

**Ross Jacobucci**  
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**Curriculum Vitae**  
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## Professional History & Education

- **Assistant Professor of Psychology**  
*University of Notre Dame*  
2017 - Current  
Notre Dame, Indiana
- **Ph.D. Psychology**  
*University of Southern California (USC)*  
August 2017  
Los Angeles, California
  - Area: Quantitative Methods
  - Dissertation: Evaluating the Stability of Decision Tree Algorithms.
- **M.A. Psychology**  
*University of Southern California (USC)*  
December 2015  
Los Angeles, California
  - Area: Quantitative Methods
  - Thesis: Regularized Structural Equation Modeling.
- **M.A. Psychology**  
*University of Northern Iowa (UNI)*  
2011-2013  
Cedar Falls, Iowa
  - Individualized Study: Quantitative Emphasis
- **B.A. Psychology**  
*Luther College*  
June 2010  
Decorah, Iowa
  - Thesis: The Effect of Mental Imagery on Performance in Golf.

## Research Funding

- **Pending**  
NIH RFA-MH-18-400      Ross Jacobucci (PI)      Under Review  
Addressing Suicide Research Gaps: Aggregating and Mining Existing Data Sets for Secondary Analyses  
*Integrative Data Mining in the Prediction of the Pathway to Suicide.*  
Total Cost: \$540,750
- **Completed**  
T32 AG000037-38      Crimmins (PI)      01/01/15-07/31/17  
Ruth L. Kirschstein National Research Service Award  
*Predoctoral trainee on the Multidisciplinary Research Training in Gerontology Grant at USC.*  
Role: Predoctoral Trainee

## Books

Jacobucci, R. & Grimm, K. J. (under contract). *Exploratory data mining for social and behavioral scientists*.  
New York, NY: Guilford.

## Publications

### • Publications

- Stegmann, G., **Jacobucci, R.**, Serang, S., & Grimm, K. J. (accepted). Recursive partitioning with nonlinear change trajectories. *Multivariate Behavioral Research*.
- Usami, S., **Jacobucci, R.**, & Hayes, T. (accepted). The performance of latent growth curve model based structural equation model trees to uncover population heterogeneity in growth trajectories. *Computational Statistics*.
- Jacobucci, R.**, Grimm, K. J. (in press). Comparison of frequentist and Bayesian regularization in structural equation modeling. *Structural Equation Modeling*.
- Burke, T. A., **Jacobucci, R.**, Ammerman, B. A., Piccirillo, M., McCloskey M., & Alloy, L. B. (in press). Identifying the relative importance of non-suicidal self-injury features in predicting suicidal ideation and behavior using exploratory data mining. *Psychiatry Research*.
- Stegmann, G., **Jacobucci, R.**, Harring, J., & Grimm, K. J. (in press). Nonlinear mixed-effects modeling programs in R. *Structural Equation Modeling*.
- Ammerman, B. A., **Jacobucci, R.**, & McCloskey, M. S. (in press). Using exploratory data mining to identify important predictors of non-suicidal self-injury frequency. *Psychology of Violence*.
- Ammerman, B. A., **Jacobucci, R.**, Kleiman, E. M., Uyeji, L., & McCloskey, M. S. (in press). The relationship between nonsuicidal self-injury age of onset and severity of self-harm. *Suicide and Life Threatening Behavior*.
- Serang, S., **Jacobucci, R.**, Brimhall, K. C., & Grimm, K. J. (2017). Exploratory mediation analysis via regularization. *Structural Equation Modeling*, 24. 733-744.
- Jacobucci, R.**, Grimm, K. J., & McArdle, J. J. (2017). A comparison of methods for uncovering sample heterogeneity: Structural equation model trees and finite mixture models. *Structural Equation Modeling*, 24. 270-282.
- Grimm, K. J., **Jacobucci, R.**, McArdle, J. J. (January, 2017). Big data methods and psychological science. *Psychological Science Agenda*.
- Jacobucci, R.**, Grimm, K. J., & McArdle, J. J. (2016). Regularized structural equation modeling, *Structural Equation Modeling*, 23, 555-566. doi:10.1080/10705511.2016.1154793. PMID: 4937830
- Ammerman, B. A., **Jacobucci, R.**, Kleiman, E. M., Muehlenkamp, J. J., & McCloskey, M. S. (2016). Development and validation of empirically derived frequency criteria for NSSI disorder using exploratory data mining, *Psychological Assessment*.
- Jacobucci, R.**, & McArdle, J. J. (2015). Abstract: Regularized structural equation modeling, *Multivariate Behavioral Research* 50, 736-736. doi:10.1080/00273171.2015.1121125.
- Hayes, T., Usami, S., **Jacobucci, R.**, & McArdle, J. J. (2015). Using classification and regression trees (CART) and random forests to analyze attrition in longitudinal data: Results from two simulation studies, *Psychology and Aging*, 30, 911-929. doi:10.1037/pag0000046. PMID: 4743660
- Skaar, N. R., Christ, T. J., & **Jacobucci, R.** (2014). Measuring adolescent prosocial and health risk behavior in schools: Initial development of a screening measure. *School Mental Health*, 6, 137-149. doi:10.1007/s12310-014-9123-y

