



## “E2M3: ECOLOGICAL AND EPIDEMIOLOGICAL MINI MODELING IN MADAGASCAR”

**Organizer:** Cara E. Brook, PhD, Department of Integrative Biology, University of California

**Expected participant:** 25

**Duration:** Two hours

### **Abstract**

This two-hour intensive workshop, geared towards students in their third cycle or higher in biology, mathematics, medicine, or public health, aims to provide participants with an introduction to the use of dynamical and statistical models in understanding ecological and epidemiological data. The course is modeled after E2M2: Ecological and Epidemiological Modeling in Madagascar, a ten-day workshop, which the instructors teach annually in Madagascar. In E2M2, students participate in a series of interactive lectures and computer-based tutorials and learn to fine-tune model-based research questions, develop clear model frameworks and corresponding equations, and fit models to real-world data. In E2M3, students will receive a basic introduction to subjects covered in greater depth in the full length course—specifically learning to distinguish between statistical and mechanistic modeling approaches and apply each technique to appropriate questions. Because time is limited, we strongly advise students to familiarize themselves with basic programming in R prior to arrival to the course.

