

CURRICULUM VITA

Dimiter M. Dimitrov

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DEGREES

Ph. D. in Educational Psychology (Educational Measurement & Statistics) from Southern Illinois University at Carbondale, 1995. (Dissertation topic: “*Cognitive Item Subordinations in Linear Logistic Test Modeling*”).

Ph.D. in Mathematics (Mathematics Education) from the Department of Mathematics at Sofia University "Kliment Ohridski", Bulgaria, 1984. (Dissertation topic: “*Acquisition of mathematics knowledge in the environment of foreign language education*”).

Bachelor in Mathematics, from the Department of Mathematics at Sofia University "Kliment Ohridski", Bulgaria.

Current position:

Professor of Educational Measurement & Quantitative Research Methods in the Graduate School of Education, George Mason University, Fairfax, Virginia.

Current Professional Appointments:

Editor of *Measurement and Evaluation in Counseling and Development* [the official journal of the American Association for Assessment in Counseling and Education]

Vice-President of the American Educational Research Association (MWERA).

Academic Experience

Professor of Educational Measurement & Quantitative Research Methods in the Graduate School of Education at George Mason University (Spring 2007 – present).

Associate Professor of Educational Measurement & Quantitative Research Methods in the Graduate School of Education at George Mason University (Fall 2003 – Spring 2007).

Associate Professor of Educational Measurement & Statistics in the College and Graduate School of Education at Kent State University, Kent, Ohio (2001 - 2003).

Assistant Professor of Educational Measurement & Statistics (1995 - 2000) and Director of the Bureau of Research (1997 - 1999) in the College and Graduate School of Education at Kent State University, Kent, Ohio.

Teaching Assistant (1992-1995) and **Lecturer** (1995) of **Educational Statistics** at the Department of Educational Psychology, Southern Illinois University at Carbondale [SIUC].

Instructor of Mathematics and Computer Programming in J.A.Logan Community College at Carbondale, Illinois (1994-1995) [during the Ph.D. program at SIUC].

Associate Professor of Mathematics and Statistics in Education, Department of Education at the University of Sofia, “Kliment Ohridski”, Bulgaria (1984-1991).

Mathematics Instructor at the Department of Mathematics - College for International Students, Sofia, Bulgaria (1977-1983).

PUBLICATIONS

Note. Listed here are only publications in the USA (1995 - present). Prior publications (available upon request) consist of 2 textbooks and 15 refereed journal articles in the area of educational measurement, statistics, and mathematics published in Bulgarian, Russian, and French.

Book Chapters/Manuals:

Dimitrov, D. M. (2007): **RELIABILITY.** In B. Erford (Ed.) *Assessment for Counselors* (pp. 99-122). Boston: Houghton-Mifflin/Lahaska Press.

Dimitrov, D.M. (2006). **VALIDATION OF COGNITIVE OPERATIONS AND PROCESSES ACROSS ABILITY LEVELS AND INDIVIDUAL TEST ITEMS.** In T. E. Scruggs & M. A. Mastropieri (Eds.) *Advances in Learning and Behavioral Disabilities, Vol. 19* (pp. 55-81). San Diego, CA: ELSEVIER, Ltd.

Dimitrov, D. M. (2007). **CORRELATION AND REGRESSION.** In B. Erford (Ed.) *Research and Evaluation in Counseling* (pp. 408-433). Boston: Houghton-Mifflin/Lahaska Press.

Dimitrov, D. M. (2007). **MULTIPLE REGRESSION.** In B. Erford (Ed.) *Research and Evaluation in Counseling* (pp. 471-495). Boston: Houghton-Mifflin/Lahaska Press.

Dimitrov, D. M.(2007). **MULTIVARIATE ANALYSIS OF VARIANCE.** In B. Erford (Ed.) *Research and Evaluation in Counseling* (pp. 496-512). Boston: Houghton-Mifflin/Lahaska Press.

