside, California.

60. Wilson, M. (2009, February). *Seeking coherence: On the relationship between large-scale assessment and classroom assessments*. Invited address at The IMES 2009 International Conference 2009, Faculty of Education, Chulalongkorn University, Bangkok, Thailand.
59. Wilson, M. (2008, October). *On the relationship between large-scale assessment and classroom assessments*. Invited address at CAESL 2008: International Conference on <sup>[11]</sup>SEP Assessment for Learning in Science, San Francisco, California.
58. Wilson, M., Zheng, X., & Walker, L. (2008, September). *Latent growth item response models*. Invited presentation at the International Conference on Outcomes Assessment, Bethesda, Maryland.
57. Walker, L. & Wilson, M. (June, 2008). *Exploring cross-cultural and time-wise item shift: An extension of the Latent Growth Item Response Model*. Invited paper presented at the 3MC Conference, Berlin, Germany.
56. Wilson, M., & Moore, S. (2008, April). *An explanative approach to measurement of reading comprehension*. Invited presentation at the ETS Invitational Conference on Reading Comprehension, University of Philadelphia, Philadelphia, Pennsylvania.
55. Wilson, M. (2008, March). *Some perspectives on assessment: The BEAR Assessment System*. Keynote Address at the Open Learning Initiative Conference, Carnegie-Mellon University, Pittsburg, Pennsylvania.
54. Wilson, M., Zheng, X., & Walker, L. (2007, August). *Latent growth item response models*. Keynote Address presented at the IPN Conference on Longitudinal Data Analysis in Educational Studies 2007, Kiel, Germany.
53. Wilson, M., & Moore, S. (2007, July). *Explanatory measurement: an introduction*. Keynote Address at the Pacific Rim Objective Measurement Workshop (PROMS), National College of Physical Education and Sports, Taiwan ROC.
52. Wilson, M. (2007, July). *Linking summative to formative: A role for large-scale assessment in classroom assessments*. Invited presentation, National SunYat-sen University, Kaohsiung, Taiwan ROC.
51. Wilson, M. (2007, May). *Linking summative to formative: A role for large-scale assessment in classroom assessments*. William Angoff Memorial Lecture, Educational Testing Service, Princeton, New Jersey.
50. Wilson, M. (2007, May). *Constructing Measures: The BEAR Assessment System*. Invited presentation to the PIER program, Carnegie-Mellon University, Pittsburg, Pennsylvania.
49. Wilson, M. (2006, November). *The struggle for meaning in standards-based assessment*. Keynote address at the 11<sup>th</sup> Annual National Roundtable Conference—Conference theme: “The path travelled and the road ahead”—Perth, Australia.

48. Kennedy, C. A. & Wilson, M. (2006, October). *Using progress variables to map intellectual development*. Invited presentation at a conference entitled “Assessing and modeling cognitive development in school intellectual growth and standard setting.” Maryland Assessment Research Center for Education Success, University of Maryland, College Park, Maryland.
47. Wilson, M., De Boeck, P., & Carstensen, C. (2006, July). *Explanatory item response models for analysing competency data*. Presentation in an invited symposium at the International Congress of Applied Psychology, Athens, Greece.  
Also presented at the National Foundation for Educational Research, Slough, UK, August 2006.
46. Wilson, M., & Moore, S. (2006, June). *Building out the measurement model to incorporate complexities in language testing*. Samuel J. Messick Memorial Lecture, Learning Testing Research Colloquium, University of Melbourne, Melbourne, Australia.
45. Wilson, M., Stacy, A., & Claesgens, J. (2006, June). *Using Assessment to Frame a Picture of Development*. University of Colorado Summer Institute for Classroom Learning Assessment, Boulder, Colorado.
44. Draney, K., & Wilson M. (2006, May). *Mixture models in a developmental context*. Paper presented at the “Mixture Models in Latent Variable Research” invitational conference, University of Maryland, College Park, Maryland.
43. Wilson, M. (2006, April). *Formative classroom assessments: What do teachers need?*  
Invited paper presented at the Consortium for Policy Research in Education symposium on formative assessment, San Francisco, California.  
Also presented at the NCIEA Colloquium on formative assessment, Denver, Colorado, May, 2006.
42. Wilson, M. (2006, April). *Why do something simple, when it's just as easy to do something complicated?* Keynote presentation at the 13<sup>th</sup> meeting of the International Objective Measurement Workshop, Berkeley, California.
41. Wilson, M. (2006, March). *Systems for State Science Assessment—ideas and tools that are needed to assess science learning at the state level in the USA*. Presentation at the Science and Technology Education Group Seminar, King's College, London, UK.
40. Wilson, M., De Boeck, P., & Carstensen, C. (2005, September). *Explanatory Item Response Modeling*. Keynote address at the Fachgruppe Methoden und Evaluation of the German Psychological Society, Munster, Germany.
39. Wilson, M. (2005, September). *Struggling for meaning in standards-based assessment*. Invited presentation at the 20<sup>th</sup> CRESST Conference, Los Angeles, California.
38. Wilson, M., & Scalise, K. (2005, May). *Assessment: A key aspect of teaching and learning*.

- Invited address at the First Athens International Conference on University Assessment, Athens, Greece.
37. Wilson, M. (2005, March). *Building from the Research: Test design for K-12 Science achievement*. Invited symposium at the National Science Teachers Association National Convention, Dallas, Texas.
  36. Wilson, M. (2004, October). *Cognitive diagnosis using explanatory item response models*. Invited presentation at the 4<sup>th</sup> Spearman Seminar, University of Pennsylvania, Philadelphia, Philadelphia.
  35. Wilson, M. (2004, July). *Explanatory measurement: Generalized linear and nonlinear models for item response modeling*. Invited symposium at the 24th Biennial Conference of the Society for Multivariate Analysis in the Behavioral Sciences (SMABS 2004), Jena University, Germany.
  34. Wilson, M., & Scalise, K. (2004, June). *Combining perspectives from cognitive science and psychometrics to improve assessment of science learning: The BEAR Assessment System*. Invited presentation at the 3<sup>rd</sup> Assessment for the Future Workshop. New College, Cambridge, UK.
  33. Wilson, M. & Brown, N. (2004, July). *Measurement as struggle*. Keynote presentation at the International Objective Measurement Workshop, Cairns, Australia.
  32. Wilson, M., & Scalise, K. (2004, March). *Assessment: A key aspect of teaching and learning*. Plenary Panel presentation at the MSRI Workshop on Assessing Students' Mathematics Learning, Berkeley, California.
  31. Wilson, M., & Scalise, K. (2004, March). *Using assessment to improve learning: The BEAR Assessment System*. Keynote address at the Enhancement Themes 4<sup>th</sup> Assessment Workshop, The Robert Gordon University, Aberdeen, UK.
  30. Wilson, M., & Scalise, K. (2003, November). *Research on learning: Implications for assessment in higher education*. Plenary Address at the California Association for Institutional Research Annual Conference, Rohnert Park, California.
  29. Wilson, M., & Scalise, K. (2003, June). *Research on learning: Implications for higher education*. Opening Plenary Address at the American Association for Higher Education Assessment Conference, Seattle, Washington.
  28. Wilson, M. (2003, April). *The technologies of assessment*. Invited presentation at the AEL National Research Symposium entitled "Toward a National Research Agenda for Improving the Intelligence of Assessment Through Technology," Chicago, Illinois.



27. Wilson, M. (2003, April). *Comments on Issues in International Assessment*. Discussant at a Presidential Invited Session on international assessment, American Educational Research Association annual meeting, Chicago, Illinois.
26. Wilson, M., & Draney, K. (2003, February). *The BEAR Assessment System: Balance and Coherence*. Invited presentation at the National Research Council "Bridging the Gap" Workshop, Washington DC.
25. Wilson, M. (2002, June). *Did they really know what students know?* Paper presented at the Distinguished Visitors lecture series in the Education and Arts Faculty, University of Newcastle, Newcastle, Australia.
24. Wilson, M. (2002, June). *Item response theory as an application of nonlinear mixed models*. Paper presented at the Distinguished Visitors lecture series in the Statistics Department, University of Newcastle, Newcastle, Australia.
23. Wilson, M. (2002, February). *Assessment: The necessary connection between the classroom and policy-makers*. Invited presentation at the Texas Symposium on Testing and Assessment, University of Texas at Dallas, Dallas, Texas.
22. Wilson, M. (2001, October). *On choosing a model for measuring*. Invited paper at the International Conference on Objective Measurement 3, Chicago, Illinois.
21. Wilson, M. (2001, August). *The BEAR Assessment System*. Invited presentation at the "Assessment and Cognition: Theory to Practice" Conference, University of Maryland, College Park, Maryland.
20. Wilson, M. (2001, August). *Beyond BEAR*. Invited presentation at the "Assessment and Cognition: Theory to Practice" Conference, University of Maryland, College Park, Maryland.
19. Wilson, M., & Draney, K. (2000, May). *Standard Mapping: A technique for setting standards and maintaining them over time*. Paper in an invited symposium entitled "Models and analyses for combining and calibrating items of different types over time" at the International Conference on Measurement and Multivariate Analysis, Banff, Canada.
18. Wilson, M. (2000, January). *The role of assessment in evaluation: materials development and professional development*. Invited presentation at The Evaluation Forum, Lawrence Hall of Science, UC Berkeley, Berkeley, California.
17. Wilson, M. & Briggs, D. (1999, December), *An introduction to individual growth modeling: A multilevel modeling perspective*. Invited presentation at the Institute for Human Development Colloquium, UC Berkeley, Berkeley, California.

16. Wilson, M. (1999, May). *Multilevel models in educational research*. Presentation at the annual meeting of the Chicago chapter of the American Statistical Association, Chicago, Illinois.
15. Wilson, M. (1998, July). *Embedding developmental assessment into an instructional curriculum: The case of SEPUP's "Issues, Evidence and You."* International Developmental Assessment Seminar, Royal Melbourne Institute of Technology, Melbourne, Australia.
14. Wilson, M. (1998, January). *How do curriculum developers measure success?* ScienceGate II Conference, Xerox Document University, Virginia.
13. Wilson, M. (1997, June). *Recent developments in item response modeling*. Language Testing Research Centre, University of Melbourne, Melbourne, Australia.
12. Wilson, M. (1997, June). *A theory of the measurement of knowledge content, access and learning*. Presentation to the Cognitive Psychology Seminar in the Psychology Department at the University of Melbourne, Melbourne, Australia.
11. Wilson, M. (1997, January). *Assessment and evaluation together in the service of instruction and learning*. NSF Status of Middle School Science Conference. Washington, DC.
10. Wilson, M. (1994, December). *Some thoughts on componential models*. Invited participant in a colloquium on "Componential item response models" at the Catholic University of Lueven, Belgium.
9. Wilson, M. (1994, April). *What technical issues might be major concerns in implementing new assessments and new technologies*. Invited participant in a colloquium on "Assessment in the 21st century: Issues, technologies, and challenges" NCME annual meeting, New Orleans, Louisiana.
8. Wilson, M. (1993, April). Invited participant in a colloquium on "The technical requirements of high stakes performance assessments: Answers to your questions" NCME annual meeting, Atlanta, Georgia.
7. Wilson, M., & Adams, R.J. (1992, June). *Evaluating progress with alternative assessments: A model for Chapter 1*. Invited address to the conference on Curriculum and Assessment Reform. Boulder, Colorado.
6. Wilson, M. (1991, November). *Measurement models for new forms of student assessment in mathematics education*. Keynote address at the First National Conference on Assessment in the Mathematical Sciences. Australian Council for Educational Research, Geelong, Australia.

5. Masters, G., & Wilson, M. (1991, March). *Partial credit models: An introduction for test developers*. Half-day workshop given at Educational Testing Service, Princeton, New Jersey.
4. Wilson, M. (1990). *A mixture model approach to the measurement of stage-like development*. Berkeley-Stanford Quantitative Methods Colloquium, University of California, Berkeley, California.
3. Wilson, M., & Mislevy, R.J. (1989). *Test theory for measuring understanding and learning*. Paper presented at the Educational Testing Service Invitational Symposium on Language Acquisition and Language Assessment, Princeton, New Jersey.
2. Wilson, M. (1987). *Bootstrapping in educational research*. Invited Speaker, Australian Council for Educational Research, Hawthorn, Australia.
1. Wilson, M. (1987). *Comparing attitudes across content: reflections based on a quality of school life instrument*. Invited Speaker, University of Melbourne, Melbourne, Australia.

#### Papers Presented at Professional Meetings (Refereed)

335. Mari, L., Wilson, M., & Maul, A. (2022, August). *Calibration Across the Sciences*. Paper presented at the Measurement at The Crossroads meeting, Milan, Italy.
334. Awwal, N, Wilson, M., & Zhang, Z., & (2022, April). *Measuring group collaboration using process data in an online computer-based assessment environment*. Paper presented at the annual meeting of the National Council for Measurement in Education, San Diego.
333. Gochyyev, P., Wilson, M., Toyama, Y., & Jolin, J. (2022, April). *Modeling a summative assessment for a multidimensional learning progression*. Paper presented at the annual meeting of the National Council for Measurement in Education, San Diego.
332. Mari, L., Wilson, M., & Maul, A. (2022, April). *Measurement across the sciences: Developing a shared concept system for measurement*. Paper presented at the annual meeting of the National Council for Measurement in Education, San Diego.
331. Wilson, M., Suksiri, W, Morell, L., Osborne, J. F., MacPherson, A., Dozier, S., McNeill, R., & Tan, S. (2022, April). *Investigating measurement invariance of a complex academic practice across different subject areas*. Paper presented at the annual meeting of the National Council for Measurement in Education, San Diego.
330. Wilson, M., Suksiri, W, Morell, L., Osborne, J. F., MacPherson, A., Dozier, S., Tan, S., & McNeill, R. (2022, April). *Relationship between measures of “21st Century skills” and the content underlying them*. Paper presented at the annual meeting of the National Council for Measurement in Education, San Diego.

