

Steven Marshall Boker

PERSONAL INFORMATION

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Age:

68



FORMAL EDUCATION

B.S. Mathematics, June 1972

University of Denver, Denver, CO.

M.A. Psychology, August 1994

University of Virginia, Charlottesville, VA (advisor John R. Nesselroade)

Thesis Topic: *The Perception of Structure in Simple Auditory Rhythmic Patterns*

Ph.D. Psychology, May 1996

University of Virginia, Charlottesville, VA (advisor John R. Nesselroade)

Dissertation Topic: *Linear and Nonlinear Dynamical Systems Data Analytic Techniques and an Application to Developmental Data*

PROFESSIONAL POSITIONS

2009–present: *Professor*, Department of Psychology, University of Virginia

2007–present: *Area Head*, Quantitative Program, Department of Psychology, University of Virginia

2010–present: *Speaker-Director*, Max Planck International Research School on the Life Course, University of Virginia

2018–present: *Director*, Initiative for the Dynamics of Healthy Development, University of Virginia

2018–present: *Affiliate Graduate Faculty*, Virginia Commonwealth University

2007–present: *Faculty*, LIFE Academy; Joint graduate program of University of Virginia, University of Michigan, Max Planck Institute for Human Development, Humbolt University, Free University of Berlin, and University of Zurich.

2006–present: *Visiting Scientist*, Max Planck Institute for Human Development: Center for Lifespan Psychology, Berlin, Germany

1990–present: *Data Science Consultant*, National Collegiate Athletic Association

2016–2018: *Director of Graduate Studies*, Data Science Institute, University of Virginia

2007, 2017–2018: *Data Science Consultant*, American College Testing and The College Board

3/2013–5/2013, 4/2019–6/2019: *Senior Associate Research Scientist*, University of Zurich

2007–2009: *Associate Professor*, Department of Psychology, University of Virginia

- 2008–2012:** *Member*, Council of Representatives for the Federation of Behavioral, Psychological, and Cognitive Sciences.
- 2003–2006:** *Associate Professor*, Department of Psychology, University of Notre Dame
- 2006:** *Member*, Faculty Advisory Board, Center for Research Computing, University of Notre Dame.
- 2005:** *Chair*, Institutional Review Board, University of Notre Dame
- 2004–2005:** *Director*, Quantitative Program, Department of Psychology, University of Notre Dame
- 4/2003–5/2003:** *Visiting Scientist*, Riken Brain Science Institute, Tokyo, Japan
- 2/2003–3/2003, 3/2001–6/2001:** *Visiting Scientist*, Max Planck Institute for the Physics of Complex Systems, Dresden, Germany
- 1996–2002:** *Assistant Professor*, Department of Psychology, University of Notre Dame
- 1991–1996:** *Graduate Student*, Department of Psychology, University of Virginia
- 1985–1990:** *Co-owner and Recording Engineer*, Triple Helix Recording Studios
- 1979–1991:** *President and Founder*, Data Transforms, Inc. (software publishing)
- 1972–1978:** *Independent Building Contractor*, Zonahedra Construction.

PROFESSIONAL HONORS

- Doktor der Philosophie ehrenhalber (Dr. phil. honoris causa)** (2020) Universität der Bundeswehr München
- The Saul Sells Award** (2020) from the Society of Multivariate Experimental Psychology for lifetime achievement in multivariate psychology.
- President of the Society of Multivariate Experimental Psychology** (2013–2014)
- Elected Fellow of Division 5 of the American Psychological Association** (2011)
- Elected Fellow of the Association for Psychological Science** (2010)
- Elected Fellow of Division 20 of the American Psychological Association** (2010)
- The Tanaka Award** (2003) from the Society of Multivariate Experimental Psychology for the outstanding article of 2002 in *Multivariate Behavioral Research*.
- Early Investigator Award** (2000) from the Society of Multivariate Experimental Psychology for outstanding early-career contributions to multivariate research in psychology.

The Maury Pathfinder Prize (1995) from the University of Virginia Department of Psychology for the outstanding Master's Thesis of 1994.

ELECTED MEMBERSHIPS

Society of Multivariate Experimental Psychology

GRANT SUPPORT

Social Relationship Qualities as Predictors of Health and Aging from Adolescence through Early Midlife J. Allen PI, Funded by the National Institute on Child Health and Human Development (2R01HD058305); July 1, 2018 - June 30, 2028; \$3,056,144 Total Costs. Role: Co-I

Explore-to-Build: Institute for The Dynamics of Healthy Development S. Boker PI, Funded by University of Virginia Pan-University Institute initiative; December 12, 2017 - December 11, 2018; \$100,000 Total Costs; Role: PI.

Nonverbal Synchrony as a Behavioral Marker of Patient and Physician Racial Attitudes and Predictor of Outcomes of Clinical Interactions L. Hamel PI, Funded by the National Cancer Institute (R21 CA 212263-01); July 1, 2017 - June 30, 2020; \$535,672 Total Costs. Role: Consortium PD/PI

Psychometric and Genetic Assessments of Substance Use M. C. Neale PI, Funded by the National Institute on Drug Abuse (DA-018673); February 1, 2015 - January 31, 2020; \$499,995 Total Subcontract. Role: Consortium PD/PI

Transdisciplinary Big Data Science Training at UVa J. Papin PI, Funded by the National Institutes of Health, NLM (T32-LM012416); April, 2016 - March, 2021; \$1,430,160 Total Costs. Role: Co-I

Adolescent Peer and Family Relationship Predictors of Adult Health J. Allen PI, Funded by the National Institute on Child Health and Human Development (2R01 HD058305-17A1); July 10, 2013 - June 30, 2018; \$2,756,492 Total Costs. Role: Co-I

Influence of Age and Social Context on the Dynamics of Emotion Regulation A. D. Staples PI, Funded by the National Institute on Aging (R21 AG041035-01); August 1, 2012 - July 30, 2016; \$275,000 Total Costs. Role: Co-I

Mapping Affect and Facial Dynamics during Dyadic Conversation S. M. Boker PI, Funded by the National Science Foundation (BCS-1030806); October 1, 2010 - September 30, 2013; \$199,997 Total Costs. Role: PI

- Training in Quantitative Modeling in Aging Research** J. R. Nesselroade PI, Funded by the National Institute on Aging (2 T32 AG020500-06); May 1 2008 - April 30, 2013; \$1,163,045 Total Costs. Role: Co-PI
- A Twin Study of Ovarian Hormones and Disordered Eating** K. L. Klump PI, Funded by National Institutes of Health (RO1 MH082054-01); 7/1/2008 – 6/30/2013; \$2,021,685 Total Costs. Role: Consortium PD/PI
- OpenMx: Multipurpose Software for Statistical Modeling** S. M. Boker PI, Funded by the National Institutes of Health Roadmap Initiative (NIH 1R21DA024304-01); September 26, 2007 - August 31, 2012; \$1,095,362 Total Costs. Role: PI
- Collaborative Research DHB: Coordinated motion and facial expression in dyadic conversation** S. M. Boker PI, Funded by the National Science Foundation (NSF BCS-0527485); January, 2006 - December, 2009; \$715,133 Total Costs. Role: PI
- Facial Expression Analysis by Image Processing** J. F. Cohn PI, Funded by the National Institute of Mental Health; May 1, 2006 to April 30, 2011. \$2,358,836 Total costs. Role: Consultant
- Dynamical Systems Tools: Modeling multi-level processes in parent-child relations** M. Sturge-Apple PI, Funded by the National Institutes of Health Roadmap Initiative (NIH 1R21NR010857-01); October 1, 2007 – May 31, 2011; \$1,190,373 Total Costs. Role: Consultant
- Notre Dame Study of Resiliency in Later Life** C. S. Bergeman PI, Funded by the National Institute on Aging (5R01AG023571-02); September 15, 2005 - August 31, 2010; \$1,250,000 Direct Costs. Role: Consultant
- Notre Dame Study of Resiliency in Later Life – Supplement** C. S. Bergeman PI, Funded by the National Institute on Aging (3R01AG023571-02S1A1); September 15, 2007 - August 31, 2012; \$950,000 Direct Costs. Role: Consultant
- Conference & Workshop: Child & Adolescent Development and Family Processes** S. M. Boker PI, Funded by the Notre Dame Institute for Scholarship in the Liberal Arts; March 2006 - August 2006; \$9,493 Total Costs. Role: PI
- Conference & Workshop: Connecting Statistical and Computational/Process Models of Cognitive Aging** Michael Wenger PI, Funded by the National Institute on Aging; June, 2004 - May 2005; \$15,000 Total Costs. Role: Co-PI
- Conference & Workshop: Dynamical Systems Data Analysis** S. M. Boker PI, Funded by the National Institute on Aging (NIA R13 AG21625-01); September, 2002 - August 2003; \$18,650 Total Costs. Role: PI
- Dynamic Postural Equilibrium** S. M. Boker PI, Funded by the National Institute on Aging (NIA R29 AG14983); May 1999 to April 2005; \$346,051 Direct Costs. Role: PI

Quantitative Psychology Lab S. M. Boker PI, Funded by the National Collegiate Athletic Association; July 1996 to July 2006; \$49,452 Direct Costs. Role: PI

Predicting and Preventing Neglect in Teen Mothers J. E. Borkowski PI, Funded by the National Institute for Child Development, (NICHD HD-39456) August 15, 2001 to August 14, 2006. \$4,200,000 Direct Costs. Role: Co-PI

Emotion Regulation and Adjustment to Conjugal Loss in Later Life C. S. Bergeman PI, Funded by the National Institute on Aging; March 2000 to February 2003; \$296,760 Direct Costs. Role: Co-PI

Versatile Software for Biomedical Genetic Applications M. C. Neal PI, Funded by the National Institutes of Health, (NIH RR-08123) May 1994 to April 1996. Role: Consultant

EDITORSHIPS

2001–2006 *Notre Dame Series on Quantitative Methodology* Series editor of book series with Lawrence Erlbaum Associates.

2004–present *Multivariate Behavioral Research* Consulting editor.

PEER REVIEWED ARTICLES AND PROCEEDINGS PAPERS

Note: Italicized authors are current or former advisees or postdocs.

