

NDSU OFFICE OF
RESEARCH AND CREATIVE ACTIVITY

RCA UPDATE

January 27, 2020

Rajani Ganesh-Pillai

January 2020 RCA Researcher of the Month

If you ask Rajani Ganesh-Pillai about the key to successful marketing, she'll pause, look you in the eye and tell you what it isn't. Rajani doesn't think marketing should be only about making money or convincing customers to buy something new. Instead, she believes marketing is about understanding people and finding out what problems they are trying to solve and then finding solutions to those problems through products, services, and ideas. Rajani researches consumer behavior as an associate professor of marketing at NDSU.



"My research is about what leads people to make decisions in the face of risk and uncertainty in their lives such as where they live, what they do for a living, and who their life partners are," she says. "While it also includes what products they buy, I see consumer behavior as a broad topic that intersects with behavioral economics, psychology, and sociology. My

research is interdisciplinary and is guided by my curiosity about human behaviors."

Rajani believes that a lot of what drives consumers when judging new products is perceived risk. "Innovative products are risky to consumers," she says. "They're different and they offer something new and that creates uncertainty.

She relates how one of her current projects involves the perceived value of nano zinc oxide in sunscreen and how companies present their value in their marketing. "If a product has too much mineral zinc oxide, it remains white and chalky on the skin. If there's too little, it's not effective at blocking the sun. After a product with too little concentration of mineral zinc oxide allowed sunburns to happen, we saw a change in positioning. Some companies began promoting nano zinc oxide as feature that provided added benefit. While other companies positioned their sunscreens as 'natural' or with 'mineral zinc oxide,' nano particles were there all along. But its framing in communication to consumers was intended mitigate the perceived risk. Same product, but a completely different approach."

Rajani collaborates with many researchers and groups at NDSU. She has worked with William Nganje (professor and chair of agribusiness and applied economics) on innovations in food technologies and with Achintya Bezbaruah (associate professor of civil and environmental engineering) on the perceived and objective risks among farmers regarding nanoparticles

in fertilizers. She's also a member of the Center for Engineered Cancer Test Beds where she works with Elizabeth Crawford Jackson (associate professor of communication) to understand how message strategies influence perceived risk and acceptance of nanotechnology based cancer test beds. Rajani also serves as a Challey Fellow where she investigates innovation and development. Her research has appeared in journals including the Journal of Business Research, Journal of International Marketing, Thinking & Reasoning, and Journal of Nanoparticle Research.

"My advisor once told me that good collaborators can either make or break your research," she said. "I've found that the best way to approach a potential collaboration is to connect with the fellow researcher as a person first. Whether it's at a social event or over a cup of coffee, the best collaborations I've had start from a place of mutual respect and a great problem that we can solve together."

[Read more about Rajani Ganesh-Pillai, the January 2020 Researcher of the Month >>](#)

Looking for Collaborators?

In addition to the database of funding opportunities, [Pivot](#) also maintains searchable profiles of researchers from NDSU and from other institutions that use Pivot. You can search for collaborators from the [Pivot Profiles page](#). Note that if you're off-campus, you'll need to log in to access Pivot.

Have questions about Pivot, or need help logging in?

[Contact the Research Development team >>](#)

RCA Funding Opportunities

RCA has opened applications for two funding programs:

The **Research Development Travel Award program** helps defray travel expenses for faculty presenting at national conferences or for supporting travel to visit archives or special collections. International opportunities may be accommodated if required for discipline-specific research. 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.

The **Research Support Services program** helps 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.

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

Training Sessions: Advanced Research Computing

**These free sessions are offered by the NDSU Center for
Computationally Assisted Science and Technology ([CCAST](#))**

CCAST is conducting a series of training sessions to introduce advanced research computing to NDSU faculty, staff, and students. This training series also aims to provide researchers with the basic knowledge to make the best use of local and national high-performance computing (HPC) resources and ultimately to advance their research capabilities.

The training events, offered every other Thursday from 2:00–4:00 p.m. in Quentin Burdick Building room 132, will include lectures, demonstrations, and hands-on sessions where participants have opportunities to run simple and not-so-simple programs on CCAST's HPC systems. There are no prerequisites, except a willingness to learn. Some familiarity with computer programming would also be helpful, but not required.

The schedule for Spring 2020 is as follows:

- Feb. 13: Introduction to HPC, HPC resources at NDSU (and elsewhere)
- Feb. 27: Linux for HPC: Working with a Linux system, command-line basics
- Mar. 12: How to get your work done faster? Ensemble computing, OpenMP, and MPI
- Mar. 26: How to get your work done faster? Parallel scaling performance
- Apr. 9: Linux for HPC: Text processing and shell scripting
- Apr. 23: HPC for Big Data and machine learning
- May. 7: Cloud computing with OpenStack

The training is FREE and open to the entire NDSU community; however, space is limited to 24 seats per class and *pre-registration is required*.

