

Christine E. DeMars
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Education

Michigan State University, Ph.D. in measurement and quantitative methods (1998).
Arizona State University, Master of Education in elementary education (1993).
Wichita State University, Bachelor of Arts in psychology (1990).

Employment

Senior assessment specialist/professor of graduate psychology. Center for Assessment and Research Studies, James Madison University (7/2011-present).
Associate assessment specialist/associate professor of graduate psychology. Center for Assessment and Research Studies, James Madison University (7/2005-6/2011).
Assistant assessment specialist/assistant professor of psychology. Center for Assessment and Research Studies, James Madison University (7/1998-6/2005).

Graduate Courses Taught

Item Response Theory
Advanced Item Response Theory
Classical Test Theory & Generalizability Theory
Measurement Theory
Multivariate Statistics

Book/Book Chapters

DeMars, C. E. (2018). Classical test theory and item response theory. In P. Irwing, T. Booth & D. J. Hughes (Eds.). *The Wiley Handbook of Psychometric Testing: A Multidisciplinary Reference on Survey, Scale and Test Development* (pp. 49-73). London: John Wiley & Sons.
DeMars, C. E., & Bandalos, D. L. (2018). Chapter 14: Item response theory. In D. L. Bandalos, *Measurement Theory and Applications for the Social Sciences* (pp. 403-445). New York: Guilford.
DeMars, C. (2010). *Item Response Theory*. New York: Oxford University Press.

Peer-Reviewed Publications

DeMars, C. E., & Satkus, P. (in press). Item parameter recovery: Sensitivity to prior distribution. *Educational and Psychological Measurement*.
Alahmadi, S., & DeMars, C. E. (2024). Comparing examinee-based and response-based motivation filtering methods in remote low-stakes testing. *Applied Measurement in Education*, 37(1), 43-56.
<https://doi.org/10.1080/08957347.2024.2311927>
Nason, K., & DeMars, C. E. (in press). The impact of external events on low-stakes assessment: A cautionary tale. *Research and Practice in Assessment*.

- DeMars, C. E. (2022). The (non)impact of misfitting items in computerized adaptive testing. *Journal of Computerized Adaptive Testing*, 9 (2), 8-24. doi: 10.7333/2211-0902008
- Alahmadi, S., & DeMars, C. E. (2022). Large-scale assessment during a pandemic: Results from James Madison University's remote assessment day. *Research and Practice in Assessment*, 17 (3), 4-15.
- DeMars, C. E. (2021). Violation of conditional independence in the many-facets Rasch model. *Applied Measurement in Education*, 34 (2), 122-138. doi: 10.1080/08957347.2021.1890743
- DeMars, C. E. (2021). A note on the odds ratio DIF index. *Applied Psychological Measurement*, 45 (1), 71-73. doi: 10.1177/0146621620947185
- DeMars, C. E. (2021). A note on the relation between the angle of the reference composite and Liu, Li, and Liu's Method 4 for domain scores. *Applied Psychological Measurement*, 45 (2), 130-133. doi: 10.1177/0146621620965742
- Waterbury, G. T., & DeMars, C. E. (2021). Anchors aweigh: How the choice of anchor items affects the vertical scaling of 3PL data with the Rasch model. *Educational Assessment*, 26 (3), 175-197. doi: 10.1080/10627197.2020.1858782
- DeMars, C. E. (2020). Comparing causes of dependency: Shared latent trait or dependence on observed response. *Journal of Applied Measurement*, 21 (4), 400-419.
- DeMars, C. E. (2020). Alignment as an alternative to anchor purification in DIF analyses. *Structural Equation Modeling*, 27, 56-72. doi: 10.1080/10705511.2019.1617151
- DeMars, C. E. (2020). Multilevel Rasch modeling: Does misfit to the Rasch model impact the regression model? *Journal of Experimental Education*, 88, 605-619. doi: 10.1080/00220973.2019.1610859
- Sauder, D. C. & DeMars, C. E. (2020). Applying a multiple comparison control to IRT item-fit testing. *Applied Measurement in Education*, 33, 362-377. doi: 10.1080/08957347.2020.1789138
- Sauder, D. C. & DeMars, C. E. (2019). An updated recommendation for multiple comparisons. *Advances in Methods and Practices in Psychological Science*, 2, 26-44. doi: 10.1177/2515245918808784
- Waterbury, G. T., & DeMars, C. E. (2019). The effects of probability threshold choice on an adjustment for guessing using the Rasch model. *Journal of Applied Measurement*, 20, 1-12.
- DeMars, C. E. (2019). Revised Parallel Analysis with non-normal ability and a guessing parameter. *Educational and Psychological Measurement*, 79, 151-169. doi: 10.1177/0013164418767009
- Waterbury, G. T., & DeMars, C. E. (2019). (Brief Research Report): A user friendly effect size--When normality matters. *Journal of Experimental Education*, 87, 260-268. doi: 10.1080/00220973.2018.1434757
- DeMars, C. E. (2017). Infit and Outfit: Interpreting statistical significance and magnitude of misfit in conjunction. *Journal of Applied Measurement*, 18, 163-177.
- Bashkov, B. M., & DeMars, C.E. (2017). Examining the performance of the Metropolis-Hastings Robbins-Monro algorithm in the estimation of multilevel multidimensional IRT models. *Applied Psychological Measurement*, 41, 323-337.
- Hartman, C.-J. B., DeMars, C. E., Griscom, H. P. & Butner, H. M. (2017). Assessment of undergraduate students' environmental stewardship reasoning and knowledge. *International Journal of Sustainability in Higher Education*, 18, 492-502.