329. Gunckel, K., Morell, L., Moreno, D., Tan, S., MacPherson, A., Dozier, S., & Wilson, M. (2022, March 29). Examining the crosscutting concept of patterns: An initial construct map in the context of ecosystems. In-person and on-line hybrid poster presentation at the 95<sup>th</sup> NARST International Conference.
328. Gochyyev, P. & Wilson, M. (2021, September). *The ADM curriculum efficacy study and Lord's paradox*. Paper presented at the Society for Research for Educational Effectiveness annual meeting (online).
327. Awwal, N., Wilson, M. & Zhang, Z. (2021, June). *Using process data to develop indicators for the assessment of group collaboration*. Paper presented at the National Council on Measurement in Education, Baltimore: USA (virtual).
326. Wilson, M., Draney, K., Brown, R., Toyama, Y., McNeil, R., Tan, S., & Patz, R. (2021, June). *Assessing college-ready computational thinking*. Structured Poster Session on Computer Science & Computational Thinking at the National Science Foundation, Discovery Research PreK-12 (DRK-12) PI Meeting.
325. Lehrer, R., & Wilson, M. (2021, June). *Modeling assessment to enhance teaching and learning*. Structured poster session on assessment at the National Science Foundation, Discovery Research PreK-12 (DRK-12) PI Meeting.
324. Wilson, M., Gunckel, K., & Morell, L. (2021). *Learning progressions in science: Analyzing & deconstructing the multiple dimensions in assessment*. Structured poster session on assessment at the National Science Foundation, Discovery Research PreK-12 (DRK-12) PI Meeting.
323. Awwal, N., Wilson, M. & Zhang, Z. (2021). *Using process data to develop indicators for the assessment of group collaboration*. Paper presented at the NCME Annual Meeting (online).
322. Torres Iribarra, D., & Wilson, M. (2021, June). *System overview of an Assessment Development and Management (ADM) System*. Paper presented at the NCME Annual Meeting (online).
321. Wilson, M., & Condor, A. C. (2021, June). *Teaching measurement to graduate students using an Assessment Development and Management (ADM) System*. Paper presented at the NCME Annual Meeting (online).
320. Gochyyev, P., & Wilson, M. (2021, June). *Weights for the subdimensions in the Composite Model*. Paper presented at the NCME Annual Meeting (online).
319. Suksiri, W., Morell, L., & Wilson, M. (2021, June). *Moving from writing items to designing items to provide better assessment information*. Paper presented at the NCME Annual Meeting (online).

318. Dray, A.J., Wihardini, D., Wilson, M. & Moss, P. (2021, June). *A construct modeling approach to the performance assessment of teaching*. Paper presented at the NCME Annual Meeting (online).
317. Dozier, S., MacPherson, A., Morell, L., Suksiri, W., Wilson, M. & Osborne, J., (2021, April). *Undercovering students' developing understanding of interdependent relationships in ecosystems*. Presented at the NARST Annual Meeting remote.
316. Morell, L., Dozier, S., Suksiri, W., Osborne, J., & Wilson, M. (2021, April). *Assessing higher order thinking of complex skills using selected response items*. Presented at the NARST Annual Meeting remote.
315. Wilson, M., & Toyama, Y. (2021, April). *What makes reading difficult? Contributions of passage, task, and reader characteristics on item difficulty*. Paper presented at the AERA Annual Meeting (online).
314. Koo, B., Bathia, S., Morell, L., Gochyyev, P., Wilson, M., & Smith, R. (2021, April). *Examining the effects of a peer-learning research community on the development of research identity*. Paper presented at the AERA Annual Meeting (online).
313. Morell, L., Bathia, S., Koo, B., Wilson, M., Gochyyev, P., & Smith, R. (2021, April). *The construct of researcher identity for secondary school students*. Paper presented at the AERA Annual Meeting (online).
312. Tan, K., Clinton, J., Wilson, M. (2021, April). *A culturally responsive definition of student engagement: A Malaysian school perspective*. Paper presented at the AERA Annual Meeting (online).
311. Morell, L. Dozier, S., Suksiri, W., Osborne, J., & Wilson, M. (2021, Feb). *Gaining insight into teachers' interpretations of computer-based feedback for the purpose of valid inferences*. Paper presented at the IOMW 2020 Virtual Conference.
310. Morell, L., Suksiri, W., & Wilson, M (2021, February). *Prevalence of misreporting demographic data*. Paper presented at the IOMW 2020 Virtual Conference.
309. Awwal, N., Griffin, P., & Wilson, M. (2020, September). *Assessing group collaboration in small teams from a process perspective*. Paper presented at the National Council on Measurement in Education Annual Meeting, San Francisco: USA (virtual).
308. Morell, L., Suksiri, W., Dozier, S., Osborne, J., & Wilson, M. (2020, September). *An exploration of selected-response items compared to constructed-response item types in science education*. Presented at the National Council on Measurement in Education (NCME), online Annual Meeting.

307. Suksiri, W., Morell, L., & Wilson, M. (2020, September). *Making response processes matter to designing assessments of student learning*. National Council on Measurement in Education (NCME) online Annual Meeting.
306. Scalise, K., Wilson, M. & Gochyyev, P. (2020, September). *A taxonomy of critical dimensions in learning analytics: Some key elements for interpretation of data*. Conference on Educational Data Science, Stanford University.
305. Han, Y., & Wilson, M. (2020, July). *Analyzing success on a collaborative problem solving task using response processes*. Paper presented at the International Meeting of the Psychometric Society, online virtual conference.
304. Wilson, M. & Lehrer, R. (2020, April). *Role of instrument design in framing the validity argument for a set of mathematics assessments*. AERA Annual Meeting San Francisco, CA <http://tinyurl.com/r926p36> (Conference Canceled).
303. Kim, J., Wilson, M., & Rabe-Hesketh, S. (2020, April). *Polytomous item explanatory item response theory models with random item errors: Simulation and empirical studies*. AERA Annual Meeting San Francisco, CA <http://tinyurl.com/ukzc89d> (Conference Canceled).
302. Bathia, S., Morell, L., Smith, R., Koo, B. & Wilson, M. (2020, April). *Measuring high school students' self-perception as a researcher: Development and validation of the Researcher Identity Scale*. AERA Annual Meeting San Francisco, CA <http://tinyurl.com/sajb3fx> (Conference Canceled).
301. Arneson, A. E., Wihardini, D. & Wilson, M. (2020, April). *Developing assessments for college-ready critical reasoning in statistics*. AERA Annual Meeting San Francisco, CA <http://tinyurl.com/ujsb3qy> (Conference Canceled).
300. Zhang, Y., Buckner, A., Duckor, B. & Wilson, M. R. (2020, April). *Measuring California superintendents' beliefs about school climate assessment: New insights from item response theory analysis*. AERA Annual Meeting San Francisco, CA <http://tinyurl.com/v9cr9ge> (Conference Canceled)
299. Zhang, Y., Buckner, A., Duckor, B., & Wilson, M. (2020, April). *California superintendents' beliefs about school climate assessment for continuous improvement: Multi-dimensionality and response patterns*. Paper accepted for presentation at the annual meeting of the National Council on Measurement in Education conference, San Francisco, California.
298. Dozier, S., Morell, L., Suksiri, W., Osborne, J., & Wilson, M. (2020, March). *Automated assessment of argumentation in school science: Developments and challenges*. Paper accepted for presentation at the NARST Conference, Portland, Oregon

297. Morell, L., Suksiri, W., Dozier, S., Osborne, J., & Wilson, M. (2020, January 9). *Automated assessment of scientific reasoning: Selected-Response items compared to constructed-response items*. Session presented at the Annual Principal Investigators Meeting for the Institute of Education Science, Washington, DC.
296. Cardace, A, Metz, K. E., Wilson, M. (2019, November). *The power of a learning progression perspective for analyzing structured interviews to inform instruction*. Presentation at the California Educational Research Association Annual Conference in Sacramento, CA.
295. Cardace, A, Metz, K. E., Wilson, M. (2019, September). *Applying a learning progression framework to classroom assessment in early-grades elementary science: Comparing a written assessment to a cognitive interview*. Roundtable paper for the NCME Special Conference on Classroom Assessment in Boulder, CO.
294. Dozier, S., Morell, L., Suksiri, W., Osborne, J. F., and Wilson, M. (2019, August). *Addressing the practice of arguing from evidence in science using forced-choice item formats*. Paper presented at the Conference of the European Science Education Research Association, Bologna, Italy.
293. Wihardini, D., Dray, A., & Wilson, M. (2019, August). *The internal structure of a performance-based assessment for elementary teacher education in mathematics*. Paper presented at the Pacific Rim Objective Measurement Symposium, Jakarta, Indonesia.
292. Wilson, M., & Gochyyev, P. (2019, July). *Measuring sub-dimensions and composites*. Paper presented at the International Meeting of the Psychometric Society, Santiago, Chile.
291. Wilson, M., Maul, A., & Mari M. (2019, July). *Objectivity and intersubjectivity of measurement across the sciences*. Paper presented at the International Meeting of the Psychometric Society, Santiago, Chile.
290. Wilson, M., & Gochyyev, P. (2019, July). *Further findings from modeling data in collaborative assessments*. Paper presented at the International Meeting of the Psychometric Society, Santiago, Chile.
289. Wilson, M., Mari L., & Maul, A. (2019, July). *The status of the concept of reference object in measurement in the human sciences compared to the physical sciences*. Paper presented at the IMEKO TC1-TC7-TC13-TC18 Joint Symposium, St. Petersburg, Russia.
288. Wilson, M. & Dulhunty, M. (2019, July). *Interpreting the relationship between item difficulty and DIF: examples from educational testing*. Paper presented at the IMEKO TC1-TC7-TC13-TC18 Joint Symposium, St. Petersburg, Russia. DOI: 10.1088/1742-6596/1379/1/012026

287. Fisher, W. F., & Wilson, M. (2019, July). *The BEAR Assessment System Software as a platform for developing and applying UN SDG metrics*. Paper presented at the IMEKO TC1-TC7-TC13-TC18 Joint Symposium, St. Petersburg, Russia.
286. Mari, L, Maul ,A., & Wilson, M. (2019, July). *Can there be one meaning of “measurement” across the sciences?* Paper presented at the IMEKO TC1-TC7-TC13-TC18 Joint Symposium, St. Petersburg, Russia.
285. Morell, L., Bathia, S., Koo, B., Smith, R., & Wilson, M. (2019, April). *An application of item response theory to develop a measure of researcher identity*. Paper presented at the National Institutes of Health (NIH) SciEd Annual Conference, Washington, DC.
284. Morell, L., Bathia, S., Koo, B., Smith, R., & Wilson, M. (2019, April). *The construction and validation of a researcher identity scale*. Paper presented at the American Educational Research Association (AERA) Annual Meeting, Toronto, Ontario, Canada.
283. Toyama, Y., & Wilson, M. (2019, April). *Assessments of science and literacy integrated curricula*. Paper presented at the 2019 Annual Meeting of the American Educational Research Association in Toronto, Ontario, Canada.
282. Wilson, M., Torres Irribarra, D., & Draney, K. (2019, April). *Challenges of full-cycle assessment facilitation*. Paper presented at the 2019 Annual Meeting of the National Council on Measurement in Education in Toronto, Ontario, Canada.
281. Wilson, M., Morell, L., Osborne, J., Dozier, S., & Suksiri, W. (2019, April). *Assessing higher order reasoning using technology-enhanced selected response item types in the context of science*. Paper presented at the 2019 Annual Meeting of the National Council on Measurement in Education in Toronto, Ontario, Canada.
280. Cardace, A, Metz, K. E., Wilson, M. (2019, April). *Representing quantitative findings to enhance understanding: A case from elementary science*. Electronic Board presentation at the 2019 Annual Meeting of the National Council on Measurement in Education in Toronto, Ontario, Canada.
279. Morell, L., Suksiri, W., Dozier, S., Osborne, J., & Wilson, M., (2019, January). *Addressing the NGSS practice of Arguing from Evidence using forced-choice item formats: Challenges and successes*. Paper presented at the IES Annual Principal Investigators Meeting, Washington, DC.
278. Wilson, M., & Gochyyev, P. (2018, August). *The derived measures model for obtaining composite and dimension estimates*. Paper presented at the American Psychological Association annual convention, San Francisco.
277. Bathia, S., Morell, L., Koo, B., Bernard, J., Smith, R., and Wilson, M. (May 28, 2018). *Measuring a student’s researcher identity using the BEAR Assessment Framework*.



Presented at the Annual Meeting – National Institutes of Health (NIH), SciEd 2018, Washington, DC.

276. Kim, J., Suksiri, W., Bathia, S., Mason, M., & Wilson, M. (2018, April). *Do many psychological studies fail to be replicated because of too few items? A Monte Carlo simulation study*. Paper presented at the IOMW meeting, New York.
275. Gochyyev, P., & Wilson, M. (2018, April). *Derived measures model for obtaining composite and dimension scores*. Paper presented at the IOMW meeting, New York.
274. Wilson, M. (2018, April). *Measurement across the sciences: Intersubjectivity*. Paper presented at the IOMW meeting, New York.
273. Wilson, M. (2018, April). *Things I learned from Ben*. Paper presented at the IOMW meeting, New York.
272. Wilson, M., & Gochyyev, P. (2018, April). *Investigating response profiles using a constrained mixture rating scale model*. Paper presented at the AERA annual meeting, New York.
271. Kim, J. & Wilson, M. (2018, April). *Polytomous item explanatory IRT models: An application to Carbon Cycle assessment data*. Paper presented at the AERA annual meeting, New York.
270. Chen, Y., & Wilson, M. (2018, April). *Measuring orthographic processing: An application of item response theory*. Paper presented at the AERA annual meeting, New York.
269. Gochyyev, P., Sussman, J. & Wilson, M. (2018, April). *Investigating Public understanding of educational measurement: Communicating psychometric methods and outcomes*. Paper presented at the NCME annual meeting, New York.
268. Wihardini, D., & Wilson, M. (2018, April). *Background information and school clustering effects on students' opportunity-to-learn in PISA 2012*. Paper presented at the NCME annual meeting, New York.
267. Milligan, S., Wilson, M., Griffin, P., Scoular, C., Barrios, D. J., Alom, B. M., Awwal, N., Zhang, Z. H. (2018, April). *Adopting a process perspective of collaborative problem solving*. Paper presented at the National Council on Measurement in Education Annual Meeting, New York, USA.
266. Wilson, M., Morell, L., & Osborne, J. (March 10, 2018). *Modeling the relationship between argumentation and science content items: Possible task formats*. Presented at the National Association for Research in Science Teaching (NARST) Annual Conference, Atlanta, Georgia.

