

# Mathematical and Theoretical Biology Institute

research experience for undergraduates  
summer program  
june — august  
2010

## contact information

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MCMSC  
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mathematical, computational  
and modeling sciences center  
(MCMSC)

**ASU** ARIZONA STATE  
UNIVERSITY

# what is MTBI?

An intensive 8-week summer research experience for undergraduates (REU) at Arizona State University in Tempe, Arizona.

Prepares 20 promising young scientists for the rigors of graduate studies in working at the interface of mathematics, statistics, and the natural and social sciences.

Enables students in a small group setting to conduct research in their own areas of interest.

## eligibility

- Undergraduates who have completed their sophomore or junior year during 2009
- Majoring in math, biology, or related fields
- At least one year of calculus.



## program structure

- Four weeks of intensive instruction in dynamical systems, computational methods, and modeling.
- Four-week research segment features students working in self-selected groups on research problems of their own choosing.
- Emphasis on cooperative learning in a grade-free environment.
- Computer laboratory dedicated to hands-on activities. Students learn to use *Matlab*, *Mathematica*, *LaTeX* and computational software used in the study of dynamical systems.
- Seminar and lecture topics from guest speakers range from epidemiology, molecular biology, bifurcation theory, to homeland security.
- Emphasis is on dynamical systems, including stochastic processes, computational methods, and modeling to address questions that exist at the interface of mathematics and the natural and social sciences.

