



National Science Foundation  
WHERE DISCOVERIES BEGIN



# NSF IHBEM Webinar

February 2, 2023, 2-3 pm EST

Use the Q&A panel in Zoom to send questions!

After the webinar, send questions to [NSF-IHBEM@nsf.gov](mailto:NSF-IHBEM@nsf.gov)

Program page: <https://www.nsf.gov/pubs/2022/nsf22054/nsf22054.jsp>

Webinar page: [https://www.nsf.gov/events/event\\_summ.jsp?cntn\\_id=304472&org=NSF](https://www.nsf.gov/events/event_summ.jsp?cntn_id=304472&org=NSF)



## ***IHBEM Participants***

### NSF

- Directorate for Mathematical and Physical Sciences
- Directorate for Social, Behavioral, and Economic Sciences
- Directorate for Biological Sciences

### NIH

- NIDA

## ***Cognizant Program Officers***

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# Why "Integrating Human Behavior into Epidemiological Models (IHBEM)"?

- **NSF recognizes that:**
  - Mathematical epidemiological models are essential tools in combating pandemics among humans.
  - Current models have proved insufficient in part due to human behavioral, social, and economic processes that are missing from the models but that have appeared to be key to understanding the course of the pandemic.
  - Next generation models will require multidisciplinary collaboration.
- **NSF Response:**
  - NSF initiated IHBEM to catalyze fundamental multidisciplinary research into creation of epidemiological models integrating human behavior.



## IHBEM workshop, May 6-7, 2021

### Motivation:

- All epidemiological models contain behavioral assumptions.
- Assumptions are often implicit and not well-justified.

### Purpose:

- Start conversations and catalyze ideas on how to improve the conceptualization of impact of human behavior in epidemiological models.

### Participants:

- Experts in the mathematical, social, behavioral, and economic, and biological sciences

Workshop site, with links to presentation videos and conference report:

<https://giesbusiness.illinois.edu/bridging-disciplinary-divides-conference>



## NSF IHBEM Solicitation 23-546

This solicitation calls for research that

- improves mathematical epidemiological models
- incorporates research and scientific insights about human behavior, economics, and social dynamics

Full proposal submission window is April 3-14, 2023.



## NSF IHBEM Proposal Requirements

- Must be *convergent*
  - Must have two or more PIs/co-PIs
  - Must have balanced participation from the mathematical sciences and the social, behavioral, and economic sciences
  - Additional participants from the biological sciences are welcome
- Should focus on significant, well-delineated research challenge (see solicitation for examples)
- Should include metrics to assess success



## Special conditions for Proposals (deviations from PAPPG)

- May request up to \$1,000,000 (including indirects) over 3-4 years
- Prefix for title must be IHBEM:
- Must include Management Plan
- Must address prior support in detail (see specifics in solicitation)
- Must include required information on protection of human subjects and vertebrate animals (see solicitation)
- Must strictly follow format for letters of collaboration



## IHBEM Review Criteria

- Intellectual Merits and Broader Impacts
- The extent to which the proposed topic and research integrate behavioral and social processes into mathematical epidemiological models.
- The extent of the balance on research team between those with expertise in the mathematical sciences and the behavioral and social sciences.
- The extent to which the Management Plan is comprehensive and well-developed.
- The appropriateness of the metrics to assess the success of the project.
- Possibly NIH overall impact scores, using 5 NIH core review criteria.





## For more information:

- IHBEM program page:  
<https://www.nsf.gov/pubs/2022/nsf22054/nsf22054.jsp>
- Send questions to the following Email: [NSF-IHBEM@nsf.gov](mailto:NSF-IHBEM@nsf.gov)