

2nd *Computation and Visualization Consortium (CVC) Workshop*

When: July 7-11, 2014

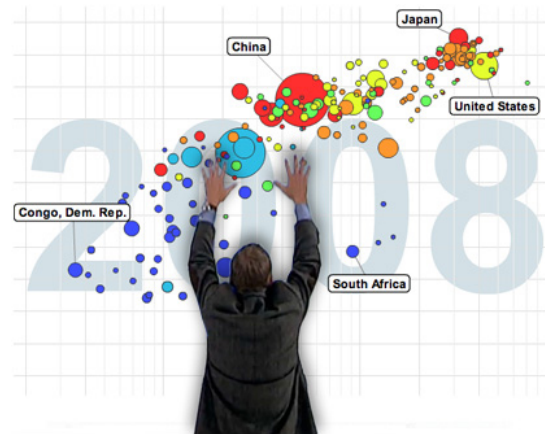
Location: Macalester College (St. Paul, MN)

Workshop Leaders: [Randy Pruim](#) (Calvin College), [Danny Kaplan](#) (Macalester College), Nicholas Horton ([Amherst College](#)) and [Libby Shoop](#) (Macalester College)

Application Deadline: We will begin reviewing applications and selecting participants on **April 21, 2014**. Applications should be completed in advance of this date for full consideration.

Workshop Audience and Topics

As the second in a series of workshops, this gathering aims to engage science faculty who have an interest to better prepare science students to meet the challenges of formatting, analyzing, and visualizing increasingly complex and large data sets. Recognizing the diverse backgrounds and needs of faculty, the week will be divided in two parts. Participants can join for all or half of the 5-days of programing.



The *first 2.5 days of the workshop* (starting 9 am on Monday, July 7 and ending at noon on July 9) aims to introduce faculty members to the open source software package, RStudio. These days will serve as an introduction to using R for handling data and graphics and include

- An introduction to the RStudio environment
- A “More with Less Cookbook” for R, maybe “doing more in R with less cookbook”
- Designing and creating sophisticated graphical data visualizations
- Data wrangling: Manipulating data for graphics and insight
- Preparing documents that include text, graphics and analysis.

The *second 2.5 days* (starting at noon on July 9 and ending at 4 pm on July 11) will provide participants a chance to dig in on their own projects -- the “work” part of the workshop

- quick review of first half of workshop
- planning your case study
- development of case studies (individually or in small groups)

In order to support project development, participants will learn specific skills as needed. These may include

- how to summarize data with models
 - how to construct plausible models and fit them
 - displaying models on graphics
 - error bars/bands and how to see inferential ideas on graphs
- basic data scraping skills (how to get data from web sites)
 - working with online databases in R
- more advanced data cleaning skills
- additional programming skills
- resampling and bootstrap methods

The Computation and Visualization Consortium (CVC) and Workshop Application:

The CVC formed during the preparation of proposals for the 2012 “College’s science education” grant program sponsored by the Howard Hughes Medical Institute (HHMI). Six institutions—Macalester College, Calvin College, Grinnell College, Gustavus Adolphus College, Smith College, and Lawrence University—invited to submit a proposal to the HHMI competition-- created a consortium with the goal of providing workshops for faculty to enhance their capacity to use increasingly complex and large data sets in their research and classrooms.

Although a subset of schools received funding, the CVC structure facilitates participation of faculty from each of the founding CVC schools. This year, the Science Education Award from the Howard Hughes Medical Institute (HHMI) to Macalester College will cover all local workshop expenses (e.g. housing, food, local transportation, etc.). As agreed during forming the consortium, each CVC institution will provide travel funds for their participating faculty.

A set of seats and travel scholarships are available for Faculty from non-CVC institutions.

Please complete an application for the workshop using [this link](#).

Lodging and Food:

Lodging will be provided on the Macalester College campus. The rooms are about a 10-minute walk from the Olin-Rice Science Building, where the workshop sessions will be held. Breakfast, lunch, snacks, and dinner will be provided.

Arrival and Departure

The first-half of the workshop will begin at 9 am on Monday, July 7, 2014 and end at noon on Wednesday, July 9, 2014. The second-half of the workshop will start at noon on Wednesday, July 9 and conclude by 4 pm on Friday, July 11, 2014. Those flying to the workshop can book flights to the Minneapolis-St. Paul International Airport (MSP). The airport is approximately 15 minutes from campus by car. Shuttle or taxi transportation will be arranged once flight schedules of participants becomes known. *As agreed upon during the planning of the Computational and Visualization Consortium (CVC), each participating institution will cover transportation costs.* A limited number of travel scholarships are available for non-CVC participants.

Institutional Representatives of the Computation and Visualization (CVC) Steering Committee

Macalester College	Paul J. Overvoorde (Associate Professor of Biology)
Calvin College	Randy Pruijm (Professor of Math and Statistics)
Grinnell College	Leslie Gregg-Jolly (Professor of Biology)
Gustavus Adolphus	Jeff Dahlseid (Associate Professor of Biology and Chemistry)
Lawrence University	Beth DeStasio and Nancy Wall (Professors of Biology)
Smith College	Chirs Gole (Professor of Mathematics and Statistics)