

Tutorial Welcome and Introduction

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Multi-Scale Evaluation in STEM Education



Inclusion across the Nation of Communities
of Learners of Underrepresented Discoverers
in Engineering and Science (NSF INCLUDES)



These STEM evaluation activities are supported by the National Science Foundation through award HRD-1650390 to the University of Tennessee, Knoxville.



- Foster new collaborative efforts to investigate fundamental and applied questions arising in biology using appropriate mathematical and computational methods
- Enhance the essential human capacity to analyze complex biological questions and develop necessary new mathematics
- Encourage broader public appreciation of the unity of science and mathematics.

NIMBioS by the Numbers

NIMBioS has supported:

39 Working Groups (99 meetings)

33 Investigative Workshops

37 Postdoctoral Fellows

258 Short-term Visitors

17 Sabbatical Fellows

200+ Educational Activities

NIMBioS has hosted:

7,000+ participants from

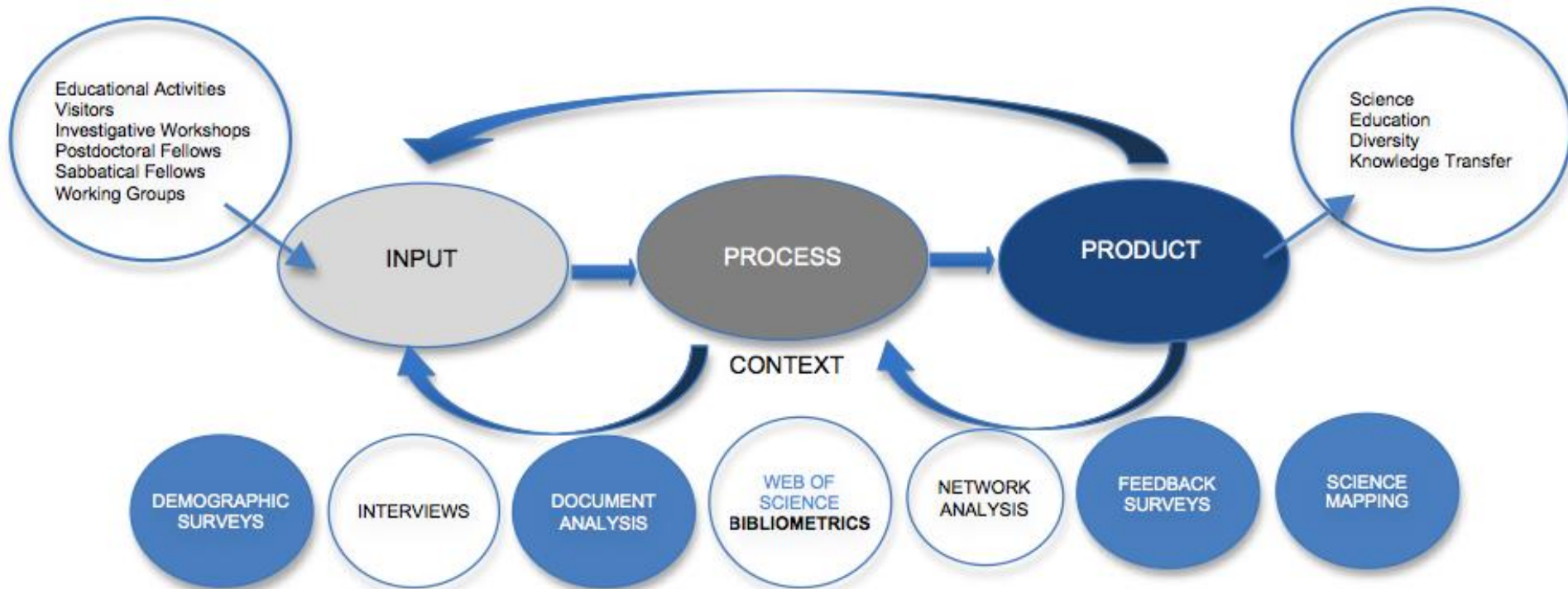
789 institutions

54 countries

50 US states (D.C. & Puerto Rico)

*Activities have led to the publication of more than **600+ journal articles** on a variety of topics at the interface of mathematics and biology.*