Dimitrov, D. M. (2007). **FACTOR ANALYSIS AND OTHER MULTIVARIATE METHODS.** In B. Erford (Ed.) *Research and Evaluation in Counseling* (pp. 513-527). Boston: Houghton-Mifflin/Lahaska Press.

Dimitrov, D. M. (2007). **PARTIAL AND SEMIPARTIAL CORRELATIONS.** In B. Erford (Ed.) *Research and Evaluation in Counseling* (pp. 528-531). Boston: Houghton-Mifflin/Lahaska Press.

Dimitrov, D.M. (1997). **Manual with Test Bank to Accompany Elmore/Woehlke Basic Statistics.** New York: Longman.

Refereed Journal Articles

Dimitrov, D. M. (2007). **Least squares distance method of cognitive validation and analysis for binary items using their IRT parameters.** *Applied Psychological Measurement, 31*(5), 367-387.

Thomas, C., & Dimitrov, D. M. (2007). **Effect of a teen pregnancy prevention program on teen's attitudes toward sexuality: A latent trait modeling approach.** *Developmental Psychology, 43*(1), 173-185.

Dimitrov, D. M. (2006). **Comparing groups on latent variables: A structural equation modeling approach.** *WORK: A Journal of Prevention, Assessment &*

Rehabilitation, 26(4), 429-436.

- Dimitrov, D. M., & Smith, R. M. (2006). **Adjusted Rasch person-fit statistics.** *Journal of Applied Measurement*, 7(2), 170-183.
- Dimitrov, D.M., Henning, J. (2005). **A linear logistic test model of reading comprehension.** *Journal for the Advancement of Educational Research*, 1(1), 60-70.
- Dimitrov, D. M., & Rumrill, P. (2005). **Multivariate methods in rehabilitation research.** *WORK: A Journal of Prevention, Assessment & Rehabilitation*, 24(2), 205-212.
- Kamman, T., Muir, L., Koester, L.S., & Dimitrov, D.M. (2005). **Linking maternal perceptions to behavior: Nurturing attitudes and facial expressions of affect.** *Parenting: Science and Practice*, 5(3), 237-258.
- Dimitrov, D.M. (2003). **Marginal true-score measures and reliability of binary items as a function of their IRT parameters.** *Applied Psychological Measurement*, 27(6), 440-458.
- Dimitrov, D.M. (2003). **Reliability and true-score measures of binary items as a function of their Rasch difficulty parameter.** *Journal of Applied Measurement*, 4(3), 222-233.
- Dimitrov, D.M., & Raykov, T. (2003). **Validation of cognitive structures: A structural equation modeling approach.** *Multivariate Behavioral Research*, 38(1), 1-23.
- Dimitrov, D.M., & Rumrill, P. (2003). **Pretest-posttest designs in rehabilitation research.** *WORK: A Journal of Prevention, Assessment, & Rehabilitation*, 20(2), 159-165.
- Dimitrov, D.M., & Shelestak, D. (2003). **Psychometric analysis of performance on categories of client needs and nursing process with the NLN diagnostic readiness test.** *Journal of Nursing Measurement*, Vol. 11(3), 207-223.
- Dimitrov, D.M. (2002). **Reliability: Arguments for multiple perspectives and potential problems with generalization across studies.** *Educational and Psychological Measurement*, 62(5), 783-801.
- Dimitrov, D.M., McGee, S., & Howard, B. (2002). **Changes in students' science ability produced by multimedia learning environments: Application of the linear logistic model for change.** *School Science and Mathematics*, 102(1), 5-24.
- Dimitrov, D.M., Rumrill, P., Fitzgerald, S., & Hennessey, M., (2001). **Reliability in rehabilitation research.** *WORK: A Journal of Prevention, Assessment, & Rehabilitation*, 16, 159-164.