- Horst, S. J. & DeMars, C. E. (2016). Higher education faculty engagement in a modified Mapmark standard setting. *Research & Practice in Assessment*, 11, 29-41.
- DeMars, C. E. (2016). Partially-compensatory multi-dimensional IRT models: Two alternate model forms. *Educational and Psychological Measurement*, 76, 231-257.
- DeMars, C. E. (2015). Modeling DIF for simulations: Continuous or categorical secondary trait? *Psychological Test and Assessment Modeling*, 57, 279-300.
- DeMars, C. E., & Jurich, D. P. (2015). The interaction of ability differences and guessing when modeling DIF with the Rasch model: Conventional and tailored calibration. *Educational and Psychological Measurement*, 75, 610-633.
- Socha, A., DeMars, C. E., Zilberberg, A., & Phan, H. (2015). DIF detection with the Mantel-Haenszel procedure: The effects of matching type and other factors. *International Journal of Testing*, 15, 193-215.
- DeMars, C. E. (2015). Estimating variance components from sparse data matrices in large-scale educational assessments. *Applied Measurement in Education*, 28, 1-13.
- DeMars, C. E. (2014). An illustration of the effects of ignoring a secondary factor. *Applied Psychological Measurement*, 38, 406-409.
- Evans, S.W., Schultz, B.K. & DeMars, C.E. (2014). High school based treatment for adolescents with ADHD: Results from a pilot study examining outcomes and dosage. *School Psychology Review*, 43, 185-201.
- DeMars, C. E., Bashkov, B. M., & Socha, A. (2013). The role of gender in test-taking motivation under low-stakes conditions. *Research & Practice in Assessment*, 8, 69-82.
- DeMars, C. E. (2013). A tutorial on interpreting bifactor model scores. *International Journal of Testing*, 13, 354-378.
- DeMars, C. E. (2013). A comparison of confirmatory factor analysis and multidimensional Rasch models to investigate the dimensionality of test-taking motivation. *Journal of Applied Measurement*, 14, 179-196.
- Socha, A. & DeMars, C. E. (2013). An investigation of sample size splitting on ATFIND and DIMTEST. *Educational and Psychological Measurement*, 73, 631-647.
- Socha, A. & DeMars, C. E. (2013). A note on specifying the guessing parameter in ATFIND and DIMTEST. *Applied Psychological Measurement*, 37, 69-74.
- DeMars, C. E. (2012). A comparison of limited-information and full-information methods in Mplus for estimating IRT parameters for non-normal populations. *Structural Equation Modeling*, 19, 610-632.
- Jurich, D. P., DeMars, C. E., & Goodman, J. T. (2012). Investigating the impact of cheating on IRT equating under the non-equivalent anchor test design. *Applied Psychological Measurement*, 36, 291-308.
- DeMars, C. E., & Jurich, D. P. (2012). Software Note: Using BILOG for Fixed Anchor Item Calibration. *Applied Psychological Measurement*, 36, 232-236.
- DeMars, C. E. (2012). Confirming testlet effects. *Applied Psychological Measurement*, 36, 104-121.
- Evans, S.W., Schultz, B.K., DeMars, C.E. & Davis, H. (2011). Effectiveness of the Challenging Horizons after-school program for young adolescents with ADHD. *Behavior Therapy*, 42, 462-474.
- DeMars, C. E. (2011). An analytic comparison of effect sizes for differential item functioning. *Applied Measurement in Education*, 24, 189-209.