### • Chapters

- Jacobucci, R.** & Grimm, K. J. (accepted). Regularized estimation of multivariate latent change score models. *Advances in Longitudinal Models for Multivariate Psychology: A Festschrift for Jack McArdle*.

Grimm, K. J. & **Jacobucci, R.** (accepted). Individually varying time metrics in latent change score models. *Advances in Longitudinal Models for Multivariate Psychology: A Festschrift for Jack McArdle*.

- **Technical Reports**

**Jacobucci, R.** (2017). regsem: Regularized Structural Equation Modeling. *arXiv preprint arXiv:1703.08489*.

- **Manuscripts Under Review**

Ammerman, B. A., Serang, S., **Jacobucci, R.**, Burke, T., A., Alloy, L. B., & McCloskey, M. S. (under review). Exploratory Analysis of Mediators in the Relationship between Childhood Maltreatment and Suicidal Behavior.

Serang, S. & **Jacobucci, R.** (under review). Exploratory mediation analysis of dichotomous outcomes via regularization.

**Jacobucci, R.**, Brandmaier, A., & Kievit, R. (under review). Variable selection in structural equation models with regularized MIMIC models.

**Jacobucci, R.** (in preparation). Are decision trees reliable enough for psychological research?

- **Manuscripts in Preparation**

Ammerman, B. A., Hong, M., Sorgi, K. M., **Jacobucci, R.**, & McCloskey, M. S. (in preparation). The most dangerous method: An examination of non-suicidal self-injury methods.

Grimm, K. J., & **Jacobucci, R.** (in preparation). Reliable trees: Reliability informed recursive partitioning for psychological data.

Ammerman, B.A., **Jacobucci, R.**, Turner, B. J., & McCloskey, M.S. (in preparation). Quantifying the importance of lifetime frequency versus number of methods used in the consideration of NSSI severity.

Ammerman, B.A., **Jacobucci, R.** & McCloskey, M.S. (in preparation). Re-considering important outcomes: Further exploration of the NSSI disorder frequency criteria.

Burke, T.A., Ammerman, B.A., & **Jacobucci, R.** (in preparation). The use of machine learning in the study of suicidal and non-suicidal self-injurious thoughts and behavior: A systematic review.

## Presentations

- **Oral Presentations**

Grimm, K. J., Stegmann, G., **Jacobucci, R.**, & Serang, S. (2018, March). Machine learning approaches to understanding differences in longitudinal change trajectories. Keynote address at the 6th Annual Meeting of the Texas Universities' Educational Statistics and Psychometrics Alliance.

**Jacobucci, R.** (2017, November). *Exploratory data mining for a single outcome in clinical research*. Paper presented at the 51st Annual Convention for the Association for Behavioral and Cognitive Therapies, San Diego, California.