- Mutua, K., & Dimitrov, D.M. (2001). **Prediction of school enrolment of children with intellectual disabilities in Kenya: The role of parents' expectations, beliefs, and education.** *International Journal of Disability, Development, and Education*, 48, 179-191.
- Dimitrov, D.M. (2001). **An extended index of agreement among multiple raters.** In R Hashway (Ed.), *Annals of the Joint Meeting of the Association for the Advancement of Educational Research and the National Academy for Educational Research 1998-1999* (pp.309-315). Lanham, Maryland: University Press of America, Inc.
- Mutua, K., & Dimitrov, D.M. (2001). **Parents' expectations about future outcomes of children with mental retardation in Kenya: Differential effects of child's gender and severity of mental retardation.** *The Journal of Special Education*, 35(3), 172-180.
- Fitzgerald, S., Dimitrov, D.M., & Rumrill, P. (2001). **The basics of nonparametric research.** *WORK: A Journal of Prevention, Assessment, & Rehabilitation*, 16, 287-292.
- Dimitrov, D.M., Fitzgerald, S., & Rumrill, P. (2000). **Multiple regression in rehabilitation research.** *WORK: A Journal of Prevention, Assessment, & Rehabilitation*, 14, 1-7.
- Dimitrov, D.M., & Shelestak, D. (2000). **Learning outcomes related to success on NCLEXRN.** *Nurse Educator*, 26(3), 108.
- Newman, I., Dimitrov, D.M., & Waechter, D. (2000). **Factor structure of perceived individualization of instruction: Argument for multiple perspective.** *Educational Research Quarterly*, 24(1), 20-29.
- Dimitrov, D.M. (1999). **Gender differences in science achievement: Differential effect of ability, response format, and strands of learning outcomes.** *School Science & Mathematics*, 99(8), 445-450.
- Dimitrov, D.M. (1999). **Gender, ethnicity, ability, and type of item response in mathematics proficiency of fifth graders.** *Journal of Research in Education*, 9, 80-83.
- Dimitrov, D.M. (1999). **Multimethod analysis of mathematics achievement tests.** *Mid-Western Educational Researcher*, 12, 15-19.

Refereed Paper Presentations

International and National Conferences

- Dimitrov, D. M. (June, 2007). **Rasch modeling for measurement of change.** Keynote Address at The IX International Conference on Theory and Practice in Measurement of Latent Variables in Education and Social Fields. Slaviansk-at-Kuban, Russia.
- Dimitrov, D.M., Romero, S. J., Ximenez, C., & Ponsoda, V. (April, 2007). **An IRT-based analysis of arithmetic test items.** Paper presented at the meeting of the American Educational Research Association. Chicago, Illinois.

- Dimitrov, D.M. (April, 2007). **Early evaluation of NSF's MSP Program: Early changes in K-12 student achievement.** Paper presented at the meeting of the American Educational Research Association. Chicago, Illinois.
- Romero, S., Ponsoda, G., Dimitrov, D., & Ximenez, C. (February, 2007). **A simulation study on the robustness of a least squares distance method of cognitive validation.** Paper presented at the 10th Congress on Research Methodology in Social Sciences. College of Psychology. University of Barcelona, Spain.
- Dimitrov, D.M. (2005, April). **Conditional validation of cognitive structures with Rasch measurement.** Paper presented at the meeting of the American Educational Research Association. Montreal, Canada.
- Dimitrov, D. M. (2004, April). **Re-estimation of ability in the Rasch model.** Paper presented at the meeting of the American Educational Research Association. San Diego, CA.
- Dimitrov, D. M., & Smith, R. M. (2004, April). **Adjusted Rasch person-fit statistics.** Paper presented at the meeting of the American Educational Research Association. San Diego, CA.
- Dimitrov, D.M. (2003, April). **Reliability of true cutting scores for Rasch calibrated items.** Paper presented at the meeting of the American Educational Research Association. Chicago, IL.
- Dimitrov, D.M. (2003, April). **Expected values and reliability of number-right scores for IRT calibrated items.** Paper presented at the meeting of the American Educational Research Association. Chicago, IL.
- McGee, S., Dimitrov, D.M., Kirby, J., & Croft, S. (2003, April). **Three-year study of Astronomy Village Implementation.** Paper presented at the meeting of the American Educational Research Association. Chicago, IL.
- Dimitrov, D.M. (2002, April). **Error variance of Rasch measurement with logistic ability distributions.** Paper presented at the meeting of the American Educational Research Association. New Orleans, Louisiana.
- McGee, S. & Dimitrov, D.M. (2002, April). **Using design experiments to investigate long-term program success.** Paper presented at the meeting of the American Educational Research Association. New Orleans, Louisiana.
- Dimitrov, D.M. (2001, October). **Reliability of Rasch measurement with skewed ability distributions.** Paper presented at the International Conference on Objective Measurement. Chicago, IL.
- Dimitrov, D.M.(2001, December). **Pseudo-lognormal distributions of ability**