265. Awwal, N., Griffin, P., Zhang, Z. H., Scoular, C., Alom, M., Jimenez, D., & Wilson, M. (2017). Validation of Collaborative Problem Solving Process Framework from Evidence of Student Observations for Developing Generic Measures. *Proceedings of the 25th International Conference on Computers in Education. New Zealand: Asia-Pacific Society for Computers in Education*, 631-642.
264. Wilson, M. (2017, April). *On the relationship between large-scale assessment and classroom assessment*. Paper presented at the NCME annual meeting, San Antonio, TX.
263. Kim J., Wilson M., & Draney K. (2016, August). *Investigation of item properties of the carbon cycle test using the LLTM for polytomous items*. Paper presented at the IMEKO TC1-TC7-TC13 Joint Symposium, Berkeley, CA.
262. Mari L., Maul A., Torres Irribarra D., & Wilson M. (2016, August). *A meta-structural understanding of measurement*. Paper presented at the IMEKO TC1-TC7-TC13 Joint Symposium, Berkeley, CA.
261. Morell L., & Wilson M. (2016, August). Assessment as a tool to understand students' conceptions of the structure of matter. Paper presented at the IMEKO TC1-TC7-TC13 Joint Symposium, Berkeley, CA.
260. Wihardini D., & Wilson M. (2016, August). Introducing the construct modeling approach to measure students' moral development. Paper presented at the IMEKO TC1-TC7-TC13 Joint Symposium, Berkeley, CA.
259. Wilson, M. (2016, April). *What should be our "Foundations," and why should we care anyway?* Paper presented at the IOMW meeting, Washington, DC.
258. Wilson, M. (2016, April). *Introduction to the concept of a structured constructs model (SCM)*. Paper presented at the NCME annual meeting, Washington, DC.
257. Choi, I-H., & Wilson, M. (2016, April). *A structured constructs model for continuous latent traits with discontinuity parameters*. Paper presented at the NCME annual meeting, Washington, DC.
256. Shin, H-J. & Wilson, M. (2016, April). *A structured constructs model based on change-point analysis*. Paper presented at the NCME annual meeting, Washington, DC.
255. Choi, I-H., Park, S., Lee, H. K., Burmester, K., & Wilson, M. (2016, April). *Measurement of young children's development using the Desired Results Developmental Profile*. Paper presented at the American Educational Research Association annual conference, Washington, DC.
254. Park, S., Choi, I., Lee, H., Burmester, K., & Wilson, M. (2016, April). *Generalization of the Desired Result Developmental Profile-School Readiness (DRDP-SR): A Validity Study*

- for Dual Language Learners*. Paper presented at the American Educational Research Association annual conference, Washington, DC.
253. Wilson, M. (2016, April). *A systems approach to developing a learning progression and associated instructional units and assessments*. Paper presented at the annual conference of the National Council for Measurement in Education, Washington, DC.
252. Mari, L., & Wilson, M. (2015, May). *A structural framework across strongly and weakly defined measurements*. Paper presented at the 2015 IEEE International Instrumentation and Measurement Technology Conference, Pisa, Italy
251. Shin, H. J., & Wilson, M. (2015, April). A trifactor model for multiple ratings data. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois.
250. Burmester, K., Kriener-Althen, K., Wilson, M., & Moore, S. (2015, April). *A process for determining Criterion Zone Boundaries for kindergarten readiness assessments*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois.
249. Mangione, P., Wilson, M., & Hernandez, R. (2015, April). *The role of a statewide kindergarten assessment for teachers, administrators and a state education agency*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois.
248. Wilson, M. (2015, April). *Assessment tasks that measure three-dimensional learning*. Paper presented at the annual conference of the National Council for Measurement in Education, Chicago, Illinois.
247. Wilson, M. (2015, February). *Comments on: Assessment in support of K-12 science learning*. Paper presented at the Annual meeting of the American Association for the Advancement of Science, San Jose, California.
246. Wilson, M., Mari, L., Maul, A., & Torres Iribarra, D. (2014, September). *A comparison of measurement concepts across physical science and social science domains: Instrument design, calibration, and measurement*. Paper presented at the Joint IMEKO (International Measurement Confederation) TC1-TC7-TC13 Symposium, Madeira, Portugal.
245. Torres Iribarra, D., Freund, R., Fisher, W. & Wilson, M. (2014, September). *Metrological traceability in education: A practical online system for measuring and managing middle school mathematics instruction*. Paper presented at the Joint IMEKO (International Measurement Confederation) TC1-TC7-TC13 Symposium, Madeira, Portugal.
244. Mari, L., Maul, A., Torres Iribarra, D. & Wilson, M. (2014, July). *Quantities, quantification, and the necessary and sufficient conditions for measurement*. Paper presented at the International Meeting of the Psychometric Society, Madison, Wisconsin.

243. Maul, A., Torres Iribarra, D., & Wilson, M. (2014, July). *The philosophical foundations of psychological measurement*. Paper presented at the International Meeting of the Psychometric Society, Madison, Wisconsin.
242. Wilson, M., Mari, L., Maul, A., & Torres Iribarra, D. (2014, July). *A comparison of measurement concepts across physical science and social science domains: Instrument design, calibration, and measurement*. Paper presented at the International Meeting of the Psychometric Society, Madison, Wisconsin.
241. Brandt, S., Duckor, B., & Wilson, M. (2014, April). *A utility-based validation study for the dimensionality of the performance assessment for California teachers*. Paper presented at the American Educational Research Association annual conference, Philadelphia, Pennsylvania.
240. Wilson, M., Scalise, K., & Gochyyev, P. (2014, April). *Assessing learning in digital networks: Perspectives from ATC21S*. Paper presented at the annual conference of the National Council for Measurement in Education, Philadelphia, Pennsylvania.
239. Choi, I., & Wilson, M. (2014, April). *Incorporating mobility for multilevel and repeated item response data*. Paper presented at the annual conference of the National Council for Measurement in Education, Philadelphia, Pennsylvania.
238. Wilson, M. (2014, April). *Critical perspectives on NGSS and NGSA: Measurement*. Paper presented at the annual conference of the National Council for Measurement in Education, Philadelphia, Pennsylvania.
237. Kim, J, Draney, K, & Wilson, M. (2014, April). *Investigation item properties using the LLTM for polytomous items*. Paper presented at the annual conference of the National Council for Measurement in Education, Philadelphia, Pennsylvania.
236. Wihardini, D, & Wilson, M. (2014, April). *Multidimensional Rasch analysis of Indonesian students' performance on PISA 2012*. Paper presented at the annual conference of the National Council for Measurement in Education, Philadelphia, Pennsylvania.
235. Shin, H-J., Wolfe, E., Wilson, M., Foltz, P, & Song, T. (2014, April). *Human rater monitoring with automated scoring engines*. Paper presented at the annual conference of the National Council for Measurement in Education, Philadelphia.
234. Maul, A., Wilson, M., & Torres Iribarra, D. (2014, April). *Is psychological measurement possible?* Paper presented at the International Objective Measurement Workshop in Philadelphia, Pennsylvania.
233. Wilson, M. (2014, April). *Constructing data modeling assessments from concepts and practices useful to students, teachers, policy-makers and assessment developers*. Paper

- presented at the International Objective Measurement Workshop in Philadelphia, Pennsylvania.
232. Wilson, M. (2013, November). *Relating psychometric approaches to measurement with the concepts of measurement system and the standard reference set*. Paper presented at the 29<sup>th</sup> Boulder Conference on the History and Philosophy of Science, University of Colorado, Boulder, Colorado
231. Wihardini, D., Castellano, K., and Wilson, M. (2013, November). *Unpacking the difficulty in assessing and responding to academic language aspects of the Performance Assessment for California Teachers*. Poster presented at the 92nd California Educational Research Association, Anaheim, California.
230. Torres Iribarra, D., Wilson, M. & Freund, R. (2013, October). *The Berkeley Assessment System Software: An application for facilitating teacher management of the assessment process*. Presented at the 39th Annual Conference of the International Association for Educational Assessment, Tel Aviv, Israel.
229. Wilson, M. (2013, October). *Relating psychometric approaches to measurement with the concepts of measurement system and the standard reference set*. Paper presented at the 29th Boulder Conference on the History and Philosophy of Science (topic: Measurement Across the Sciences), Boulder, Colorado.
228. Mari, L., Maul, A., Torres Iribarra, D., & Wilson, M. (2013, September). *Quantification is neither necessary nor sufficient for measurement*. Paper presented at the Joint IMEKO (International Measurement Confederation) TC1-TC7-TC13 Symposium, Genoa, Italy.
227. Maul, A., Torres Iribarra, D., & Wilson, M. (2013, September). *On the conceptual foundations of psychological measurement*. Paper presented at the Joint IMEKO (International Measurement Confederation) TC1-TC7-TC13 Symposium, Genoa, Italy.
226. Castellano, K., Duckor, B., Wihardini, D., Tellez, K., & Wilson, M. (2013, April). *Validity evidence for the internal structure of the performance assessment for the California teachers' Elementary Mathematics Teaching Event*. Paper presented at the annual meeting of the National Council for Measurement in Education, San Francisco, California.
225. Shin, H. J., & Wilson, M. (2013, April). *Evaluation of school effects using latent growth item response models*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.
224. Yao, S-Y., & Wilson, M. (2013a, April). *Developing and validating a learning-progression-based assessment of the structure of matter*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.
223. Yao, S-Y., & Wilson, M. (2013b, April). *Validation of a learning progression in science: A latent class analysis approach*. Paper presented at the annual meeting of the American

Educational Research Association, San Francisco, California.

222. Blunk, M., Moss, P., Dray, A., Furr, D., Wilson, M., & Altman, M. (2013, April). *Exploring the validity of assessments of teaching practice in teacher education: A mixed-methods study*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.
221. Castellano, K., Duckor, B., Tellez, K., & Wilson, M. (2013, April). *Validity evidence for the internal structure of the Performance Assessment for California Teachers' Elementary Mathematics Teaching Event*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.
220. Duckor, B., Castellano, K., Tellez, K., & Wilson, M. (2013, April). *Validating the internal structure of the Performance Assessment for California Teachers (PACT): A Multidimensional Item Response Model Study*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.
219. Duckor, B., Draney, K., Wilson, M. (2013, April). *Assessing assessing: An item response modeling approach*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.
218. Wilson, M. (2013, April). *Challenges and opportunities of learning progressions for the psychometric community*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.
217. Sammet, K., Moore, S., & Wilson, M. (2013, April). *Measuring positive youth development in context with the Desired Results Developmental Profile - School Age*. Paper presented at the Annual meeting of the American Educational Research Association, San Francisco, California.
216. Chiu, T., Morell, L., & Wilson, M.. (2013, April). *Coding student responses: An iterative and construct-driven approach that uses multiple sources of data*. Paper presented at the Annual meeting of the American Educational Research Association, San Francisco, California.
215. Wilson, M., Black, P., & Morell, L. (2013, April). *A learning progression approach to understanding students' conceptions of the structure of matter*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.
214. Maul, A., Wilson, M., & Torres Iribarra, D. (2013, March). *On the conceptual foundations of psychological measurement*. Paper presented at the Dimensions of Measurement conference, Bielefeld, Germany.
213. Fisher, Jr., W. P., Seeratan, K., Draney, K., Wilson, M., Murray, E. (2012, April). *Predicting mathematics test item difficulties: Results of a preliminary study*. Paper

- presented at the International Objective Measurement Workshop in Vancouver, Canada.
212. Lee, H. Kyung, Fisher, Jr., W. P., McKerracher, A., Seeratan, K., Draney, K., Wilson, M. R., et al.. (2012, April). *Special education learning progressions in mathematics: An investigation using the BEAR Assessment System*. Paper presented at the International Objective Measurement Workshop, Vancouver, Canada.
211. Wilson, M., Irribarra, D. T., & Diakow, R. (2012, April). *Evaluating practical implications of alternative latent structures: Consequences for interpretation*. Paper presented at the AERA annual meeting, Vancouver, Canada.
210. Wilson, M. & Scalise, K. (2012, April). *Assessment of learning in digital social networks*. Paper presented at the AERA annual meeting, Vancouver, Canada.
209. Seeratan, K. L., Draney, K. L., Haertel, G. D., Fisher, W. P., Murray, E. Blackorby, J., Wilson, M. R., Saldarriaga, C., Lee, H-K., Thayer, S., Lim, S., McKerracher A. M. (2012, April). *Diagnostic learning progressions framework—Developing a universally designed classroom assessment system that is inclusive of students with mathematics learning disabilities: Our First Pilot Study*. Paper presented at the AERA annual meeting, Vancouver, Canada.
208. Wilson, M. & Moore, S. (2012, April). *DRDPtech: Desired Results Developmental Profile (DRDP) online assessment system*. Paper presented at the AERA annual meeting, Vancouver, Canada.
207. Wilson, M. & Moore, S. (2012, April). *Research studies supporting Desired Results Development Profile 2010 validity*. Paper presented at the AERA annual meeting, Vancouver, Canada.
206. Diakow, R., Irribarra, D. T., & Wilson, M. (2012, April). *Analyzing the complex structure of a learning progression: Structured Construct Models*. Paper presented at the National Council on Measurement in Education Annual Meeting, Vancouver, Canada.
205. Lee, Y., & Wilson, M. (2012, April). *A multidimensional model with internal factors for componential structure of data*. Paper presented at the National Council on Measurement in Education Annual Meeting, Vancouver, Canada.
204. Choi, J., Wilson, M., & Rabe-Hesketh, S. (2012, April). *An evaluation of the GLLAMM approach to generalizability in item response modeling*. Paper presented at the National Council on Measurement in Education Annual Meeting, Vancouver, Canada.
203. Choi, J., Shin, H.J., Draney, K. Anderson, C.W., & Wilson, M. (2012, April). *Exploring the relationship between forced-choices and constructed responses of mixed-format items using MIRT estimates*. Paper presented at the National Council on Measurement in Education Annual Meeting, Vancouver, Canada.

