NATIONAL SCIENCE FOUNDATION

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Title: "Some methods and statistical issues of Design of Experiments in Ecological and Environmental Systems"

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Statistical Design of Experiments (DOE) is an efficient procedure for planning experiments so that the data obtained can be analyzed to yield valid and objective conclusions (See a Definition in the NIST Handbook: http://www.itl.nist.gov/div898/handbook/pri/section1/pri11.htm). However, DOE poses many challenges in general. And in environmental research, it poses some special ones, given the characteristics of the activity. DOE basic tenant is that factors are controlled by the experimenter, and randomly assigned to the subjects utilized in the experiment. This is not always possible in environmental research (and other areas such as social science). In the present talk, we will discuss how the DOE basic tenants interact with several environmental research conditions, how they can affect the corresponding inferences, and what implementations can be used to cope with such situations. Several DOE examples will be reviewed, to illustrate its applications in this area.

Date: May 28, 2013
Time: 11 AM – 12 Noon
Location: Room 606

NSF Staff and Researchers are welcome.