- DeMars, C. E., & Lau, A. (2011). DIF detection with latent classes: How accurately can we detect who is responding differentially? *Educational and Psychological Measurement*, 71, 597-616.
- DeMars, C. E. (2010). Type I error inflation for detecting DIF in the presence of impact. *Educational and Psychological Measurement*, 70, 961-972.
- Wise, S. L., & DeMars, C. E. (2010). Examinee non-effort and the validity of program assessment results. *Educational Assessment*, 15, 27-41.
- DeMars, C. E., & Wise, S. L. (2010). Can differential rapid-guessing behavior lead to differential item functioning? *International Journal of Testing*, 10, 207-229.
- Wise, S. L. & DeMars, C. E. (2009). A clarification of the effects of rapid guessing on coefficient alpha: A note on Attali's "Reliability of Speeded Number-Right Multiple-Choice Tests". *Applied Psychological Measurement*, 33, 488-490.
- DeMars, C. E. (2009). Modification of the Mantel-Haenszel and logistic regression DIF procedures to incorporate the SIBTEST regression correction. *Journal of Educational and Behavioral Statistics*, 34, 149-170.
- DeMars, C. E. (2008). Polytomous DIF and violations of ordering of the expected latent trait by the raw score. *Educational and Psychological Measurement*, 68, 379-396.
- DeMars, C. E. (2007). "Guessing" parameter estimates for multidimensional IRT models. *Educational and Psychological Measurement*, 67, 433-446.
- DeMars, C. E. (2007). Changes in rapid-guessing behavior over a series of assessments. *Educational Assessment*, 12, 23-45.
- DeMars, C. E. (2006). Application of the bi-factor multidimensional item response theory model to testlet-based tests. *Journal of Educational Measurement*, 43, 145-168.
- Wise, S. L. & DeMars, C. E. (2006). An application of item response time: The effort-moderated model. *Journal of Educational Measurement*, 43, 19-38.
- DeMars, C. E. (2005). Type I error rates for PARSCALE's fit index. *Educational and Psychological Measurement*, 65, 42-50.
- Wise, S. L. & DeMars, C. E. (2005). Low examinee effort in low-stakes assessment: Problems and potential solutions. *Educational Assessment*, 10, 1-17.
- DeMars, C. E. (2004). Measuring higher education outcomes with a multidimensional Rasch model. *Journal of Applied Measurement*, 5, 350-361.
- DeMars, C. E. (2004). Detection of item parameter drift over multiple test administrations. *Applied Measurement in Education*, 17, 265-300.
- DeMars, C. E. (2004). Type I error rates for generalized graded unfolding model fit indices. *Applied Psychological Measurement*, 28, 48-71.
- DeMars, C. E., & Erwin, T. D. (2004). Scoring *Neutral or Unsure* on an identity development instrument for higher education. *Research in Higher Education*, 45, 83-95.
- DeMars, C. E. (2003). Detecting multidimensionality due to curricular differences. *Journal of Educational Measurement*, 40, 29-51.
- DeMars, C. E. (2003). Sample size and the recovery of nominal response model item parameters. *Applied Psychological Measurement*, 27, 275-288.