underlying test performance. Paper presented at the meeting of the Association for the Advancement in Educational Research. Ponte Vedra, FL.

Nikolova, O., & Dimitrov, D.M.(2001, December). **Item response model for difficulty of French grammar tests.** Paper presented at the meeting of the Association for the Advancement in Educational Research. Ponte Vedra, FL.

Dimitrov, D.M. (2000, November). **Correspondence analysis of interrater agreement.** Paper presented at the meeting of the Association for the Advancement in Educational Research. Ponte Vedra, FL.

Dimitrov, D.M., & Henning, J. (2000, November). **A Linear Logistic Test Model of Reading Comprehension Difficulty.** Paper presented at the meeting of the Association for the Advancement in Educational Research. Ponte Vedra, FL.

Dimitrov, D.M. (1999, May). **Extension and generalizability of agreement coefficients.** Paper presented at the International Conference of The Institute for Operational Research and the Management Sciences (INFORMS). Cincinnati, OH.

Dimitrov, D.M. (1999, April). **Mathematics and science achievement profiles by gender, race, ability, and type of item response.** Paper presented at the meeting of the American Educational Research Association. Montreal, Canada.

Muir, L., & Dimitrov, D.M. (1999, April). **Changes in maternal attitudes from pregnancy through the second year.** Presented at the meeting of the American Educational Research Association. April 19-23, Montreal, Canada.

Dimitrov, D.M. (1998, December). **An extended index of agreement among multiple raters.** Paper presented at the meeting of the Association for the Advancement in Educational Research. Ponte Vedra, FL.

Dimitrov, D.M. (1998, December). **Race and type of item response in the Ohio Off-Grade Proficiency Test-Mathematics.** Paper presented at the meeting of the Association for the Advancement in Educational Research. Ponte Vedra, FL.

Guidubaldi, J., Perry, J., Redmond, C., & Dimitrov, D. (August, 1999). **Reviving fatherhood: Empirical foundations and policy initiatives.** Symposium presentation at the American Association Annual Convention, Division 51: Society for the Psychological Study of Men and Masculinity; Boston, Massachusetts.

Dimitrov, D.M. (1996, April). **Monte Carlo approach for reliability estimations in generalizability studies.** Paper presented at the meeting of the American Educational Research Association. New York, NY. (ERIC Document Reproduction Services, ED).

INVITED PRESENTATIONS AT ANNUAL CONFERENCES OF THE AMERICAN EDUCATIONAL RESEARCH ASSOCIATION (AERA):

Dimitrov, D.M. (April, 2007): **Getting Published: A Panel of Journal Editors and Emerging Scholars.** Presentation at the meeting of the American Educational Research Association. Chicago, Illinois.

Dimitrov, D.M. (April, 2005): **Editors' Mentoring Roundtable Closed Session.** Presentation at the meeting of the American Educational Research Association. Montreal, Canada.

Dimitrov, D.M. (April, 2005): **Presidential Invited Session: Complementary Research Methods: Meet the Authors and Reviewers.** Presentation at the meeting of the American Educational Research Association. Montreal, Canada.

Dimitrov, D.M. (April, 2005): **Getting Published: A Panel of Journal Editors and Emerging Scholars.** Presentation at the meeting of the American Educational Research Association. Montreal, Canada.