202. Irribarra, D. T., Diakow, R., & Wilson, M. (2012, April). *Alternative specifications for structured construct models*. Paper presented at the IOMW 2012 Conference, Vancouver, Canada.
201. Wilson, M., Irribarra, D. T., & Maul, A. (2012, April). *What's philosophy got to do with measuring?: On the disconnect between theory and practice in social science measurement*. Paper presented at the IOMW 2012 Conference, Vancouver, Canada.
200. Moore, S., Wilson, M., Yi-Hung Lin, Y. (2012, April). *Measurement scales linked and equated across age-level assessments to span developmental trajectories from birth to kindergarten for multiple domains in early-childhood education: The Desired Results Development Profile (DRDP)*. Paper presented at the IOMW 2012 Conference, Vancouver, Canada.
199. Duckor, B., Draney, K., Wilson, M. (2012, April). *Assessing assessing; An item response approach*. Paper presented at the IOMW 2012 Conference, Vancouver, Canada.
198. Lehrer, R., Wilson, M., Ayers, E., & Kim, M-J. (2011, September). *Assessing data modeling and statistical reasoning*. Paper presented at the Fall Conference, Society for Research on Educational Effectiveness (SREE), Washington, DC.
197. Choi, I-H., & Wilson, M. (2011, July). *Mixture extensions of the linear logistic test model (LLTM) using markov chain monte carlo (MCMC) estimation*. Paper presented at the International Meeting of the Psychometric Society, Hong Kong, China.
196. Lee, Y., & Wilson, M. (2011, July). *Random item MIRID modeling and its application*. Paper presented at the International Meeting of the Psychometric Society, Hong Kong, China.
195. Wilson, M., Ayers, E., & Lehrer, R. (2011, July). *Developing assessments of data modeling and mapping a learning progression*. Paper presented at the International Meeting of the Psychometric Society, Hong Kong, China.
194. Schwartz, R., Ayers, E., & Wilson, M. (2011, July). *Mapping a learning progression using unidimensional and multidimensional item response models*. Paper presented at the International Meeting of the Psychometric Society, Hong Kong, China.
193. Ayers, E., Torres Irribarra, D., Wilson, M. (2011, July). *Modeling links between dimensions of a learning progression using SEM*. Paper presented at the International Meeting of the Psychometric Society, Hong Kong, China.
192. Choi, J., Wilson, M., & Rabe-Hesketh, S. (2011, July). *Combining generalizability theory and item response theory using the GLLAMM framework*. Paper presented at the International Meeting of the Psychometric Society, Hong Kong, China.
191. Wilson, M. (2011, April). *Linking dimensions in an outcome progression*. Paper presented



- at the annual meeting of the Jean Piaget Society, Berkeley, California.
190. Diakow, R., Irribarra, D. T., & Wilson, M. (2011, April). Analyzing the complex structure of a learning progression: Structured construct models. In E. Ayers (Chair) *Measuring Learning Progression for Data Modeling: Psychometric Modeling and Issues*. Symposium conducted at the annual meeting of the National Council of Measurement in Education, New Orleans, Louisiana.
189. Schwartz, R., Ayers, E., & Wilson, M. (2011, April). Mapping a learning progression using unidimensional and multidimensional item response modeling. In E. Ayers (Chair) *Measuring Learning Progression for Data Modeling: Psychometric Modeling and Issues*. Symposium conducted at the annual meeting of the National Council of Measurement in Education, New Orleans, Louisiana.
188. Ayers, E., & Wilson, M. (2011, April). *Pre-post analysis using a 2-dimensional IRT model*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, Louisiana.
187. Lehrer, R., & Wilson, M. (2011, April). *Developing assessments of data modeling: Construct maps as boundary objects*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, Louisiana.
186. Moss, P. A. & Wilson, M. (2011, April). *Developing an integrated assessment system in elementary teacher education (DIAS): Mathematics*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, Louisiana.
185. Seeratan, K.L., Draney, K., Wilson, M., Haertel, G., Murray, E., & Blackorby, J. (2011, April). *Diagnostic learning progressions framework: Developing a universally designed formative and summative classroom assessment system for students with mathematics learning disabilities*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, Louisiana.
184. Wilson, M. (2010, March). *Discussant notes*. Discussant at a symposium on “Cognition and Valid Inferences about Student Achievement” at the annual meeting of the American Educational Research Association, Denver, Colorado.
183. Moss, P., Wilson, M. & Dray, A.J. (2010, October). *A role for learning progressions in teacher education: The DIAS project*. Paper presented at the annual meeting of the California Council on Teacher Education, San Diego, California.
182. Schwartz, R., Ayers, E., & Wilson, M. (2010, April). *Modeling a multi-dimensional learning progression*. Paper presented at the annual meeting of the American Educational Research Association. Denver, Colorado.
181. Dray, A.J., Brown, N.J., Lee, Y., Diakow, R & Wilson, M. (2010, May). *The nature of “embedded assessment:” The development of a measure of reading comprehension for*

- struggling adolescent readers*. Paper presented at the annual meeting of the American Education Research Association, Denver, Colorado.
180. De Boeck, P., & Wilson, M. (2010, May). *Multidimensional random item profile Models*. Paper presented at the Annual Meeting of the National Council for Measurement in Education, Denver, Colorado.
179. Yao, S-Y., & Wilson, M. (2010, May). *Random item profile modeling of DIF*. Paper presented at the Annual Meeting of the National Council for Measurement in Education, Denver, Colorado.
178. Choi, J., Chen, J., Wilson, M. (2010, May). *Random item profile modeling of polytomous responses*. Paper presented at the Annual Meeting of the National Council for Measurement in Education, Denver, Colorado.
177. Shavelson, R. J, Moss, P., Wilson, M., Duckor, B., Baron, W., & Wilmot, D. (2010, May). *The promise of teacher learning progressions: Challenges and opportunities for articulating growth in the profession*. Paper presented at the Annual Meeting of the American Education Research Association, Denver, Colorado.
176. Scalise, K., & Wilson, M. (2010, May). *Examining student reasoning with bundle models in criterion-referenced assessment*. Paper presented at the Annual Meeting of the National Council for Measurement in Education, Denver, Colorado.
175. Diakow, R., Torres Iribarra, D., & Wilson, M. (2010, May). *New graphical methods for the representation of Ordered Partition Models*. Paper presented at the Annual Meeting of the National Council for Measurement in Education, Denver, Colorado.
174. Brown, N. S., Kulikowich, J. N., & Wilson, M. (2010, May). *Learning progressions in science: Theoretical, curricular, assessment, and psychometric considerations*. Paper presented at the Annual Meeting of the American Educational Research Association, Denver, Colorado.
173. Wilson, M. (2010, May). *21st-Century measurement for 21st-Century skills*. Paper presented at the Annual Meeting of the American Educational Research Association, Denver, Colorado.
172. Berson, E., Yao, S-Y., Morell, L., & Wilson, M. (2010, May). *Teachers and researchers: Codeveloping classroom assessments for eighth-grade physical science*. Paper presented at the Annual Meeting of the American Educational Research Association, Denver, Colorado.
171. Wilson, M., Scalise, K., Gochyyev, P., Lin, Y-H., & Torres Iribarra, D. (2010, May). *Progress monitoring for real classroom contexts: The Formative Assessment Delivery System*. Paper presented at the Annual Meeting of the American Educational Research Association, Denver, Colorado.

170. Moss, P. A. & Wilson, M. (2010, May). *A role for learning progressions in teacher education: The DIAS assessment system*. Paper presented at the Annual Meeting of the American Educational Research Association, Denver, Colorado.
169. Brown, N., Nagashima, S., Fu, A., Timms, M., & Wilson, M. (2010, April). *Analyzing scientific reasoning in assessments using construct modeling and the Evidence-Based Reasoning Framework*. Paper presented at the International Objective Measurement Workshop, University of Colorado, Boulder, Colorado.
168. Choi, I., Kim, Y., Moore, S., & Wilson, M. (2010, April). *The Desired Results Developmental Profile: Validity evidence for a multidimensional, multi-age instrument*. Paper presented at the International Objective Measurement Workshop, University of Colorado, Boulder, Colorado.
167. Yao, S. Y., Berson, E., Ayers, E., Cho, S., & Wilson, M. (2010, April). *The qualitative inner loop of the BEAR Assessment System*. Paper presented at the International Objective Measurement Workshop, University of Colorado, Boulder, Colorado.
166. Wilson, M., & Morell, L. (2010, April). *The BEAR Assessment System—state of the art*. Paper presented at the International Objective Measurement Workshop, University of Colorado, Boulder, Colorado.
165. Dray, A.J., Brown, N.J., Lee, Y., Diakow, R & Wilson, M. (2010, April). *The San Diego Striving Readers Assessment Project: Creating measures of reading comprehension for adolescent readers*. Paper presented at the International Objective Measurement Workshop, University of Colorado, Boulder, Colorado.
164. Kim, M. J., Zhou, W., Dray, A., Walker, L., Lehrer, R. & Wilson, M. (2009, June). *Assessing data modeling and statistical reasoning*. Poster session presented at the annual meeting of the Institute of Education Sciences Research Conference, Washington D.C.
163. Walker, L., Schwartz, R., Dray, A.J., Torres, D.I., Full, M.C. & Wilson, M. (2009, April). *Assessing data modeling: A multidimensional analysis*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, California.
162. Wilson, M., Kennedy, C., Su, Y.-H., & Scalise, K. (April, 2009). *The Formative Assessment Delivery System (FADS)*. Paper presented at the annual meeting of American Educational Research Association, San Diego, California.
161. Cho, S-J., De Boeck, P., & Wilson, M. (2009, April). *Secondary dimension modeling of DIF: A mixture approach for test speededness*. Paper presented at the annual meeting of the National Council for Measurement in Education, San Diego, California.

160. Wilson, M. (2009, April). *Growth in student achievement: Can we have both meaning and technical rigor?* Paper presented at the annual meeting of the National Council for Measurement in Education, San Diego, California.
159. Black, P., & Wilson, M. (2009, April). *Learning progressions to guide systems of formative and summative assessment.* Paper presented at the annual meeting of the American Educational Research Association, San Diego, California.
158. Wilson, M. (2009, April). *Evidence in learner assessment: A multilevel validity strategy.* Paper presented at the annual meeting of the American Educational Research Association, San Diego, California.
157. Dray, A., Weinberg, P., Lehrer, R., Wilson, M. (2008, June). *Assessing data modeling in middle school students.* Poster presented at the Institute of Education Sciences Research Conference, Washington D.C.
156. Wilson, M., Zheng, X., & Walker, L. (2008, June). *Latent Growth Item Response Models.* Paper presented at the International Meeting of the Psychometric Society, Durham, New Hampshire.
155. Moss, P. A., Boerst, T., Duckor, B., Blunk, M., Lewis, J., Ball, D. L., Huang, X., Jang, H., and Wilson, M. (2008, March). *Developing an Integrated Assessment System for Teacher Education: Elementary Mathematics.* Paper presented at the Annual Meeting of the American Educational Research Association, New York.
154. Brown, N.J., Wilson, M., Dray, A.J., Lee, Y. (2008, March). *Assessing literacy in the classroom: The Berkeley Evaluation and Assessment Research system for the Striving Readers Literacy project.* Paper presented at the annual meeting of the American Educational Research Association, New York, New York.
153. Wilson, M. (2008, March). *Measuring progressions.* In A. C. Alonzo & A. W. Gotwals (Chairs), *Diverse perspectives on the development, assessment, and validation of learning progressions in science.* Symposium conducted at the annual meeting of the American Educational Research Association, New York, New York. Retrieved March 30, 2008, from <http://myweb.uiowa.edu/alonzo/aera2008.html>
152. Seeratan, K. L., Zhou, W., Karelitz, T., Burmester, K., Kim, M., Full, M., Schwartz, R., & Wilson, M. (2008, March). *Making sense of student responses to assessment items using scoring exemplars.* Paper presented at the annual meeting of the American Educational Research Association, New York, New York.
151. Scalise, K., Claesgens, J., Wilson, M., & Stacy, A. (2007, October). *ChemQuery: An assessment system for mapping student progress in learning general chemistry.* Paper presented in the Proceedings of the National STEM Assessment Conference, Washington, D.C.

150. Wilson, M. (2007, September). *On the large scale*. Paper presented at the European Association for Research in Learning and Instruction (EARLI) annual conference, Budapest, Hungary.
149. Draney, K. Wilson, M., Choi, J., & Lee, Y. (2007, July). *Developing progress variables and learning progressions for the Carbon Cycle*. Interactive Poster Session for the Knowledge Sharing Institute (KSI) of the Center for Curriculum Materials in Science (CCMS), Washington, DC.
148. Scalise, K., & Wilson, M. (2007). *Bundle models for computer adaptive testing in E-learning assessment*. Paper presented at the 2007 Graduate Management Admission Council (GMAC) Conference on Computerized Adaptive Testing, Minneapolis, Minnesota.  
Also presented at the annual meeting of the American Educational Research Association, New York, New York, March, 2008.
147. Wilson, M. (2007, March). *Implications of cognitive and sociocultural studies for the practice of assessment: A dialogue across different perspectives*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois.
146. Wilson, M., & Black, P. (2007, March). *The idea of a learning progression as a core for both instruction and assessment*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois.
145. Wilson, M. (2007, March). *Constructing measures: An item response modeling approach*. Paper presented at the annual meeting of the National Council for Measurement in Education, Chicago, Illinois.
144. Wilson, M. (2007, March). *Reflections on brokering psychometric and teaching/learning communities*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois.
143. Claesgens, J. M., Scalise, K., Draney, K. L., Wilson, M., & Stacy, A. (2007, March). *The ChemQuery story: Measurable insights on how students learn chemistry*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois.
142. Liu, O. L., & Wilson, M. (2007, March). *Gender differences and similarities in PISA 2003 Mathematics: A comparison between the United States and Hong Kong*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois.
141. Paek, I., Stankov, L., Lee, J., & Wilson, M. (2007, March). *A study of confidence and accuracy using the Rasch modeling procedures*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois.