- DeMars, C. E., Cameron, S. L., & Erwin, T. D. (2003). Information literacy as foundational: Determining competence. *Journal of General Education*, 52, 253-265.
- DeMars, C. E., & Erwin, T. D. (2003). Revising the scale of intellectual development: Application of an unfolding model. *Journal of College Student Development*, 44, 168-184.
- DeMars, C. (2002). Incomplete data and item parameter estimates under JMLE and MML. *Applied Measurement in Education*, 15, 15-31.
- DeMars, C. E., Sundre, D. L., & Wise, S. L. (2002). Standard setting: A systematic approach to interpreting student learning. *Journal of General Education*, 51, 1-20.
- Lachnicht, D., Brevard, P. B., Wagner, T. L., & DeMars, C. E. (2002). Dietary oxygen radical absorbance capacity as a predictor of bone mineral density. *Nutrition Research*, 22, 1389-1399.
- DeMars, C. (2001). Group differences based on IRT scores: Does the model matter? *Educational and Psychological Measurement*, 61, 60-70.
- DeMars, C. (2000). Test stakes and item format interactions. *Applied Measurement in Education*, 13, 55-77.
- DeMars, C. (1998). Gender differences in mathematics and science on a high school proficiency exam. *Applied Measurement in Education*, 11, 279-299.

Other Publications

- DeMars, C. E. (2018). Item information function. In B. Frey (Ed.), *The SAGE encyclopedia of educational research, measurement, and evaluation* (pp. 899-903). Thousand Oaks, CA: SAGE.
<http://dx.doi.org/10.4135/9781506326139.n360>
- DeMars, C. E. (2011). [Review of the book *The theory and practice of item response theory*, by R. J. de Ayala]. *International Journal of Testing*, 11, 211-214.
- DeMars, C. E. (2010). Guessing parameter. In N. J. Salkind (Ed.), B. Frey, & D. M. Dougherty (Assoc. Eds.), *Encyclopedia of Research Design*, (Vol 1, pp. 557-558). Newbury Park, CA: SAGE.
- Anderson, R. D., & DeMars, C. (2002, May/June). Differential item functioning (DIF): Investigating item bias. *Assessment Update*, 14 (3), 12, 16.
- Erwin, T. D., & DeMars, C. (2002, March/April). Advancing assessment: Why not computer based assessment? *Assessment Update*, 14 (2), 1-2, 15-16.
- DeMars, C. (2001). Computer program exchange: Read_FastTestPro_Log: Extraction of examinee data from FastTEST Pro examinee files. *Applied Psychological Measurement*, 25, 356.
- DeMars, C. (2000). Computer program exchange: DRAWICC: Modules to graph item response functions and item information functions with SAS GPLOT. *Applied Psychological Measurement*, 24, 224.

Presentations

- Nason, K., DeMars, C. E. (2024, April 12-14). *Local Independence and Q3 Values: How much Matters?* [Electronic poster presentation]. National Council on Measurement in Education annual meeting, Philadelphia.
- Nason, K., & DeMars, C. (2023, October 18-22). *Context Matters: The Impact of External Events on Low-Stakes Assessment* [Paper presentation]. Northeastern Educational Research Association 54th Annual Meeting, Trumbull, CT.