Dimitrov, D.M. (April, 2006): **Editors' Mentoring Roundtable Closed Session.** Presentation at the meeting of the American Educational Research Association. San Francisco, CA.

Dimitrov, D.M. (April, 2006): **Getting Published: A Panel of Journal Editors and Emerging Scholars.** Presentation at the meeting of the American Educational Research Association. San Francisco, CA.

Refereed Papers Presented at Annual Meetings of Regional Associations of Educational Research:

Dimitrov, D.M., Ximenez, C., Ponsoda, V., & Romero, S. (October, 2006). **Bridging item response theory to classical true-score measures of student performance on basic arithmetic operations.** Paper presented the meeting of the Mid-Western Educational Research Association. Columbus, Ohio.

Dimitrov, D.M., Romero, S., Ximenes, C., & Ponsoda, V. (October, 2006). **Psychometric analysis of cognitive operations underlying student performance on basic arithmetic operations: An application of the least squares distance method.** Paper presented the meeting of the Mid-Western Educational Research Association. Columbus, Ohio.

Dimitrov, D. M. (October, 2005). **An IRT approach to validation of cognitive operations for test items.** Paper presented at the meeting of the Mid-Western Educational Research Association. Columbus, Ohio.

Dimitrov, D. M., & Thomas, C. L. (October, 2005). **Latent trait modeling of**

longitudinal changes in treatment effects on constructs of teens' sexual abstinence. Paper presented at the meeting of the Mid-Western Educational Research Association. Columbus, Ohio.

- Thomas, C. L., & Dimitrov, D. M. (October, 2005). **Validation of a retrospective classroom learning procedure.** Paper presented at the meeting of the Mid-Western Educational Research Association. Columbus, Ohio.
- Dimitrov, D. M. (October, 2004). **Methods of “virtual items” and “virtual persons” in the analysis of pretest to posttest changes in true domain scores.** Paper presented at the meeting of the Mid-Western Educational Research Association. Columbus, Ohio.
- Thomas, C.L., & Dimitrov, D. M. (October, 2004). **The effect of interventions in a teen pregnancy program on constructs of teens' attitudes and behaviors toward sexuality.** Paper presented at the meeting of the Mid-Western Educational Research Association. Columbus, Ohio.
- Dimitrov, D. M. (October, 2004). **Some misconceptions still “at large” in educational research.** Invited paper presentation at the meeting of the Mid-Western Educational Research Association. Columbus, Ohio.
- Dimitrov, D.M. (October, 2003). **Adjusted Rasch person-fit statistics.** Paper presented at the meeting of the Mid-Western Educational Research Association. Columbus, Ohio.
- Dimitrov, D.M. (October, 2003). **Re-estimation of ability in the Rasch model.** Paper presented at the meeting of the Mid-Western Educational Research Association. Columbus, Ohio.
- Dimitrov, D.M. (October, 2002). **Classical error variance and true scores as a function of item parameters estimated with the two-parameter logistic model.** Paper presented at the meeting of the Mid-Western Educational Research Association. Columbus, Ohio.
- Dimitrov, D.M., & Shelestak, D. (October, 2002). **Analysis of Performance on Categories of the NLN Diagnostic Readiness Test: An item response theory approach.** Paper presented at the meeting of the Mid-Western Educational Research Association. Columbus, Ohio.
- Dimitrov, D.M. (2001, October). **Reliability and standard error of measurement related to parameters of items and ability distributions.** Paper presented at the meeting of the Mid-Western Educational Research Association. Chicago, IL.
- Dimitrov, D.M. (2000, October). **Item Response Analysis of Cognitive Structure of a Test.** Paper presented at the meeting of the Mid-Western Educational Research Association. Chicago, IL.

