

## **Faculty Development Workshop: Teaching Transparent Methods of Empirical Research**

*Offered jointly by Project TIER and  
the UCLA Social Sciences Data Archive*



**UCLA**  
5628 Math Sciences Building

**March 12, 2018**

**Register [here](#)**

A key strategy for increasing the transparency and reproducibility of empirical research in the social sciences is introducing students to these concepts early in their education, and training them in appropriate research methods. When students are taught to adopt transparent and reproducible methods when they first begin working with quantitative data, they will be likely to continue practicing these methods throughout their ensuing professional careers.

The purpose of this workshop is to provide guidance on effective ways of introducing students in the social sciences to principles and practices of transparent research. It will demonstrate several transparency-enhancing workflows and tools, and discuss effective strategies for introducing these methods to students.



This workshop is intended primarily for faculty, staff and graduate students who teach, serve as TAs, or otherwise support courses on quantitative methods, as well as those who supervise theses, dissertations or other forms of independent student research. Participants from both undergraduate and graduate programs are welcome. The focus will be on empirical research in the social sciences, but much of the material covered will also be applicable in relevant fields of the natural sciences; participants from all disciplines are welcome.

This workshop is being offered jointly by Project TIER and the UCLA Social Sciences Data Archive. There is no cost to attend.

### **Workshop content**

The workshop will introduce two approaches to reproducible quantitative research:

- **The TIER Protocol:** The TIER Protocol consists of specifications for comprehensive replication documentation for an empirical study, and guidelines for a workflow in which the construction of that documentation is integrated throughout the entire research process. Constructing editable command files containing code that executes all the steps of data processing and analysis required to generate the results reported for a study is central to this workflow. This workflow can be adopted by users of any programmable statistical software (e.g., Stata, R, SPSS, SAS, Matlab, and many others).
- **Markup files with embedded code:** In this approach, the text of the paper and code that generates the statistical results are integrated in a single document. The text is written in a markup language, and chunks of statistical code are embedded throughout the document. This source file is sent to an engine that renders the complete paper, in which the tables and figures produced by the code chunks are displayed in place of (or along with) the code that appears in the markup file. The final paper can be rendered in a variety of formats, including HTML, pdf, Word and Latex. The workshop will demonstrate how this workflow can be implemented using either R (with R Markdown) or Stata (with an appropriate add-on).



The workshop will also discuss how on-line file-sharing platforms can be used to facilitate both of these approaches to reproducible research. The focus will be on the Open Science Framework (OSF), but the discussion will apply to any file-sharing platform (e.g., Dropbox, Google Drive, GitHub, or an institutional server).

In addition, time will be devoted to a broader discussion of underlying purposes and principles: Why should research be reproducible? And what are the educational benefits of teaching students to use reproducible methods when they conduct quantitative research?

### **Logistics**

The workshop will be held on March 12, 2018, on the UCLA campus, 5628 Math Sciences Building (map: <https://goo.gl/maps/CRz96q6mi942>).

A continental breakfast will be available beginning at 8:30 am.

The program will run from 9:00 am to 4:30 pm.

Lunch, as well as refreshments during breaks, will be provided.

There is no registration fee, but space is limited. Advance registration is required. Register [here](#).