- 100** Garcia, S. C., Mikhail, M. E., Keel, P. K., Burt, S. A., Neale, M., Boker, S., & Klump, K. L. (in press) Increased Rates of Eating Disorders and their Symptoms in Women with Major Depressive Disorder and Anxiety Disorders. *International Journal of Eating Disorders*
- 99** Beam, C., Pezzoli, P., Mendle, J., Burt, S.A., Neale, M., Boker, S., Keel, P. & Klump, K. (in press) How Nonshared Environmental Factors Come to Correlate with Heredity. *Development and Psychopathology*
- 98** Golino, H., Moulder, R., Shi, D., Christensen, A., Nieto, M. D., Nesselroade, J. R., Sadana, R., Thiyagarajan, J. A., & Boker, S. M. (in press) Entropy Fit Indices: New Fit Measures for Assessing the Structure and Dimensionality of Multiple Latent Variables. *Multivariate Behavioral Research*
- 97** Mikhail, M. E., Keel, P. K., Burt, S. A., Sisk, C. L., Neale, M., Boker, S., & Klump, K. L. (in press) Trait negative affect interacts with ovarian hormones to predict risk for emotional eating. *Clinical Psychological Science*
- 96** Mikhail, M. E., Keel, P. K., Burt, S. A., Neale, M., Boker, S., & Klump, K. L. (2020) Low emotion differentiation: An affective correlate of binge eating? *International Journal of Eating Disorders* DOI: 10.1002/eat.23207

- 95 Behrens, F., Snijdwint, J., Moulder, R., Prochazkova, E., Elio, E., Boker, S., & Kret, M. (preprint archive) Physiological synchrony promotes cooperative success in real-life interactions. *BioRxiv* DOI: <https://doi.org/10.1101/792416>
- 94 Moulder, R., Daniel, K., Teachman, B. & Boker, S. M. (in press) Tangle: A Metric for Quantifying Complexity and Erratic Behavior in Short Time Series. *Psychological Methods*
- 93 Boker, S. M., Moulder, R., & Sjobeck, G. (2020) Constrained Fourth Order Latent Differential Equation Reduces Parameter Estimation Bias for Damped Linear Oscillator Models. *Structural Equation Modeling* **7**:2 202–218.
- 92 Bastiaansen, J. A., Kunkels, Y. K., Blaauw, F., Boker, S. M., Ceulemans, E., Chen, M. and Chow, S.-M., de Jonge, P., Emerencia, A. C., Epskamp, S., Fisher, A. J., Hamaker, E. L., Kuppens, P., Lutz, W., Meyer, M.J., Moulder, R., Oravecz, Z., Riese, H., Rubel, J., Ryan, O., Servaas, M. N., Sjobeck, G., Snippe, E., Trull, T. J., Tschacher, W., van der Veen, D. C., Wichers M., Wood, P. K., Woods, W. C., Wright, A. G. C., Albers, C. J., Bringmann, L. J. (in press) Time to get personal? The impact of researchers' choices on the selection of treatment targets using the experience sampling methodology. *Journal of Psychosomatic Research*.
- 91 Hamel, L. M., Moulder, R., Albrecht, T. L., Boker, S. M., Foster, T., Eggly, S., Magnuson, A. & Penner, L. A. (2019) Comparing nonconscious nonverbal synchrony in racially concordant and racially discordant oncology interactions. *Journal of Clinical Oncology* **37**:27 Suppl, pp 169.
- 90 Hamel, L. M., Moulder, R., Eggly, S., Albrecht, T. L., Boker, S. M., Dougherty, D. W., & Penner, L. A. (2019) Assessing Nonverbal Synchrony in Racially-Discordant Oncology Treatment Discussions *Annals of Behavioral Medicine* **53** S516-S516.
- 89 Hamel, L. M., Moulder, R., Albrecht, T. L., Boker, S. M., Eggly, S., & Penner, L. A. (2019) Comparing nonverbal synchrony in racially concordant and racially discordant oncology interactions. *Journal of Clinical Oncology* **37**:15 Suppl. 11525-11525.
- 88 Hamel, L. M., Moulder, R., Albrecht, T. L., Boker, S. M., Foster, T., Eggly, S., Magnuson, A., & Penner, L. A. (2018) Nonverbal synchrony as a marker of patient racial attitudes in oncology interactions. *Journal of Clinical Oncology* **36**:15 Suppl. e22126.
- 87 Beam, C., Pezzoli, P., Mendle, J., Burt, S.A., Neale, M., Keel, P., Boker, S. & Klump, K. (2018) Stress vulnerability effects on gene-environment correlation over time. *Behavior Genetics* **48**:6, pp 456–457
- 86 Fowler, N., Keel, P., Burt, S., Neale, M., Boker, S., Sisk, C., & Klump, K. (2019) Associations between ovarian hormones and emotional eating across the menstrual cycle: Do ovulatory shifts in hormones matter? *International Journal of Eating Disorders*. **52**:2, pp 195–199.
- 85 Hamel, L. M., Moulder, R., Albrecht, T. L., Boker, S. M., Eggly, S. & Penner, L. A. (2018) Nonverbal synchrony as a behavioral marker of patient and physician race-related attitudes and a predictor of outcomes in oncology interactions: Protocol for a secondary analysis of video-recorded cancer treatment discussions. *BMJ Open* **8**:12 pp e023648.

- 84 Martin, M., Weibel, R., Röcke, C., and Boker, S. M. (2018) Semantic Activity Analytics for Healthy Ageing: Challenges and Opportunities *IEEE Pervasive Computing*. **17**:3, 73–77. DOI: 10.1109/MPRV.2018.03367738
- 83 Wang, Y., Adams, S., Beling, P., Greenspan, S., Rajagopalan, S., Boker, S. & Brown, D. (2018) Privacy Preserving Distributed Deep Learning and its Application in Credit Card Fraud Detection. *IEEE TrustCom/BigDataSE 2018*. pp 1070-1078. DOI: 10.1109/TrustCom/BigDataSE.2018.00150
- 82 Xie, W., Wang, Y., Boker, S. & Brown, D. (2016) Privlogit: Efficient privacy-preserving logistic regression by tailoring numerical optimizers. *arXiv preprint, arXiv:1611.01170*.
- 81 Buttrick, N., Choi, H., Wilson, T., Oishi, S., Boker, S., Gilbert, D., Alper, S., Aveyard, M., Cheong, W., Čolić, M., Daglar, I., Doğulu, C., Karabati, S., Kim, E., Knežević, G., Kmiya, A., Laclé, C., Lage, C., Lazarević, L., Lazarević, D., Lins, S., Molina, M., Neto, F., Orlić, A., Petrović, B., Sibaja, M., Fernández, D., Vanpaemel, W., Voorspoels, W., & Wilks, D. (in press) Cross-Cultural Consistency and Relativity in the Enjoyment of Thinking versus Doing. *Journal of Personality and Social Psychology: Personality Processes and Individual Differences*.
- 80 McKee, K. L., Neale, M. C., Rappaport, L. M., & Boker, S. M. (2018) Adaptive Equilibrium Regulation: Modeling Individual Dynamics on Multiple Timescales. *Structural Equation Modeling*. **25**:6, pp 888–905.
- 79 Boker, S. M. & Martin, M. (2018) A Conversation between Theory, Methods, and Data. *Multivariate Behavioral Research*. **53**:6, 806–819 DOI: 10.1080/00273171.2018.1437017, PMC: 6167194
- 78 Moulder, R., Boker, S., Ramseyer, F., & Tschacher, W. (2018). Determining synchrony between behavioral time series: An application of surrogate data generation for establishing falsifiable null-hypotheses. *Psychological Methods*. **23**:4 pp 757–773 DOI:10.1037/met0000172
- 77 McKee, K. L., Neale, M. C., & Boker, S. M. (2017) Modeling psychological dynamics with random events. *Behavior Genetics* **47**:6, 675–676
- 76 Klipker, K., Wrzus, C., Rauhers, A., Boker, S. M., & Riediger, M. (2017) Within-Person Changes in Salivary Testosterone and Physical Characteristics of Puberty Predict Boys’ Daily Affect. *Hormones and Behavior*. **95**, 22–32
- 75 Pritikin, J. N., Hunter, M.D., Oertzen, T. v., Brick, T. R., & Boker, S. M. (2017) Many-level multilevel structural equation modeling: An efficient evaluation strategy. *Structural Equation Modeling* **24**:5, 684–690. DOI: 10.1080/10705511.2017.1293542. PMCID: PMC5875450
- 74 O’Connor, S. M., Beam, C. R., Luo, X., Cohen, L. A., VanHuyse, J. L., Emery, R. E., Turkheimer, E., Kell, P. K., Burt, A., Neale, M. C., Boker, S. M., & Klump, K. L. (2017) Genetic and Environmental Associations between Body Dissatisfaction, Weight Preoccupation, and Binge Eating: Evidence for a Common Factor with Differential Loadings across Symptom Type. *International Journal of Eating Disorders*. **50**:2, 157–161. DOI: 10.1002/eat.22625.

- 73** Hu, Y. & Boker, S. M. (2017) Latent Differential Equation Models for Binary and Ordinal Data. *Structural Equation Modeling* **24**:1, 52–64. DOI: 10.1080/10705511.2016.1227260.
- 72** Racine, S. E., VanHuysse, J. L., Keel, P. K., Burt, A. S., Neale, M. C., Boker, S. M., & Klump, K. L. (2017) Eating Disorder-Specific Risk Factors Moderate the Relationship between Negative Urgency and Binge Eating: A Behavioral Genetic Investigation. *Journal of Abnormal Psychology*, **126**:5, 481-494. DOI: 10.1037/abn0000204
- 71** Klump, K. L., O'Connor, S. M., Hildebrandt, B. A., Keel, P. K., Neale, M. C., Sisk, C. L., Boker, S. M., & Burt, A. S. (2016) Differential Effects of Estrogen and Progesterone on Genetic and Environmental Risk for Emotional Eating in Women. *Clinical Psychological Science*, **4**:5, 895–908. DOI: 10.1080/10705511.2016.1148605
- 70** Hu, Y., Nesselroade, J. R., Erbacher, M. K., Boker, S. M., Burt, S. A., Keel, P. K., Neale, M. C., Sisk C. L. & Klump, K. (2016) Test Reliability at the Individual Level. *Structural Equation Modeling* **23**:4, 532–543. DOI: 10.1080/10705511.2016.1148605. PMID: PMC5603211
- 69** Boker, S. M., Staples, A., & Hu, Y. (2016) Dynamics of Change and Change in Dynamics. *Journal for Person-Oriented Research*, **2**:1–2, 34–55.
- 68** Neale, M.C., Hunter, M.D., Pritikin, J.N., Zahery, M., Brick, T.R., Kirkpatrick, R., Estabrook, R., Bates, T.C., Maes, H.H., & Boker, S.M. (2016) OpenMx 2.0: Extended Structural Equation and Statistical Modeling. *Psychometrika*, **81**:(2), 535–549. PMID: 25622929
- 67** Neale, M., Hunter, M., Maes, H., von Oertzen, T. & Boker, S. (2015) MIDDLE: A new paradigm for genetic studies. *Behavior Genetics*, **45**:6, 675–675.
- 66** Klump, K. L., Hildebrandt, B. A., O'Connor, S. M., Keel, P. K., Neale, M. C., Sisk, C. L., Boker, S. M., & Burt, A. S. (2015) Changes in Genetic Risk for Emotional Eating across the Menstrual Cycle: A Longitudinal Study. *Psychological Medicine*, **45**:15, 3227–3237. DOI: 10.1017/S0033291715001221
- 65** Lunkenheimer, E., Tiberio, S., Buss, K., Lucas-Thompson, R., Boker, S. & Timpe, Z. (2015) Coregulation of Respiratory Sinus Arrhythmia between Parents and Preschoolers: Differences by Children's Externalizing Problems. *Developmental Psychobiology*, **57**:(8), 994–1003, doi: 10.1002/dev.21323. PMID: 25976070
- 64** Boker, S. M., Brick, T. R., Pritikin, J. N., Wang, Y., Oertzen, T. v., Brown, D., Lach, J., Estabrook, R., Hunter, M. D., Maes, H. H., & Neale, M. C. (2015) Maintained Individual Data Distributed Likelihood Estimation. *Multivariate Behavioral Research*, **50**:6, 706-720. DOI: 10.1080/00273171.2015.1094387. PMID: 26717128.
- 63** Racine, S. E., Burt, A. S., Keel, P. K., Sisk, C. L., Neale, M. C., Boker, S. M., & Klump, K. L. (2015) Examining Associations between Negative Urgency and Key Components of Objective Binge Episodes. *International Journal of Eating Disorders*, **48**:(5), 527–531. DOI: 10.1002/eat.22412.

