

RCA UPDATE

January 9, 2023

RCA Names Broadening Participation Faculty Fellows

The Office of Research and Creative Activity has named Hollie Mackey, NDSU associate professor of education and Febina Mathew, NDSU associate professor of plant pathology as faculty fellows. Both will be working on the topic of broadening participation, which the NSF defines as expanding opportunities for people of all racial, ethnic, geographic, socioeconomic backgrounds, sexual orientations, gender identities and to persons with disabilities.

Dr. Mackey has extensive experience working with Tribal Nations and Tribal Colleges and most recently served as a presidential appointee in the Biden Administration as the Executive Director of the White House Initiative on Advancing Educational Equity, Excellence, and Economic Opportunity for Native Americans and Strengthening Tribal Colleges and Universities. A member of the Northern Cheyenne Nation, Dr. Mackey has focused her academic career working within communities to advance research interests. Her goals for the fellowship include identifying synergy among the North Dakota Tribal Colleges and connecting NDSU researchers with Indigenous stakeholders.



Dr. Mathew has experience working with collaborators and mentoring students from diverse communities. Her own background includes projects with Native American students in South Dakota; the development of a program at SDSU that provides plant health education to students with the goal of addressing needs of the future STEM workforce in Tribal Communities; and serving on the American Phytopathological Society's Committee for Diversity, Equity, and Inclusion and on the NDSU's Agricultural Affairs Diversity, Equity, and Inclusion Council. She hopes to develop a collaborative framework to improve the coordination, growth, and visibility of NDSU's diversity, equity, inclusion, and accessibility resources to help researchers strengthen their competitiveness for federal grants.



Welcome Holly and Febina!

Meet NDSU's new faculty researchers: LINDSAY MALONE, PhD School of Natural Resource Sciences

What are your primary research and scholarly interests?

I am building a research program focused on "Climate Smart Agriculture" which to me means sustainably increasing crop yields, building more resilient systems (and soil!), and reducing greenhouse gas emissions. My past research has been largely on integrating conservation practices in row crop systems, with a particular focus on soybean.



Where are you from and where did you pursue your education?

I grew up on a Jersey dairy farm near Buffalo, NY. I received my B.S. in Plant Sciences from Cornell University and both my M.S. and Ph.D. in Agronomy from the

University of Wisconsin-Madison.

What excites you about NDSU?

NDSU's own statement captures the categories that excite me: "Student-focused, land-grant, research institution." I want my research to directly impact the livelihoods of North Dakotans, while being able to engage with students.

On a different note - North Dakota has fairly diverse cropping systems, which offers some exciting prospects when it comes to "Climate Smart Ag"!

What motivates you?

My career-long goal is to make farming safer, more efficient, and more sustainable -- family and friends who farm inspire me every day to keep pushing towards that goal.

If you could have coffee / tea with anyone, who would it be?

My grandparents - there is so much I would love to ask them about their lives and our family farm's history.

What was your first job?

Feeding calves

What does your very best day include?

A hot cup of coffee and an inexplicable desire to write - or an excellent book.

Are you a new researcher at NDSU? [Submit your profile](#)

Important: COI Disclosures moving to Novelution this month

On **January 20, 2023** The online COI disclosure will replace the DocuSign process known as the Significant Financial Interest (SFI) disclosure.

If you are planning to submit a proposal in late January or February, please consider logging into Novelution after January 20, 2023 and completing your disclosure ahead of submission. This will alleviate last minute requests prior to the deadline.

When do I need to disclose?

- Federal funding sources, such as NIH, NSF and [other PHS agencies](#), require disclosure of significant financial interests as well as foreign affiliations annually. You'll be prompted to complete the disclosure prior to the submission of a new proposal or the release of an award.
- If you have indicated a potential financial or familial conflict within a proposal, you will also be prompted to complete the new COI disclosure form.
- Other potential conflicts may be disclosed at any time.

More information about [disclosure procedures](#) is available on the RCA webpage..

Training

Training by the Novelution team will be available January 17, 2023 at 1:30. To register for training, contact [Amanda Wilkinson](#) (701-231-8908)

Required Export Controls Training Now Available Online

NDSU uses the web-based Collaborative Institutional Training Incentive (CITI) for training in U.S. Export Control Regulations. The RCA Office requires successful completion of the CITI module ***Introduction to Export Compliance*** for everyone on a project subject to a Technology Control Plan (TCP).