- DeMars, C. E., Shapovalov, Y. A., & Hathcoat, J. D. (2023, April 13-15). *Many-Facet Rasch Designs: How Should Raters be Assigned to Examinees?* [Paper presentation]. National Council on Measurement in Education annual meeting, Chicago.
- Satkus, P., & DeMars, C. (2023, April 13-15). *The Use of Complex-Structure Items in Multi-stage Testing* [Paper presentation]. National Council on Measurement in Education annual meeting, Chicago.
- Alahmadi, S., & DeMars, C. (2022, October). *What if We Ignore Non-Effortful Responses? The Impact of Rapid-Guessing on Item Parameter Estimates* [Poster presentation]. Northeastern Educational Research Association 53rd Annual Meeting, Rocky Hill, CT.
- Shapovalov, Y. A., DeMars, C., & Hathcoat, J. D. (2022, October). *Evaluating halo effect in performance assessments: A Rasch measurement model simulation study* [Paper presentation]. Northeastern Educational Research Association 53rd Annual Meeting, Rocky Hill, CT.
- Alahmadi, S., & DeMars, C. (2021, October). *Differential Motivation in Remote Educational Assessment: Person-Based Filtering Versus Response-Based Filtering* [Poster presentation]. Northeastern Educational Research Association 52nd Annual Meeting, virtual.
- Satkus, P., & DeMars, C. (2021, October). *Item Parameter Recovery With and Without The Use Of Priors* [Paper presentation]. Northeastern Educational Research Association 52nd Annual Meeting, virtual.
- Satkus, P., & DeMars, C. E. (2020, April). *Examining the Performance of the Alignment Method in DIF Analyses*. Paper presented at the annual meeting of the the National Council on Measurement in Education, San Francisco, CA. (virtual, conference cancelled)
- Satkus, P., & DeMars, C. E. (2019, October). *Examining the Effects of Specifying Bayesian Priors on the Wald's Test for DIF*. Paper presented at the annual meeting of the Northeastern Educational Research Association. Rocky Hill, CT.
- Satkus, P., & DeMars, C. E. (2019, October). *An Applied Example of a Two-Tier Multiple-Group Testlet Model*. Paper presented at the annual meeting of the Northeastern Educational Research Association. Rocky Hill, CT.
- DeMars, C. E. & Sauder, D. (2019, April). *Considerations in $S\text{-}\chi^2$: Rest score or summed score, priors, and violations of normality*. Electronic poster presented at the annual meeting of the National Council on Measurement in Education, Toronto, Canada.
- Waterbury, G. T., & DeMars, C. E. (2019, April). *Anchors Aweigh: How the Choice of Anchor Items Affects Rasch Vertical Scaling*. Paper presented at the annual meeting of the National Council on Measurement in Education, Toronto, Canada.
- Waterbury, G. T., & DeMars, C. E. (2019, April).. *The effects of probability threshold choice on an adjustment for guessing using the Rasch model*. Electronic poster presented at the annual meeting of the National Council on Measurement in Education, Toronto, Canada.
- Waterbury, G. T., & DeMars, C. E. (2017, October).. *A user friendly effect size: When normality matters*. Paper presented at the annual meeting of the Northeastern Educational Research Association. Rocky Hill, CT.
- Sauder, D., & DeMars, C. (2017, April).. *Type I error rates of ten post-hoc comparison procedures: A simulation*. Electronic board presented at the annual meeting of the National Council on Measurement in Education, San Antonio, TX.
- Sauder, D., & DeMars, C. (2017, April). *Effects of Inclusion of a "Don't Know" Option on a Cognitive Test*. Electronic board presented at the annual meeting of the National Council on Measurement in Education, San Antonio, TX.

