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NSF IHBEM Webinar

November 20, 2023, 12-1 pm EST

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

After the webinar, send questions to NSF-IHBEM@nsf.gov

Program page: <https://beta.nsf.gov/funding/opportunities/incorporating-human-behavior-epidemiological-0>

Webinar page: <https://new.nsf.gov/events/funding-opportunity-webinar-incorporating-human-0/2023-11-20>



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IHBEM Participants

NSF

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

NIH

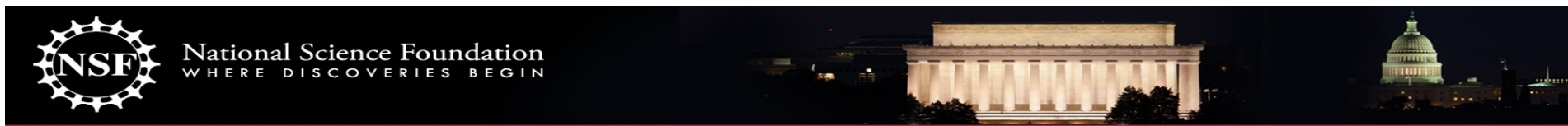
- NIDA

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Why "Integrating Human Behavior in 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 appeared to be key to understanding the course of the COVID-19 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.



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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>



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Prior Competitions

- Dear Colleague Letter of 3/1/22, FY23 solicitation
- Called for proposals to
 - improve mathematical epidemiological models
 - incorporate research and scientific insights about human behavior, economics, and social dynamics [not necessarily all!]

Many strong proposals submitted

- 8 awards made in FY22, 9 awards in FY23
- Search awards at [nsf.gov](https://www.nsf.gov) or [research.gov](https://www.research.gov) to see individual awards
 - Keyword “IHBEM:”
 - Find abstract, PIs, etc.



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NSF IHBEM Solicitation 24-507

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 February 1-14, 2024.



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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



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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



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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.



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For more information:

- IHBEM program page:
<https://beta.nsf.gov/funding/opportunities/incorporating-human-behavior-epidemiological-0>
- Send questions to the following Email: NSF-IHBEM@nsf.gov
- A recording and transcript of the webinar, along with the slides, will be accessible from the event page shortly after conclusion of the webinar: <https://beta.nsf.gov/events/ihbem-webinar/2023-11-20>

National Institute on Drug Abuse (NIDA)

FY 2022-2026 NIDA Strategic Plan

Mission

To advance science on drug use and addiction and to apply that knowledge to improve individual and public health

<https://nida.nih.gov/about-nida/2022-2026-strategic-plan/directors-message>



Example Areas of NIDA Interests

in the context of responding to public health crisis such as drug overdose, HIV, and HCV

- Using technology and advanced statistical methods **to inform our understanding of both social, behavioral and neurobiological components of substance use** that are strongly influenced by diverse environmental and social factors
- **Development and validation** of technologies, analytics, and models to help individuals gather, manage, and use data and information **related to drug use and their personal health**
- **Methods and algorithms for aggregation of data** including, but not limited to, electronic health records (EHRs), laboratory generated data, environmental, and/or behavioral data.
- **Diagnostic/monitoring tools and technology platforms** to optimize drug use interventions and delivery



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Q&A

Submit questions using the
Q&A icon in Zoom