PIs responsible for compliance with TCPs are also required to successfully complete the modules ***Export Compliance for Researchers: Parts I & II***.

Other modules are available and optional, unless specified in a TCP. Individuals who have completed the CITI training will not need to complete it again for two years.

[Learn more >>](#)

Changes to NSF Proposal Submissions – January 30, 2023

The National Science Foundation (NSF) has released the updated Proposal and Award Policy and Procedure Guide ([PAPPG 23-1](#)) which will be effective for proposals with deadlines on or after January 30, 2023. There are a number of major changes introduced with this update:



- **FastLane will be Decommissioned.** NSF is preparing to transition the preparation and submission of all new proposals from FastLane to Research.gov on January 30, 2023. Previously submitted FastLane proposals and supplemental funding requests will be available for the research community to access until Friday, September 29, 2023.
- **New Certification Requirements for Biographical Sketches and Current and Pending Support.** Senior Personnel will be required to certify that the information provided in their Biographical Sketch and Current and Pending Support documents are accurate, current, and complete. This certification will be included in both SciENCv and the NSF fillable format for proposals submitted or due on or after January 30, 2023.
- **Effective October 2023, SciENCv will be required for preparation of biographical sketches and current and pending support.** Other formats, including the fillable PDF form, will no longer be accepted.

Spotlight on Research Integrity & Compliance

IRB Collaborative Research FAQ – “I am conducting research with colleagues at another university or universities. Do we all need to apply for approval? If my colleague already has approval, do I need approval at NDSU?”

Collaborative research projects require submission to the NDSU IRB even when another colleague has already received IRB approval from their own institution.

Collaborative review arrangements – where one IRB acts as the reviewing IRB and another IRB (or IRBs) agree to rely on that institution’s review – can be arranged. For non-exempt research this process is known as a **reliance agreement**. For exempt research, a reliance agreement may be used, but is not always required. Informal agreements between institutions may be sufficient.

How do I get started?

Discuss with your colleagues who will submit for IRB approval. Talk to any involved institutions about their willingness to participate in a collaborative review. If NDSU will be the **reviewing** IRB, draft a protocol within Novelution for review. If NDSU will be the **relying** IRB, upload a copy of the approved protocol to Novelution.

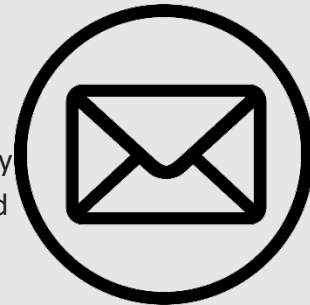
Questions? Contact Kristy Shirley, Research Integrity & Compliance Manager/IRB Administrator – Kristy.shirley@ndsu.edu or 701-231-8995.

2023 Employee Benefits Cost Estimator

Download the new [2023 Employee Benefits Cost Estimator](#) developed by the Human Resources and Payroll team. This estimator will help calculate the approximate value of the employer cost of an employee’s benefits when creating budgeting for grant and contract proposals.

New CUI designation on federal agency or flow-thru sponsors emails requires attention

Some federal agencies, including the National Science Foundation (NSF), have begun marking emails and other communications with a **“controlled unclassified information”** (CUI) designation. If you receive an email or any communication connected to your sponsored project/funded award which is marked with a CUI designation, please immediately forward it to ndsu.research@ndsu.edu.



CUI is information the federal government has created or owns that needs to have safeguards and dissemination controls in place in accordance with federal standards related to information security. CUI must be stored or handled in controlled environments that can detect and prevent unauthorized access.

Recently NSF advised that it is now required to use the CUI marking for correspondence which includes any type of CUI. However, there seems to be confusion as to what is being marked as CUI. Email correspondence should typically not contain any CUI. Sponsored Programs Administration will follow up with the sponsor regarding the applicability of the CUI designation on any email or correspondence which NDSU receives that contains the CUI designation. When questioned so far, the NSF has removed the CUI designation and acknowledged that items were erroneously marked as CUI.

Questions can be directed to ndsu.research@ndsu.edu

How to Pursue Funding From Mission Agencies
February 15, 2023; Noon-1:30pm

This virtual workshop, led by **Academic Research Funding Strategies LLC**, will provide insights for researchers about how to approach mission agencies, analyze funding opportunities, and develop white papers, quad charts, and proposals to these agencies.