- Sauder, D., & DeMars, C. (2016, October). *Type I error rates of ten post-hoc comparison procedures: A simulation*. Paper presented at the annual meeting of the Northeastern Educational Research Association. Rocky Hill, CT.
- Hartman, C.-J., DeMars, C.E., Griscom, H., Butner, H., & Goodall, P. (2016, October). *Measuring students' environmental stewardship learning over time*. Poster presented at the annual meeting of the Association for the Advancement of Sustainability in Higher Education, Baltimore, MD.
- Bashkov, B. M., & DeMars, C.E. (2016, April). *Examining performance of the MH-RM algorithm with the 3PL multilevel MIRT model*. Paper presented at the annual meeting of the National Council on Measurement in Education, Washington, DC.
- DeMars, C. E. & Jacovidis, J. N. (2016, April). *Multilevel IRT: When is local independence violated?* Electronic board presented at the annual meeting of the National Council on Measurement in Education, Washington, DC.
- Sauder, D. & DeMars, C. (2016, April). *Challenging conditions for MML and MH-RM estimation of multidimensional IRT models*. Electronic board presented at the annual meeting of the National Council on Measurement in Education, Washington, DC.
- Bashkov, B. M., DeMars, C. E., Yen, S. J., & Kenyon, D. (2014, October). *Providing diagnostic feedback for students developing English language proficiency: A classification profile method*. Paper presented at the annual meeting of the Northeastern Educational Research Association. Rocky Hill, CT.
- Jurich, D.P., Bradshaw, L. P., & DeMars, C.E. (2014, April). *Limited-information methods to assess overall fit of diagnostic classification models*. Paper presented at the National Council on Measurement in Education, Philadelphia, PA.
- DeMars, C.E., & Jurich, D.P. (2014, April). *Modeling DIF With the Rasch Model: Group Impact and Guessing*. Poster presented at the annual meeting of the National Council on Measurement in Education, Philadelphia, PA.
- Jurich, D. P., & DeMars, C. (2013, October). *Evaluating Limited-Information Goodness-of-fit Indices in Assessing Multidimensional Item Response Models*. Paper presented at the annual meeting of the Northeastern Educational Research Association annual meeting. Rocky Hill, CT.
- Jurich, D.P., & DeMars, C.E. (2013, April). *Confirmatory Factor Analysis with Dichotomous Data: Does Unmodeled Guessing Affect Fit and Parameter Recovery?* Poster presented at the annual meeting of the National Council on Measurement in Education, San Francisco, CA.
- Socha, A., & DeMars, C. (2012, October). *An investigation of sample size splitting on ATFIND and DIMTEST*. Paper presented at the annual meeting of the Northeastern Educational Research Association, Rocky Hill, CT.
- Willse, J. T., Fulcher, K. H., & DeMars, C. E. (2012, April). *Confirmatory Mixture Rasch Analysis for Understanding and Improvement of an Information Seeking Skills Test*. Paper presented at the annual meeting of the National Council on Measurement in Education, Vancouver, BC, Canada.
- Jurich, D. P., & DeMars, C. E. (2011, October). *Classification accuracy of IRT models at small sample sizes: Exploring the role of model selection*. Paper presented at the annual meeting of the Northeastern Educational Research Association, Rocky Hill, CT.
- Jurich, D., DeMars, C., & Goodman, J. (2011, April). *Investigating the impact of cheating on IRT equating under the non-equivalent anchor test design*. Paper presented at the annual meeting of the National Council on Measurement in Education, New Orleans, LA.

