



USCIMAGE

Integrative Methods of Analysis
for Genetic Epidemiology

HPC

Center for High-Performance Computing

The “Happy Scientist” Workshop, 2018: #1

An introduction to high-performance computing using R

We are pleased to announce the first of this year's educational workshops sponsored by the IMAGE Program of USC's Biostatistics Division. This series, the “Happy Scientist” workshop series, is aimed at providing educational material for researchers, both students and faculty, about a variety of tools and methods that might prove useful to them. If you have any suggestions for subjects that you would like to learn about in future, please send email to (pmarjora@usc.edu). Our agenda will be driven by your specific interests as far as is possible.

Description: While the R programming language was not developed for High Performance Computing (think about the ‘for’ loops!), thanks to its always-thriving community of users, there are several effective ways in which R can be used to perform High Performance Computing. In this presentation, we will provide a general overview of HPC in R with a particular focus on **multicore processing** (i.e. no big data for now), and introduce some of the available tools for enhancing your R code. Furthermore, we'll include some examples using the **'parallel' package**, the **'foreach'+ 'iterators' R packages**, and **Rcpp(Armadillo) + OpenMP**.

This particular workshop is given in collaboration with USC's Center for High-Performance Computing and will be presented by George Vega Yon and Garrett Weaver. It will include some time for some hands on coding of examples of the methods involved.

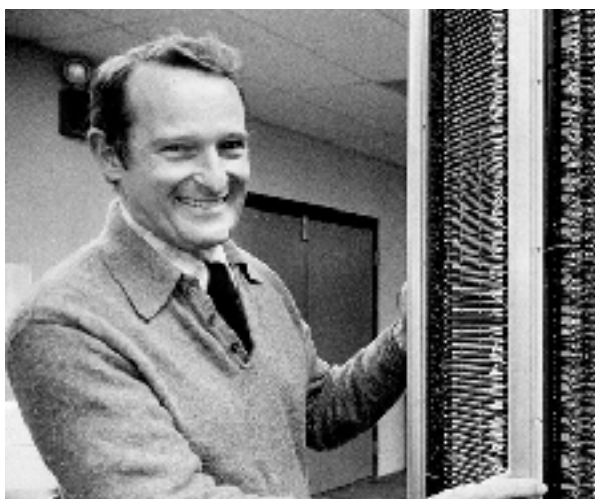
As ever, all members of USC are welcome to attend.

Happy Scientist Seminars, 2018: #1.

Title: An introduction to high-performance computing using R.

Time: 10am-11:30am, Thursday March 29th.

Location: Soto (SSB) 115/116



Seymour Cray, 1925-1966:

Seymour Cray (1925-1966) was an American electric engineer, founder of Cray Research, who in 1976 introduced what is considered to be the first supercomputer ever built, the Cray-1, starting the supercomputer industry.

Known as “The Father of Supercomputing”, Cray enjoyed skiing, wind surfing, tennis, using #3 pencils for designing his super-computers, and hole digging in his backyard. (Incidentally, that sentence is a good example of the importance of the Oxford comma.) In tribute to him, IEEE society awards the “Seymour Cray Computer Engineering Award” for those that “[...] best exemplify the creative spirit demonstrated by Seymour Cray.”