NSF IHBEM DCL Webinar

March 11th 2022, 2-3PM EST

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

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

DCL 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

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 DCL

This DCL calls for research that

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

Mechanism is RAISE (Research Advanced by Interdisciplinary Science and Engineering) proposal

RAISE guidelines (PAPPG: Chapter II.E.4)

RAISE is a funding mechanism to support bold, interdisciplinary projects whose:

1. Scientific advances lie in great part outside the scope of a single program or discipline, such that substantial funding support from more than one program or discipline is necessary.
2. Lines of research promise transformational advances.
3. Prospective discoveries reside at the interfaces of disciplinary boundaries that may not be recognized through traditional review or co-review.

NSF IHBEM Proposal Requirements

- Must be *convergent*
  - Must have two or more PIs/co-PIs
  - With participation necessarily from the mathematical sciences and the social, behavioral, and economic sciences
  - And possibly from the biological sciences as well

- Should focus on significant, well-delineated research challenge (see DCL for examples)

- Should include metrics to assess success

RAISE conditions for NSF IHBEM Proposals

- May *not* be submitted unless authorized following submission of Concept Paper.
- Must include section stating how each of 3 RAISE criteria is met
- May request up to $1,000,000 (including indirects) over up to 5 years
- See PAPPG Chapter II.E.4

IHBEM RAISE Review Process

- First submit Concept Paper to Division of Mathematical Sciences (DMS)
  - Use ProSPCT web tool at https://suitability.nsf.gov/s/.
  - Follow titling and targeting instructions in DCL
  - Input: Project title, list of team members, summary of project up to 2 pages, applicability to 3 RAISE guidelines
- Submit *authorized* proposals to DMS/Mathematical Biology program
  - Upload authorization email as Supplementary Document
- RAISE proposals may receive external reviews. This may occur by review panel, external *ad hoc* reviewers, or some combination of these.

NSF participants in this Dear Colleague Letter (DCL)

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

Timeline

- Concept Papers due by April 1, 2022, 5pm local time:
  - Use ProSPCT webform with link given in DCL
  - Requires information on proposed project and Concept Paper
  - Approval is required for next step: submission of RAISE proposal
- RAISE proposals due by May 15, 2022, 5pm local time:
  - Only permitted if approved from Concept Paper
  - For multiple institutions: one proposal with sub-awards (= collaborative proposal from single institution). The PAPPG category of Collaborative proposals from multiple institutions cannot be engaged here.
- Aim to make awards by end of July 2022

For more information:

- DCL page with links to ProSPCT web tool for submission of Concept Paper and to preliminary conference: https://www.nsf.gov/pubs/2022/nsf22054/nsf22054.jsp
- 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://www.nsf.gov/events/event_summ.jsp?cntn_id=304472&org=NSF

Q&A

Submit questions using the Q&A icon in Zoom