140. Scalise, K., Claesgens, J., Wilson, M., & Stacy, A. (2006). *ChemQuery: An assessment system for mapping student progress in learning General Chemistry*. Paper presented at the NSF Conference for Assessment of Student Achievement, Washington, D.C.
139. Allen, D. D., & Wilson, M. (2006, July). *Introducing multidimensional item response modeling: the Treatment of Self-Regulation Questionnaire*. Symposium presented at the annual conference of the International Society of Behavioral Nutrition and Physical Activity, Boston, Massachusetts.
138. Allen, D. D., & Wilson, M. (2006, July). *Introduction to Item Response Theory methods and omparison to Classical Test Theory*. Symposium presented at the annual conference of the International Society of Behavioral Nutrition and Physical Activity, Boston, Massachusetts.
137. Brown, N. S., Kennedy, C., Draney, K., & Wilson, M. (2006, April). *Assessing a learning progression in science: Solving psychometric issues*. Paper presented at the 13<sup>th</sup> meeting of the International Objective Measurement Workshop, Berkeley, California.
136. Paek, I., Yon, H., & Wilson, M. (2006, April). *Random parameter structure and testlet model: Extension of the Rasch testlet model*. Paper presented at the 13<sup>th</sup> meeting of the International Objective Measurement Workshop, Berkeley, California.
135. Xie, Y., & Wilson, M. (2006, April). *Imperial vs. Metric study (IMS)*. Paper presented at the 13<sup>th</sup> meeting of the International Objective Measurement Workshop, Berkeley, California.
134. Yamada, H., Draney, K., Karelitz, T., Moore, S., & Wilson, M. (2006, April). *Comparison of dimension-aligning techniques in a multidimensional IRT context*. Paper presented at the 13<sup>th</sup> meeting of the International Objective Measurement Workshop, Berkeley, California.
133. O'Rourke, K., Karelitz, T., Zheng, X., Wilson, M. (2006, April). *Measuring statistical reasoning: development of an assessment system for data modeling*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.
132. Karelitz, T., Draney, K., & Wilson, M. (2006, April). *Diagnostic assessment using continuous vs. discrete ability models*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.
131. Wilson, M., & Hallam, P. J., Pecheone, R., & Moss, P. (2006, April). *Using student achievement test scores as evidence of external validity for indicators of teacher quality: Connecticut's Beginning Educator Support and Training Program*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.

130. Kennedy, C., Brown, N. S., Draney, K., & Wilson, M. (2006, April). *Using progress variables and embedded assessments to improve learning*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.
129. Long, K., Kennedy, C., Wilson, M., Fried, R., Haertel, G., & Murphy, R. (2006, April). *An illustration of how FOSS designed and implemented assessments in PADI*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.
128. Wilson, M. & Mangione, P. (2006, January). *Theory to practice: Conceptualizing and creating developmental indicators*. Paper presented at a meeting on the First 5 Preschool Evaluation, First 5 California, Los Angeles, California.
127. Wilson, M. (2005, October). *Introduction to IRT applications for PRO assessment*. Paper presented at the annual meeting of the International Society of Quality of Life, San Francisco, California.
126. Karelitz, T., Draney, K., & Wilson, M. (2005, July). *Linking continuous and categorical models*. Paper presented at the 70<sup>th</sup> Annual Meeting of the Psychometric Society, Tilburg, The Netherlands.
125. Wilson, M. (2005, June). *Systems for state science assessment*. Paper presented at the Large Scale Assessment Conference of the Chief State School Officers Association, San Antonio, Texas.
124. Wilson, M., & Draney, K. (2005, June). *Some links between large-scale and classroom assessments: The case of the BEAR Assessment System*. Paper presented at the Large Scale Assessment Conference of the Chief State School Officers Association, San Antonio, Texas.
123. Scalise, K., & Wilson, M. (2005, April). *Bundle models for data driven content in E-learning and CBT: The BEAR CAT approach*. Paper presented at the annual meeting of the National Council for Measurement in Education, Montreal, Canada.
122. Wilson, M., & Draney, K. (2005, April). *Some links between large-scale and classroom assessments: The case of the BEAR Assessment System*. Paper presented at the annual meeting of the National Council for Measurement in Education, Montreal, Canada.
121. Kennedy, C., & Wilson, M. (2005, April). *Models and tools for drawing inferences from student work: The BEAR scoring engine*. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.
120. Draney, K., & Wilson, M. (2005, April). *Assessing multiple dimensions across the years of childhood*. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.

119. Wilson, M., Kennedy, C., Brown, N., & Draney, K. (2005, April). *Using progress variables and embedded assessment to improve teaching and learning*. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.
118. Wilson, M., Karelitz, T., Zheng, X., & Burmester, K. (2005, April). *The assessment system*. Paper presented in a symposium on “Constructing Data, Modeling Worlds: Collaborative Investigation of Statistical Reasoning” at the Research Pre-session to the National Council of Teachers of Mathematics Annual Meeting, Anaheim, California.
117. Wilson, M. (2005, March). *Background to the Committee’s work: Test Design for K-12 Science Achievement*. Paper presentation at the National Science Teachers Association National Convention, Dallas, Texas.
116. Stacy, A., Claesgens, J., Scalise, K., & Wilson, M. (2004). *Perspectives of chemists: A framework to promote conceptual understanding of chemistry*. Paper presented at the 18<sup>th</sup> Biennial Conference on Chemical Education, Ames, Iowa.
115. De Boeck, P., & Wilson, M. (2004, July). *Expressing item response models as GLMMs and NLMMs*. Paper presented at the 24th Biennial Conference of the Society for Multivariate Analysis in the Behavioral Sciences (SMABS 2004), Jena University, Germany.
114. Wilson, M., & De Boeck, P., (2004, July). *Explanatory measurement models*. Paper presented at the 24th Biennial Conference of the Society for Multivariate Analysis in the Behavioral Sciences (SMABS 2004), Jena University, Germany.
113. De Boeck, P., & Wilson, M. (2004, July). *Explanatory measurement: Further extensions*. Paper presented at the 24th Biennial Conference of the Society for Multivariate Analysis in the Behavioral Sciences (SMABS 2004), Jena University, Germany.
112. Wilson, M. (2004, July). *On choosing a model for measuring. Part II: Polytomous data*. Paper presented at the International Objective Measurement Workshop, Cairns, Australia.
111. Wilson, M., Allen, D., & Li, J. C. (2004, June). Applying item response modeling to the Self Efficacy Scale. Paper presented at the NCI, NIH, DHHS, and DIA Advances in Health Outcomes Measurement Conference, Bethesda, Maryland.
110. Allen, D., Wilson, M., & Li, J. C. (2004, June). Investigating validity and reliability of the Self Efficacy Scale: Comparing classical test theory and item response modeling. Paper presented at the NCI, NIH, DHHS, and DIA Advances in Health Outcomes Measurement Conference, Bethesda, Maryland.
109. Wilson, M., Allen, D., & Li, J. C. (2004, June). Advanced measurement issues in the Behavioral Sciences. Paper presented at the NCI, NIH, DHHS, and DIA Advances in Health Outcomes Measurement Conference, Bethesda, Maryland.



108. Briggs, D., Alonzo, A., Schwab, C., & Wilson, M. (2004, June). *Modeling partial information in multiple choice items*. Paper presented at the 69<sup>th</sup> Annual Meeting of the Psychometric Society, Monterey, California.
107. Paek, I., & Wilson, M. (2004, June). *Type I error and power of multidimensional and unidimensional DIF methods in a multidimensional test: MRCML DIF model, RCML DIF model, and SIBTEST*. Paper presented at the 69<sup>th</sup> Annual Meeting of the Psychometric Society, Monterey, California.
106. Wilson, M., Mangione, P. L., Brown, R. S., Heal, H. B., & Moore, S. (2004, April). *Theory to practice: Conceptualizing and creating developmental indicators across domains*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, California (Also presented at the HeadStart National Research Conference, Washington, DC.)
105. Wilson, M., & Kennedy, C. (2004, April). *Next steps: PADI calibration and scoring engine*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, California.
104. Scalise, K., Claesgens, J., Krystyniak, R., Mebane, S., Wilson, M., & Stacy, A. (2004, April). *Perspectives of Chemists: Tracking conceptual understanding of student learning in chemistry at the secondary and university levels*. Paper presented at the American Educational Research Association Annual Meeting, San Diego, California.
103. Briggs, D., Alonzo, A., Schwab, C., & Wilson, M. (2004). *Developmental assessment with ordered multiple-choice items*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, California.
102. Wilson, M., Moore, S. M., & Brown, R. S. (2004, April). *Psychometric scaling of developmental outcomes: Assessing multiple dimensions across the years of childhood*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, California.
101. Rost, J., & Wilson, M. (2003, November). *Testable facts of science competence—TEFASCO*. Paper presented at the International Conference on research and development in Mathematics and Science Education, Washington, DC.
100. Wilson, M., & Draney, K. (2003, July). *Selecting cut scores with a composite of item types: The “Construct Mapping” procedure*. Paper presented at the “Bilateral workshop on psychometrics: Flanders—Chile,” Leuven, Belgium.
99. Wilson, M., & Xie, Y. (2003, July). *Modeling fixed and random item features with SAS NLMixed*. Presented at the International Meeting of the Psychometric Society, Cagliari (Sardinia), Italy

98. Wilson, M. (2003, April). *Measurement as struggle*. Paper presented at the Conference in honor of Ben Wright, Chicago, Illinois.
97. Mislevy, R., Wilson, M., & Murphy, R. (2003, April). *Next Steps for the PADI Project*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois.
96. Kang, S., & Wilson, M. (2003, April). *A Crossed Multilevel IRT Model for Analyzing Rated Polytomous Measures*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois.
95. Wilson, M., & Draney, K. (2003, March). *The BEAR Assessment System: Balance and coherence*. Paper presented at the International Conference on research and development in Mathematics and Science Education, Kiel, Germany.
94. Araki, C. J., & Wilson, M. (2003, April). *Self-Selected Study Activities of Ethnically Diverse College Students*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois.
93. Paek, I., Peres, D. G. , & Wilson, M. (2002, April). *Constructing one scale to describe two statewide exams*. Paper presented at the International Objective Measurement Workshop, New Orleans, Louisiana.
92. Kim, S., & Wilson, M. (2002, April). *A comparative analysis of the ratings in performance assessment using generalizability theory and the many-facet Rasch model*. Paper presented at the International Objective Measurement Workshop, New Orleans, Louisiana.
91. Claesgens, J., Scalise, K., Draney, K., Wilson, M. & Stacey, A. (2002, April). *Perspectives of Chemists: A framework to promote conceptual understanding of chemistry*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, Louisiana.
90. Wilson, M. (2001, November). *Advances in measurement and statistical modeling*. Paper presented at the National Academy Workshop on "Technology and Assessment: Thinking Ahead," Washington, DC.
89. Briggs, D., & Wilson, M. (2001, April). *Multidimensional measurement using Rasch models*. Paper presented at the annual meeting of the American Educational Research Association, Seattle, Washington.
88. Wilson, M. (2001, April). *Developments in test theory and psychometrics*. Paper presented at the annual meeting of the American Educational Research Association, Seattle, Washington.

87. Wilson, M., Hoskens, M., & Draney, K. (2001, April). *Rater effects: Some issues, some solutions*. Paper presented at the annual meeting of the American Educational Research Association, Seattle, Washington.
86. Wilson, M., & Draney, K. (2000, June). *Developmental assessment strategies in a statewide testing program: Scale interpretation, standard setting, and task-scoring for the Golden State Examinations*. Paper presented at the Council of Chief State School Officers National Conference on Large Scale Assessment, Snowbird, Utah.
85. Wilson, M., Draney, K. & Hoskens, M. (2000, April). *Standard Setting on a Composite of Item Types: The "StandardMapping" procedure*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, Louisiana.
84. Patz, R., Junker, B., Hoskens, M. & Wilson, M. (2000, April). *Advances in item response models for multiple ratings of student work*. Paper presented at the annual meeting of the National Council for Measurement in Education, New Orleans, Louisiana.
83. Briggs, D. & Wilson, M. (2000, April). *An introduction to multidimensional measurement*. Paper presented at the International Objective Measurement Workshop, New Orleans, Louisiana.
82. Wang, W., Wilson, M., & Cheng, Y. (2000, April). *Local dependence between latent traits when common stimuli are used*. Paper presented at the International Objective Measurement Workshop, New Orleans, Louisiana.
81. Wilson, M. (2000, April). *Rasch models for item bundles*. Paper presented at the International Objective Measurement Workshop, New Orleans, Louisiana.
80. Hoskens, M., & Wilson, M. (2000, April). *The rater bundle model*. Paper presented at the International Objective Measurement Workshop, New Orleans, Louisiana.
79. Wilson, M. (1999, August). *Making the punishment fit the crime: Examples from psychometric modeling*. Paper presented at the annual convention of the American Psychological Association, Boston, Massachusetts.
78. Wilson, M., Draney, K., Adams, R., & Wu, M. (1999, July). *ConQuest Workshop* presented at the European Meeting of the Psychometric Society, Lueneburg, Germany.
77. Wilson, M. (1999, July). *Testing stages*. Paper presented at the European Meeting of the Psychometric Society, Lueneburg, Germany.  
Also presented at the Cognition and Development Colloquium, UC-Berkeley, September, 1999)
76. Dawson, T. L., Commons, M. L., Wilson, M., & Xie, Y. (1999, June). *The General Model of Hierarchical Complexity Scoring System: Refinements and additions*. Paper presented at the annual symposium of the Jean Piaget Society, Mexico City, Mexico.

