

CALL FOR PROPOSALS

Cyberinfrastructure and AI for Science and Society

Submission Deadline: two types of proposals are invited (Seed Projects: December 15, 2023; Incubation Workshops: rolling deadline)

CASS (Cyberinfrastructure and AI for Science and Society) invites researchers, scientists, and technology experts within Rutgers New Brunswick to submit project proposals that operate at the intersection of AI and technology with social sciences, natural sciences, and engineering. CASS is funded by the Chancellor-Provost Challenge to build interdisciplinary scholarship and scholarly communities to serve the common good. We seek innovative proposals for projects at the interface of advancing science through Artificial Intelligence (AI) methods and/or leveraging cyberinfrastructure. This initiative aims to address complex scientific challenges by fusing the transformative capabilities of AI and the potential of modern cyberinfrastructure.

CASS is currently seeking proposals for two separate tracks. **Seed Projects** are intended to be ~1-semester projects with the potential to lead to external funding. **Incubators** are smaller projects (1 day to 1 week long) with the potential to grow into Seed Projects or lead to external funding.

FOCUS AREAS

- 1. AI-Driven Scientific Discoveries:** Projects harnessing AI to enable new scientific discoveries, improve scientific models, or optimize experimental designs.
- 2. Cyber-Enabled Collaborative Science:** Projects that utilize cyberinfrastructure to facilitate collaboration, data sharing, and real-time analytics in scientific research.
- 3. AI for Cyberinfrastructure Management and Optimization:** Projects using AI to enhance the efficiency, security, and capabilities of cyberinfrastructure for scientific purposes.
- 4. Integrated AI and Cyber Infrastructure for Multi-Disciplinary Research:** Projects that synergistically combine AI and cyberinfrastructure to tackle grand challenges in multidisciplinary fields such as climate science, genomics, neuroscience, materials science, and interdisciplinary domains such as social sciences and humanities.

SEED PROJECT PROPOSAL GUIDELINES

Submission Deadline: December 15, 2023

Proposals should include a short description of the project. High-quality, interdisciplinary proposals will receive funding priority.

Proposal length: up to 3 pages (2-page project description, 1-page budget)

File format: PDF

Proposal sections:

- Project Title
- Team Members and Affiliations
- Abstract (max 200 words)
- Objectives and Expected Outcomes
- Approach and Methodology
- Proposed Utilization of AI and/or Cyber Infrastructure
- Preliminary Timeline
- Budget Requests and Justification (1 page)

ELIGIBILITY

- Researchers and scientists affiliated with Rutgers New Brunswick.
- Multi-disciplinary and cross-institutional collaborations are encouraged.
- Individuals or teams can submit proposals.

EVALUATION CRITERIA

- Innovation and originality
- Feasibility of the approach
- Potential scientific impact
- Effective use of AI and/or cyberinfrastructure
- Multidisciplinary aspects
- Potential to lead to external funding

SUBMISSION PROCESS

- Proposals must be submitted through the online form at <https://bit.ly/cass-2023>
- Multiple submissions from the same author or team are allowed but must be distinct.

AWARDS AND SUPPORT

Selected projects will be eligible for the following:

- Funding support up to ~\$25,000, including personnel costs, materials, supplies, travel, etc., is allotted per selected project. We anticipate 2-4 selected projects in Spring 2024. If sufficient progress is made on a funded project in Fall 2023, additional funding may be requested for Spring 2024 as well.
- Mentorship and guidance from leading experts in AI and cyberinfrastructure.
- Access to advanced AI tools and high-performance computing resources.
- Opportunities for collaboration and networking within a vibrant research community.

We look forward to your innovative contributions. For further information and inquiries, please contact: cass_info@email.rutgers.edu

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INCUBATOR WORKSHOP PROPOSAL GUIDELINES

Submission Deadline: rolling, open

Proposals should include a short description of the targeted problem, project, or research questions. Incubator workshops are intended to serve as forums for interdisciplinary teams with developing interest in the topics of artificial intelligence (broadly conceived) and/or cyberinfrastructure to engage in intensive discussions on research ideas and collaborative opportunities. High-quality interdisciplinary proposals demonstrating an ability to lead to additional support will receive funding priority.

Proposal length: up to 2 pages

File format: PDF

Proposal sections:

1 page: - Project Title

- Team Members and Affiliations
- Abstract (max 200 words)
- Objectives and Expected Outcomes
- Proposed Utilization of AI and/or Cyber Infrastructure

1 page: - Budget Justification

- Description of incubator workshop requirements (i.e., space requirements, incubator dates)

ELIGIBILITY

- Researchers and scientists affiliated with Rutgers New Brunswick.
- Multi-disciplinary and cross-institutional collaborations are encouraged.
- Proposals can be submitted by individuals or teams.

EVALUATION CRITERIA

- Innovation and originality
- Potential scientific impact
- Effective use of AI and/or cyberinfrastructure
- Multidisciplinary aspects
- Potential to lead to additional funding

SUBMISSION PROCESS

- Proposals must be submitted through the online form at <https://bit.ly/cass-2023>
- Multiple submissions from the same author or team are allowed but must be distinct.

AWARDS AND SUPPORT

Selected projects will be eligible for the following:

- Funding support of up to \$5,000 can be allotted per incubator. Potential items that can be funded include personnel, materials and supplies, food/catering, travel, venue, etc.
- Mentorship and guidance from leading experts in AI and cyberinfrastructure.
- Access to advanced AI tools and high-performance computing resources.
- Opportunities for collaboration and networking within a vibrant research community.

We look forward to your innovative contributions. For further information and inquiries, please contact: cass_info@email.rutgers.edu

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