- 62** Markey, P. M., Racine, S. E., Markey, C. N., Hopwood, C. J., Keel, P. K., Burt, A. S., Neale, M. C., Sisk, C. L., Boker, S. M., & Klump, K. L. (2015) Behavior Genetics and the Within-Person Variability of Daily Interpersonal Styles: The Heritability of Spin and Pulse. *Social Psychological and Personality Science*, **6**:(3), 300–308. DOI: 10.1177/1948550614552729. PMCID: 25977748
- 61** Pritikin, J. N., Hunter, M. D., & Boker, S. M. (2015) Modular Open-Source Software for Item Factor Analysis. *Educational and Psychological Measurement*, **75**:(3), 458-474. DOI: 10.1177/0013164414554615. PMCID: 27065479
- 60** Boker, S. M. (2015) Adaptive Equilibrium Regulation: A Balancing Act in Two Timescales. *Journal for Person-Oriented Research*, **1**:(1–2), 99-109. DOI: 10.17505/jpor.2015.10. PMCID: 27066197
- 59** Culbert, K. M., Breedlove, S. M., Sisk, C. L., Keel, P., Neale, M. C., Boker, S. M., Burt, S. A., & Klump, K. L. (2015) Age Differences in Prenatal Testosterone’s Protective Effects on Disordered Eating Symptoms: Developmental Windows of Expression? *Behavioral Neuroscience*, **129**:(1), 18–36, doi: 10.1037/bne0000034. PMCID: 25621790
- 58** Hildebrandt, B. A., Racine, S. E., Keel, P. K., Burt, A. S., Neale, M. C., Boker, S. M., Sisk, C. L., & Klump, K. L. (2015) The Effects of Ovarian Hormones and Emotional Eating on Changes in Weight Preoccupation Across the Menstrual Cycle. *International Journal of Eating Disorders*, **48**:5, 477–486, doi: 10.1002/eat.22326.
- 57** Gasimova, F., Robitzsch, A., Wilhelm, O., Boker, S. M., Hu, Y., & Hueluer, G. (2014) Dynamical Systems Analysis Applied to Working Memory Data. *Frontiers in Psychology: Quantitative Psychology and Measurement*, **5**, 687, PMCID: 25071657
- 56** Suisman, J. L., Thompson, J. K., Keel, P. K., Burt, A. S., Neale, M. C., Boker, S. M., Sisk, C. L., & Klump, K. L. (2014) Genetic and Environmental Influences on Thin-Ideal Internalization Across Development. *International Journal of Eating Disorders*, **47**:7, 773-783, doi: 10.1002/eat.22321.
- 55** Klump, K. L., Racine, S. E., Hildebrandt, M. A., Burt, A. S., Neale, M. C., Sisk, C. L., Boker, S. M., & Keel, P. K. (2014) Influences of Ovarian Hormone on Dysregulated Eating: A Comparison of Associations in Women with versus without Binge Episodes. *Clinical Psychological Science*, **2**:5, 545–559.
- 54** Haedt–Matt, A. A., Keel, P. K., Racine, S. E., Burt, A. S., Hu, J. Y., Boker, S. M., Neale, M. C., & Klump, K. L. (2014) Do Emotional Eating Urges Regulate Affect? Concurrent and Prospective Associations and Implications for Risk Models of Binge Eating. *International Journal of Eating Disorders*, **47**:8, 874–877, doi: 10.1002/eat.22247
- 53** Farr, R. H., Diamond, L. M. & Boker, S. M. (2014) Female Same-Sex Sexuality from a Dynamical Systems Perspective: Sexual Desire, Motivation, and Behavior. *Archives of Sexual Behavior*, **43**:8, 1477–1490. PMCID: 25193132

- 52 Rojas, E. E., Cummings, J. R., Bornovalova, M. A., Hopwood, C. J., Racine, S. E., Keel, P. K., Sisk, C. L., Neale, M. C., Boker, S. M., Burt, A. S., & Klump, K. L. (2014) A Further Validation of the Minnesota Borderline Personality Disorder Scale. *Personality Disorders: Theory, Research, and Treatment*, **5**:2, 146.
- 51 Hu, Y., Boker, S. M., Neale, M. C. & Klump, K. (2014) Latent Differential Equations with Moderators: Simulation and Application. *Psychological Methods*, **19**:1, 56–71
- 50 Dodson, G., Boker, S., Evans, M.K. & Zonderman, A.B. (2014). An Investigation of Construct Validity Using Higher Order Invariance. *Multivariate Behavioral Research*, **49**:3, 284. PMID: 26735194
- 49 Staples, A., Dodson, G., Boker, S., & Estabrook, R. (2013). Age Differences in Emotion Experience and Expression During Conversation. *Gerontologist*, **53**, 463–464.
- 48 Hopwood, C.J., Burt, S.A., Keel, P.S., Neale, M., Boker, S., & Klump, K.L. (2013). Interpersonal problems associated with multidimensional personality questionnaire traits in women during the transition to adulthood. *Assessment*, **20**:1, 60–67. PMID: 22064504
- 47 Racine, S. E., Keel, P. K., Burt, S. A., Sisk, C. L., Neale, M. C., Boker, S. M. & Klump, K. L. (2013) Exploring the Relationship between Negative Urgency and Binge Eating: Etiologic Associations and the Role of Negative Affect. *Journal of Abnormal Psychology*, **122**:2, 433–444.
- 46 Klump, K. L., Keel, P. K., Burt, S. A., Racine, S. E., Neale, M. C., Sisk, C. L., & Boker, S. M. (2013) Ovarian Hormones and Emotional Eating Associations across the Menstrual Cycle: An Examination of the Potential Moderating Effects of Body Mass Index and Dietary Restraint. *International Journal of Eating Disorders*, **46**:3, 256–263.
- 45 Hu, Y. & Boker, S. M. (2013) Permutation Tests of Coupled Latent Differential Equations. *Multivariate Behavioral Research*, **48**:1, 160. PMID: 26789222
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- 217 Mikhail, M. E., Keel, P. K., Burt, S. A., Neale, M., Boker, S., & Klump, K. L. (2020). The link between emotion differentiation and binge eating: Similarities and differences across measures. Poster presented at the Annual Meeting of the Society for Affective Science; Virtual; April, 2020.

- 216** Boker, S. (2019) Motivation as a Dynamical System; Presented at the *Motivation & Healthy Ageing 2nd Interdisciplinary Workshop* Collegium Helveticum, Zurich, Switzerland; December 16, 2019
- 215** Boker, S. & Bergeman, C. (2019) An Adaptive Equilibrium Regulation Model of Resilience; Presented at the *Annual Meeting of the Gerontological Society*; Austin, TX; November, 2019
- 214** Boker, S., von Oertzen, T. & Brandmaier, A. (2019) Products of Variables in Structural Equation Modeling (XRAM); Presented at the *Annual Meeting of the Society of Multivariate Experimental Psychology*; Baltimore, MD; October 10, 2019
- 213** Boker, S., von Oertzen, T. & Brandmaier, A. (2019) Context Dependent Statistical Models using Products of Variables; Presented at the *Cognitive Health Technologies Workshop*; Cottbus, Germany; August 20, 2019
- 212** Garcia, S. C., Mikhail, M. E., Keel, P. K., Burt, S. A., Neale, M., Boker, S., & Klump, K. L. (2019). Rates of Eating Disorders and their Symptoms in Women with Mood and Anxiety Disorders: Comorbidity and Implications for Treatment. Poster presented at the *Annual Renfrew Center Foundation Conference for Professionals*, Philadelphia, PA. November, 2019
- 211** Mikhail, M. E., Keel, P. K., Burt, S. A., Sisk, C. L., Neale, M., Boker, S., & Klump, K. L. (2019). Differences in affective and hormonal risk factors for dysregulated eating in White versus Black women. Poster presented at the *Annual Renfrew Center Foundation Conference for Professionals*, Philadelphia, PA.
- 210** Mikhail, M. E., Keel, P. K., Burt, S. A., Neale, M., Boker, S., & Klump, K. L. (2019, September). Low emotion differentiation: An affective risk factor for binge eating? Poster presented at the *Annual Meeting of the Eating Disorders Research Society*, Chicago, IL.; September 2019
- 209** Hardt, K., Voelkle, M., Bergeman, C. & Boker, S. M., (2019) Modeling resilience by means of fourth order approximations to estimate a second order latent differential equations system. Presented at the *2019 Fachgruppe Methoden & Evaluation der Deutschen Gesellschaft für Psychologie* ; Kiel, Germany; September 15-18, 2019.
- 208** von Oertzen, T., Brandmeier, A., & Boker, S. M., (2019) Interaction Effects in SEM and their Implementation in Onyx and OpenMx. Presented at the *2019 Fachgruppe Methoden & Evaluation der Deutschen Gesellschaft für Psychologie*; Kiel, Germany; September 15-18, 2019.
- 207** Boker, S. M., von Oertzen, T., & Brandmeier, A. (2019) Decomposing expected moments of products of variables for structural equation modeling. Presented at the *2019 International Meeting of the Psychometric Society*; Santiago, Chile; July 16, 2019.
- 206** Boker, S. M. (2019) Multi-Timescale Models of Resiliency across the Lifespan. Colloquium at the University of Zurich Department of Psychology; Zurich, Switzerland; May 13, 2019.
- 205** Boker, S. M. (2019) Multi-Timescale Models of Resiliency across the Lifespan. Colloquium at the Universität der Bundeswehr München; Munich, Germany; May 9, 2019.

- 204** Boker, S. M. (2019) Dynamical Systems Perspective. Presented at the *2nd Workshop on Semantic Analysis of Multi-Scale Health Dynamics at the Collegium Helveticum*; Zurich, Switzerland; March 20, 2019.
- 203** Boker, S. M. (2019) Multiscale Dynamics of Resilience. Presented at the *OPNET Resilience Workshop*; NIH Campus, Bethesda, MD; March 5, 2019.
- 202** Hamel, L., Moulder, R., Eggly, S., Albrecht, T., Boker, S., Dougherty, D., & Penner, L. (2019) Comparing Nonconscious Nonverbal Synchrony in Racially Concordant and Racially Discordant Oncology Interactions. Presented at the *American Society Of Clinical Oncology Annual Conference*; Chicago, IL; May 31 - June 4, 2019.
- 201** Boker, S. M. (2019). Theory, Methods, and Data: A Dance and a Conversation. Invited colloquium presented to the *Georgia Tech Department of Psychology*; Atlanta, GA; January 30, 2019.
- 200** Hamel, L., Eggly, S., Moulder, R., Boker, S., Albrecht, T., & Penner, L. (2019) Assessing Nonverbal Synchrony in Racially-Discordant Oncology Treatment Discussions. Presented at the *40th Annual Meeting and Scientific Sessions of the Society of Behavioral Medicine*; Washington, DC; March 6-9, 2019.
- 199** Mikhail, M. E., Keel, P. K., Burt, A. S., Sisk, C. L., Neale, M., Boker, S., & Klump, K. L. (2018). Affect as a Moderator of Hormone-Emotional Eating Associations Across the Menstrual Cycle. Presented at the *Academy for Eating Disorders*; New York; March 14-16, 2019.
- 198** Boker, S. M. (2018). Multi-Timescale Models of Resiliency Across the Lifespan. Presented at the *Spring LIFE Academy*; Berlin; June 3, 2018.
- 197** Boker, S. M. (2018). Theory, Methods, and Data: A Dance and a Conversation. Presented at the *Max Planck Institute for Human Development*; Berlin; May 3, 2018.
- 196** Boker, S. (2018). Theory, Methods, and Data: Symmetry Formation, Symmetry Breaking, and Information. Presented at the *Semantic Analysis of Multi-Scale Health Dynamics Workshop at Collegium Helveticum*; Zurich; March 14-16, 2018.
- 195** Wang, Y., Adams, S., Beling, S., Greenspan, S., Rajagopalan, S., Boker, S. & Brown, D. (2018). Privacy Preserving Distributed Deep Learning and its Application in Credit Card Fraud Detection. Presented at *The 17th IEEE International Conference On Trust, Security And Privacy In Computing And Communications*; New York; August 1-3, 2018.
- 194** Hamel, L. M., Moulder, R., Albrecht, T. L., Boker, S. M., Foster, T., Eggly, S., Magnuson, A. & Louis A. Penner, L. A. (2018). Nonverbal Synchrony as a Marker of Patient Racial Attitudes in Oncology Interactions. Presented at the *American Society of Clinical Oncology Annual Meeting*; Chicago; June 1-5, 2018.
- 193** Mazen, J. A. M., & Boker, S. (2018). Differential Effects of Parental Monitoring on Substance Use Among American Indian Adolescents. Poster presented at the *Association for Psychological Science Annual Meeting*; San Francisco; May 24-27, 2018.