75. Dawson, T. L., & Wilson, M. (1999, June). *Why do different stage-scoring methods yield similar scores? Insights from a study of expert scorers*. Paper presented at the Annual symposium of the Jean Piaget Society, Mexico City, Mexico.
74. Wilson, M. (1999, June). *Rater Feedback Based on Item Response Modeling*. Council of Chief State School Officers National Conference on Large Scale Assessment, Snowbird, Utah.
73. Wilson, M. (1999, June). *Modeling Repeated Ratings of Student Work*. Council of Chief State School Officers National Conference on Large Scale Assessment, Snowbird, Utah.
72. Wilson, M., & Hoskens, M. (1999, April). *The rater bundle model*. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.
71. Wilson, M. & Hofstetter, C. (1999, January). *Evaluation Training Program (ETP)*, Paper presented at The National Science Foundation Workshop on Training Mathematics and Science Evaluators. University of California, Berkeley. Berkeley, California.
70. Wilson, M. & Hofstetter, C. (1998, November). *The Evaluation Training Program Doctorate in Program Evaluation at Berkeley*. Paper presented at the American Evaluation Association annual meeting, Chicago, Illinois.
69. Draney, K., & Wilson, M. (1998, June). *Creating composite scores and setting performance levels: Use of a scaling procedure*. Paper presented at the Council of Chief State School Officers National Conference on Large Scale Assessment, Colorado Springs, Colorado.
68. Wilson, M., & Draney, K. (1998, June). *Creating composite scores and setting performance levels: Comparison of raw score and scaling procedures*. Paper presented at the Council of Chief State School Officers National Conference on Large Scale Assessment, Colorado Springs, Colorado.
67. Roberts, L. & Wilson, M. (1998, April). *Evaluating the effects of an integrated assessment system: Changing teacher's practices and improving student achievement in science*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, California.
66. Patz, R., Wilson, M., & Hoskens, M. (1998, April). *Rater effects in NAEP: Recommendations for detection, evaluation and mitigation*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, California.
65. Wilson, M. (1997, September). *The California comparability study*. Paper presented at Comparability Symposium, sponsored by The Los Angeles County Office of Education, and the California Department of Education, Burlingame, California.

64. Draney, K., & Wilson, M. (1997, July). *Mapping student progress with embedded assessments: The challenge of making evaluation meaningful*. Paper presented at the National Evaluation Institute workshop, Indianapolis, Indiana.
63. Hoskens, M., Wilson, M., & Stavisky, H. (1997, June). *Accounting for rater effects in large scale testing using IRT*. Paper presented at the International Meeting of the Psychometric Society, Santiago de Compostela, Spain.
62. Wilson, M. & Draney, K. (1997, March). *Beyond Rasch in the measurement of stage-like development*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois.  
Also presented at the Ninth International Objective Measurement Workshop, Chicago, Illinois, March, 1997.
61. Dawson, T. L., Goodheart, E. A., Draney, K., Wilson, M., Commons, M. L. (1997, March). *Concrete, abstract, formal, and systematic operations as observed in a "Piagetian" balance-beam task Series*. Paper presented at the annual meeting of the AERA. Chicago, Illinois.
60. Hoskens, M., & Wilson, M. (1997, February). *A state-wide performance assessment survey in science*. Paper presented at the annual conference of the American Association for the Advancement of Science, Seattle, Washington.
59. Wilson, M. & Draney, K. (1997, February). *Mapping student progress in science with embedded assessments*. Paper presented at the annual conference of the American Association for the Advancement of Science, Seattle, Washington.  
Also presented at the Ninth International Objective Measurement Workshop, Chicago, Illinois, March, 1997.  
Also presented at the annual meeting of the American Educational Research Association, Chicago, Illinois, March, 1997.
58. Wilson, M., & Case, H. (1996, June). *An investigation of the feasibility and potential effects of rater feedback on rater errors*. Paper presented at the Council of Chief State School Officers National Conference, Phoenix, Arizona.
57. Adams, R., & Wilson, M. (1996, April). *Multilevel modeling of complex item responses in multiple dimensions: Why bother?* Paper presented at the annual meeting of the American Educational Research Association, New York, New York.
56. Wilson, M., Hoskens, M., & Wang, W. (1996, April). *Complex item responses: Rater effects and item dependency*. Paper presented at the annual meeting of the American Educational Research Association, New York, New York.
55. Wilson, M., & Hoskens, M. (1996, April). *Multidimensional item responses: Multimethod-multitrait perspectives*. Paper presented at the annual meeting of the American Educational Research Association, New York, New York.

54. Wilson, M., Thier, H., Sloane, K. & Nagle, B. (1996, April). *What have we learned from developing an embedded assessment system?* Paper presented at the annual meeting of the American Educational Research Association, New York, New York.
53. Wilson, M. & Draney, K.. (1996, April). *Mapping student progress with embedded assessments* Paper presented at the annual meeting of the American Educational Research Association, New York, New York.
52. Wang, W., Wilson, M., & Adams, R. (1996, April). *The multidimensional random coefficients multinomial logit model for measuring individual differences in change.* Paper presented at the annual meeting of the American Educational Research Association, New York, New York.
51. Wilson, M. & Adams, R.J. (1995, August). *Issues in complex sampling involving latent variables.* Paper presented at the annual meeting of the American Statistical Association, Orlando, Florida.
50. Wilson, M., & Hoskens, M. (1995, July). *A conjunctive item response model for componential data.* Paper presented at the European meeting of the Psychometric Society, Leiden, The Netherlands.
49. Wang, W., & Wilson, M. (1995, April). *Item response modeling for multidimensional between-items and multidimensional within-items.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.
48. Kaufman, P., Wilson, M., & Adams, R. (1995, April). *Multilevel item response models of students "at risk".* Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.
47. Wilson, M. & Draney, K. (1995, April). *Partial credit in a developmental context: A mixture model approach.* Paper presented at the annual meeting of the National Council for Measurement in Education, San Francisco, California (Also presented at the Eighth International Objective Measurement Workshop, Berkeley, California).
46. Wilson, M., and Adams, R.J. (1994, June). *Beyond plausibility?* Paper presented at the annual meeting of the Psychometric Society, Champaign-Urbana, Illinois.
45. Wilson, M. (1994, April). *Multimode assessment involving raters.* Paper presented at the annual meeting of the American Educational Research Association, Atlanta, Georgia.
44. Draney, K.L., & Wilson, M.R. (1994, April). *An object-based learning environment for exploratory data analysis.* Paper presented at the annual meeting of the American Educational Research Association, Atlanta, Georgia.
43. Adams, R.J., & Wilson, M. (1994, April). *A non-linear multilevel model: An alternative to plausible values.* Paper presented at the annual meeting of the American Educational Research Association, New Orleans, Georgia.

42. Pirolli, P. & Wilson, M. (1993). *A theory for the scientific measurement of knowledge systems operating in context*. The Human Machine Cognition Conference, Pensacola, FL.
41. Wilson, M. (1993, June). *A multilevel perspective on quasi-experimental research*. Paper presented at the annual meeting of the Psychometric Society, Berkeley, California.
40. Pirolli, P., Wilson, M., & Draney, K. (1993, May). *Cognitive diagnosis of self explanation and self regulation strategies using the CMU LISP Tutor*. Conference on Alternative Diagnostic Assessment, University of Iowa, Iowa City, Iowa.
39. Wilson, M., & Pirolli, P. (1993, May). *Measurement of cognitive systems*. Conference on Alternative Diagnostic Assessment, University of Iowa, Iowa City, Iowa.
38. Wilson, M. (1993, April). *The RCML family*. Paper presented at the Seventh International Objective Measurement Workshop, Emory University, Atlanta, Georgia.
37. Draney, K, Pirolli, P., & Wilson, M. (1993, April). *Using the RCML to investigate linear logistic test models in a complex domain*. Paper presented at the Seventh International Objective Measurement Workshop, Emory University, Atlanta, Georgia.
36. Adams, R.J., Wilson, M., and Wu, M. (1993, April). *Multilevel item response modelling*. Paper presented at the annual meeting of the American Educational Research Association, Atlanta, Georgia.
35. Wang, W., & Wilson, M. (1993, March). *Comparing multiple-choice and performance-based items*. Paper presented at the California Learning Assessment System Technical Advisory Committee meeting, San Francisco, March 1993. Also presented at the Seventh International Objective Measurement Workshop, Emory University, Atlanta, Georgia.
34. Wilson, M., and Adams, R.J. (1992, July). *A multilevel perspective on the "two scientific disciplines of psychology"*. Paper presented in a symposium at the XXV International Congress of Psychology, Brussels, Belgium.
33. Pirolli, P., & Wilson, M. (1992, June). *Measuring learning strategies and understanding: A research framework*. Paper presented at the ITS'92 (Intelligent Tutoring Systems 1992) conference, Montreal, Canada.
32. Adams, R.A, & Wilson, M. (1992, April). *A random coefficients multinomial logit: Generalising Rasch models*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.
31. Wilson, M., & Adams, R.A. (1992, April). *Rasch models for item bundles*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.

30. Draney, K., & Wilson, M. (1992). *The impact of design characteristics on study outcomes in retention research: A meta-analytic perspective*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.
29. Wilson, M. (1991). *To describe their performances well: Contributions towards a new psychometrics*. Paper presented at the National Academy of Education Spencer Fellows Forum, Boston, Massachusetts.
28. Pirolli, P., & Wilson, M. (1991). *Alternative measurement models for student modelling in Intelligent Tutoring Systems*. Paper presented at the first meeting of the Office of Naval Research Cognitive Diagnosis Group, LRDC, Pittsburgh, Pennsylvania.
27. Wilson, M. (1991). *Flunking retention; A revision of a meta-analysis*. Paper presented in the Seminar Series in Quantitative Political and Social Science, University of California, Berkeley, Berkeley, California.
26. Wilson, M., & Adams, R. A. (1991). *Describing Rasch models using a linear design matrix*. Paper presented at the Sixth International Objective Measurement Workshop, University of Chicago, Chicago, Illinois.
25. Wilson, M., Bol, L., & Warkentin, R. (1991). *The relationship between biology students' study activities and their achievement as moderated by course characteristics: A hierarchical linear model*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois.
24. Wilson, M., & Masters, G. (1991). *The partial credit model and null categories*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois.
23. Wilson, M. (1991). *Implications of new perspectives on student assessment for Chapter 1 and its evaluation: Educational leverage from a political necessity*. Paper presented at the meeting of the Chapter I Performance Assessment Work Group, California State Department of Education, Sacramento, California.
22. Wilson, M. (1991). *A moderation perspective on the California Assessment Project*. Paper presented at the meeting of the Technical Advisory Committee, California Assessment Project, San Francisco, California.
21. Wilson, M. (1990). *An extension of the partial credit model to incorporate diagnostic information*. Paper presented at the annual meeting of the National Council for Measurement in Education, Boston, Massachusetts.
20. Ekstrand (Draney), K., & Wilson, M. (1990). *Application of the Saltus model to a Piagetian test of cognitive development*. Paper presented at the annual meeting of the American Educational Research Association, Boston, Massachusetts.
19. Wilson, M. (1989). *Commentary on an integrated approach to quantifying research synthesis*. Invited paper presented at the Second Meeting of the Collaborative Alcohol-



- related Longitudinal Project, Institute for Health and Aging, University of California, San Francisco, California.
18. Wilson, M. (1989). *Saltus: A psychometric model of discontinuity in cognitive development*. Paper presented at the annual meeting of the Society for Mathematical Psychology, Irvine, California.
  17. Wilson, M. (1989). *Some comments on the use of Item Response Theory*. Invited paper presented at the Australian Council for Educational Research Symposium on Applications of IRT to System-wide Testing, Melbourne, Australia.
  16. Wilson, M. (1989). *The partial order model*. Paper presented at the Fifth International Objective Measurement Workshop, University of California, Berkeley, Berkeley, California.
  15. Wilson, M. (1989). *Application of a polytomous IRT model to attitude assessment in program evaluation*. Paper presented at the Fifth International Objective Measurement Workshop, University of California, Berkeley, Berkeley, California.
  14. Iventosch, L., & Wilson, M. (1989). *An examination of gender-related item bias in SOLO mathematics items*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.
  13. Thomas, J.W., Rohwer, W.D., & Wilson, M. (1989). *Hierarchical models of studying*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.
  12. Cunningham, A.E., Stanovich, K.E., & Wilson, M. (1989). *Cognitive variation in adult students differing in academic ability*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.
  11. Wilson, M., Iventosch, L., & Gifford, B. (1988). *Bootstrap estimation of standard errors for the hierarchical linear model*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans.
  10. Wilson, M. (1987). *The structure of the quality of school life: An international comparison*. Paper presented at the annual meeting of the National Council on Measurement in Education, Washington DC.
  9. Wilson, M. (1987). *The quality of school life of potential dropouts*. Paper presented at the annual meeting of the American Educational Research Association, Washington DC.
  8. Wilson, M. (1986). *A psychometric model of hierarchical development*. Paper presented at the annual meeting of the American Psychological Association, Washington DC.
  7. Wilson, M. (1986). *The quality of school life in Australian schools*. Paper presented at the annual meeting of the Social Context of Education Division of the American Educational Research Association, Baton Rouge, Louisiana.

6. Wilson, M. (1986). *Modelling SOLO science items*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.
5. Wilson, M. (1985). *Scaling SOLO science items*. Paper presented at the annual meeting of the Australian Association for Research in Education, Hobart, Australia.
4. Wilson, M. (1985). *A psychometric model of stage-like development*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois
3. Wilson, M. (1985). *Scaling mathematical learning hierarchies*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois.
2. Ziomek, R., & Wilson, M. (1984). *A proposed additional index to Glass' effect size estimator with application of mastery learning experiments*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, Louisiana.
1. Wilson, M. (1983). *Finite measures from perfect scores*. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.