- Newman, I., Waechter, D., & Dimitrov, D.M. (2000, February). **Effect training on the underlying factor structure on perceived individualization of instruction.** Paper presented at the meeting of the Eastern Educational Research Association. Hilton Head, SC.
- Dimitrov, D.M., & Mutua, K. (1999). **Logistic regression model for the prediction of school enrollment of children with disabilities in Kenya.** Paper presented at the meeting of the Mid-Western Educational Research Association. October 13-16, 99, Chicago, IL.
- Dimitrov, D. M. (1999, February). **System of item subordinations in the validation of item difficulty models.** Paper presented at the meeting of the Eastern Educational Research Association. Hilton Head, SC.
- Dimitrov, D. M. (1999, February). **Reading and mathematics proficiency of fifth graders by gender, race, ability, and type of item response.** Paper presented at the meeting of the Eastern Educational Research Association. Hilton Head, SC.
- Dimitrov, D. M. (1998, October). **Partial credit analysis of mathematics items from the Ohio Off-Grade Proficiency Tests.** Paper presented at the meeting of the Mid-Western Educational Research Association. Chicago, IL.
- Dimitrov, D. M., & Obiekwe, J. (1998, February). **Validation of item difficulty components for algebra problems.** Paper presented at the meeting of the Eastern Educational Research Association. Tampa, FL.
- Schwartz, M., & Dimitrov, D. M. (1998, February). **A study of college trustee consensus.** Paper presented at the meeting of the Eastern Educational Research Association. Tampa, FL.
- Dimitrov, D. M. (1997, October). **Reliability of g-wise kappas for multiple-rater agreements.** Paper presented at the meeting of the Mid-Western Educational Research Association. Chicago, IL.
- Dimitrov, D. M., & Gallagher, M. (1997, October). **Combining IRT, generalizability theory, and cognitive methods in the analysis of standardized mathematics achievement tests.** Paper presented at the meeting of the Mid-Western Educational Research Association. Chicago, IL.
- Dimitrov, D. M. (1997, February). **Regression analysis of cognitively subordinated items.** Paper presented at the meeting of the Eastern Educational Research Association. Hilton Head, SC.
- Dimitrov, D. M. (1997, February). **An educationally suitable derivation of the expected mean squares between groups for ANOVA.** Paper presented at the meeting of the Eastern Educational Research Association. Hilton Head, SC.

Dimitrov, D. M. (1996, October). **Validation of item difficulty models**. Paper presented at the meeting of the Mid-Western Educational Research Association. Chicago, IL.

Dimitrov, D. M. (1995, October). **On the cutting score determination in dichotomous classifications**. Paper presented at the meeting of the Mid-Western Educational Research Association. Chicago, IL. (ERIC, ED # TM025074).

Miller, S., & Dimitrov, D. M. (1995, November). **The utilization of peer networks to teach self-determination skills to youth with severe behavioral disabilities**. Paper presented at the meeting of the Teacher Education for Children with Behavioral Disorders (TECBD). Tempe, Arizona.

EVALUATION PROJECTS:

- **Evaluation of the National Mathematics and Science Partnership (MSP) Program:** A multi-million grant awarded by the National Science Foundation to an evaluation team from George Mason University, Vanderbilt University, and the COSMOS Corporation for evaluation of the national MSP program [62 MSP projects nationwide]. [*My responsibilities:* leading the substudy of a large-scale quantitative evaluation based on latent-trait hierarchical growth modeling: **2005-2008**].
- **Evaluation of WeCare@School – A wireless emergency care information service for schools** - grant awarded by the U.S. Department of Commerce to Fairfax Public Schools. [Principle investigator for the project's external evaluation; **2005-2007**].
- **Evaluation of the “Astronomy Village” Program for Science Education (Grade 9-11)**. A Grant of the Center for Educational Technology (CET) at Wheeling Jesuit University, Wheeling, West Virginia (2000-2002). [Principal investigator]
- **Evaluation of a Reduced Class Size Program** (A Grant with the Akron Public Schools, Akron, Ohio, 2000).
- **Evaluation of Project “Wheelbarrow” of the Canton City Schools** (Canton City Schools, Canton, Ohio, 1999). [Principal investigator]
- **Evaluation of the “Results for Kids” Program** (A Grant with the Summit Educational Center, Akron, Ohio, 1998).
- **Evaluation and Analysis of Perception Data on Summit County Professional Development Services for Educators** (Summit Education Initiative, Akron, 1998).
- **Validation of Surveys with a Program of the Hattie Lorlham Foundation** (Kent, Ohio, 1998/99).