- 192 *Sjoberck, G. R., & Boker, S. (2018). Contrasting Information and Correlational Approaches to Determining the Symmetry in Dyadic Behavioral Time Series. Poster presented at the Association for Psychological Science Annual Meeting; San Francisco; May 24-27, 2018.*
- 191 *Moulder, R., Boker, S., Ramseyer, F., & Tschacher, W. (2017). Methods for assessing non-verbal synchrony. Poster presented at the Max Planck International Research School for the Life Course; Zurich, Switzerland; October 15-18, 2017.*
- 190 *Moulder, R., Boker, S., Ramseyer, F., & Tschacher, W. (2017). Methods for assessing nonverbal synchrony. Poster presented at the 19th Herbstakademie on Embodied Aesthetics: Resonance in Perception, Expression and Therapy; Heidelberg, Germany; October 6-7, 2017.*
- 189 *Natasha Fowler, Pamela K. Keel, S. Alexandra Burt, Michael Neale, Steven Boker, Cheryl Sisk, & Kelly L. Klump (2017) Associations between ovarian hormones and binge eating across the menstrual cycle: Do ovulatory shifts in hormones matter? Poster at 23rd Annual Meeting of the Eating Disorders Research Society; Leipzig, Germany; September 14-16, 2017.*
- 188 *McKee, K., Neale, M., Boker, S. M., Klump, K. & Keel, P. (2017) Modeling Affective Dynamics in Twins. Talk at the 47th Behavior Genetics Annual Meeting; Oslo, Norway; June, 2017.*
- 187 *Laurenceau, J. P. & Boker, S. M. (2017) Methodological Approaches for the Study of Emotion Dynamics. Invited Talk at the Association for Psychological Science Annual Convention; Boston, MA; May 26, 2017.*
- 186 *Boker, S. M. (2017) Dynamical Systems Analysis in the Context of Statistical Methods and Research Design. Keynote Address at Modern Modeling Methods; University of Connecticut; May 23, 2017.*
- 185 *Boker, S. M. (2017) Overview of Methodology for Longitudinal Dynamics. Invited Plenary Talk at the 4th International Conference on Aging & Cognition; Zurich, Switzerland; April 24, 2017.*
- 184 *Boker, S. M., Schuurman, N. K, Meyer, J. & Ryan, O. (2017) Dynamic Modeling of Intensive Longitudinal Data. Symposium at the International Convention of Psychological Science; Vienna, Austria; March 24, 2017.*
- 183 *Hopwood, C. J., Luo, X., Keel, P. S., Neale, M., Boker, S. M., Burt, S. A., & Klump, K. L. (2017) An etiological decomposition of the association between interpersonal problems and eating disorders. Poster at the Society for Personality and Social Psychology Lifespan Development Preconference; San Antonio, Texas; January 20, 2017.*
- 182 *Boker, S. M., Santander, T., Connelly, J. & Morris, J. (2016) Latent Feature Decomposition: Dimension Reduction for Nonstationary Multivariate Association. Conference talk at the Annual Meeting of the Society of Multivariate Experimental Psychology; Richmond, Virginia; October 20, 2016.*
- 181 *Boker, S. M. (2016) RAM at Thirty-Something: A Remarkably Lasting Achievement. Invited talk at the McArdle Festschrift; Richmond, Virginia; October 18, 2016.*

- 180 Boker, S. M. (2016) Nonstationarity, Symmetry, and Information: Music to My Ears. Invited talk at *The COGITO Study: Looking at 100 Days Ten Years After*; Berlin, Germany; October 6, 2016.
- 179 Boker, S. M. (2016) Latent Feature Decomposition: Dimension Reduction for Nonstationary Multivariate Association. Invited talk at the *Dynamic Systems Modeling: Expert Meeting at the University of Aberdeen*; Aberdeen, Scotland; August 17, 2016.
- 178 Boker, S. M. (2016) Adaptive Equilibrium Regulation: A Model for Developmental Plasticity. Invited talk at *Max Planck Institute for Human Development*; Berlin, Germany; August 3, 2016.
- 177 Boker, S. M. (2016) Latent Feature Decomposition. Symposium talk at the *Annual Meeting of the Association for Psychological Science* ; Chicago, IL; May 27, 2016.
- 176 Tong, X. & Boker, S. M. (2016) Bootstrap Standard Errors and Confidence Intervals in Latent Differential Equation Modeling. Symposium talk at the *Annual Meeting of the Association for Psychological Science* ; Chicago, IL; May 27, 2016.
- 175 Moulder, R. G. & Boker, S. M. (2016) Similarities in Motion and Movement: Comparing Methods of Obtaining Synchronicity Between Individuals in Dyadic Systems. Symposium talk at the *Annual Meeting of the Association for Psychological Science* ; Chicago, IL; May 27, 2016.
- 174 Boker, S. M. & Wang, Y. (2016) Preserving Privacy and Enabling Psychological Science in Everyday Contexts. Symposium talk at the *Annual Meeting of the Association for Psychological Science* ; Chicago, IL; May 26, 2016.
- 173 Boker, S. M., Santander, T., Connelly, J. & Morris, J. (2016) Latent Feature Decomposition of Brain Signals: Dimension Reduction for Nonstationary Multivariate Associations. Poster presented to the *Alpine Brain Imaging Meeting*; Champéry, Switzerland; January 9–12, 2016.
- 172 Boker, S. M. (2015) A Dynamical Systems Model for Addiction. *Advanced Genetic Epidemiology Statistical Workshop*; Richmond, VA; October 28, 2015.
- 171 Boker, S. M. (2015) Semantic Structure of Attributed Affect from Thin Slices of Natural Conversation. *Mixed Emoticon: An Interdisciplinary Conference on Mixed Emotions*; University of Michigan; October 23, 2015.
- 170 Boker, S. M. (2015) Adaptive Equilibrium Regulation: A Model for Developmental Change in Regulation. *LIFE Academy*; Schloss Marbach, Germany; October 20, 2015.
- 169 Boker, S. M. (2015) Adaptive Equilibrium Regulation. *Annual Meeting of the Society of Multivariate Experimental Psychology*; Los Angeles, CA; October 15, 2015.
- 168 Boker, S. M. (2015) Adaptive Equilibrium Regulation. *International Meeting of the Psychometric Society*; Beijing, China; July 13, 2015.

- 167** Neale, M. C., Hunter, M., Maes, H., von Oertzen, T., & Boker, S. M. (2015) MIDDLE: A new paradigm for genetic studies. *Behavior Genetics Association Annual Meeting*; San Diego, CA; June 17-20, 2015.
- 166** Boker, S. M. (2015) Adaptive Equilibrium Regulation: A Balancing Act in Two Timescales. *Conference on Person-oriented Research*; Vienna, Austria; May 8–9, 2015.
- 165** Klump, K.L., Burt, S.A., Keel, P.K., Neale, M., Sisk, C.L., & Boker, S. (2015). The Significant Effects of Ovarian Hormones on Genetic Risk for Binge Eating. *International Conference on Eating Disorders*; Boston, MA; April 23–25 2015.
- 164** Hildebrandt, B.A., Racine, S.E., Keel, P.K., Burt, S.A., Neale, M., Boker, S.M., Sisk, C.L., & Klump, K.L. (2015). Longitudinal Associations between Emotional Eating and Weight Pre-occupation: A Daily Data Approach. *International Conference on Eating Disorders*; Boston, MA; April 23–25 2015.
- 163** Culbert, K.M., Racine, S.E., Breedlove, M., Sisk, C.L., Keel, P.K., Neale, M., Boker, S., Burt, S.A., & Klump, K.L. (2015). Preliminary Evidence that Prenatal Testosterone Exposure Alters Sensitivity to the Effects of Ovarian Hormones on Binge Eating Across the Menstrual Cycle. *International Conference on Eating Disorders*; Boston, MA; April 23–25 2015.
- 162** Racine, S.E., Suisman, J. L., Burt, S.A., Keel, P.K., Neale, M., Boker, S., Sisk, C.L., & Klump, K.L. (2015). Thin-Ideal Internalization and Dietary Restraint: Potential Moderators of the Association between Negative Urgency and Binge Eating. *International Conference on Eating Disorders*; Boston, MA; April 23–25 2015.
- 161** Boker, S. M. (2015) Circularity and Embodiment: The Communication of Emotion in Facial Expressions. Keynote address to the *18th Herbstakademie*; Heidelberg, Germany; March 27, 2015.
- 160** Boker, S. M. (2015) Data Privacy and Distributed Statistics: How Smart Phones Can Preserve Privacy while allowing Citizen Health Science in Everyday Contexts. *Workshop on Citizen Science*; Zurich, Switzerland; January 22, 2015.
- 159** Boker, S. M., Seidler, R. & Bernard, J. (2015) Decomposing nonstationary relationships between multiple BOLD timeseries. Poster presented to the *Alpine Brain Imaging Meeting*; Champéry, Switzerland; January 12-15, 2015.
- 158** Boker, S. M., Brick, T. R., Oertzen, T. v., Estabrook, R., Pritikin, J. N., Hunter, M. D., Maes, H. H., & Neale, M. C. (2014) Maintained Individual Data Distributed Likelihood Estimation. Presidential Address to the *Society of Multivariate Experimental Psychology*; Nashville, TN; October 10, 2014.
- 157** Boker, S. M., Horn, E., Meyer, M. J., & Turkheimer, E. (2014) A Method for ACE Decomposition of Parameters of Dynamical Systems. *Behavior Genetics Association Annual Meeting*; Charlottesville, VA; June 19, 2014.

