University of South Carolina Psychology PhD Program
Quantitative Psychology Concentration

PROSPECTIVE STUDENT GUIDE

QUANTITATIVE PSYCHOLOGY
Students in our program study the methodology, measurement and statistics used to conduct research on human behavior. Our concentration prepares students to thrive in an increasingly data-driven world and sets them up to contribute to a wide range of collaborative and quantitative research endeavors.

OUR FOCUS
The Quantitative Psychology Ph.D. concentration at the University of South Carolina has a dual focus. We train students to develop and evaluate novel methodology, as well as to innovatively apply methods to solve important psychological research problems that impact society.

DEVELOP NEW METHODS
We train our students to conduct their own primary quantitative research and to collaborate effectively with substantive researchers. Graduates from our program are prepared to continue their work in the academy as tenure track or research professors, as well as to serve in other important research roles at major universities, medical centers, private firms, or government agencies.

A QUICK GLANCE AT STUDENT SUPPORT

Our students are typically supported financially with a graduate assistantship

- ~$20K assistantship for 20 hour/week, 9-month appointment
- Assistantship includes tuition waiver
- Health insurance and benefits are provided
- Opportunities may be available for summer support
- Assistantships tend to be teaching assistant positions, but research positions may also be available

DEADLINES
Application Deadline: December 1

REQUIRED DOCUMENTS
- Supplemental Questions on Application
- Official Transcript(s)
- Personal Statement
- Curriculum Vitae or Resume
- 3 Letters of Recommendation

*Note: GRE Scores are not required for any concentration in the department. Please do not submit or send GRE scores.

Optional Documents
- Writing Sample
- Diversity Statement

Concentration Area Faculty

Donna Coffman, Ph.D., University of North Carolina, Chapel Hill, Associate Professor

Dr. Coffman's research work is focused on expanding the methods available for the quantitative study of causation -- for example, expanding methods to continuous treatments rather than only categories, studying mediation, and allowing causal effects and mediation to vary over time. These methods are very important for analyzing intensive longitudinal data (including wearable devices) and the design of just-in-time adaptive interventions and other mobile health (mHealth) applications. Her particular areas of substantive interest for these analyses and interventions are obesity prevention, smoking cessation, and substance abuse prevention and treatment.

Amanda J. Fairchild, Ph.D., Arizona State University, Professor

Dr. Fairchild has centered her work on assessing and applying statistical techniques for prevention science and translating innovative methods for applied researchers to promote best practice. These efforts have encompassed methodological research in statistical mediation and moderation analyses, psychometrics, and statistical pedagogy. Most recently, she has been investigating new methods for causal inference. In addition to her primary research in methodology, Dr. Fairchild routinely collaborates with several colleagues on substantive research projects. Her collaborative work covers a variety of domains including neurodevelopmental disorders and health promotion.
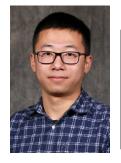

Alberto Maydeu-Olivares, Ph.D., University of Barcelona & University of Illinois, Professor

Dr. Maydeu-Olivares's research interest focus on structural equation modeling and item response theory (IRT), and more generally in developing new quantitative methods. His early research focused on social problem solving and optimism. He is probably best known for his research on goodness of fit tests for very sparse categorical data (with applications to educational testing), and models for preference and choice (with applications to marketing but also to personnel selection). His most recent work focuses on goodness of fit testing of structural equation models, the use of instrumental variable methods to overcome common method bias, and statistical modeling of faking in personnel selection.

Sarfaraz Serang, Ph.D., University of Southern California, Assistant Professor

Dr. Serang's research program involves developing and evaluating statistical methods for use in the social sciences. His methodological interests include structural equation modeling, longitudinal modeling, statistical learning (data mining/machine learning), and combinations of the three. He also collaborates with researchers from a wide range of disciplines to answer all kinds of interesting research questions.

Dexin Shi, Ph.D., University of Oklahoma, Associate Professor

Dr. Shi's research primarily focuses on developing, improving, and applying statistical methods (from both Frequentist and Bayesian perspectives) for modeling psychological data. His methodological interests reside in the following four areas: 1) Psychometrics, 2) Model fit and model selection, 3) Causal inference, and 4) Missing data analysis. He is also interested in the application of quantitative methods to substantive areas of psychology, especially in clinical and health related studies.

