



NIMBioS

National Institute for Mathematical
and Biological Synthesis

Collaborating across disciplines to solve today's problems Educating to solve tomorrow's

Mathematical modeling and analysis in biology provides insight into the complexities arising from the nonlinearity and hierarchical nature of biology, from within the cell to global systems. Many central issues of national and international concern related to public health, the environment, ecosystem functioning, and natural resources require new scientific knowledge arising from connections between data and models at multiple scales of biological organization. Founded in 2008 with an award from the National Science Foundation, NIMBioS brings together researchers from around the world to collaborate across disciplinary boundaries to find creative solutions to today's complex biological problems.

Workshops and Tutorials

NIMBioS hosts **Investigative Workshops** focusing on broad, transformative interdisciplinary topics. Workshops synthesize information with a goal to identify future directions that might lead to more intensive **Working Groups** that meet regularly to develop new models. Our **Accelerator Tutorials** bring participants up to speed quickly on a variety of tools and topics.



Educational Opportunities

Postdoctoral and sabbatical fellowships, short-term visits, graduate assistantships, curriculum development and more. NIMBioS hosts an intensive, eight-week summer research experience for undergraduates and a research conference every fall. NIMBioS brings mathematics to life in K-12 through the Biology in a Box program.

Evaluation Services

Founded in 2016 at NIMBioS, the **National Institute for STEM Evaluation and Research** provides quality evaluation services to the science, technology, engineering and mathematics research and education sectors. NISER has collaborated on grant proposals with multiple institutions in the United States and abroad, and manages the evaluations of more than 15 STEM-related projects.



NISER
NATIONAL INSTITUTE FOR STEM
EVALUATION AND RESEARCH

NIMBioS by the Numbers

NIMBioS
has
hosted:

6,600+ participants from
915 institutions
56 countries
50 US states (DC & Puerto Rico)

NIMBioS
has
supported:



44 Investigative Workshops



55 Working Groups



47 Postdoctoral Fellows



330+ Short-term Visitors



250+ Educational Activities



17 Sabbatical Fellows

Results

NIMBioS
activities
have:



led to the publication of 700+ peer-reviewed scientific articles



led to numerous grant submissions by NIMBioS participants to advance research ideas generated by their involvement at NIMBioS

"What People Are Saying"



NIMBioS has united the forces of mathematical and computational biology and forever changed the landscape of mathematical biology research and education in the US and the world."

--Participant, Food Web Dynamics Working Group

"The NIMBioS network that brought our team of mathematicians, economists, ecologists and epidemiologists together has gone on to win grants from the NIH, the NSF and the UK's BBSRC."

--Participant, Play & Sociality Working Group

"We would not have been able to create the output or impact if it weren't for the ideas generated during our Working Group. Though our work was spread over two years, the intensity and focus during these sessions ensured we would create an immediate and tangible output."

--Participant from IBM



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