



DATA EXPEDITIONS Spring 2020 Call for Proposals



The purpose of this call is to introduce more undergraduate students to exploratory data analysis early in their Duke experience, and to involve graduate students in thinking about the way classes can interact with data. Our hope is that expeditions will encourage students to be more adventurous in exploring the Duke curriculum and that students with deeper skills will be capable of deeper insights.

What are Expeditions?

The Information Initiative at Duke (iiD), in partnership with the Social Science Research Institute (SSRI), will support pairs of graduate students to prepare a data set for use in an undergraduate class and then assist the faculty instructor by supervising the data expedition within the class. Another useful approach is to prepare several data sets for use in illustrating the ideas behind a particular data analysis technique.

Graduate students who participate receive a (tax free) grant of \$1500 for academic-related travel (such as conferences or workshops), texts, certain hardware (as long as it does not have a hard drive) and software, and more. The funds are not available until the course is complete and all materials have been submitted to Ariel Dawn (ariel.dawn@duke.edu) in the Rhodes Information Initiative. These materials add to our undergraduate curriculum through expeditions, and we reciprocate by investing in intellectual development.

How are Expeditions Organized and Funded?

iID provides resources, SSRI stores the datasets for later use, and representatives from affiliated departments provide direction. Departments interested in participating are encouraged to contact the Data Expeditions Director Paul Bendich (bendich@math.duke.edu).

Application Process

Applications will be reviewed by a faculty committee, those received by October 10, 2019, will receive full consideration, and funding decisions will be made by October 29, 2019.

Graduate students are encouraged to contact Paul Bendich (bendich@math.duke.edu) for help in developing ideas.

We particularly encourage exploration of data sets that bring different intellectual communities together. We place a special emphasis on expeditions that can be used in the introductory undergraduate classroom, as well as those that can be easily adapted for use in multiple pedagogical scenarios.

Application Details

Email Ariel Dawn (ariel.dawn@duke.edu) a PDF, at most 2 pages, with the following information.

1. Sponsoring faculty member and target undergraduate class
2. Title of dataset(s)
3. Description: A brief data description that includes (at least) the following information:
 - one-two sentence description of data file
 - source(s) where the data come from (we greatly prefer data that can be made public without restrictions!)
 - why the data were collected in the first place
 - how the dataset was put together
 - dimensions of the dataset
4. Potential Classroom Exercises: List of potential questions that can be explored using this dataset, and description of pathways towards answers the students can take.
5. Techniques: List of computational techniques – this is an opportunity to ask for access to a virtual machine that comes pre-loaded with different software packages
6. Source(s): Properly formatted citation of data source(s)

Expeditions recommended for an award will be asked to provide a Markdown or HTML document that contains, in addition to the information listed above,

7. List of variables: A list of the variable names and brief description for each (with hyperlinks to Codebook below)
8. Codebook: Description of each variable and its values

Robert Calderbank and Jerry Reiter (iiD)

Mine Cetinkaya-Rundel (Statistics)

Merlise Clyde (Statistics)

Candice Odgers (Political Science)

Anita Layton (Mathematics)

Paul Bendich (Mathematics)

Richard Lucic (Computer Science)

Lisa Huettel (Electrical Engineering)

Emma Rasiel (Economics)

Tom Nechyba (Economics and SSRI)

Victoria Szabo (ISIS)

Hans Van Miegroet (Art, Art History and Visual Studies)

Scott deMarchi (Political Science)

Larry Carin (Electrical Engineering)

Astrid Guigni (English)