

## Ross Jacobucci

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## Curriculum Vitae

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### Education

- **University of Southern California (USC)** Los Angeles, California  
*Ph.D. Psychology* Expected Spring 2017
  - Area: Quantitative Methods
  - Dissertation: On the Application of Decision Trees in both Psychological and Gerontological Research.
- **University of Southern California (USC)** Los Angeles, California  
*M.A. Psychology* December 2015
  - Area: Quantitative Methods
  - Thesis: Regularized Structural Equation Modeling
- **University of Northern Iowa (UNI)** Cedar Falls, Iowa  
*M.A. Psychology* 2011-2013
  - Individualized Study: Quantitative Emphasis
- **Luther College** Decorah, Iowa  
*B.A. Psychology* June 2010
  - Thesis: The Effect of Mental Imagery on Performance in Golf.

### Publications

#### • Publications

- Jacobucci, R., Grimm, K. J., & McArdle, J. J. (in press). A comparison of methods for uncovering sample heterogeneity: Structural equation model trees and finite mixture models. *Structural Equation Modeling*.
- Grimm, K. J., Jacobucci, R., McArdle, J. J. (in press). Big data methods and psychological science. *Psychological Science Agenda*.
- 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*.
- 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

- **Manuscripts Under Review**

Serang, S., **Jacobucci, R.**, Brimhall, K. C., & Grimm, K. J. (in revision). Exploratory mediation analysis via regularization. *Structural Equation Modeling*.

**Jacobucci, R.**, Grimm, K. J. (under review). Comparison of frequentist and Bayesian regularization in structural equation modeling. *Structural Equation Modeling*.

Ammerman, B. A., **Jacobucci, R.**, & McCloskey, M. S. (under review). Using exploratory data mining to identify important predictors of non-suicidal self-injury frequency. *Psychology of Violence*.

- **Manuscripts in Preparation**

**Jacobucci, R.**, Grimm, K. J., & Zelinski, E. M. (in preparation). The bi-directional relationship between health and cognition in older ages.

**Jacobucci, R.**, Grimm, K. J. (in preparation). Psuedo-Continuous testing of the latent change score model. Invited book chapter for *Advances in Longitudinal Models for Multivariate Psychology: A Festschrift for Jack McArdle*.

**Jacobucci, R.**, & Zelinski, E. M. (in preparation). Exploratory search for heterogeneity in change across older age using structural equation model trees.

Burke, T. A., **Jacobucci, R.**, Ammerman, B. A., Piccirillo, M., McCloskey M., & Alloy, L. B. (in preparation). Identifying the relative importance of non-suicidal self-injury features in predicting suicidal ideation and behavior using exploratory data mining.

McArdle, J. J., Bohrnstedt, G. A., Prescott, C. A., **Jacobucci, R.**, Grimm, K. J., Rebok, G., Lyter, D. A., & Lapham, S. (in preparation). A confirmatory examination of the factors of cognition as measured in Project TALENT.

**Jacobucci, R.**, Serang, S., & CogUSA Team (in preparation). Examination of mode effects in CogUSA survey administration.

## Presentations

- **Invited Talks**

**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.

- **Symposium Chair**

*Structural Equation Modeling*. 2016 International Meeting for the Psychometric Society, Asheville, North Carolina.

- **Oral Presentations**

**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.

Burke, T. A., **Jacobucci, R.**, Ammerman, B. A., Piccirillo, M., McCloskey M., & Alloy, L. B. (2016, October). *Identifying the relative importance of non-suicidal self-injury features in predicting suicidal ideation and behavior using exploratory data mining*. Submitted to 50th Annual Conference of American Association of Suicidology in Pheonix, Arizona.

Khoddam, R., Cho, J., **Jacobucci, R.**, Prescott, C., & Leventhal, A. M. (2016, August) *Using bivariate latent difference score modeling to examine the relationship between conduct problems and cigarette use across the transition to high school*. Abstract submitted for paper presentation at the meeting for Society for Research on Nicotine & Tobacco in Florence, Italy.

**Jacobucci, R.**, Zelinski, E. M. (2016, July). *Exploratory search for heterogeneity in change across older age using structural equation model trees*. Abstract submitted for paper presentation at the 21st IAGG World Congress of Gerontology and Geriatrics, San Francisco, California.

**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

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.

## Awards/Honors

### Ruth L. Kirschstein National Research Service Award

Predoctoral trainee on the Multidisciplinary Research Training in Gerontology Grant at USC.  
Three years of full funding.

### 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

### • Workshops

**Exploratory Data Mining via SEARCH Strategies**

8/15/2016-8/19/2016, 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, Arizona State University, Tempe, AZ

Role: Lecturer and lab instructor.

Lecture Topic: Multivariate Decision Tree Methods

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, 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

### **• Teaching Assistant**

Fundamentals of Psychological Measurement, Fall 2014 (Graduate-Level: Dr. John J. McArdle, USC)

History & Systems, Spring 2013 (Undergraduate-Level: Dr. Andrew R. Gilpin, UNI)

Psychology of Music, Spring 2013 (Undergraduate-Level: Dr. Carolyn Hildebrandt, UNI)

Advanced Graduate Statistics, Fall 2012 (Graduate-Level: Dr. Andrew R. Gilpin, UNI)

Cognitive & Intellectual Assessment, Fall 2012 (Graduate-Level: Dr. John E. Williams, UNI)

Honor's Introduction to Psychology, Fall 2012 (Undergraduate-Level: Dr. John E. Williams, UNI)

Introduction to Psych Statistics, Spring 2012 (Undergraduate-Level: Dr. Andrew R. Gilpin, UNI)

Memory & Language, Fall 2011 (Undergraduate-Level: Dr. Jack Yates, UNI)

## **Software**

**Jacobucci, R.** (2016). regsem: Performs Regularization on Structural Equation Models (version 0.4.3) [Software]. Available from <https://cran.r-project.org/web/packages/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>

## **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.

### **• Advanced Training**

Integrative Analysis of Longitudinal Studies of Aging and Dementia: Enhancing Replication and Reproducibility, GSA 2015 Pre-Conference Workshop, Orlando, FL

Structural Equation Modeling in Longitudinal Research, APA Advanced Training Institutes. Summer 2014, Arizona State University, Tempe, AZ

Big Data: Exploratory Data Mining in Behavioral Research, APA Advanced Training Institutes. Summer 2014, Arizona State University, Tempe, AZ

- **Reviewing**

Multivariate Behavioral Research  
SMEP 2016 Graduate Student Conference  
21st IAGG World Congress of Gerontology and Geriatrics

- **Affiliations**

Gerontological Society of America  
Psychometric Society

## References

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**Kevin J. Grimm**, Ph.D., Arizona State University  
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**John J. McArdle**, Ph.D., University of Southern California  
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