- 156 Boker, S. M., Brick, T. R., Oertzen, T. v., Estabrook, R., Pritikin, J. N., Hunter, M. D., Maes, H. H., & Neale, M. C. (2014) Maintained Individual Data Distributed Likelihood Estimation. *Association for Psychological Science Annual Meeting*; San Francisco, CA; May 25, 2014.
- 155 Depp, K., Staples, A.D., Dodson, G., Boker, S. M. (2014). Differences in how emotions are perceived by naïve viewers of a video-chat. Poster presented at *The Society for Research in Human Development Conference*, Austin, TX.
- 154 Donovan, J., Staples, A.D., Dodson, G., Boker, S. M. (2014). Age biases in emotion recognition of happy, sad, and angry conversation clips. *Poster presented at The Society for Research in Human Development Conference*, Austin, TX.
- 153 Gray, A., Staples, A.D., Dodson, G., Boker, S. M. (2014). Emotional expressivity measured through self and partner ratings. Poster presented at *The Society for Research in Human Development Conference*, Austin, TX.
- 152 Boker, S. M., Seidler, R. & Bernard, J. (2014) Windowed Cross-Correlation of BOLD Signals. *Alpine Brain Imaging Meeting*; Champéry, Switzerland; January 14-16, 2014.
- 151 Boker, S. M. (2013) Mapping Facial Expression onto a Semantic Space of Emotion. *Fall LIFE Academy*; Schloss Marburg, Germany; October 13, 2013.
- 150 Boker, S. M., Brick, T., Staples, A., & Dodson, G. (2013) Automatic Tracking of Communication of Emotion using Semantic Spaces and Facial Expressions. *Colloquium*; Colorado State University; September 26, 2013.
- 149 Boker, S. M. (2013) Modeling development-related changes in equilibrium and variability using differential equations. *3rd INAPIC Fall Workshop: Developmental Models of Brain-Behavior Change Relationships*; University of Zurich; September 14, 2013.
- 148 Boker, S. M., Brick, T., Staples, A., & Dodson, G. (2013) Communication of Emotion using Semantic Spaces and Facial Expressions. *Design And Data Analysis*; University of Virginia; September 5, 2013.
- 147 Staples, A., Dodson, G. & Boker, S. M. (2013) Age Differences in Emotion Experience and Expression during Conversation. *Gerontological Society of America*; University of Virginia; November 23, 2013.
- 146 Hildebrandt, B.A., Racine, S.E., Keel, P.K., Burt, S.A., Neale, M., Boker, S., Sisk, C.L., & Klump, K.L. (2013). The effects of ovarian hormones and emotional eating on changes in weight preoccupation across the menstrual cycle. *19th Eating Disorder Research Society Meeting*; Bethesda, MD; September 2013.
- 145 Suisman, J.L., Thompson, J.K., Keel, P.K., Burt, S.A., Neale, M., Boker, S., Sisk, C., & Klump, K.L. (2013). An investigation of the etiology of thin-ideal internalization during puberty. *19th Eating Disorder Research Society Meeting*; Bethesda, MD; September 2013.

- 144 Klipker, K., Wrzus, C., Rauers, A., Boker, S., Riediger, M. (2013) Emotionsdynamiken im Alltag von Jugendlichen. *Fachgruppe für Entwicklungspsychologie der DGPs (EPSY 2013)*; Universität des Saarlandes, Saarbrücken, Germany; September 11, 2013.
- 143 Klump, K. L., Burt, A. S., Neale, M. C., Sisk, C. L., Boker, S. M. & Keel, P. K. (2013) The significant effects of ovarian hormones on genetic risk for binge eating. *Behavior Genetics Association Annual Meeting*; Nice, France; July 2013.
- 142 Boker, S. M., Brick, T. R., Oertzen, T. v., Estabrook, R., Pritikin, J. N., Hunter, M. D., Maes, H. H., & Neale, M. C. (2013) Maintained Individual Data Distributed Likelihood Estimation. *Invited Talk, German Institute for Economic Research (DIW)*; Berlin, Germany, June 17, 2013.
- 141 Boker, S. M. (2013) Distributed Likelihood Estimation. *Big Data 2*; University of Virginia; May 14, 2013.
- 140 Boker, S. M. (2013) Dynamics of Change and Change in Dynamics. *Invited Talk, University of Zurich*; Zurich, Switzerland; April 22, 2013 and *Invited Talk, University of Geneva*; Geneva, Switzerland; April 23, 2013.
- 139 Boker, S. M., Brick, T., Staples, A., Dodson, G. (2013) Tracking the Dynamics of Communicative Emotion from Facial Expressions. *INAPIC Colloquium, University of Zurich*; Zurich, Switzerland; April 3, 2013.
- 138 Boker, S. M., Brick, T., Staples, A., Dodson, G. & Hu, Y. (2013) Tracking Facial Expression and Perceived Emotion from Video. *Alpine Brain Imaging Meeting*; Champéry, Switzerland; January 7, 2013.
- 137 Boker, S. M. (2012) Maintained Individual Data — Distributed Likelihood Estimation (MIDDLE). *Fall LIFE Academy*; Wintergreen, VA; October 18, 2012.
- 136 Boker, S. M., Brick, T., Staples, A., Hu, Y. & Dodson, G. (2012) Mapping Emotion onto Facial Expressions. *Annual Meeting of the Society of Multivariate Behavioral Psychology*; Vancouver, Canada; October 12, 2012.
- 135 Boker, S. M. (2012) Facial Motions and Embodied Emotions. *17th Herbstakademie: “The Implications of Embodiment: Enactive, Clinical, Social”*; Heidelberg, Germany; October 2, 2012.
- 134 Hu, Y., Boker, S., Neale, M., & Klump, K. (2012). A procedure for modeling coupled latent differential equations with moderators. *45th Annual Meeting of the Society for Mathematical Psychology*; Columbus, Ohio; July, 2012.
- 133 Boker, S. M., Klump, K., and Neale, M. C. (2012) Dynamical Systems Analysis in Twin Research. *Behavior Genetics Society Annual Meeting*; Edinburgh, UK; June 23, 2012.
- 132 Boker, S. M. (2012) Modeling Resiliency. University of Southern California; Feb 24, 2012.

- 131 Boker, S. M. (2011) A Differential Equations Model for the Ovarian Hormone Cycle. *Inductive Developmental Systems Theory*; The Pennsylvania State University; Nov. 1, 2011.
- 130 Boker, S., Klump, K., Keele, P., and Hu, Y. (2011) Dynamical Systems Models of Ovarian Hormones and Disordered Eating. *NIH Summit on Systems Biology*; Richmond, VA; June 16, 2011.
- 129 Boker, S. (2011) Dynamics of Change and Change in Dynamics. *Intraindividual Methods in Multivariate Psychology*; Charlottesville, VA; May 30, 2010.
- 128 Boker, S. (2010) Modeling Resilience with Differential Equations. *Fall LIFE Academy*; Schwanenwerder, Berlin, Germany; Oct. 15, 2010.
- 127 Boker, S. & Martin, M.. (2010) On the Equilibrium Dynamics of Meaning. *Conference to Honor the Career of Michael W. Browne*; The Ohio State University, Columbus, OH; Sept. 9, 2010.
- 126 Montpetit, M., Bergeman, C. S., Deboeck, P., & Boker, S. M. (2010). Stress–Resistance and Stress–Recovery: A Dynamic Conception of Resilience-as-Process. *Association for Psychological Science Annual Convention*; Boston, MA; May 27–30, 2010.
- 125 Nicholson, J. S., Deboeck, P., Farris, J. R., & Boker, S. M. (2010). Maternal Depressive Symptomatology and Child Behavior: Transactional Relationship with Simultaneous Bidirectional Coupling. *Association for Psychological Science Annual Convention*; Boston, MA; May 27–30, 2010.
- 124 Boker, S., Neale, M., Maes, H., Wilde, M., Spiegel, M., Brick, T., Spies, J., Estabrook, R., Kenny, S., Bates, T., Mehta, P., Fox, J. (2009) OpenMx: Multipurpose Software for Statistical Modeling. *Facilitating Interdisciplinary Research: Methodological and Technological Innovation in the Behavioral and Social Sciences Meeting*; Bethesda, Maryland; October 8, 2009.
- 123 Boker, S., Neale, M., Maes, H., Mehta, P., Wilde, M., Brick, T., Spies, J., Spiegel, M. Estabrook, R., Hunter, M., Kenny, S., Fox, J., Bates, T. (2009) OpenMx: An Open Source and Extensible SEM Framework. *Annual Meeting of the Society of Multivariate Experimental Psychology*; Salishan, Oregon; October 10, 2009.
- 122 Boker, S. M. (2009) Emotional Elasticity: Models of Affective Resilience. *European Congress on Psychological Assessment*; Ghent, Belgium; September 17, 2009.
- 121 Boker, S. M. (2009) Avatars, Multivariate Analysis, and Metamers: A Theory of Facial Dynamics and Affect Expression. *Colloquium Presented to the Psychology Department at the University of Kansas*; Lawrence, Kansas; September 4, 2009.
- 120 Boker, S. M. (2009) Continuous Expression Spaces and Facial Expression Metamers. *MAXNET Cognition*; Berlin, Germany; June 4, 2009.

- 119 *Erbacher, M. K., Schmidt, K. M., Bergeman, C. S., & Boker, S. M. (2009). Highs and Lows: Measuring Affect Fluctuations Across 56 Days in Older Adults. Annual Meeting of the Association for Psychological Science; San Francisco, CA; May 24, 2009.*
- 118 *Boker, S. M. (2009) New Methodology for the Random Assignment of Apparent Gender and Expressivity in a Videoconference Conversation Paradigm. Annual Meeting of the Association for Psychological Science; San Francisco, CA; May 24, 2009.*
- 117 *Boker, S. M. (2009) Measuring and Modeling Interpersonal Dynamics of Dyadic Conversations. Colloquium presented to the Department of Psychology at the University of Cincinnati; Cincinnati, OH; April 17, 2009.*
- 116 *Nicholson, J. S., Farris, J. R., Deboeck, P., Borkowski, J. G., & Boker, S. M. (2009). Maternal Depressive Symptomatology and Child Behavior: Transactional Relationship With Simultaneous Bidirectional Coupling. Biennial Meeting of the Society for Research in Child Development; Denver, CO; April 4, 2009.*
- 115 *Boker, S. M. & Oertzen, T. v. (2009). On the Unreasonable Effectiveness of Time Delay Embedding. Biennial Meeting of the Society for Research in Child Development; Denver, CO; April 4, 2009.*
- 114 *Boker, S. M. (2009) Challenges and Rewards of Multivariate Time Series: Acquisition, Storage, and Analysis of Data with Implications for Models of Dynamical Systems. NIH Genes, Environment, and Health / Exposure Biology Program Grantees Meeting; Bethesda, MD; January 14, 2009.*
- 113 *Boker, S. M. (2008) Coordination Dynamics during Conversation: Social Expectation, Person Perception, and Head Movements. LIFE Fall Academy; Berlin, Germany; October 16, 2008.*
- 112 *Boker, S. M. (2008) Contributions of Motion Dynamics and Social Expectations to Interpersonal Coordination During Dyadic Conversation. Colloquium presented to the Research Center for Group Dynamics at the University of Michigan; Ann Arbor, Michigan; October 13, 2008.*
- 111 *Boker, S. M. & Laurenceau, J.-P. (2008) Multilevel and Multivariate Latent Differential Equation Models of Daily Marital Dynamics. 4th Congress of the European Society on Family Relations (ESFR); Jyväskylä, Finland; September 26, 2008.*
- 110 *Boker, S. M., Brick, T. R., Monpetite, M. A. & Bergeman, C. S. (2008) Modeling Individual Changes due to Resiliency using Differential Equations. Individual Pathways of Change; The Pennsylvania State University; September 11, 2008.*
- 109 *Ashenfelter, K. T., Boker, S. M. , & Waddell, J. (2008) Coordination and Self-Similarity of Verbal and Nonverbal Behaviors during Face-to-Face Dyadic Conversation. Poster presented to the Annual Meeting of the Cognitive Science Society; Washington, DC; July 26, 2008.*
- 108 *Boker, S. M. (2008) A Bird's Eye View. International Network of Intraindividual Variability Research Collaborations (IntraVarNet); Dölln, Germany; July, 19 2008.*