Technical Reports on Evaluation Projects:

- Dimitrov, D. M. (2006). **Trends in MSP-Related Changes With Three-Year MIS Data: 2002/03, 2003/04, and 2004/05.** Washington, DC: National Science Foundation [Math and Science Partnership Programs].
- Dimitrov, D. M. (2005). **Initial Trends in MSP-Related Changes With Two-Year MIS Data: 2002/03 and 2003/04.** Washington, DC: National Science Foundation [Math and Science Partnership Programs].
- Dimitrov, D. M. (2003, March). **Measurement and Statistical Analysis of Rater Agreement in Grading Third Year Medical Students.** (Contractor: Office of Academic Affairs, Northeastern Ohio Universities, College of Medicine)
- Dimitrov, D.M. (2002, November). **Measurement and Statistical Analysis in Support of Research of the Center for Educational Technology (CET) at Wheeling Jesuit University, Wheeling, West Virginia.**
- Newman, I., Waechter, D., & Dimitrov, D. M. (2000, April). **Evaluation of Reduced Class Size Program in the Akron Public Schools.** Technical Report. Akron Public Schools.
- Behner, D., & Dimitrov, D. M. (1999, July). **Comparative Effect of Project Wheelbarrow. Technical Report. Canton City Schools, Canton, OH.**
- Mahoney, C., Telzrow, C., Shnelker, D., & Dimitrov, D. M. (1998, November). **Summit Educational Initiative/Task Force: Professional Development Focus Group. Technical Report. Bureau of Research Training and Services. College Education, Kent State University.**

SOFTWARE FOR MEASUREMENT AND STATISTICAL METHODS:

- Dimitrov, D.M. (2005). **LSDIM: A Computer Program (in MATLAB) for Validation and Analysis of Cognitive Operations and Processes.** Graduate School of Education at George Mason University, Fairfax, Virginia, USA.*
- Dimitrov, D.M. (2005). **TRUESA: A Computer Program (in MATLAB) for True-Score Analysis of Binary Items Based on Their IRT Parameters.** Graduate School of Education at George Mason University, Fairfax, Virginia, USA **
- Dimitrov, D.M. (2004). **RASCH-FIT: A Computer Program (in C++) for Person and Item Fit of Data With the Binary Rasch Model.** Graduate School of Education at George Mason University, Fairfax, Virginia, USA***.

**Applied Psychological Measurement* (2007) Vol. 31(5) pp. 367-387).

** *Applied Psychological Measurement* (2003), Vol. 27 (6), pp. 440-458.

*** *Journal of Applied Measurement* (2003), Vol. 4(3), pp. 222-233.

TEACHING:

Courses Taught at Kent State University (Fall 1995 – Summer 2003):

EDPF- 88791 Classical Test Theory (3 hrs)*
EDPF- 88791 Item Response Theory (3 hrs)*
EDPF- 88791 Generalizability Theory (3 hrs)*
EDUC-75510 Educational Statistics I (3 hrs)
EDPF- 78716 Educational Statistics II (3 hrs)
EDPF- 78728 Educational Statistics III (3 hrs)
EDUC-85515 Quantitative Research in Education (3 hrs)
EDUC-85517 Advanced Quantitative Research in Education (3 hrs)*
EDPF- 88791 Factor Analysis (3 hrs)*
EDPF- 88791 Multivariate Statistical Methods (3 hrs)*
EDPF- 78728 Comparative Research (3 hrs)
EDPF- 68807 Evaluation in Education (3 hrs)

* Primary instructor for the course

Courses Taught at George Mason University, Fall 2003 –present:

EDRS 821 Advanced Applications of Quantitative Methods
EDRS 811 Quantitative Methods in Education Research
EDRS 810 Problems and Methods in Educational Research
EDRS 630 Educational Assessment
EDRS 620 Quantitative Inquiry in Education