Ammerman, B. A., **Jacobucci, R.**, Turner, B. J., Serang, S., & McCloskey, M. S. (2017, November). *Quantifying the importance of lifetime frequency versus number of methods used in the consideration of NSSI severity*. Paper presented at the 51st Annual Convention for the Association for Behavioral and Cognitive Therapies, San Diego, California.

**Jacobucci, R.**, Serang, S., & Ammerman, B.A. (2017, November). *Multivariate approaches to exploratory data mining with the application of exploratory mediation for self-injury*. Paper presented at the 51st Annual Convention for the Association for Behavioral and Cognitive Therapies, San Diego, California.

- Burke, T. A., **Jacobucci, R.**, Ammerman, B.A., Hamilton, J. L., & Alloy, L. B. (2017, June). *Using exploratory data mining to compare importance of risk factors in predicting recent versus former history of non-suicidal self-injury*. Paper presented at the 51st Annual Convention for the Association for Behavioral and Cognitive Therapies, San Diego, California.
- Kleiman, E.M., **Jacobucci, R.**, Ammerman, B.A., Turner, B.J., Beale, E.E., Fedeor, S., Huffman, J.C., & Nock, M. K. (2017, June). *What affect states are most strongly associated with suicidal ideation? A real-time monitoring, exploratory data mining study*. Paper presented at the 51st Annual Convention for the Association for Behavioral and Cognitive Therapies, San Diego, California.
- Zelinski, E. M., **Jacobucci, R.** (2017, July). *Heterogeneity in cognitive change trajectories of older adults observed from structural equation model trees*. Alzheimers Association International Conference in London, UK
- Burke, T. A., **Jacobucci, R.**, Ammerman, B. A., Piccirillo, M., McCloskey M., & Alloy, L. B. (2017, April). *Identifying the relative importance of non-suicidal self-injury features in predicting suicidal ideation and behavior using exploratory data mining*. Paper presented at the 50th Annual Conference of American Association of Suicidology in Pheonix, Arizona.
- Jacobucci, R.**, Zelinski, E. M. (2016, November). *The bi-directional relationship between health and cognition in older age*. Paper presented at the Gerontological Society of America Annual Meeting, New Orleans, Louisiana.
- Peters, K., **Jacobucci, R.**, Prescott, C., Walters, E., McArdle, J. J. (2016, November). *Computerized adaptive testing of cognitive abilities in the Project Talent Aging Study*. Paper presented at the Gerontological Society of America Annual Meeting, New Orleans, Louisiana.
- Jacobucci, R.**, Grimm, K. J. (2016, October). *Psuedo-continuous testing of the latent difference score model*. Paper invited for presentation at the conference to honor the work of Jack McArdle, Richmond, Virginia.
- Grimm, K. J., **Jacobucci, R.** (2016, October). *Individually-varying time metrics in latent change score models*. Paper invited for presentation at the conference to honor the work of Jack McArdle, Richmond, Virginia.
- Jacobucci, R.**, Grimm, K. J., McArdle, J. J. (2016, July). *Comparison of frequentist and Bayesian regularization in structural equation modeling*. Paper presented at the International Meeting for the Psychometric Society, Asheville, North Carolina.
- Ammerman, B. A., **Jacobucci, R.**, Kleiman, E. M., Muehlenkamp, J., J. & McCloskey, M. S. (2015, November). *The exploration and validation of an empirically derived frequency criteria for NSSI Disorder*. Paper presented at the 49th Annual Convention for the Association for Behavioral and Cognitive Therapies, Chicago, Illinois
- Jacobucci, R.**, Prindle, J. J., McArdle, J. J. (2015, September). *An Application of Exploratory Data Mining in Project TALENT*. Paper presented at the International Meeting for Intelligence Research Annual Conference, Albuquerque, New Mexico.