Please register before 12:00 midnight on Monday, February 10, by sending an e-mail to CCAST at ndsu.ccast.training@ndsu.edu with the following information: first and last names, e-mail address, department, current status (faculty, staff, postdoc, grad, or undergrad), and the sessions you would like to attend.

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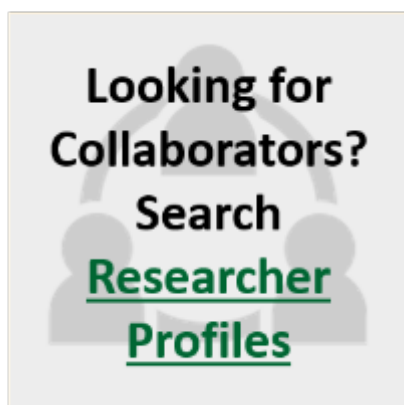
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Need to update your profile?
Click here to learn how!

Acton Institute: Mini-Grants on Free Market Economics

The purpose of this grant program is to enhance the effectiveness in the research and teaching of market economics for faculty at colleges, universities, and seminaries across the United States and Canada. Grants range between \$1,000-\$10,000.

The Acton Institute invites proposals from faculty in one or more of the following broad categories:

- **Course development** — specifically adding new courses or strengthening existing courses in the curriculum which address the nature, morality, and purpose of free-market economics. This may include courses that deal with religion and economics, microeconomics, macroeconomics, political economy, ethics and economics, the history of economic thought, or other related subject areas.
- **Faculty research** —identifying scholarly projects that show promise for advancing the understanding of free markets and, ideally, demonstrate how the free market relates to Christian faith and ethics.

Deadline: March 31, 2020



FFAR: 2020 New Innovators in Food and Agriculture - Limited Submission Program

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.

FFAR New Innovators : Submit Pre-proposal by 1/31/2020, 5:00 p.m. if you are interested in being considered for this program.

The Foundation for Food and Agricultural Research (FFAR) seeks nominations for its 2020 New Innovator in Food and Agriculture Research Award. With this program, FFAR intends to support and promote the future generation of exceptionally talented and creative new faculty who are conducting critical and highly innovative research, and are establishing research programs that will lead to expanded availability of food and facilitate the global practice of sustainable agriculture as the world's population grows to more than 9 billion people by the year 2050. The New Innovator Award seeks to promote career advancement of highly creative and promising new scientists who intend to make a long-term career commitment to research in food and agriculture and bring innovative, ground-breaking research initiatives and thinking to bear on

problems facing food and agriculture. NDSU may nominate one applicant.

Nominee Eligibility:

- Required: Hired on or after August 1, 2016 for a tenure-track or equivalent position.
- Preference: Within 8 years of Ph.D. or equivalent degree.
Faculty with significant research experience prior to obtaining a faculty position will not be considered.
- This program is open to any discipline / program, but the nominee should be working in one of the FFAR Challenge Areas:
 - Advanced Animal Systems
 - Health-Agriculture Nexus
 - Next Generation Crops
 - Soil Health
 - Sustainable Water Management
 - Urban Food Systems

If you are eligible for this program and would like to be considered, please follow the process outlined below.

Friday, January 31, 2020: NDSU pre-applications are due to ndsu.researchdev@ndsu.edu by 5pm CT. Pre-applications should be prepared as indicated below and emailed as a single pdf file to ndsu.researchdev@ndsu.edu. Following a review of pre-applications received, one nominee will be selected.

Pre-applications should include the following:

- Cover Sheet – include name, department, date of hire in a tenure-track or equivalent position, and applicable FFAR Challenge Area.
- Provide a brief description of your research program (300 words or less).
- Provide a brief statement on the innovative nature of your research / how you are outstanding in your field (500 words or less).
- Curriculum Vitae

NEH: Fellowships

National Endowment for the Humanities (NEH) [Fellowships](#) are competitive awards granted to individual scholars pursuing projects that embody exceptional research, rigorous analysis, and clear writing. Applications must clearly articulate a project's value to humanities scholars, general audiences, or both.

Fellowships provide recipients time to conduct research or to produce books, monographs, peer-reviewed articles, e-books, digital materials, translations with annotations or a critical apparatus, or critical editions resulting from previous research. Projects may be at any stage of development. NEH invites research applications from scholars in all disciplines, and it encourages submissions from independent scholars and junior scholars.

Applicants interested in research projects that are either born digital or require mainly digital expression and digital publication are encouraged to apply instead for [NEH-Mellon Fellowships for Digital Publication](#).