- 107** Boker, S. M. (2008) Dissociating facial appearance and dynamics during videoconference conversations. Wherry Memorial Lecture to The Ohio State University Departments of Statistics and Psychology; April 23, 2008.
- 106** Boker, S. M., *Brick, T. R. & Spies, J. R.* (2008) Coordination of Facial Expressions and Head Movement in Dyadic Conversation. Presented to the *New England Sequencing and Timing 2008*; March 8, 2008.
- 105** Boker, S. M., Cohn, J. F., Theobald, B.–J., & Matthews, I. (2008). Dissociating facial appearance and dynamics in real time during natural conversation. Presented to the *Computational and Systems Neuroscience 2008*; Snowbird, Utah; March 3, 2008.
- 104** Matthews, I., Boker, S. M., Theobald, B.–J., Cohn, J. F., Mangini, M., *Spies, J. R., Brick, T. R., & Abadar, Z.* (2007) Facial Expression and Motion in Dyadic Conversation. Presented at *Meeting of Minds: The Thinking Head — Thinking Systems Project*; Parramatta, Australia; November 23, 2007.
- 103** Boker, S. M., Cohn, J. F., Lucey, S., Theobald, B.–J., Matthews, I., Abadar, Z., Mangini, M., *Spies, J. R., & Brick, T. R.* (2007) Measuring and Manipulating Coordination Dynamics during Conversation. Presented to the *Annual Meeting of the Society of Multivariate Experimental Psychology*; Chapel Hill, NC; October 18, 2007.
- 102** Boker, S. M., Cohn, J. F., Lucey, S., Theobald, B.–J., Matthews, I., Abadar, Z., Mangini, M., Spies, J. R., & Brick, T. R. (2007) Manipulation of Appearance and Dynamics during Dyadic Interaction. Invited talk presented to the *National Science Foundation Human and Social Dynamics Program Annual PIs Meeting*; Arlington, VA; October 2, 2007.
- 101** Boker, S. M. (2007) Coupled Linear Oscillator Models. Symposium talk presented to the *Annual Meeting of the European Survey Research Association*; Prague; June 28, 2007.
- 100** Boker, S. M. (2007) Discussion on “Parameter Estimation for Differential Equations: A Generalized Smoothing Approach”. Comment presented to the *Royal Statistical Society*; London; May 11, 2007.
- 99** Boker, S. M. (2007) Dynamical Systems Approaches to Models of Intensive Longitudinal Data. Symposium talk presented to the *Annual Meeting of the Association for Psychological Science*; Washington, DC; May 26, 2007.
- 98** *Zentall, S. R., Ekas, N., Lickenbrock, D. M., Boker, S. M. & Braungart–Riker, J. M.* (2007) Parent–Infant coupling: A dynamic systems approach. Poster at *The Annual Meeting of the Society for Research in Child Development*; March 31, 2007.
- 97** Boker, S. M. (2007) Dynamic Systems in the Social Sciences: Applications and Challenges. Invited talk presented to the National Science Foundation Workshop *New Frontiers in Dynamical Systems*; Arlington, VA; March 1, 2007.
- 96** *T. R. Brick, S. M. Boker, & J. R. Waddell* (2006). Joint Angle Extraction from Unconstrained Motion Capture Data. Paper presented to the *Annual Meeting of the North American Association for Computational, Social, and Organization Sciences*.

- 95 Boker, S. M., *Ashenfelter, K. T., & Spies, J. R.* (2006) Age-Related Latent Differential Equations Models for Multivariate Measurement of the Dynamics of Intraindividual Variability. Symposium talk presented to the *Annual Convention of the Gerontological Society of America*; Dallas, TX; November, 2006.
- 94 Boker, S. M. & *Deboeck, P. R.* (2006) Age-Related Latent Symmetry Dynamics in Head Movements and Facial Expressions during Dyadic Conversation. Symposium talk presented to the *Annual Convention of the Gerontological Society of America*; Dallas, TX; November, 2006.
- 93 Boker, S. M. (2006) Latent Differential Equations (LDE) Models for Coupled Dynamical Systems. Presented at the *LIFE Academy October, 2006*; Wintergreen, Virginia; October 17, 2006.
- 92 Boker, S. M. (2006) Modeling dyadic and family processes as dynamical systems: An application to the regulation of intimacy and disclosure in marriage. Presented at the conference *New Methods for the Analysis of Family and Dyadic Processes*; University of Massachusetts Amherst; October 15, 2006.
- 91 Boker, S. M. (2006) Embodiment of Self and Other: Mutual Regulation of Affective Symmetry in Conversation. Presented at the *Herbstakademie Ascona 2006: Dynamical Systems in Cognitive Science*; Ascona, Switzerland; October 5, 2006.
- 90 Boker, S. M., Cohn, J., Matthews, I., Ashenfelter, K., Spies, J., Brick, T., Deboeck, P., Covey, E. & Tiberio, S. (2006) Coordinated Motion and Facial Expression in Dyadic Conversation. Poster presented to the 2006 NSF-HSD P.I. meeting; Washington, DC; September 14-15, 2006.
- 89 Boker, S. M. (2006) Information Flow and Symmetry Breaking in Interpersonal Coordination. Keynote address presented to the *Sixteenth Annual Society for Chaos Theory in Psychology & Life Sciences Conference*; Johns Hopkins University; August 4, 2006.
- 88 *Ashenfelter, K. T., Waddell, J. R., Vitanov, N., & Boker, S. M.* (2006) Multifractal Head Movements During Conversation. Poster presented to the *Annual Convention of the Society for Mathematical Psychology*; July 30 – August 1, 2006.
- 87 *Brick, T., Boker, S. M., & Waddell, J. L.* (2006) Joint Location and Angle Extraction for Pose Estimation from Underconstrained Motion Capture Data. Presented at the *Annual Conference of the North American Association for Computational, Social, and Organizational Science*, Notre Dame, IN; June 22-23, 2006.
- 86 Boker, S. M. (2006) Estimating Standard Errors in State Space Embedded Latent Differential Equations Models. Presented to the *Society for Multivariate Analysis in the Behavioral Sciences Annual Meeting*; Budapest, Hungary; July 2-5, 2006.
- 85 Laurenceau, J.-P. & Boker, S. M. (2006) Intimacy Regulation in Marriage: A Dynamical Systems Approach. Presented to the *2006 International Association for Relationship Research Conference*; July 8, 2006.

- 84 Boker, S. M. (2006) Symmetry Formation and Symmetry Breaking in Dyadic Interactions. Colloquium presented to the *Center for Lifespan Psychology, Max Planck Institute for Human Development*; June 27, 2006.
- 83 Zentall, S. R., Boker, S. M. & Braungart-Riker, J. M. (2006) Mother–infant synchrony: A dynamical systems approach. Presented to the *Fifth International Conference on Development and Learning*; May 31–June 3, 2006.
- 82 Boker, S. M. & Deboeck, P. R. (2006) Models of intersegmental coordination and control in a moving room. Presented to the *New England Sequencing and Timing Meeting*, New Haven, CT; March 11, 2006.
- 81 Boker, S. M. (2006) Methods and Applications of Dynamical Systems Analysis. Colloquium presented to the Department of Psychology, University of Virginia; February 20, 2006.
- 80 Boker, S. M. & Deboeck, P. R. (2005) Age–Related Differences in Postural Control: Multisegmental Dynamics in a Moving Room. Symposium talk presented to the *Annual Convention of the Gerontological Society of America*; November 21, 2005.
- 79 Boker, S. M. & Spies, J. (2005) Age–related Differences in Time–Varying Coordination during Standing. Symposium talk presented to the *Annual Convention of the Gerontological Society of America*; November 22, 2005.
- 78 Chow S.–M., Boker, S. M., Zu, J., & Fujita, F. (2005) Representing the Circumplex Structure of Emotions as Dynamical Systems Models. Poster presented at *XXV Dynamics Days Europe 2005*, Berlin, Germany; July 25–28, 2005.
- 77 Zu, J., Chow S.–M., & Boker, S. M. (2005) The Effect of Number of Fourier Series Component on Power and Accuracy to Test Circumplex Structure. Poster presented at the *Annual Conference of the North American Association for Computational, Social, and Organizational Science*, Notre Dame, IN; June 26–28, 2005.
- 76 Ashenfelter, K. T., Boker, S. M., & Waddell, J. L. (2005) Multifractal Scaling in Coordinated Head Movements during Dyadic Conversation. Poster presented at the *Annual Conference of the North American Association for Computational, Social, and Organizational Science*, Notre Dame, IN; June 26–28, 2005.
- 75 Laurenceau, J-P. & Boker, S. M. (2005). Examining social and behavioral processes using diary methods: An overview and application of dynamical systems modeling. In T. A. Walls (Chair), *Diary Methods, Microgenetic Designs and Intensive Longitudinal Data Analysis*. Symposium talk presented at the *Annual Convention of the American Psychological Society*, Los Angeles, CA.
- 74 Boker, S. M. (2004) Coupled Differential Equations Models of Disclosure between Spouses. *Society of Multivariate Experimental Psychology Annual Meeting*; Naples, Florida; October 23, 2004.

- 73 Boker, S. M. & Tiberio, S. S. (2004) Multivariate and Multilevel Coupled Models of Dynamical Systems. *Sixth International Conference on Logic and Methodology*; Amsterdam, The Netherlands, August 20, 2004.
- 72 Boker, S. M. & Laurenceau, J.-P. (2004) Dynamical Systems Analysis of Dyadic Coupled Systems. *Society for Multivariate Analysis in the Behavioral Sciences Annual Meeting*; Jena, Germany; July 20, 2004.
- 71 Boker, S. M. (2004) Some Models of Coordination in Conversation and Dance. *Center for Ecological Study of Perception and Action*; University of Connecticut; March 12, 2004.
- 70 Boker, S. M., Deboeck, P. R. & Tiberio, S. (2004) Latent Differential Equations Models of Interpersonal Coordination in Dance. *New England Sequencing and Timing Meeting*; New Haven, Connecticut; March 13, 2004.
- 69 Boker, S. M. & Laurenceau, J.-P. (2004) Coupled Dynamics in Context: Is There Moderation in All Things? *Modeling Developmental Processes in Ecological Context – A Merrill Center for Advanced Studies, NSF, & SMEP Sponsored Conference*; Phoenix, Arizona; March 5, 2004.
- 68 Boker, S. M. (2004) Continuous change, dynamical metaphors, and statistical tests: A convergence of models of psychological regulation and embodied cognition. *University of Miami*; Miami, Florida; January 16, 2004.
- 67 Boker, S. M. & Deboeck, P. R. (2003) Latent Differential Equations Models of Interpersonal Coordination During Dyadic Dance. *11th Herbstakademie: Dynamical Systems in Cognitive Science*; Ascona, Switzerland; October 21, 2003.
- 66 Tiberio, S. & Boker, S. M. (2003) Estimating Dynamical Systems Model Parameters using Local Linear Regression. *11th Herbstakademie: Dynamical Systems in Cognitive Science*; Ascona, Switzerland; October 21, 2003.
- 65 Boker, S. M. (2003) Differential Structural Equations Models and Application to Rapid Cycling Bipolar Disorder. *McGill University*; Montreal, Canada; October 11, 2003.
- 64 Boker, S. M. & Deboeck, P. R. (2003) Dynamical Systems Models of Rapid Cycling Bipolar Disorder. *Society of Multivariate Experimental Psychology Annual Meeting*; Keystone, Colorado; September 18, 2003.
- 63 Hegde, K. K., Boker, S. M., & Merluzzi, T. V. (2003) Floor Effects in the Sickness Impact Profile (SIP): Distributional Concerns in the “Gold Standard” of Health Status Measures. *American Psychological Association Annual Meeting*; Toronto, Canada; August, 2003.
- 62 Boker, S. M. (2003) Continuous Time Dynamical Systems Data Analysis. *Pennsylvania State University Methodology Center*; State College, PA; June 2, 2003.
- 61 Boker, S. M. (2003) Latent Differential Equations Modeling. *Notre Dame Series on Quantitative Methodology: Data Analytic Techniques for Dynamical Systems*; University of Notre Dame; May 30, 2003.