- DeMars, C. E. (2010, May). *A comparison of limited-information and full-information methods in Mplus for estimating IRT parameters for non-normal populations*. Paper presented at the annual meeting of the National Council on Measurement in Education, Denver.
- DeMars, C. E., Wise, S. L., & Smith, L. F. (2009, April). *Individual score validity and student effort in higher education assessment*. Paper presented at the annual meeting of the National Council on Measurement in Education, San Diego, CA.
- Wise, S. L., & DeMars, C. E. (2008, June). *An investigation of rolling person fit in identifying examinees who abandon test effort*. Paper presented at the annual meeting of the Psychometric Society, Durham, NH.
- DeMars, C. E. (2008, March). *Scoring multiple choice items: A comparison of IRT and classical polytomous and dichotomous methods*. Paper presented at the annual meeting of the National Council on Measurement in Education, New York.
- Wise, S. L., & DeMars, C. E. (2008, March). *The impact of examinee non-effort on the validity of assessment test data*. Paper presented at the annual meeting of the National Council on Measurement in Education, New York.
- DeMars, C. E., & Wise, S. L. (2007, April). *Can differential rapid-guessing behavior lead to differential item functioning?* Paper presented at the annual meeting of the American Educational Research Association, Chicago.
- DeMars, C. E. (2005, August). *Scoring subscales using multidimensional item response theory models*. Poster presented at the annual meeting of the American Psychological Association, Washington, DC.
- DeMars, C. E., & Erwin, T. D. (2005, August). *Neutral or unsure: Is there a difference?*. Poster presented at the annual meeting of the American Psychological Association, Washington, DC.
- DeMars, C. E. (2005, April). *"Guessing" parameter estimates for multidimensional IRT models*. Paper presented at the annual meeting of the American Educational Research Association, Montreal.
- Wise, S. L., & DeMars, C. E. (2005, April). *An application of item response time: The effort-moderated IRT model*. Paper presented at the annual meeting of the American Educational Research Association, Montreal.
- DeMars, C. E. (2004, April). *Item parameter drift: The impact of the curricular area*. Paper presented at the annual meeting of the American Educational Research Association, San Diego.
- DeMars, C. E. (2004, April). *A comparison of the recovery of parameters using the nominal response and generalized partial credit models*. Poster presented at the annual meeting of the American Educational Research Association, San Diego.
- DeMars, C. (2003, April). *Missing data and IRT item parameter estimation*. Paper presented at the annual meeting of the American Educational Research Association, Chicago.
- DeMars, C. (2003, April). *Recovery of graded response and partial credit parameters in MULTILOG and PARSCALE*. Paper presented at the annual meeting of the American Educational Research Association, Chicago.
- Haley, K. A., DeMars, C. E., & Pieper, S. L. (2003, April). *Automated essay scoring: A real-life validation study*. Paper presented at the annual meeting of the American Educational Research Association, Chicago.
- Wise, S. L., & DeMars, C. E. (2003, June). *Examinee motivation in low-stakes assessment: Problems and potential solutions*. Paper presented at the annual Assessment Conference of the American Association of Higher Education, Seattle.

- DeMars, C. (2002, June). *Equating multiple forms of a competency test: An item response theory approach*. Paper presented at the annual meeting of the Association for Institutional Research, Toronto.
- DeMars, C. (2002, June). *Modeling student outcomes in a general education course with hierarchical linear models (HLM)*. Paper presented at the annual meeting of the Association for Institutional Research, Toronto.
- DeMars, C., & Erwin, T. D. (2001, June). *Applications of item response theory in higher education*. Paper presented at the Assessment Conference of the American Association for Higher Education, Denver.
- Wise, S. L., & DeMars, C. (2001, June). *Feedback from the front: Establishing computer-based tests at James Madison University*. Paper presented at the annual Assessment Conference of the American Association for Higher Education, Denver.
- DeMars, C. (1999, April). *Group differences based on IRT scores: Does the model matter?* Paper presented at the annual meeting of the American Educational Research Association, Montreal.
- DeMars, C. (1999, April). *Does the relationship between motivation and performance differ with ability?* Paper presented at the annual meeting of the National Council on Measurement in Education, Montreal.
- Erwin, T. D., DeMars, C., Anderson, R. (1999, June). *Assessment of critical thinking: Empirical studies about ETS's tasks in critical thinking and the California Critical Thinking Skills Test*. Paper presented at the Assessment Conference of the American Association for Higher Education, Denver.
- DeMars, C. (1998, April). *Item estimates under low-stakes conditions: How should omits be treated?* Poster session presented at the annual meeting of the American Educational Research Association, San Diego.
- DeMars, C. (1997, March). *Physics or biology? Geometry or algebra? Gender and content interactions on a high school proficiency test*. Poster session presented at the annual meeting of the American Educational Research Association, Chicago.

Memberships

National Council on Measurement in Education

Editorial Work

Applied Psychological Measurement: Associate Editor, 2021-2022

Journal of Educational Measurement: Editorial Board

Applied Measurement in Education: Editorial Board