The discussion will address mission agencies in general, and will use USDA, the Department of Defense, and the Department of Transportation as examples.

[Learn more and register >>](#)



Registration closes January 13, 2023

Preliminary round video submission deadline January 20, 2023

Preliminary round winners notified February 9, 2023

[Learn More >>](#)

SAVE THE DATE - APRIL 18, 2023

STUDENT RESEARCH DAY

Registration opening in February

NDSU Student Research Day is a collaboration among NDSU EXPLORE, Gamma Sigma Delta, and the Graduate Student Council. Join us for a one-day celebration of undergraduate and graduate student research and creative projects.

Please plan to join us on April 18, 2023, in the Memorial Union



RCA Funding Opportunities

Research Development Travel and Conference Support Awards help defray expenses for faculty presenting at national conferences (virtual or on-site) or for supporting travel to visit archives or special collections. As this pool of funding is limited, please consider allowing individuals who do not have other sources of travel funding to apply for this opportunity.

Research Support Services Awards help defray the costs of support services required for research, creative, or scholarly activity. For example, funds may be used in one of the NDSU Core Facilities, another recharge / service center, or for transcription services.

Research Development Funding Agency Visit Travel Awards help defray expenses for faculty traveling to meeting with Program Officers / Program Directors at funding agencies. This program requires a 1:1 match from the applicant's department and / or college.

More information and application instructions are posted on the [RCA website](#).

Upcoming Events

- **NIH Virtual Grants Conference**
February 1-2, 2023 / [Learn more >>](#)
- **Save the Date: Virtual Workshop: How to Pursue Funding From Mission Agencies**
February 15, 2023; Noon-1:30pm | [Learn more >>](#)
- **NDSU Three Minute Thesis Competition**
Live Championship Round February 16, 2023 | [Learn more >>](#)
- **Save the Date: Student Research Day**
April 18, 2023
- **Save the Date: Virtual Workshop: Pursuing Funding for Education Research**
April 19, 2023; Noon-1:30pm | [Learn more >>](#)

FUNDING OPPORTUNITIES

- [DARPA: Foundational Security for Food Systems](#)
- [DOC: Climate and Societal Interactions](#)
- [DoD: Science Technology Engineering & Mathematics \(STEM\) Education and Workforce Program](#)
- [DOE NOI: Industrial Decarbonization and Emissions Reduction](#)
- [NIH: Bidirectional Influences Between Adolescent Social Media Use and Mental Health](#)
- [NIH: Development of Innovative Informatics for Cancer Research and Management](#)
- [NSF DCL: Computational and Data-Enabled Science for New Discovery](#)
- [NSF DCL: Growing Research Access for Nationally Transformative Equity and Diversity Conferences and Workshops](#)
- [NSF: Addressing Systems Challenges through Engineering Teams](#)
- [NSF: Biodiversity on a Changing Planet](#)
- [NSF: Emerging Mathematics in Biology](#)
- [NSF: Future of Work at the Human-Technology Frontier](#)
- [NSF: Pathways into the Earth, Ocean, Polar and Atmospheric & Geospace Sciences – LIMITED](#)
- [USDA: Conservation Collaboration Grant for Program Funding – NORTH DAKOTA](#)

Upcoming Limited Submission Program Deadlines

Upcoming Limited Submission Program Deadlines

Limited submission grant programs are those that indicate a limit on the number of proposals that may be submitted by an institution for a particular deadline. A selection process becomes necessary if more applicants express interest in applying than NDSU is allowed to submit to the grant program. Email notifications of interest to ndsu.researchdev@ndsu.edu.

If you identify a limited submission opportunity that is not on the list below, please notify ndsu.researchdev@ndsu.edu.

- [NSF EPSCoR Research Infrastructure Improvement Track 4: EPSCoR Research Fellows](#)
Notification Deadline: 01/18/2023
- [NSF: Pathways into the Earth, Ocean, Polar and Atmospheric & Geospace Sciences](#)
Notification Deadline: 01/18/2023
- [NEA: Challenge America](#)
Notification Deadline: 01/25/2023
- [NIH: Undergraduate Research Training Initiative for Student Enhancement \(U-RISE\)](#)
Notification Deadline: 01/26/2023

There are a number of limited submission grant programs with upcoming agency deadlines for which we did not receive any notifications of interest. For these programs, marked "First to Notify," approval to move forward with a full proposal submission to the funder will be given on a first come, first served basis.