Alumni Spotlight

Interview with Dr. Heather McDaniel, Ph.D. (2018)

Assistant Professor at the University of South Carolina, Department of Psychology

Why did you choose the Quantitative Psych concentration?

Initially, my training and substantive interests were focused solely on school mental health services, toward promoting positive social, emotional, behavioral health outcomes for students and families in the school setting. Over time, I found that causal questions related to school mental health services, focused on what works, for whom, and under what conditions, often require innovative, advanced quantitative and research methodologies. The Quantitative Psychology Concentration allowed me to delve deeper into these methodologies, to better inform questions related to school mental health services, as well as other applied research in social science and beyond.

What was the best part of the concentration?

I appreciated the opportunity to work alongside productive, innovative faculty members committed to high quality quantitative psychology research. I had really excellent mentorship that was critical to my success in graduate school and beyond. Moreover, I appreciated the opportunity to take related quantitative coursework in other Colleges at the University. I believe it was an asset to have a multidisciplinary training experience, which included engaging in research with faculty across the university. Much of my current work is multidisciplinary, and I believe that my initial training created an appreciation and aptitude for this work.

How are you using your degree?

After graduation in 2018, I accepted a position as an Assistant Professor on the research faculty in UVA's Curry School of Education and Human Development. My work focuses both on quantitative methods and school mental health services, leveraging my blended training in School, Experimental, and Quantitative Psychology. I serve as the methodologist on federally funded trials focused on school-based behavioral health preventive interventions and a Co-Investigator on a federally funded integrative data analysis of 11 RCTs of an evidence-based, school-based preventive intervention. I also recently received my first federally funded project as PI from IES.

Would you recommend this concentration to prospective students?

I would absolutely recommend this concentration to other graduate students. The training (i.e., formally in courses and informally through faculty research assistantships) and mentorship I received in the Quantitative Psych Concentration provided many foundational skills and competencies needed to be successful in my current position.

Study with Us

Admission to the quantitative PhD concentration is based on an inclusive evaluation of the prospective student's profile. We consider one's traditional academic record, prior relevant experience, and fit with faculty mentor when evaluating applications. Applicants are encouraged to contact prospective faculty mentors prior to applying (to learn more about the faculty member's current research and to assess match potential) and are advised to discuss fit with identified mentors in the personal statement. Competitive applicants often have prior research experience in quantitative study or have completed prior quantitative classwork of some kind. The University of South Carolina is an affirmative action, equal opportunity institution. We strongly encourage minorities and members of other historically under-represented groups in our field to apply.

QUANTITATIVE METHODS COURSES

- Basic Quantitative Methods in the Analysis of Behavioral Data I
- Basic Quantitative Methods in the Analysis of Behavioral Data II
- Introduction to Causal Inference
- Psychological Measurement
- Multivariate Analysis
- Structural equation modeling (SEM)
- Statistical Mediation Analysis
- Longitudinal Data Analysis
- Advanced Structural equation modeling
- Innovative Design and Analysis of Behavioral Interventions
- Multilevel Modeling
- Special Topics in Quantitative Psychology

OUR COMMITMENT TO DIVERSITY

- We highly encourage applicants from underrepresented groups
- We are committed to fostering an environment that provides equitable opportunities for all persons, no matter their race, ethnicity, culture, nationality, religion, SES, age, disability, mental health, sexuality, or gender.
- We believe that diverse backgrounds enhance learning and enrich our intellectual community.
- Did you know that many professional organizations in quantitative psychology provide minority-specific travel/research support for students?

MORE INFORMATION

University of South Carolina Graduate School:
https://sc.edu/study/colleges_schools/graduate_school/index.php

Department of Psychology: https://sc.edu/study/colleges_schools/artsandsciences/psychology/index.php

Quantitative Psychology Concentration:

https://sc.edu/study/colleges_schools/artsandsciences/psychology/study/graduate/quantitative_psychology/index.php

APPLY:
https://www.sc.edu/study/colleges_schools/graduate_school/apply/index.php

QUESTIONS :
Please contact our Quantitative Concentration Director, Dr. Amanda Fairchild
(afairchi@mailbox.sc.edu)