- 60 Maxwell, S. E. & Boker, S. M. (2003) Multilevel Models of Dynamical Systems. *Notre Dame Series on Quantitative Methodology: Data Analytic Techniques for Dynamical Systems*; University of Notre Dame; May 31, 2003.
- 59 Boker, S. M. (2003) Coordination and segmentation in conversation and dance. *RIKEN Brain Science Institute Forum*; Tokyo, Japan; May 18, 2003.
- 58 Boker, S. M. (2003) Latent Differential Equations Modeling. *Max Planck Institute for Human Development*; Berlin, Germany; March 13, 2003.
- 57 Boker, S. M. (2003) Multivariate Latent Differential Equations Modeling. *Max Planck Institute for Physics of Complex Systems*; Dresden, Germany; March 19, 2003.
- 56 Boker, S. M. & Covey, E. S. (2002) Two recent advances in estimating and testing differential equations models. *Society of Multivariate Experimental Psychology Annual Meeting*; Charlottesville, VA; October 2002.
- 55 Bisconti, T. L., Bergeman, C. S., & Boker, S. M. (2002) Adjustment to widowhood: A dynamical systems approach to emotion regulation. *American Psychological Association Annual Meeting*; Chicago, IL; August 2002.
- 54 Covey, E. S., & Boker, S. M. (2002) Assessing significance in linear oscillator models. *Society for Mathematical Psychology Annual Meeting*; Miami University, Oxford, OH; July 2002.
- 53 Boker, S. M., Neale, M. C. & Rausch, J. R (2002) Dynamical Systems Estimation Using Latent Differential Equation Modeling with Multivariate Multi-Occasion Indicators. *Society for Multivariate Analysis in the Behavioral Sciences Annual Meeting*; Tilburg, The Netherlands; July 3, 2002.
- 52 Boker, S. M.(2002) Linear Differential Equation Models of Short and Long Term Dynamics Applied to Longitudinal Aging Data. *Notre Dame Series on Quantitative Methodology: Quantitative Methodology in Aging Research*; Notre Dame, Indiana; May 31, 2002.
- 51 Boker, S. M. & Neale, M. C. (2002) Dynamical Systems Models and Twin Data. *Genetics, Behavior and Aging Meeting*; National Institute on Aging, Bethesda, MD, March 29, 2002.
- 50 Boker, S. M. (2002) Latent Differential Equations Modeling with Multivariate Multi-Occasion Indicators. *Statistics Department Colloquium*; The Pennsylvania State University, State College, PA, February 21, 2002.
- 49 Boker, S. M. (2002) Differential Equations Models of Self-Regulating Behavior: Factor Invariance and Dynamic Invariance. *Gerontology Center Colloquium*; The Pennsylvania State University, State College, PA, February 20, 2002.
- 48 Boker, S. M. (2001) Consequences of Continuity: The Hunt for Intrinsic Properties within Parameters of Dynamics in Psychological Processes (Cattell Award Address). *Society of Multivariate Experimental Psychology Annual Meeting*; Monterey, CA, October 13, 2001.

- 47 Boker, S. M. & *Bisconti, T. L.* (2001) Dynamical Systems Models for Self-Regulatory Psychological Processes. *Psychometric Society Annual Meeting*; Valley Forge, PA, June 23, 2001.
- 46 Boker, S. M. (2001) Nonstationarity in the Coordination of Movements during Dyadic Dance and Conversation. *Colloquium*; Max Planck Institute for the Physics of Complex Systems, April 26, 2001.
- 45 Boker, S. M. (2001) Postural Stabilization: Monolithic or Coupled Control Systems? *Austrian Society for Cognitive Science Colloquium Series*; University of Vienna, April 24, 2001.
- 44 Boker, S. M. (2001) Dynamical Systems Modeling of Self Regulation. *Workshop*; Wayne State University, Department of Psychology, February 22, 2001.
- 43 Boker, S. M. (2000) Methods for Estimating the Complexity of Systems in Gerontological Data: From Long Time Series to Mixed Cross-sectional / Longitudinal Designs. *Gerontological Society of America Annual Meeting*; Washington, DC, November 18, 2000.
- 42 Boker, S. M. (2000) Age-based Changes in Stability and Coordination between Body Segments in Visually Informed Postural Stabilization. *Gerontological Society of America Annual Meeting*, Washington, DC, November 18, 2000.
- 41 Boker, S. M. & *Xu, M.* (2000) Modeling multilimb coordination in unstructured dance as a perception-action system. *Society for Music Perception and Cognition*, Montreal Canada, November 3, 2000.
- 40 Boker, S. M. (2000) A Mixed Model Dynamical Systems Approach to Longitudinal Data. *Society of Multivariate Experimental Psychology*, Saratoga Springs, NY, October 19, 2000.
- 39 Boker, S. M. & *Nesselroade, J. R.* (2000) Multilevel Modeling of Dynamical Systems: Random Coefficients and Order Parameters. *Fifth International Conference on Logic and Methodology*, Cologne Germany, October 5, 2000.
- 38 Boker, S. M. & *Maxwell, S. E.* (2000) NCAA Initial-Eligibility Rules and Changes in Prospective Student-Athlete Academic Performance. *Symposium on Large-Scale Longitudinal Studies of College Student-Athlete Academic and Social Development, American Psychological Association Annual Convention*, Washington DC, August 7, 2000.
- 37 *Xu, M., Rotondo, J. L.* & Boker, S. M. (2000) A Peak Picking Method for the Analysis of Interpersonal Coordination in Conversation. *Annual Meeting of the Society for Mathematical Psychology*, Kingston Ontario, August 10, 2000.
- 36 Boker, S. M. & *Rotondo, J. L.* (2000) Symmetry Building and Symmetry Breaking in Synchronized Movement. *Mirror Neurons and the Evolution of Brain and Language*, Delmenhorst, Germany, July 5–8, 2000.
- 35 *Rotondo, J. L.* & Boker, S. M. (2000) Behavioral Synchronization in Human Conversational Interaction. *Mirror Neurons and the Evolution of Brain and Language*, Delmenhorst, Germany, July 5–8, 2000.

- 34 Boker, S. M. (2000) Age Related Differences in Head-Trunk Coordination During Visually Informed Posture Stabilization. *Max Planck Institute for Human Development*, Berlin Germany, May 22, 2000.
- 33 Boker, S. M. (2000) Nonlinear Dependency in Head-Trunk Coordination during Posture Stabilization as a Function of Distance to Visual Target. *Dynamics and Statistics of Complex Systems*, Dresden Germany, May 18, 2000.
- 32 Boker, S. M. (2000) Perception–Action, Environment, and Cognition: A Dynamic Middle Ground Between Internal and External States *Cognitive Science Group*, University of Notre Dame, April 28, 2000.
- 31 Boker, S. M. (2000) Differential Structural Modeling of Mixed Cross–Sectional and Longitudinal Data. *Quantitative Workshop*, University of Southern California, April 21, 2000.
- 30 Boker, S. M., *Rotondo, J. L. & Parker, D. R.* (2000) Coordination of Body Segments in Visually Guided Postural Control. *New England Sequencing and Timing Annual Meeting*, New Haven CT, March 4, 2000.
- 29 *Parker, D. R. & Boker, S. M.* (2000) A Dynamical Measure of Behavioral Coordination in Self–Monitors. *Annual Meeting of the Society for Personality and Social Psychology*, Nashville, TN, February 5, 2000.
- 28 Boker, S. M. & *Parker, D. R.* (1999) Perceptual Segmentation of Auditory Rhythms and the Coordination of Limb Segments during Unstructured Dance. *Society for Music Perception and Cognition Annual Meeting*, Evanston IL, August 16, 1999.
- 27 McArdle, J. J. & Boker, S. M. (1999) Contemporary Statistical Models for Examining Test Bias. *American Psychological Society Annual Meeting*, Denver CO, June 5, 1999.
- 26 *Rotondo, J. & Boker, S. M.* (1999) Analysis of coordinated head movement in mixed– and same–sex dyadic communication. *New England Sequencing and Timing Annual Meeting*, Providence RI, March 7, 1999.
- 25 Boker, S. M. (1998) Age-Based Comparisons of Nonlinear Dependency in Postural Control. *Annual Meeting of the Gerontological Society*, Philadelphia PA, November 22, 1998.
- 24 Boker, S. M. (1998) Nonlinear Analysis and Differential Modeling of Behavioral Time Series. *New Methods for the Analysis of Change*, State College PA, October 12, 1998.
- 23 McArdle, & Boker, S. M. (1998) College Academic Eligibility of NCAA Student–Athlete Recruits from Different Ethnic and Family Income Groups. *Annual Meeting of the American Sociological Society*, San Francisco CA, August 25, 1998.
- 22 Boker, S. M. & Graham, J. (1998). A Dynamical Systems Analysis of Adolescent Substance Abuse *Annual Meeting of the Society for Prevention Research*; Park City, Utah; June 4, 1998.
- 21 Boker, S. M. (1998) A Method for Modeling Self–Regulation in Intraindividual Variability. *Penn State Genetics and Dynamical Systems Workshop*, State College PA, May 29, 1998.

- 20 Boker, S. M. (1998). Differential Structural Equation Models of Postural Control. *New England Sequencing and Timing Annual Meeting*, Providence RI, March 7, 1998.
- 19 Boker, S. M. & Nesselroade, J. R. (1997). A Method for Modeling the Intrinsic Dynamics of Intraindividual Variability: Recovering the Parameters of Simulated Oscillators in Multi-Wave Panel Data. *MacArthur Methodology Meeting*, Palo Alto CA, September 12, 1997.
- 18 Boker, S. M. (1997). Using the Internet and the World Wide Web for Archiving Psychological Data. *Symposium on Data Archiving in Psychology, American Psychological Association Annual Convention*, Chicago IL, August 16, 1997.
- 17 Boker, S. M. (1997). Coupling Between Head Position and Center of Pressure in Visually Guided Quiet Stance. *New England Sequencing and Timing Annual Meeting*, Providence RI, March 8, 1997.
- 16 Boker, S. M. (1996). Collecting data using electronic databases: Heterogeneous distributed data, meta-databases, search agents and the World Wide Web. *Federation of Behavioral, Psychological and Cognitive Sciences Forum on Research Management*, Washington DC, October 11, 1996.
- 15 Boker, S. M. (1996). Perception of Segmentation in Sequences. *New England Sequencing and Timing Annual Meeting*, Providence, RI, March 1996.
- 14 Boker, S. M. & Bertenthal, B. I. (1995). Nonlinear Analyses of Postural Development using False Nearest Neighbors. *Nonlinear Techniques in Physiological Time Series Analysis*, Dresden, Germany, October 26, 1995.
- 13 McArdle, J. J., Hamagami, F. & Boker, S. M. (1995) A Dynamical Systems Analysis of Gf and Gc. *Society of Multivariate Experimental Psychologists Annual Meeting*, Portland, Oregon, October 19, 1995.
- 12 Boker, S. M. & Kubovy, M. (1995). Individual Differences in the Perceptual Segmentation of Auditory Rhythmic Sequences. *International Joint Conference on Artificial Intelligence Workshop on Music and Artificial Intelligence*, Montreal, Canada, August 21, 1995.
- 11 Boker, S. M. (1995). Predicting the Grouping of Rhythmic Sequences using Local Estimators of Information Content. *International Joint Conference on Artificial Intelligence Workshop on Computational Auditory Scene Analysis*, Montreal, Canada, August 19–20, 1995.
- 10 Nesselroade, J. R. & Boker, S. M. (1995). Dynamical Systems Models for Intraindividual Variability in Health and Cognitive Performance. *European Congress on Psychology*, Athens, Greece: July 2, 1995.
- 9 Nesselroade, J. R. & Boker, S. M. (1995). A Dynamical Systems Model of Coupling Between Lung Functioning and Memory in Older Adults. *American Psychological Society Annual Meeting*, New York, June 30, 1995.