## • Poster Presentations

- Jacobucci, R.**, & Zelinski, E. M. (2017, July). *Exploratory Search for Heterogeneity in Change Across Old Age Using Structural Equation Model Trees*. Poster presented at the International Association of Gerontology and Geriatrics, San Francisco, California.
- Khoddam, R., Cho, J., Jacobucci, R., Prescott, C. A., & Leventhal, A. M. (2017, March). *Bivariate Latent Difference Score Modeling to Examine the Relationship between Conduct Problems and Cigarette Smoking among Adolescents*. Poster presented at the Society for Research on Nicotine and Tobacco annual meeting, Florence, Italy.
- Ammerman, B. A., **Jacobucci, R.**, & McCloskey, M. S. (2016, June). *The Prediction of Non-Suicidal Self-Injury Frequency Using Random Forests*. Poster presented at the 11th Annual Meeting of the International Society for the Study of Self-Injury, Eau Claire, Wisconsin.
- Jacobucci, R.**, Hayes, T., Zelinski, E. M. (2015, November). *Evaluating Methods for Generalizing from a Convenience Sample*. Poster presented at the 68th Annual Scientific Meeting of the Gerontological Society of America, Orlando, Florida.

- Zelinski, E., **Jacobucci, R.**, Kennison, R., & Zak, D. (2014, November). *Can a convenience sample produce generalizable results?* Poster session presented at the Gerontological Society of America Annual Scientific Meeting, Washington, DC.
- Jacobucci, R.**, Williams, J. E., & Thiruselvam, I. (2013, January). *A confirmatory factor analysis of the short form for the IPIP-NEO five-factor model personality scale.* Poster session presented at the Society for Personality and Social Psychology, New Orleans, Louisiana.
- Jacobucci, R.**, Brownfield, C., & Williams, J. E. (2012, December). *Intelligence as a factor in criminal offender risk assessment.* Poster session presented at the International Society for Intelligence Research, San Antonio, Texas.
- Jacobucci, R.**, Williams, J. E., & Thiruselvam, I. (2012, March). *Convergent validity of two short form measures of the five factor model of personality.* Poster session presented at the Iowa Psychological Association Spring Conference, Ames, Iowa.

## Software

- Jacobucci, R.** (2017). regsem: Performs Regularization on Structural Equation Models (version 0.8.1) [Software]. Available from <https://cran.r-project.org/web/packages/index.html>
- Jacobucci, R.**, Stewart, S., Abdoell, M., Serang, S., & Stegmann, G. (2017). longRPart2: Recursive Partitioning of Longitudinal Data (version 0.0.1) [Software]. Available from <https://cran.r-project.org/web/packages/longRPart2/index.html>
- Jacobucci, R.** (2017). dtree: Decision Trees (version 0.2.3) [Software]. Available from <https://cran.r-project.org/web/packages/dtree/index.html>
- Jacobucci, R.** (2016). autosem: Performs Specification Search in Structural Equation Models (version 0.1.0) [Software]. Available from <https://cran.r-project.org/web/packages/autoSEM/index.html>

## Awards/Honors

### 2016 USC Psychology Department Travel Grant Award

Travel award to present at the 2016 Psychometric Society Meeting.

Amount: \$500

### 2015 SMEP Conference Travel Award

Travel award to present at the 13th Annual Society of Multivariate Experimental Psychology Graduate Student Conference.

Amount: \$1500

### 2015 ISIR Conference Travel Award

Travel award to present at the annual meeting of the International Society for Intelligence Research.

Amount: \$1500

### 2014 SMEP Workshop Travel Award

Travel award to attend the 2014 APA Advanced Training Institutes on Structural Equation Modeling in Longitudinal Research and Exploratory Data Mining in Behavioral Research.

Amount: \$1000

### 2014 APA Science Directorate Travel Award

Travel award to attend the 2014 APA Advanced Training Institutes on Structural Equation Modeling in Longitudinal Research and Exploratory Data Mining in Behavioral Research.

Amount: \$500

**Intercollegiate Academics Fund Travel Award, UNI, Fall 2012**

Award allocated to promote and support the presentation of research at an academic conference.