Evaluation at NIMBioS



Evaluation was an inherent component of NIMBioS from the start:

- (i) Designing formative and summative evaluation targeted to the unique goals of the research and education activities at NIMBioS;
- (ii) Carrying out research on evaluation of interdisciplinary science at multiple scales



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Evaluation Reports for NIMBioS Events and Activities

NIMBioS conducts evaluations of its working group meetings, investigative workshops, tutorials, and major education and outreach events. Evaluations are carried out via electronic surveys sent to all participants either after participation in a NIMBioS event, or both before and after participation if a pre/post comparison of responses was warranted. Evaluation findings, along with suggestions for improvement, are shared with event organizers, as well as NIMBioS staff as needed. Improvements to program content and format, as well as NIMBioS' overall operations, are made accordingly. All evaluation data are confidential, and results are reported only in the aggregate.

To learn more about the National Institute for STEM Evaluation, which currently conducts our evaluations, visit <https://www.stemeval.org/>.

Annual Evaluation Summaries

[Year 8 Evaluation Summary](#)

[Year 7 Evaluation Summary](#)

[Year 6 Evaluation Summary](#)

[Year 5 Evaluation Summary](#)

[Year 4 Evaluation Summary](#) [Year 4 Participant Diversity Report](#)

[Year 3 Evaluation Summary](#) [Year 3 Participant Diversity Report](#)

[Year 2 Evaluation Summary](#) [Year 2 Participant Diversity Report](#)

Event names below are linked to the event's web page. Click *Report* for event evaluation report (pdf).



Over 100 Evaluation reports on multiple aspects of NIMBioS at NIMBioS.org/evaluation

Working Group Event	Dates	Year	Evaluation
Coalitions and Alliances	Apr 16-18	2009	Report
	Feb 4-6	2010	Report
	Nov 4-6	2010	Report
Intragenomic Conflict	Apr 20-22	2009	Report
Feral Swine / Pseudo-rabies in Great Smoky Mountains National Park	Apr 27-29	2009	Report
	Jan 25-26	2010	Report
	Aug 10-12	2010	Report
Biological Problems using Binary Matrices	May 26-29	2009	Report
	Dec 10-13	2009	Report
	May 4-7	2010	Report
	Dec 14-17	2010	Report
	Jun 7-9	2009	Report



WHO WE ARE

A team of experts in interdisciplinary STEM education and research program evaluation

WHAT WE DO

Help you discover what works and what doesn't for your program and why

HOW WE DO IT

State-of-the-art data collection and analysis methods



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Goal of this Tutorial:

Provide a rapid overview of modern methods in evaluation and connect these to projects suggested by the participants.

Breakout Sessions:

Constructed around four example NSF INCLUDES Pilot awardee projects with representatives of each project present, in which attendees will participate in the construction of evaluation and stakeholder maps

Online Attendees:

To ask questions of speakers during the formal presentations, use our Twitter feed

#NISEREval

which will be monitored by the organizers

The Breakout sessions will be broadcast online using Zoom – choose which session you'd like to participate in and then you can use the Chat feature in Zoom to ask questions in the breakout sessions

Links for Breakout sessions

Case Study 1: Creating Academic Pathways in STEM (CAPS): A Model for Supporting Two-Year Transfer

<https://tennessee.zoom.us/j/705246816>

Case Study 2: Northern New Mexico STEM Mentor Collective

<https://tennessee.zoom.us/j/490471277>

Case Study 3: Building Diverse and Integrative STEM Continua Using Socio-environmental Systems In and Out of Neighborhoods (DISCUSSION)

<https://tennessee.zoom.us/j/491138755>

Case Study 4: Early Engagement in Research: Key to STEM Retention

<https://tennessee.zoom.us/j/443371813>