

Leaders in Quantitative Methodology

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Scott M. Hofer

The Society of Multivariate Experimental Psychology (SMEP) is an honorary-membership organization for professional scholars who work in the area of quantitative methodology. SMEP has exactly 65 members, each of whom was voted in after being nominated by one or more members. SMEP positions become open when a member turns 65 and transitions into emeritus membership, when a member resigns or passes away, or when a member does not participate in the annual SMEP conference for 3 straight years.

The term *quantitative methodology* is broadly construed and refers to methods involved in behavioral statistics, statistical/mathematical modeling, psychometrics (including measurement and testing), research design, sampling methods, software development, and related methods. Of particular importance to SMEP is that its members are directly involved in substantive, empirical research of relevance to psychology and other behavioral science disciplines.



Joe Rodgers

A primary purpose of the Society is to have an intimate and technically advanced round-table discussion at its annual meeting. The society structure was designed to encourage open and critical exchange, and half the presentation time is allocated to discussion. The program features substantive, experimental, and psychological topics as well as mathematical, computational, and statistical topics, with most presentations using advanced methods to help answer cutting-edge issues in psychological science.

A Significant Role in Psychological Science

SMEP supports the highest level of scholarship associated with quantitative methodology. It owns and runs the applied methodology journal *Multivariate Behavioral Research*. This journal is characterized by outstanding articles in six issues per year, and all articles include both sophisticated cutting-edge methodology and empirical research. In addition, the SMEP Multivariate Applications Book Series, now in its 20th year, has sold more than 72,500 copies from its catalog of 25 books.

SMEP also supports the development of young scholars in quantitative methods by including graduate student presentations and participation in the annual meeting, providing financial support for dissertation research and quantitative-methodology workshops, and offering an annual early-career award.

In addition to these endeavors, SMEP supports a small-grant award process for work that contributes to and promotes quantitative-methodology scholarship in a variety of ways. It also runs an advocacy program to encourage ethnic and gender diversity in quantitative-methodology scholarship activity.

Last, SMEP supports quantitative-methodology workshops that are delivered the day before the annual APS meeting. The cosponsored APS–SMEP Methodological Workshop Series has been a great success, with more than 10 workshops per year on a range of topics that have included latent-variable modeling, open science and replication, introduction to R, Big Data, Bayesian methods, dyadic and network data analysis, and data mining.

Helping Quantitative Methodology Grow

There are traditional areas within quantitative methodology (e.g., statistics, psychometrics, experimental design) and areas that have emerged within methodology, some of those primarily driven by SMEP and SMEP members. One example is the area of statistical/mathematical modeling, which can (and should) be distinguished from standard statistical methods organized around null-hypothesis significance testing (examples of modeling methods include structural-equation modeling, multilevel modeling, time-series modeling, hazards modeling, and categorical data analysis).

Last, many SMEP members work on the development of Big Data methods and applications, Bayesian methods within psychology, and resampling theory. They also research item response theory, integrative data analysis, and the area of causal modeling, especially within quasiexperimental research settings. All members share the goal of delivering sophisticated methodology to the applied research community.

Goals for the Future

SMEP hopes to develop collaborative relationships with other organizations, in particular with APS. Many SMEP members feel that the area of quantitative methodology is underrepresented and undersupported, and we would like to help move our area forward. We also aim to recruit more students into quantitative-methodology activity. œ