- [NIH: John Lewis NIMHD Research Endowment Program](#)
Deadline: 01/17/2023
- [NSF: Training-based Workforce Development for Advanced Cyberinfrastructure](#)
Deadline: 01/19/2023
- [DOE: Deployment Challenges for Offshore, Land-Based, and Distributed Wind](#)
Deadline: 01/20/2023

- [NIH: Leading Equity and Diversity in the Medical Scientist Training Program](#)
Deadline: 01/23/2022
- [HRSA: Rural Communities Opioid Response Program-Evaluation](#)
Deadline: 01/27/2023
- [NIH: Collaborative Program Grant for Multidisciplinary Teams](#)
Deadline: 01/27/2023
- [DOE: Machine Learning, AI, and Data Resources for Fusion Energy Sciences](#)
Deadline: 01/31/2023
- [NSF: Cultural Transformation in the Geoscience Community](#)
Deadline: 02/01/2023
- [Camille Dreyfus Teacher-Scholar Awards Program](#)
Deadline: 02/01/2023
- [DOE: AMMTO-BTO and OE FY22 Multi-Topic FOA](#)
Deadline: 02/03/2023
- [NSF: Expanding Capacity in Quantum Information Science and Engineering](#)
Deadline: 02/03/2023
- [NEA: Grants for Arts Projects](#)
Deadline: 2/09/2023
- [NIH: Research Evaluation and Commercialization Hubs](#)
Deadline: 02/09/2023
- [NSF: Major Research Instrumentation](#) – Track 2 – proposals requesting \$1.4M-\$4M
Deadline: 02/21/2023
- [NSF: Major Research Instrumentation](#) – Track 3 – purchase, installation, operation, and maintenance of equipment and instrumentation to conserve or reduce the consumption of helium.
Deadline: 02/21/2023
- [NSF: Advanced Computing Systems & Services](#)
Deadline: 02/23/2023
- [NSF: Strengthening the Cyberinfrastructure Professionals Ecosystem](#)
Deadline: 02/23/2023
- [DOE: Distributed Resilient Systems](#)
Deadline: 02/24/2023

- [Graham Foundation: Architecture and the Designed Environment](#)
Deadline: 02/25/2023
- [NSF: Scholarships in STEM \(S-STEM\) – New Solicitation](#)
Deadline: 03/02/2023
- [HRSA: Rural Communities Opioid Response Program-Neonatal Abstinence Syndrome](#)
Deadline: 03/082023

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DARPA: Foundational Security for Food Systems

The Defense Advanced Research Projects Agency (DARPA) Defense Sciences Office (DSO) is sponsoring an Information Session webcast to provide information to potential proposers on the objectives of the anticipated Foundational Security for Food Systems (FS2) Disruption Opportunity (DO). The Information Session will be held via prerecorded webcast on January 17, 2023, from 2-3 p.m. [Advance registration is required for viewing the webcast.](#) Registration closes January 10, 2023.

The goals of the FS2 DO Information Session are to (1) introduce the research community (Proposers, Academia, and Government) to the FS2 DO vision and goals; and (2) explain the mechanics of a DARPA DO and the milestones of this particular effort. DARPA anticipates releasing the FS2 DO in January 2023. If released, the DO will be available on [https://sam.gov/](https://sam.gov). Following the event, DARPA may post the presented materials as well as a Frequently Asked Questions (FAQ) list to the DARPA/DSO Opportunities website.

DARPA's Foundational Security for Food Systems (FS2) program will explore a pathwaybased approach to provide advanced threat detection and warning of crop damage irrespective of the triggering agent. FS2 will conduct research to test the feasibility of applying this approach for defense of cereal crops, specifically rice and corn. The effort does not involve genetic modification of any organism. All research will be conducted in compliance with approved regulatory standards.

Additional information regarding this SN can be found at the following link:

<https://sam.gov/opp/046ffd42d3264b64b02d84e7c8eadea2/view>

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DOC: Climate and Societal Interactions

The goal of this Notice of Federal Funding Opportunity (NOFO) [[NOAA-OAR-CPO-2023-2007771](#)] is to support collaborative research and community engagement projects that improve climate adaptation planning and action. Collaborative research and community engagement are defined here as the process of developing trusted and sustained partnerships between scientists, decision-makers, and communities that lead to shared understandings of climate adaptation needs and the co-generation of credible and actionable climate knowledge to support community defined plans, including implementable solutions. Outcomes from this work will support and inform the identification of equitable and inclusive infrastructure investments that mitigate flooding and wildfire risks.