#### Workshops, Lecture Series, Etc.

30. Wilson, M. (2016, June). *Constructing measures with the BEAR Assessment System (BAS)*. Workshop given at the MGSE Research Week, University of Melbourne, Melbourne, Australia.
29. Wilson, M. (2015, June). *New measures for an old friend: A learning progression for ICT Literacy*. Workshop given at the Australian Council for Educational Research (ACER) Research Conference, Melbourne, Australia.
28. Wilson, M. & Draney, K. (2015, May). Workshop (5 ½-day sessions) on *Constructing measures with item response modeling*. 5<sup>th</sup> European Educational Research Association Spring School on Advanced Methods in Educational Research, Dortmund, Germany.
27. Wilson, M. (2014 October). *Constructing measures with item response modeling*. Workshop, University of Gdansk. Gdansk, Poland.
26. Wilson, M. (2012, August). *Navigating between large-scale assessment and classroom assessments*. Workshop given at the International Conference on Enhancing National Competiveness—Upgrading Science Education, Bangkok, Thailand.
25. Wilson, M. (2012, May-June). *Methodology for Competence Assessment: A mini-course on Measurement Models*. Invited series of five workshops at the Centre de Recherche en Economie et Statistique (CREST), Paris, France.
24. Muller, C., Wilson, M., & Suter, L. . (2010, May). *Grant Writing for Large-scale Secondary*

- Data Analysis*. Invited workshop (1/2 day) at the Annual Meeting of the American Educational Research Association, Denver, CO.
23. Wilson, M. & Draney, K. (2009, August) *Constructing measures: The BEAR Assessment System*. Invited workshop (1 week) at the NSF Assessment of Learning Progressions Conference, University of Michigan, Ann Arbor, MI.
  22. Wilson, M., Rijmen, F., & Cho, S-J. (2009, July). *A Nonlinear Mixed Models Approach to IRT*. Workshop Pre-session (1/2 day) given at the 2009 SAMSI Summer Program on Psychometrics, Research Triangle Park, NC.
  21. Wilson, M. & Draney, K. (2009, July) *Constructing measures: The BEAR Assessment System*. Invited workshop (1 week) for the NSF IQWST project (University of Michigan & Northwestern University), presented at Berkeley, CA.
  20. Rijmen, F., DeBoeck, P., Tuerlinckx, F., & Wilson, M. (2009, April). *A Nonlinear Mixed Models Approach to IRT*. Workshop Pre-session (1/2 day) given at the annual meeting of the National Council for Measurement in Education, San Diego, CA.
  19. Scalise, K., & Wilson, M., Galpern, A., Lin, Y.-H., & Albornoz, A. M. (2009, April). *Development and Use of Innovative Item Types in Computer-Based Testing*. Workshop Pre-session (1/2 day) given at the annual meeting of the National Council for Measurement in Education, San Diego, CA.
  18. Wilson, M. (2009, February). *Workshop on ACERConQuest*. Invited workshop (1/2 day) at the Faculty of Education, Chulalongkorn University, Bangkok, Thailand.
  17. Wilson, M. & Feldman, B. (2008, September) *Constructing measures: The BEAR Assessment System Updated*. Invited workshop (1/2 day) at the International Conference on Outcomes Assessment, Bethesda, MD.
  16. Wilson, M. & Draney, K. (2008, April) *Constructing measures: The BEAR Assessment System*. Invited workshop (1 week) for the Deutsches Institut für Internationale Pädagogische Forschung (DIPF), Frankfurt, Germany, and presented at the University of Jena, Germany.
  15. Wilson, M. (2007, July). Lecture Series presented at the Summer Academy on Educational Measurement, sponsored by the Max Planck Institute for Human Development, presented at the Freie University, Berlin, Germany:
    - Measurement Models I: Why, What, How?*
    - Measurement Models II: Making measurement meaningful: The BEAR Assessment System*
    - Measurement Models IIIa: Quality control: validity evidence using the Wright Map*
    - Measurement Models IIIb: Multidimensional Models*
    - Measurement Models IV: An introduction to Explanatory Item Response Modeling*

14. Mislevy, R., Haertel, G., Kennedy, C., & Wilson, M. (2007, March). *How to make inferences about learning: Hands-on experience with the PADI design system*. Workshop Pre-session (1/2 day) given at the annual meeting of the American Educational Research Association, Chicago, IL.
  
13. Wilson, M. (2005, October). Keynote Lecture Series at the 21<sup>st</sup> University of Twente IRT Workshop, Enschede, The Netherlands.  
 Lecture I. *A constructive approach to measurement*, (with Kathleen Scalise)  
 Lecture II. *Introduction to Explanatory Item Response Modeling*, (with Paul De Boeck & Claus Carstensen)  
 Lecture III. *Guessing in International Assessments of Educational Achievement*, (with Yiyu Xie)  
 Lecture IV. *Generalizability into Item Response Modeling*, (with Derek Briggs)
  
12. Wilson, M., & Carstensen, C. (2005, September). *Explanatory item response modeling with ConQuest*. Invited workshop (1 day) at the annual conference of the Methodology Division of the German Psychological Association, Muenster, Germany.
  
11. De Boeck, P., Rijmen, F., Tuerlinckx, F., & Wilson, M. (2005, July). *Explanatory IRT*. Invited workshop at the 70<sup>th</sup> Annual Meeting of the Psychometric Society, Tilburg, The Netherlands
  
10. De Boeck, P., & Wilson, M. (2005, April). *A nonlinear mixed model approach to IRT*. Invited workshop (1/2 day) at the annual meeting of the National Council on Measurement in Education, Montreal, Canada.
  
9. Wilson, M. (2004, July). *Workshop on ConQuest*. Invited workshop at the 24th Biennial Conference of the Society for Multivariate Analysis in the Behavioral Sciences (SMABS 2004), Jena University, Germany.
  
8. Wilson, M. (2002, July). The 2002 Summer Workshop Lectures, Educational Testing Service, Princeton, New Jersey.  
 Lecture I. *A constructive approach to measurement*.  
 Lecture II. *On choosing a model for measuring*.  
 Lecture III. *Multidimensional item response modeling: An introduction* (with Derek Briggs).  
 Lecture IV. *Item response modeling as an application of generalized linear mixed models* (with Paul De Boeck).  
 Lecture V. *Modeling differential facet difficulty with SAS NLMixed*. (with Yiyu Xie).
  
7. Wilson, M. (1996). *Many-Aspect Test Software (MATS): Multilevel modeling of complex item responses in multiple dimensions*. Minicourse presented at the annual meeting of the American Educational Research Association, New York.
  
6. Wilson, M. (1994). *Theory and Applications of Assessment*. Malaysia Training Program Workshop, Department of Education, Stanford University.

5. Masters, G., & Wilson, M. (1991, March). *Partial credit models: Advanced session for statistical analysis and measurement research staff*. Workshop given at Educational Testing Service, Princeton, New Jersey.
4. Masters, G. N., & Wilson, M. (1989). *Understanding and using Partial Credit: An IRT model for ordered response categories*. Research training mini-course at the AERA annual meeting, San Francisco.
3. Masters, G. N., & Wilson, M. (1988). *Understanding and using Partial Credit: An IRT model for ordered response categories*. Research training mini-course at the annual meeting of the American Educational Research Association, New Orleans.
2. Masters, G. N., & Wilson, M. (1985). *Using microcomputers to chart student progress*. Workshop presented at the Australian Association for Research in Education Annual Meeting, Hobart, Australia.
1. Wilson, M. (1985). *Solving Practical Problems in Survey Sample Design*. Workshop presented at the Swinburne Institute of Technology, Melbourne, Australia.

#### Research Grants

(ordered by start-date)

09/2020 - 08/2024    NSF National Science Foundation, Assessing College-Ready Computational Thinking. UCB Award ID: 049812-001. PI. Total: \$2,397,744.

09/2020 - 08/2024    NSF National Science Foundation, Learning Progressions in Science: Analyzing and Deconstructing the Multiple Dimensions in Assessment. UCB Award ID: 049613-001. PI. Total: \$2,999,304.

04/2020 - 03/2022    American Educational Research Association, Modeling and Explaining the Emergence of Achievement Gaps in Kindergarten Readiness: Early Literacy Gaps between Dual Language Learners and their English Monolingual Peers. UCB Award ID: 047995-001. Co-PI. Total: \$35,000.

01/2019 - 12/2021    National Math and Science Initiative, Inc., Measurement of College Readiness. UCB Award ID: 046946-001. PI. Total: \$400,000.

12/2016 - 08/2021    NSF National Science Foundation, Collaborative Research: Modeling Assessment to Enhance Teaching and Learning. UCB Award ID: 041471-002. PI. Total: \$974,997.

07/2016 - 06/2019 Institute of Education Sciences, Developing and Testing Multi-Component Computer-Based Assessment Tasks for the Next Generation Science Standards. Total: \$1,400,000.

07/2016 - 06/2017 California Department of Education, DRDP 2016-17: Desired Results Developmental Profile. UCB Award ID: 041824-001. PI. Total: \$803,493.

07/2016 - 06/2019 Institute of Education Sciences, A Diagnostic Assessment of Meanings That Matter for Teaching High School Mathematics. Total: \$1,265,993.

01/2016 - 12/2018 National Math and Science Initiative, Inc., Measurement of College Readiness. Total: \$400,000.

09/2015 - 08/2018 Colorado State University, Research on Effects of Integrating Computational Science and Model Building in Water Systems Teaching and Learning. Total: \$79,278.

07/2015 - 03/2020 UC San Francisco, San Francisco Health Investigators (SFHI). Total: \$242,185.

07/2015 - 06/2016 California Department of Education, Field and Calibration Studies for the DRDP Single Instrument for All Children Birth to Kindergarten Entry and Support for the Implementation of DRDPtech©. Total: \$954,800.

06/2015 - 09/2016 Widya Mandala Catholic University Surabaya, Pelita Pendidikan Program Evaluation. Total: \$20,000.

09/2014 - 08/2017 Michigan State University, Sustaining Responsive and Rigorous Teaching Based on Carbon TIME. Total: \$242,565.

07/2014 - 06/2015 California Department of Education, Field and Calibration Studies for the DRDP Single Instrument for All Children Birth to Kindergarten Entry and Support for the Implementation of DRDPtech©. Total: \$804,800.

06/2014 - 06/2015 Oregon, State of, Oregon: Developing Student-Centered Assessments and Scoring Criteria from Grades 3 through High School. Total: \$178,993.

09/2013 - 12/2015 California Department of Education Child Development Division, Hosting DRDPtech-SRTM for Studies Conducted for the Race to the Top - Early Learning Challenge Grant. Total: \$817,392.

07/2013 - 06/2014 California Department of Education Child Development Division, Instrument Refinement and Field Study for the DRDP Single Instrument for All Children Birth to Five Years of Age and Supporting the Implementation of DRDPtech. Total: \$804,800.

07/2012 - 06/2017 WestEd, Illinois Kindergarten Individual Development Survey. Total: \$1,510,000.

07/2012 - 06/2013 California Department of Education Child Development Division, Expert Review and Pilot Testing the DRDP Single Instrument for All Children Birth to 5 Years of Age and Supporting the Implementation of DRDPtech™. Total: \$844,800.

03/2012 - 02/2016 DOED IES Institute of Education Sciences, Innovative Computer-Based Formative Assessment Via a Development, Delivery, Scoring and Report-Generating System. Total: \$1,426,540.

09/2011 - 08/2014 Arizona State University, Tempe, Project Aspire: Defining and Assessing Mathematical Knowledge for Teaching Secondary Mathematics. Total: \$340,958.

08/2011 - 06/2013 California Postsecondary Education Commission, Development and Field Testing of Desired Results Developmental Profile - School Readiness (DRDP-SR). Total: \$900,000.

07/2011 - 06/2015 Vanderbilt University, Data Modeling Supports the Development of Statistical Reasoning. Total: \$361,271.

09/2010 - 08/2015 Michigan State University, CCE: A Learning Progression-Based System for Promoting Understanding of Carbon-Transformation Processes. Total: \$495,934.

09/2010 - 08/2013 Northwestern University, Supporting Scientific Practices in Elementary and Middle School Classrooms. Total: \$332,666.

07/2010 - 06/2014 DOED US Department of Education, Learning Progressions in Middle School Science Instruction and Assessment. Total: \$1,599,931.

07/2006 - 06/2013 University of Michigan, Developing an Integrated Assessment and Support System for Elementary Teacher Education. Total: \$500,000.

07/2011 - 06/2012 California Postsecondary Education Commission, Development of a DRDP Single Instrument for All Children Births to 5 Years of Age and Implementation of DRDPtech. Total: \$844,800.

07/2010 - 06/2011 California Postsecondary Education Commission, Continued Development and Implementation of Desired Results Developmental Profile (DRDP), Alignment of DRDP to the Preschool Learning Foundations, Volume 3, and Implementation of Support Materials. Total: \$844,800.

03/2010 - 02/2013 SRI International (incl Sarnoff Corporation), Learning Progressions: Developing an Embedded Formative and Summative Assessment System for Elementary and Middle School Students with Learning Disabilities in Mathematics. \$319,494.

02/2010 - 08/2011 California Postsecondary Education Commission, Development and Implementation of Desired Results Developmental Profile Revision - School Readiness (DRDP-SR). Total: \$165,000.

07/2009 - 06/2010 California Postsecondary Education Commission, Continued Development and Implementation of Desired Results Development Profile Revision 2 (DRDP-R2). Total: \$844,800.

01/2009 - 06/2010 McGraw-Hill (Healthcare Grp & Clinical Res Intl), Item Authoring for Coherent Assessment. Total: \$147,747.

10/2008 - 06/2010 Strategic Education Research Partnership Institute, Science Assessment: Strengthening and Expanding the SERP-SFUSD Field Site. Total: \$97,012.

08/2008 - 07/2011 Michigan State University, Learning Progression on Carbon-Transforming Processes in Socio-Ecological Systems. Total: \$349,845.

05/2008 - 10/2008 Humboldt-Universitat Zu Berlin, Alignment of English as a First Foreign Language Performance Standards with German National Educational Standards (NES). Total: \$75,728.

04/2008 - 06/2009 California Postsecondary Education Commission, Instrument Refinement & Completion of Studies to Support the Implementation of Desired Results Development Profile. Total: \$1,056,000.

09/2007 - 12/2009 North Carolina State University, Diagnostic E-Learning Trajectories Approach (DELTA) Applied to Rational Number Reasoning for Grades 3-8. Total: \$229,076.

08/2007 - 07/2012 NSF National Science Foundation, Formative Assessment Delivery System (FADS). Total: \$1,499,980.

02/2007 - 02/2008 Mathematica Policy Research, Inc., UPK Child Outcomes Pilot Study and Power of Preschool Demonstration Evaluation. Total: \$25,000.

10/2006 - 03/2010 Vanderbilt University, Supporting the Development of Model Based Reasoning. Total: \$345,847.

09/2006 - 03/2008 California Postsecondary Education Commission, Continuing Development and Study of the Re-Designed Results Developmental Profiles (DRDP) - Revised (DRDP). Total: \$978,831.