Workshops:

- **Rasch Measurement of Change.** An International Summer School on Rasch Measurement. Anappa, Russia (June 23-28, 2007).
- **Validation of cognitive structures.** META METRIX, Inc., Durham, NC (May, 2005).
- **Rash Measurement of Change.** CET at Wheeling Jesuit University, WV (May, 2001)
- **Reliability issues.** University of Montana at Missoula (April, 2001)
- **Program Evaluation.** Akron Board of Education, Akron, Ohio (March, 1999)
- **Assessment & Evaluation.** Kent State University, Kent, Ohio (January, 1997).
- **Statistical Software (SPSS and SAS).** Kent State University, Kent, Ohio (May, 1997).

SERVICE TO THE PROFESSION

Editor of a professional journal:

Measurement and Evaluation in Counseling and Development (2005-present)

Member of the Editorial Board for three professional journals:

Educational Researcher (December 2006 – present)

Journal of Applied Measurement (January 2006 – present)

Research in the Schools (April 2005 – present)

Reviewer for professional journals:

- *Psychometrika* (2005, 2006, 2007)
- *Applied Psychological Measurement* (2006)
- *American Educational Research Journal: Teaching, Learning, & Human Development* (2006)
- *Statistics in Medicine* (2006)
- *International Online Journal on Science and Mathematics Education* (2005)
- *Educational and Psychological Measurement* (2002, 2007)
- *Measurement and Evaluation in Counseling and Development* (2000 - present)
- *Applied Measurement in Education* (1995)

Reviewer (books/book chapters) for Publishing Companies:

- Allyn & Bacon (2007)
- McGraw Hill (2004)
- Lawrence Erlbaum Associates (2004)

Appointments with National and Regional Professional Associations

- **Vice-President/President-Elect** of the Mid-Western Educational Research Association (MWERA; 2005-present). **Program Chair** for the 2007 MWERA Annual Meeting.
- **Director of Division D** (Measurement and Research Methodology) of the Mid-Western Educational Research Association (2002-2004).
- **Regional Officer** of the Association for the Advancement of Educational Research for the State of Ohio (1998 - 2002).

Reviewer, Discussant and Chair of Sessions at Professional Conferences:

American Educational Research Association (AERA):

Reviewer: 2002, 2003

Mid-Western Educational Research Association (MWERA):

Reviewer, Session Chair, Discussant: 1998 - 2007

Association for the Advancement of Educational Research (AAER):

Reviewer, Session Chair, Discussant: 1998 - 2000

Eastern Educational Research Association (EERA):

Reviewer, Session Chair, Discussant: 1997, 1998

CURRENT PROFESSIONAL MEMBERSHIP:

- American Educational Research Association (AERA)
- PSYCHOMETRIC SOCIETY
- Mid-Western Educational Research Association (MWERA)
- Association for Assessment in Counseling and Education (AACE)

PROGRAMMING AND SOFTWARE EXPERIENCE:

1. Programming experience in C++, **MATLAB, BASIC, FORTRAN.**
2. Working experience with measurement and statistical software:

SPSS, SAS, MINITAB, GB-STAT, Sigma-Plot,

Mplus (3.0): Statistical Analysis With Latent Variables & HLM

Amos (4.0): Structural Equation Modeling

GENOVA (Generalizability Theory Analysis),

MicroFACT (Factor Analysis with Ordered Polytomous Data),

FACETS -Rasch Measurement Computer Program

RASCAL - Rasch Analysis Program

LPCM-WIN 1.0 - Structural Rasch Modeling Program

XCALIBRE - Marginal Maximum-Likelihood Estimation Program (2- and 3-LPM)

PARSCALE - (IRT Analysis of Rating Scale Data)

MULTILOG -A Computer Program for IRT Analysis

EQUATE 2.0 -A Computer Program for IRT Equating

WINMIRA – A Computer Program for IRT Mixture Modeling