Through this NOFO, the Climate Adaptation Partnerships program in the Climate and Societal Interactions (CSI) division of the Climate Program Office is soliciting applications for three competitions.

1. Improving Engagement Methods for Coastal Resilience Planning
2. Assessing Tradeoffs and Co-Benefits for Complex Decision-Making in Communities Facing Coastal Inundation and / or Inland Flooding
3. Identifying Complex Interactions between Social Infrastructure and Wildfire Risks to Improve Community Adaptive Capacity

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DoD: Science Technology Engineering & Mathematics (STEM) Education and Workforce Program

This Funding Opportunity Announcement (FOA) [[N00014-23-S-F001](#)] is for STEM education programs and activities, which is formal or informal education that is primarily focused on physical and natural sciences, technology, engineering, social sciences, and mathematics disciplines, topics, or issues (including environmental science education or stewardship).

STEM education programs and activities that could be supported by this FOA include one or more of the following as the primary objective:

- Develop learners' knowledge, skill, or interest in STEM.
- Attract students to pursue certifications, licenses, or degrees (two-year degrees through post-doctoral degrees) or careers in STEM fields.
- Provide growth and research opportunities for post-secondary, college and graduate students in STEM fields, such as working with researchers or conducting research that is primarily intended to further education.
- Improve mentor / educator (K-12 pre-service or in-service, post-secondary, and informal) quality in STEM areas.
- Improve or expand the capacity of institutions to promote or foster STEM fields.

Deadline: April 14, 2023

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DOE NOI: Industrial Decarbonization and Emissions Reduction

The Office of Clean Energy Demonstrations (OCED) in collaboration with the Office of Manufacturing and Energy Supply Chains (MESC) intends to issue a Funding Opportunity Announcement (FOA) entitled "Industrial Decarbonization and Emissions Reduction Demonstration-to-Deployment Funding Opportunity Announcement." [[DE-FOA-0002936](#)] OCED anticipates funding high-impact, large-scale, transformational projects to significantly reduce greenhouse gas (GHG) emissions from high-emitting industrial subsectors to build confidence in the technical and commercial viability of emissions reduction technologies and integrated solutions. OCED will support cross-cutting industrial decarbonization approaches via energy efficiency; industrial electrification; low-carbon fuels, feedstocks, and energy sources; and carbon capture and utilization for emissions that are difficult to abate through other pathways. This approach aligns with but is not limited to the Department of Energy's (DOE) Industrial Decarbonization Roadmap.

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NIH: Bidirectional Influences Between Adolescent Social Media Use and Mental Health

Adolescents have increasing access to and spend an increasing amount of time engaging in online social interactions and consuming content on social media platforms, yet there is

limited knowledge of how online social behavior and experiences interact with adolescent mental health and risk for psychopathology. The purpose of this Funding Opportunity Announcement (FOA) [[RFA-MH-23-115](#)] is to encourage applications that focus on understanding bidirectional relationships between social media use and adolescent mental health, psychiatric symptoms, and risk or resilience for psychopathology. This FOA uses the R01 grant mechanism, whereas its companion FOA [[RFA-MH-23-116](#)] seeks shorter, higher-risk R21 grant applications.

Deadline: March 24, 2023

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NIH: Development of Innovative Informatics for Cancer Research and Management

The National Institutes of Health (NIH) National Cancer Institute (NCI) has published several opportunities related to informatics technologies and algorithms for cancer research and management.

- [RFA-CA-23-014](#) , [R21](#) Exploratory / Developmental Grants
- [RFA-CA-23-015](#) , [U01](#) Research Project (Cooperative Agreements)
- [RFA-CA-23-016](#) , [U24](#) Resource-Related Research Project (Cooperative Agreements)
- [RFA-CA-23-017](#) , [U24](#) Resource-Related Research Project (Cooperative Agreements)

Deadline: June 13, 2023

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NNSF DCL: Computational and Data-Enabled Science for New Discovery

The Computational and Data-Enabled Science and Engineering in the Mathematical and Statistical Sciences (CDS&E-MSS) program in the Division of Mathematical Sciences (DMS) seeks to stimulate the creation and development of the next generation of mathematical and statistical computational tools and algorithms. These algorithms and tools should lead to innovation within mathematics and statistics while addressing the challenges presented by the ever-expanding role of computational experimentation, modeling, and simulation, and the explosion in production and analysis of digital data from experimental and observational sources.