08/2006 - 06/2007 WestEd, Preschool Learning Standards and Benchmarks. Total: \$100,000.

08/2006 - 06/2011 San Diego Unified School District, Striving Readers Assessment Validation. Total: \$500,000.



07/2006 - 01/2007 California Postsecondary Education Commission, Item Response Theory (IRT) Analysis of Data Collected Using the Desired Results Development Profile Access Birth-to-Five Instrument (DRDP Access). Total: \$78,268.

06/2006 - 06/2011 Vanderbilt University, Assessing Data Modeling. Total: \$460,001.

09/2005 - 08/2009 Michigan State University, Developing a Research Based Learning Progression for the Carbon Cycle: Transformations of Matter and Energy in Biogeochemical Systems Project. Total: \$425,200.

02/2004 - 01/2006 California Postsecondary Education Commission, Continuing Development and Study of the Re-Designed Desired Results Developmental Profiles. Total: \$2,781,160.

02/2004 - 01/2007 Vanderbilt University, Constructing Data, Modeling Worlds: Collaborative Investigation of Statistical Reasoning. Total: \$269,946.

09/2003 - 09/2005 NIH National Cancer Institute, Applying Item Response Theory Methodology to Evaluate Measures in the Behavioral Sciences. Total: \$90,000.

02/2003 - 01/2004 Desired Result for Children and Families Instrument Design and Validity Study Project. Total: \$1,713,217.

08/2002 - 06/2007 Westat, Analyses of Data Relating to the Effects of Units of Measurement on Test Results. Total: \$179,489.

02/2002 - 01/2003 Desired Result for Children and Families Instrument Design and Validity Study Project. Total: \$275,801.

01/2002 - 08/2006 University of Michigan, Examining the Validity of Teacher Licensure Decisions. Total: \$532,574.

11/2001 - 10/2006 NSF National Science Foundation, ChemQuery: An Assessment System for Mapping Student Progress in Learning General Chemistry. Total: \$499,976.

11/2001 - 12/2008 SRI International, PADI. Total: \$989,908.

09/2001 - 08/2005 WestEd, Center Assessment and Evaluation of Student Learning (CAESL Extension). Total: \$237,206.

11/2000 - 10/2002 Northwestern University, BEAR Subcontract for Technology-Supported Performance Assessment for Inquiry-Based Science Learning. Total: \$41,876.

08/2000 - 01/2002 NSF National Science Foundation, Translating a Curriculum-Embedded Assessment System to Two New Curricula: Using the "Progress Variable" as Organizing Principle. Total: \$78,212.

09/1999 - 06/2006 San Jose Unified School Dist, Academic Language Acquisition (ALA) Evaluation. Total: \$109,020.

07/1999 - 06/2000 Professional Assistance to the Elementary Teaching and Learning Division, Reading and Mathematics. Total: \$70,536.

07/1998 - 12/2001 Spencer Foundation, Content-Flexible Development Stage Analysis for Large-Scale Assessments. Total: \$453,400.

02/1997 - 07/1997 Spencer Foundation, Implementing Concept Time Lines: A Tool For Analyzing Interview Data. \$11,225.

09/1996 - 08/2001 NSF National Science Foundation, Investigating the Implementation of a Classroom-Based Assessment System: The Case of SEPUP. Total: \$1,020,964.

09/1993 - 08/1997 NSF National Science Foundation, Psychometric Issues In Mathematics Assessment: Multiple Raters, Indicators And Viewpoints. Total: \$450,068.

02/1991 - 12/1995 DOD ONR Office of Naval Research, Strategies Of Skill Acquisition; A Mixture Model Approach To Measurement In The Context Of Intelligent Tutoring Systems. Total: \$298,759.

09/1990 – 05/1991 University of California Faculty Research Grant. Meta-analytic evidence on the effects of retention: A re-examination.

### Training Grants

09/2011 - 09/2017 DOED IES Institute of Education Sciences, Berkeley Research Experience and Methodology (BREMII) Program. Total: \$681,680.

03/2007 - 08/2011 DOED US Department of Education, Berkeley Research Experience and Methodology (BREM) Program. Total: \$624,400.

07/2002 - 06/2008 Spencer Foundation, Institutional Research Training Grant. Total: \$1,100,000.

09/2001 - 06/2002 Educational Testing Service, Harold Gulliksen Psychometric Fellowship for Yi-Yu Xie. Total: \$22,500.

09/2000 - 06/2001 Educational Testing Service, Harold Gulliksen Psychometric Fellowship for Pamela Lee Paek. Total: \$22,500.

01/1997 - 08/2002 American Educational Research Association, Evaluation Training Program. Total: \$325,000.

09/1994 - 06/1995 Educational Testing Service, Graduate Record Examination (GRE)  
Graduate Research Assistantship In Psychometrics Program. Total: \$19,500.

09/1993 - 08/1994 Educational Testing Service, Graduate Record Examination (GRE)  
Graduate Research Assistantship In Psychometrics Program. Total: \$19,500.

Committees for Professional Societies & Government, etc.

(ordered by date of finishing service)

California Department of Education

Standards and Assessment Division:

Technical Advisory Group member (2003-present)

-California Assessment of Student Performance and Progress (CAASPP)

-English Language Proficiency Assessments for California (ELPAC)

Technical Study Group member(1996-2002)

Technical Committee for the High School Exit Examination (1999-2001)

AB250 Reauthorization of Statewide Pupil Assessment System, Advisory Committee  
Member (2012)

California Learning Assessment System:

Technical Advisory Committee member (1990-1994).

Technical Study Group member (1994-1995).

Compensatory Education Office.

Advisory Committee (1990-1991)

Australian Curriculum, Assessment and Reporting Authority (ACARA).

Member of the Measurement Advisory Group, advising on the *National Assessment Program – Literacy and Numeracy* (NAPLAN) (2017-present)

*Imagine Inc.*

Member of the Research Advisory Group. (2017-present)

*Journal of Applied Measurement*. Editorial Board (2003-present).

*Australian Journal of Education*. Editorial Board (2005-present).

American Psychological Association

Member of the Board of Educational Affairs Task Force on Education and Training  
Guidelines for Psychological Assessment in Health Service Psychology.  
(2018-20).

National Academy of Education

Member of the Committee to Study Comparability Issues in Large-Scale Assessment

(2018-20)

National Assessment of Educational Progress (NAEP).

Member of the Mathematics Framework Technical Advisory Committee (2019-20)

Commonwealth of Australia, Australian Education Senior Officials Committee (AESOC).

Member of a Special Committee to review NAPLAN. (2019)

United Nations, Food and Agriculture Organization

Member of an expert panel to advise on the Food Insecurity Experience Scale (FIES)

(2017-18)

*KEDI Journal of Educational Policy* (2013- 2016).

National Academy of Education. Spencer-NAE Postdoctoral Fellowship Committee (2011-2015)

National Research Council, Board on Testing and Assessment (BOTA), member (2009-2015)

*Journal of Educational and Behavioral Statistics*. Chair of the Management Committee. (2008-2014). Member. (1991-1996)

National Research Council, Committee on a Framework for Assessment of Science Proficiency in K-12, co-Chair (2012-2014).

Psychometric Society. Editorial Council (2009-2014). President (2011-12). Board of Trustees (2010-2013).

Assessment and Teaching of 21<sup>st</sup> Century Skills. Methodological Issues Working Group Chair (2008-2010), Member of Project Team (2010-2014).

Institute of Educational Sciences. Mathematics and Science Education Research Scientific Review Panel. Principal member (2010-2013)

Program for International Studies of Achievement (PISA), OECD. US Technical Advisory Committee, member (2008-2012).

Program for International Studies of Achievement (PISA), OECD. Committee to review PISA for Schools project (2011-2012).

American Educational Research Association, Grants Governing Board member (2007–2010)

Hawaii Department of Education. Technical Advisory Committee member (2003-2010).

National Research Council, Committee on Value-Added Methodology for Instructional Improvement, Program Evaluations and Accountability, member (2008-9).

National Academy of Education- American Educational Research Association Joint Committee for a White Paper on Assessment and Accountability, member (2009).

Program for International Studies of Achievement (PISA), OECD. Committee to review new PISA contracts, member (2006, 2009).

National Center for Educational Statistics, Institute for Education Sciences. Proposal Review Committee (2006-2009)

*Educational Evaluation and Policy Analysis*. Editorial Board (2003-2009).

*Cognition and Instruction*. Editorial Board (2003-2009).

National Research Council, Committee on Developmental Outcomes and Assessments for Young Children (2007-8).

Harcourt Educational Measurement. Research Advisory Committee member (2003-2006)

National Assessment of Educational Progress (NAEP). NAEP Science Panel & Technical Review Committee (2005-6).

National Research Council, Committee report reviewer--“Assessing Technological Literacy in the United States” (2005).

National Research Council, Committee on Test Design for K-12 Science Achievement, Chair (2003-5)

Education Quality and Accountability Office, Province of Ontario, Canada (2003-2004). Advisory Committee on Ontario testing system.

National Research Council, Strategic Educational Research Program, Teaching and Learning Panel (2001-2002).

Joint Committee for Standards in Educational Evaluation. Representative for the American Educational Research Association. (1999-2002)

National Board of Osteopathic Medical Examiners. Advisory Committee member. (2000-2)

Spencer Foundation. Dissertation Fellowships Selection Committee (1999-2001).

National Research Council, Committee on Foundations of Assessment. (1998-2001)

California High School Exit Examination Standards Panel (1999-2001)

American Association for the Advancement of Science, Advisory Committee on Evaluating Science Assessments (1999-2000)

Georgia State Department of Education. Technical Advisory Committee. (1997-2004)

New Standards Project, Technical Advisory Committee for Science (1998-1999)

California Systemic Initiative Assessment Collaborative. Advisory Board member. (1996-1999)

National Board of Osteopathic Medical Examiners. Research Committee member. (1994-1999)

#### Consultancies

Nuffield Foundation, London, UK. Proposal reviewer (2006).

Austrian Science Fund. Proposal reviewer (2006).

Quality Assurance Agency for Higher Education, Scottish Office (2004-2005). Advice on Scottish higher education system.

Program for International Studies of Achievement (PISA), Organization for Economic Cooperation and Development (2000-2001). Validity Study.

MPR Associates Inc. Berkeley, CA. (1989-1996). Workshops and guidance on survey sampling techniques, measurement topics and hierarchical linear modeling.

Office of Technology Assessment, United States Congress. (1993). Community of judgment: A teacher-centered approach to educational accountability.

American Academy of Ophthalmology, San Francisco (1991-1992). Assessment issues

Westat Inc., Washington, DC (1991-1992). Hierarchical linear modeling

New Standards Project, Learning Research and Development Center, University of Pittsburgh. (1991-1992). Assessment Design Committee.

Collaborative Alcohol-related Longitudinal Project, Institute for Health and Aging, University of California, San Francisco. (1989-1992). Meta-analysis.

Language Learning and Assessment Group, Educational Testing Service, Princeton, New Jersey. (1989). Application of psychometrics to testing of language-acquisition.

Australian Council for Educational Research, Melbourne, Australia. (1989). Partial credit measurement of student performance.

California Policy Seminar, Institute of Governmental Studies, University of California, Berkeley. (1988). Validity of policy research.

Social Support Project, Department of Special Education, San Francisco State University. (1987, 1989). Social network analysis.

National Board of Medical Examiners, Philadelphia, Pennsylvania. (1987). Equivalence of the Foreign Medical Graduate Examination in Medical Sciences and the NBME Examinations.

### Membership in Professional Organizations

Fellow, American Educational Research Association

Divisional Membership: Measurement and Research Methodology

Special Interest Groups: Educational Statisticians

Rasch Measurement

Classroom Assessment

Committee/Board Membership: AERA Grants Governing Board (2007–2010)

*Journal of Educational and Behavioral Statistics*

Management Committee (Chair)

Fellow, American Psychological Association

Divisional Membership: Evaluation, Statistics, and Measurement

Member, National Academy of Education

Member, National Council on Measurement in Education

Member, Classroom Assessment Taskforce (2017-present)

President (2016-17) (and President-Elect and Past President)

Member, Psychometric Society

Member, Editorial Council

President (2011-12) (and President-Elect and Past President)

Member, Board of Trustees (2010-2013)

Past Member, American Statistical Association

*Journal of Educational and Behavioral Statistics*, Management Committee (Chair)

Past Member, Australian Association for Research in Education

### Journal Reviewing and Service Activity

Editor:

*Measurement: Interdisciplinary Research and Perspectives* (2001-2017)

*Journal of Educational Measurement* (Special Issue Editor: *Classroom Assessment*, 2017-2019)  
*Measurement* (Special Issue Editor: *Psychometric Metrology*, 2018-19)  
*Measurement* (Special Issue Editor: *Metrology Across the Sciences: Wishful Thinking?*, 2017-18)

Editorial Boards:

*Australian Journal of Education* (2005-present)  
*Cognition and Instruction* (2003-2009)  
*Educational Evaluation and Policy Analysis* (2003-2009)  
*Journal of Applied Measurement* (2000-present)  
*KEDI Journal of Educational Policy* (2013-20117)  
*Pensamiento Educativo—PEL* (Journal of Latin-american Educational Research) (2012-present)  
*Psychometrika* (2013)

*Reviewing Activity:*

(Note, recent activity is denoted by an asterisk.)

American Educational Research Journal, American Journal of Education, American Psychologist, American Journal of Mental Retardation, Applied Measurement in Education, \*Applied Psychological Measurement, \*Australian Journal of Education, Behavioral and Brain Sciences, British Journal of Mathematical and Statistical Psychology, \*Cognition and Instruction, Educational Assessment, \*Educational Evaluation and Policy Analysis, Educational Measurement: Issues and Practice, Educational Measurement, Educational Researcher, Instructional Science, Journal of Computational and Graphical Statistics, Journal of Developmental Psychology, Journal of Educational Measurement, Journal of Educational Psychology, Journal of Educational Statistics, Journal for Research in Mathematics Education, Psychological Bulletin, Psychological Methods, Psychological Review, Psychometrika, Quality of Life Research, Studies in Educational Evaluation