Amount: \$650

**Graduate Student Opportunity Fund For Travel, UNI, Fall 2012**

Award to support travel for graduate students presenting at an academic conference.

Amount: \$250

**College of Social and Behavioral Sciences Graduate Research Award, UNI, Fall 2012**

Award allocated for the purchase of expenses related to thesis research.

Amount: \$500

**Graduate College Tuition Scholarship, UNI, Fall 2012**

Scholarship based on academic performance.

**Academic All-American, Golf, 2009, 2010**

An award given out by the Golf Coaches Association of America based on academic and athletic performance.

## Teaching Experience

- **Classes**

**Undergraduate Psych Statistics**

PSY30100 - 03: Experimental Psychology I - Statistics

Fall 2017, University of Notre Dame

- **Workshops**

**Exploratory Data Mining via SEARCH Strategies**

8/15/2016-8/19/2016 & 8/14/2017-8/18/2017

University of Michigan, Ann Arbor, MI.

Role: Lecturer and lab instructor.

Lecture Topic: Structural Equation Model Trees

Lab Topics: R, Regression, Clustering, Factor Analysis, Decision Trees & Extensions, SEM Trees.

**Big Data: Exploratory Data Mining in Behavioral Research**

APA Advanced Training Institutes. 6/6/2016-6/10/2016 & 6/5/2017-6/9/2017

Arizona State University, Tempe, AZ

Role: Lecturer and lab instructor.

Lecture Topic: Structural Equation Model Trees

Lab Topics: Decision Trees, Random Forests, Boosting, & SEM Trees.

**Structural Equation Modeling in Longitudinal Research**

APA Advanced Training Institutes. 6/6/2016-6/10/2016 & 5/30/2017-6/3/2017

Arizona State University, Tempe, AZ

Role: Lab instructor.

Lab Topics: Longitudinal Factor Analysis & Alternate Change Score Models.

**Exploratory Data Mining via SEARCH Strategies**

6/8/2015-6/12/2015, University of Michigan, Ann Arbor, MI

Role: Lab instructor.

Lab Topics: R, Regression, Clustering, Factor Analysis, Decision Trees & Extensions, SEM Trees.

**Big Data: Exploratory Data Mining in Behavioral Research**

APA Advanced Training Institutes. 6/1/2015-6/5/2015, Arizona State University, Tempe, AZ

Role: Lab instructor.

Lab Topics: Decision Trees & Extensions, SEM Trees, Heuristic Search Algorithms.

- **Lecturing**

*Exploratory Factor Analysis*, Multivariate Analysis of Behavioral Data, Fall 2016, USC

*The application of SEM Trees in Project TALENT*, Big Data: Exploratory Data Mining in Behavioral Research Workshop, Summer 2014, USC.

*Graphing in R*, Graduate Consultation and Computer Center Lecture Series, Spring 2014, USC.

*Item Factor Analysis*, Graduate Consultation and Computer Center Lecture Series, Spring 2014, USC.

*Factor Indeterminacy*, Workshop in Quantitative Methods – Mathematical Psychology, Spring 2014, USC

*Estimation in Factor Analysis*, Workshop in Quantitative Methods – Mathematical Psychology, Spring 2014, USC

*Statistical Learning-Part 3: Advanced Algorithms*, Graduate Consultation and Computer Center Lecture Series, Fall 2014, USC.

*Statistical Learning-Part 1: Preprocessing*, Graduate Consultation and Computer Center Lecture Series, Fall 2014, USC.

*Exploratory Factor Analysis*, Introduction to Psych Statistics, Spring 2012, UNI

## Professional Activities

- **Consulting**

Team member of environmental-brain aging psychometrics working group for the Environmental Determinants of Cognitive Aging R01, Summer 2013 - Spring 2014, USC.

- **Reviewing**

Journal of Consulting and Clinical Psychology  
Structural Equation Modeling  
Multivariate Behavioral Research  
Behavior Research Methods  
Psychometrika