As part of this effort, this [Dear Colleague Letter \(DCL\)](#) invites proposals that aim to advance mathematics or statistics and address computational or data-oriented challenges with approaches that range from model-based to data-driven.

The CDS&E-MSS program is interested in innovative, theoretically justified computational tools and algorithms in mathematics and statistics that are accessible to a wide range of disciplines in science and engineering. Examples of successful proposals include, but are not limited to, projects that

1. involve the creation and development of algorithms and computational tools that lead to robust software packages for wide use in science and engineering,
2. develop mathematical and statistical theory and tools for better implementation and understanding of interpretable machine learning and artificial intelligence (AI) methods or
3. are novel approaches in mathematics and statistics to causal forecasting problems and big data. The program is unlikely to be supportive of data analysis or computational modeling projects that do not feature new or recently developed methodologies and their implementation.

Inquiries about the DCL and questions about the submission of proposals should be directed to the Program Directors of the [CDS&E-MSS program](#).

Proposals in response to this DCL should be submitted to the CDS&E-MSS program by March 15, 2023.

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NSF DCL: Growing Research Access for Nationally Transformative Equity and Diversity (GRANTED) Conferences and Workshops

The National Science Foundation (NSF) seeks to encourage nationally transformative ideas and scalable models to strengthen the Nation's research enterprise, particularly at emerging research and minority-serving institutions. Broadly defined, the research enterprise includes human capital, practices and processes related to research development, research administration, technology transfer and commercialization, corporate relation / public-private partnerships, research integrity, compliance and

security, research policy, student research training, and research leadership.

In the past several decades, the complexity of managing externally funded activities has increased significantly. The recent pandemic has exacerbated this issue through increased attrition of research enterprise professionals and additional budget constraints. Insufficient resources hinder institutional ability to develop and manage externally funded projects, reducing the opportunity to fully realize the outcomes from creativity present in all the Nation's institutions of higher education and their partners. Beginning in FY2023, GRANTED, a new NSF-wide initiative, will seek to address these issues.

Through this [Dear Colleague Letter \(DCL\)](#), NSF invites requests to fund conferences, symposia, and workshops centered around one or more of the three primary themes of GRANTED: enhancing practices and processes within the research enterprise, strengthening the research enterprise workforce, and partnering with national and regional professional societies to translate effective practices into diverse institutional and organizational contexts. The proposed conferences should bring together a diverse array of stakeholders with the goal to convene, build, and energize communities to help shape future GRANTED funding opportunities and be better prepared to submit ambitious proposals in response to those calls. Proposals that focus on enhancing research support infrastructure at minority-serving institutions and / or emerging research institutions are strongly encouraged.

Deadline: March 15, 2023

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NSF: Addressing Systems Challenges through Engineering Teams (ASCENT)

The Electrical, Communications and Cyber Systems Division (ECCS) supports enabling and transformative engineering research at the nano, micro, and macro scales that fuels progress in engineering system applications with high societal impact. ECCS, through its ASCENT program [[NSF 23-541](#)], offers its engineering community the opportunity to address research issues and answer engineering challenges associated with complex systems and networks that are not achievable by a single principal investigator or by short-term projects and can only be achieved by interdisciplinary research teams. ECCS envisions a connected portfolio of transformative and integrative projects that create

synergistic links by investigators across its three ECCS clusters: Communications, Circuits, and Sensing-Systems (CCSS), Electronics, Photonics and Magnetic Devices (EPMD), and Energy, Power, Control, and Networks (EPCN), yielding novel ways of addressing challenges of engineering systems and networks. ECCS seeks proposals that are bold and ground-breaking, transcend the perspectives and approaches typical of disciplinary research efforts, and lead to disruptive technologies and methods or enable significant improvement in quality of life.

- ASCENT supports fundamental research projects involving at least three collaborating PIs and co-PIs, up to four years in duration, with a total budget between \$1 million and \$1.5 million.
- ASCENT proposals must highlight the engineering leadership focus of the proposal within the scope of ECCS programs.
- ASCENT proposals must articulate a fundamental research problem with compelling intellectual challenge and significant societal impact. The topic at the heart of the proposal must lie within the scope of at least one of the three ECCS clusters (CCSS, EPMD, EPCN). Research proposals spanning multiple clusters are highly encouraged.
- ASCENT proposals must demonstrate the need for a concerted research effort by an integrated and interdisciplinary team, and strongly justify the interdisciplinary nature of the proposed work. They should include a timeline for research activities, with a strong justification of the explicit mechanisms for frequent communication between team members and effective assessment to achieve proposed goals.