- 8 Boker, S. M. & Nesselroade, J. R. (1995). Short term dynamic modeling of health and cognitive processes in a sample of elderly subjects. *University of Virginia 1995 Symposium on Dynamical Systems in Psychology and Biology*, Charlottesville, VA, June 26, 1995.
- 7 Bertenthal, B., Rose, J. & Boker, S. M. (1995). Dynamical Analyses of Postural Development. *The Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*, Monterey, CA, June 16–18, 1995.
- 6 Bertenthal, B. I., Boker, S. M. & Rose, J. L. (1995). Dynamical analyses of postural development. *Journal of Sport & Exercise Psychology*, **17**:8.
- 5 Kinzie, M. B., Larsen, V. A., Burch, J. B., & Boker, S. M. (1995). Net-Frog: Using the WWW to Learn About Frog Dissection and Anatomy. *Internet Society Annual Meeting (INET-95)*, Honolulu, HI, June 1995.
- 4 Boker, S. M. (1995). How well-adapted is color vision to the spectral environment?. *University of Virginia Department of Psychology Cognitive Area Spring Conference*, Charlottesville, VA, March 24, 1995.
- 3 Boker, S. M. (1995). The Perception of Structure in Simple Auditory Sequences. *New England Sequencing and Timing Annual Meeting*, Providence, RI, March 1995.
- 2 McArdle, J.J. & Boker, S. M. (1994). Large Scale Databases for Convergent Analyses. *Society of Multivariate Experimental Psychologists Annual Meeting*, Princeton, NJ, October 1994.
- 1 McArdle, J.J., Boker, S.M. & Hamagami, F. (1994). A Dynamic Structural Analysis of Gf and Gc. Poster for *Human Cognitive Abilities Conference*, Charlottesville, VA: September 1994.

CLASSROOM TEACHING

- Multivariate Analysis** (Psyc 7760) University of Virginia, Fall 2010, Spring 2012, Spring 2014, Fall, 2015, Spring 2017, Fall 2017.
- Structural Equation Modeling** (Psyc 8735) University of Virginia. Fall 2008, Spring 2010, Spring 2011, Fall 2014, Spring 2015, Fall 2016, Spring 2018.
- Dynamical Systems Analysis for Psychological Data** (Psyc 8730) University of Virginia. Spring 2007, Fall 2009, Fall 2011, Fall 2013, Spring 2015, Fall 2016.
- Design and Data Analysis** (Psyc 797) University of Virginia. Spring 2008–2012, Spring 2014–2017.
- Exploratory and Graphical Analysis of Data** (Psyc 881) University of Virginia. Fall 2007
- Multivariate Analysis** (Psyc 607) University of Notre Dame, Fall 1997–2006
- Dynamical Systems Analysis for Psychological Data** (Psyc 611 and 345) University of Notre Dame. Spring 1997, 1999; Fall 2001, 2003, 2005

Exploratory and Graphical Data Analysis (Psyc 506 and 344) University of Notre Dame. Spring 2000, Fall 2002, 2004, 2006.

Quantitative Minor (Psyc 510) University of Notre Dame, Spring 2005.

Quantitative Studies Group (Psyc 701) University of Notre Dame, Spring and/or Fall 1996–2005.

Introduction to Artificial Neural Networks (Psyc 614) University of Notre Dame Spring 2002.

Psychology Department Statistical Consultant University of Notre Dame. 1997–1999, Fall 2001.

Introduction to Statistics for Psychology (Psyc 341) University of Notre Dame, Spring 1998

Multivariate Statistics and Structural Modeling for Cognitive Science RIKEN Brain Science Institute, Tokyo. Spring 2003

WORKSHOPS and WORKING GROUPS

NCAA Technical Advisory Panel on College Entrance Examination Concordance NCAA Headquarters; Indianapolis, IN; December 13, 2017.

Advanced Genetic Epidemiology Statistical Workshop Virginia Commonwealth University; Richmond Virginia; October 23 - 28, 2017. (one of 15 faculty)

Algorithms and Models for Social Sciences Studentstiftung Summer Academy, Krakow, Poland; August 28 - September 6, 2017.

Dynamic Systems Modeling Expert Meeting Society for Ambulatory Assessment, University of Luxembourg; June 14-15, 2017.

Dynamic Systems Modeling Modern Modeling Methods conference, University of Connecticut; May 22, 2017.

Working Group on Metrics and Research Standards for Healthy Ageing World Health Organization Headquarters, Geneva, Switzerland; March 27-31, 2017 (one of 30 members)

NCAA Technical Advisory Panel on College Entrance Examination Concordance NCAA Headquarters; Indianapolis, IN; September 7-8, 2016.

Advanced Genetic Epidemiology Statistical Workshop Virginia Commonwealth University, Richmond Virginia; October 22 - 27, 2015. (one of 18 faculty)

Advanced Structural Equation Modeling with OpenMx Association for Psychological Science Annual Meeting, San Francisco, CA; May 22, 2014.

- Introduction to Dynamical Systems Modeling** Max Planck Institute for Human Development, Berlin, Germany; August 21–22, 2012.
- Introduction to Structural Equation Modeling with OpenMx** Association for Psychological Science Annual Meeting, Chicago, IL; May 24, 2012.
- The 2012 International Workshop on Statistical Genetics and Methodology of Twin and Family Studies: The Introductory Course** University of Colorado, Boulder, CO; March 5–9, 2012 (one of 20 faculty).
- New Methods for Conceptualizing, Analyzing, and Visualizing Dyadic Data Within and Across Persons** Zurich Summer School, University of Zurich, Switzerland, August 10–12, 2011.
- Structural Equation Modeling with OpenMx** Society for Multivariate Experimental Psychology Annual Meeting, October 1, 2010.
- Introduction to Dynamical Systems Analysis** Zurich Summer School, University of Zurich, Switzerland, August 19, 2010.
- Structural Equation Modeling with OpenMx** LIFE Academy, University of Virginia, Charlottesville, VA; May 13–17, 2010.
- Structural Equation Modeling with OpenMx** Psychometric Society Annual Meeting; July 6, 2010.
- Structural Equation Modeling with OpenMx** University of Minnesota, Minneapolis, MN; April 1, 2010.
- The 2010 International Workshop on Statistical Genetics and Methodology of Twin and Family Studies: The Introductory Course** University of Colorado, Boulder, CO; March 1–5, 2010 (one of 20 faculty).
- American Psychological Association Advanced Training Institute** *Structural Equation Modeling in Longitudinal Research*; University of Virginia, Charlottesville, VA; June 9–13, 2008 (one of four faculty).
- American Psychological Association Advanced Training Institute** *Structural Equation Modeling in Longitudinal Research*; University of Virginia, Charlottesville, VA; June 13–17, 2005 (one of four faculty).
- Longitudinal Research Institute** *Longitudinal Methods, Measurement & Models*; University of Michigan, Ann Arbor, MI; May 18–21, 2004 (one of five faculty).
- American Psychological Association Advanced Training Institute** *Longitudinal Methods, Modeling, and Measurement in Contemporary Psychological Research*; University of Virginia, Charlottesville, VA; June 3–7, 2003 (one of five faculty).

American Psychological Association Advanced Training Institute *Longitudinal Methods, Modeling, and Measurement in Contemporary Psychological Research*; University of Virginia, Charlottesville, VA; June 10-15, 2002 (one of five faculty).

Longitudinal Research Institute *Longitudinal Methods, Measurement & Models*; University of Virginia, Charlottesville, VA; June 18-21, 2002 (one of five faculty).

Mixed Models for Gerontological Research Preconference Workshop, *2001 Gerontological Society of America Annual Meeting*, Chicago; November 2001 (co-taught with S. E. Maxwell).

Dynamical Systems Seminar University of Virginia, Fall & Spring, 1992–1993, Spring 1995.

Artificial Neural Networks Seminar University of Virginia, Fall, 1994.

Applied Structural Equation Modeling University of Southern California, May 1995 (workshop co-taught with J. J. McArdle).

Methodology of Twin, Family and Adoption Studies University of Helsinki, September 1995 (one of 11 workshop faculty).

MENTORING

Master's Thesis/Predissertation Direction and Co-Direction

- Gustaf Sjobeck, 2019
- Robert Moulder, 2017
- M. Joseph Meyer, 2015
- Joshua Pritikin, 2013
- Geneva Dodson, 2012
- Yueqin Hu, 2012
- Michael Hunter, 2011
- Jeffrey Spies, 2008
- Timothy Brick, 2007
- Pascal Deboeck, 2005
- Stacey Tiberio, 2004
- Eric Covey, 2002
- David Parker, 1999

Ph.D. Dissertation Direction and Co-Direction

- Elena Martynova, (in progress)

- Gustaf Sjobeck, (in progress)
- Kevin McKee, (in progress at VCU)
- Robert Moulder, (in progress)
- Yang Wang, 2018
- M. Joseph Meyer, 2018
- Joshua Pritikin, 2016
- Geneva Dodson, 2016
- Bommae Kim, 2016
- Yueqin Hu, 2013
- Timothy Brick, 2011
- Kathleen Ashenfelter, 2007
- Pascal Deboeck, 2007
- Eric Covey, 2007
- Joseph Rausch, 2006
- Jennifer Rotondo Waddell, 2000

Postdoctoral Fellow Supervision

- Angela Staples (2010–2012)
- Guangjian Zhang (2005–2006)
- Michael Mangini (2004–2006)

Quantitative Minor Direction

- Jennifer Rotondo, 2000
- Melissa Sturge–Apple, 2002

Distinguished Major Direction

- Alicia Grove, 2011-2012
- Allison Gray, 2014-2015
- Garon Alden, 2016-2017

AD HOC REVIEWER

Journals *Science; Psychological Research; Psychometrika; Journal of Mathematical Psychology; Cognitive Science; Journal of Gerontology: Psychological Science; Psychological Methods; Scandanavian Journal of Psychology; Multivariate Behavioral Research; Ecological Psychology; Psychological Review; Journal of Educational Psychology; Behavior Research Methods, Instruments, & Computers; Journal of Experimental Psychology: Human Perception & Performance; Structural Equation Modeling; PLoS ONE .*

Funding Agencies National Institute on Aging; National Institute on Child and Human Development; National Science Foundation; Institute of Education Sciences; Netherlands Organisation for Scientific Research; Research Foundation Flanders; South Carolina Commission on Higher Education.

Conferences International Conference on Affective Computing and Intelligent Interaction.

PAST AND CURRENT PROFESSIONAL MEMBERSHIPS

American Association for the Advancement of Sciences (AAAS), American Mathematical Society (AMS), American Psychological Association (APA), American Psychological Society (APS), American Statistical Association (ASA), Association for Computing Machinery (ACM), Audio Engineering Society (AES), Institute of Electrical and Electronic Engineers (IEEE), International Neural Network Society (INNS), Psychometric Society (PS), Society for Mathematical Psychology (SMP), Society of Multivariate Experimental Psychology (SMEP), Society for Music Perception and Cognition (SMPC).