LOI deadline: February 1, 2023

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NSF: Biodiversity on a Changing Planet (BoCP)

The connection between functional biodiversity and biodiversity dynamics on a changing planet is the main focus of the Biodiversity on a Changing Planet (BoCP) program [[NSF 23-542](#)]. The program encourages proposals that integrate pattern- and process-based research approaches in the context of the constant gain, loss, and reorganization of biodiversity on a changing planet. To advance a comprehensive understanding of functional biodiversity requires a highly integrative approach - including consideration of spatial and temporal dimensions from the organismal to the ecosystem level and from recent to deep timescales. The program therefore places a strong emphasis on multidisciplinary research among climatic, geological, paleontological, ecological,

organismal, phylogenetic and evolutionary sciences.

The BoCP program is a cross directorate and international program led by NSF that invites submission of interdisciplinary proposals addressing grand challenges in biodiversity science within the context of unprecedented environmental change, including climate change. Successful BoCP proposals will test novel hypotheses about functional biodiversity and its connections to shifting biodiversity dynamics on a changing planet, with an emphasis on integrative research into the complex intersections among climatic, geological, paleontological, and biological processes. Integrative research is likely to combine multiple perspectives--including organismal, species, ecological, evolutionary, phylogenetic, geological, and/or paleontological approaches-- at various scales. Proposals that seek to improve predictive capability about functional biodiversity across temporal and spatial scales by considering the linkages between past, present, and future biological, climatic, and geological processes are also encouraged. While this focus complements several core programs at NSF, it differs by requiring an integrative approach to understanding functional biodiversity as it relates to shifting biodiversity dynamics under changing environmental conditions.

The program supports both US-only collaborative proposals and proposals with international partnerships with the National Natural Science Foundation of China (NSFC), the São Paulo Research Foundation (FAPESP) of Brazil, and the National Research Foundation (NRF) of South Africa.

Deadline: March 29, 2023



NSF: Emerging Mathematics in Biology

The Emerging Mathematics in Biology (eMB) program [[NSF 23-537](#)] seeks to stimulate fundamental interdisciplinary and potentially transformative research pertaining to the development of innovative mathematical / statistical / computational theories, tools, and modeling approaches to investigate challenging questions of great interest to biologists and public health policymakers. It supports research projects in mathematical biology that address challenging and significant biological questions through novel applications of traditional, but nontrivial, mathematical tools and methods or the development of new theories particularly from foundational mathematics and / or computational / statistical tools, including Artificial Intelligence / Deep Learning / Machine Learning (AI/DL/ML).

Deadline: March 22, 2023



NSF: Future of Work at the Human-Technology Frontier: Core Research (FW-HTF)

The overarching vision of this program [[NSF 23-543](#)] is to support multi-disciplinary research to sustain economic competitiveness, to promote worker well-being, lifelong and pervasive learning, and quality of life, and to illuminate the emerging social and economic context and drivers of innovations that are shaping the future of jobs and work.

For the purposes of this solicitation, work is defined as mental or physical activity to achieve income, profit, or other tangible benefits. A proposal for a research grant in this program must focus on advancing fundamental understanding of future work and work outcomes for workers and society.

The specific objectives of the Future of Work at the Human-Technology Frontier program are to

1. facilitate inter-disciplinary or convergent research that employs the joint perspectives, methods, and knowledge of behavioral science, computer science, economics, engineering, learning sciences, research on adult learning and workforce training, and the social sciences;
2. develop deeper understandings of how human needs can be met and values respected in regard to how new technologies, conditions, and work experiences are changing;
3. support deeper understanding of the societal infrastructure that accompanies and leads to new work technologies and new approaches to work and jobs, and that prepares people for the future world of work;
4. encourage the development of a research community dedicated to designing intelligent technologies and work organization and modes inspired by their positive impact on individual workers, the work at hand, the way workers learn and adapt to technological change, creative and inclusive workplaces (including remote locations, homes, classrooms, or virtual spaces), and benefits for social, economic, educational, and environmental systems at different scales;

5. promote deeper basic understanding of the interdependent human-technology partnership to advance societal needs by advancing design of intelligent technologies that operate in harmony with human workers, including consideration of how adults learn the new skills needed to interact with these technologies in the workplace, and by enabling broad and diverse workforce participation, including improving accessibility for those challenged by physical, learning or cognitive impairment and other visible and invisible disabilities; and
6. understand, anticipate, and explore ways of mitigating potential risks including inequity arising from future work at the human-technology frontier.

Deadline: March 30, 2023



NSF: Pathways into the Earth, Ocean, Polar and Atmospheric & Geospace Sciences (GEOPATHs) – Limited Submission

[Limited submission grant programs](#) are those that indicate a limit on the number of proposals that may be submitted by an institution for a particular deadline. A selection process becomes necessary if more applicants express interest in applying than NDSU is allowed to submit to the grant program.

NSF GEOPATHs: [Notify RCA](#) by 1/18/2023, 5pm, if you are interested in submitting to this program.

The Directorate for Geosciences (GEO) supports the Pathways into the Geosciences - Earth, Ocean, Polar and Atmospheric Sciences (GEOPATHs) funding opportunity [[NSF 23-540](#)]. GEOPATHs invites proposals that specifically address the current needs and opportunities related to education, learning, training and professional development within the geosciences community through the formation of STEM Learning Ecosystems that engage students in the study of the Earth, its oceans, polar regions and atmosphere. The primary goal of the GEOPATHs funding opportunity is to increase the number of students pursuing undergraduate and / or postgraduate degrees through the design and testing of novel approaches that

engage students in authentic, career-relevant experiences in geoscience. In order to broaden participation in the geosciences, engaging students from historically excluded groups or from non-geoscience degree programs is a priority. This solicitation features three funding tracks that focus on Geoscience Learning Ecosystems (GLEs):

1. GEOPATHs: *Informal Networks (IN)*. Collaborative projects in this track will support geoscience learning and experiences in informal settings for teachers, pre-college (e.g., upper level high school) students, and early undergraduates in the geosciences.
2. GEOPATHs: *Undergraduate Preparation (UP)*. Projects in this track will engage pre-college and undergraduate students in extra-curricular experiences and training in the geosciences with a focus on service learning and workplace skill building.
3. GEOPATHs: *Graduate Opportunities (GO)*. Projects in this track will improve research and career-related pathways into the geosciences for undergraduate and graduate students through institutional collaborations with a focus on service learning and workplace skill building.

LIMITED SUBMISSION: An organization may serve as sole submitting organization or as lead organization of a collaborative project on only one submission per cycle, regardless of track, but may serve as the non-lead organization of a collaborative project more than once per cycle.

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USDA: Conservation Collaboration Grant for Program Funding – NORTH DAKOTA

The Natural Resources Conservation Service (NRCS), an agency under the United States Department of Agriculture (USDA), [is announcing potential availability of grant agreements](#) for the purpose of leveraging NRCS resources, addressing local natural resource issues, encouraging collaboration and developing state- and community-level conservation leadership. Proposals will be accepted for projects located in North Dakota.

Deadline: March 1, 2023

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Looking for more funding opportunities?



RCA subscribes to SPIN by InfoEd Global, a database of more than 40,000 funding opportunities. Through this subscription, SPIN is free for current NDSU faculty, staff, and students.

For more information and to access this database, visit the [SPIN page](#) on the RCA website. If you have questions, please contact ndsuhresearchdev@ndsuh.edu.

Have questions, ideas, or suggestions for the RCA Update?

[Contact Us](#)



The Office of Research and Creative Activity (RCA) sends weekly emails to NDSU faculty and staff to provide current information on various topics including funding opportunities, grant program changes, research resources, deadlines, notices, and training.

You are receiving this notification through the NDSU official employee listserv or sub-list. The official listserv refreshes after each pay period.

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We collectively acknowledge that we gather at NDSU, a land grant institution, on the traditional lands of the Oceti Sakowin (Dakota, Lakota, Nakoda) and Anishinaabe Peoples in addition to many diverse Indigenous Peoples still

connected to these lands. We honor with gratitude Mother Earth and the Indigenous Peoples who have walked with her throughout generations. We will continue to learn how to live in unity with Mother Earth and build strong, mutually beneficial, trusting relationships with Indigenous Peoples of our region.