Application deadline: April 8, 2020

NIH: Development of Innovative Informatics Methods and Algorithms for Cancer Research and Management (R21)

The purpose of this Funding Opportunity Announcement ([FOA / RFA-CA-20-007](#)) is to invite exploratory/developmental research grant applications (R21) for the development of innovative methods and algorithms in biomedical computing, informatics, and data science addressing priority needs across the cancer research continuum including cancer biology, cancer treatment and diagnosis, early cancer detection, risk assessment and prevention, cancer control and epidemiology, and/or cancer health disparities. As a component of the NCI's [Informatics Technology for Cancer Research](#) (ITCR) Program, this

FOA encourages applications focused on the development of novel computational, mathematical, and statistical algorithms and methods that can considerably improve acquisition, management, analysis, and dissemination of relevant data and/or knowledge. The central mission of ITCR is to promote research-driven informatics technology across the development lifecycle to address priority needs in cancer research. In order to be successful, there must be a clear rationale for how the proposed informatics method or algorithm is novel and how it will benefit the cancer research field. See also: R01 Companion opportunity – [RFA-CA-20-011](#).

Letter of Intent deadline: May 9, 2020

Application deadline: June 9, 2020



NIJ: Research and Evaluation on Trafficking in Persons

With [this solicitation](#), the National Institute of Justice (NIJ) continues to build upon its research and evaluation efforts to better understand, prevent, and respond to trafficking in persons in the United States. Applicants should propose research projects that — first and foremost — have clear implications for criminal justice policy and practice in the United States.

NIJ is interested in research projects addressing both sex and labor trafficking. NIJ is particularly interested in research responding to the following priority areas:

1. Labor trafficking.
2. Demand reduction research.
3. Research to identify the health and wellness effects of trafficking victimization.
4. Profiling recruitment tactics.

Deadline: April 20, 2020



NPS: Preservation Technology and Training Grants

The National Park Service (NPS) [2020 Preservation Technology and Training Grants](#) (PTT Grants) are intended to create better tools, better materials, and better approaches to conserving buildings, landscapes, sites, and collections. The PTT Grants are administered by the National Center for Preservation Technology and Training (NCPTT), the NPS innovation center for the preservation community.

This competitive grants program will support the following activities:

- Innovative research that develops new technologies or adapts existing technologies to preserve cultural resources - typically 20,000 dollars.
- Specialized workshops or symposia that identify and address national preservation needs - typically 15,000 to 20,000 dollars.
- How-to videos, mobile applications, podcasts, best practices publications, or webinars that disseminate practical preservation methods or provide better tools for preservation practice - typically 5,000 to 15,000 dollars.

The maximum grant award is 20,000 dollars. The actual grant award amount is dependent on the scope of the proposed activity. NCPTT does not fund brick and mortar grants.

Deadline: February 24, 2020

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NSF: Innovation Corps Hubs Program

[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 I-Corps Hubs: [Notify RCA](#) of your interest in participating in this program by February 7, 2020, 5pm.

The National Science Foundation (NSF) seeks to further develop and nurture a national innovation ecosystem that guides the output of scientific discoveries closer to the development of technologies, products, and services that benefit society. The goal of the NSF Innovation Corps (I-Corps) Program, created in 2011 by NSF, has been and will continue to be to reduce the time and risk associated with translating promising ideas and technologies from the laboratory to the marketplace. The I-Corps Program utilizes experiential learning of customer and industry discovery, coupled with first-hand investigation of industrial processes, to quickly assess the translational potential of inventions. The I-Corps Program is designed to support the commercialization of so-called "deep technologies," or those revolving around fundamental discoveries in science and engineering. The I-Corps program addresses the skill and knowledge gap associated with the transformation of basic research into deep technology ventures (DTVs).

In the program's initial phase, I-Corps Nodes and Sites were funded separately to serve as the backbone of the National Innovation Network (NIN). Previous solicitations for NSF I-Corps Nodes and NSF I-Corps Sites have now been archived. This new solicitation for I-Corps Hubs has been informed by feedback received from the community and lessons learned over the first eight years of the program.

In 2017, the American Innovation and Competitiveness Act (AICA, Public Law 114-329, Sec. 601) formally authorized and directed the expansion of the NSF I-Corps Program. Through this solicitation [[NSF 20-529](#)], NSF seeks to evolve the current structure, in which NSF I-Corps Teams, Nodes, and Sites are funded through separate programs, toward a more integrated operational model capable of sustained operation at the scope and scale required to support the expansion of the NSF I-Corps Program as directed by AICA. In this more integrated model, I-Corps Hubs, comprising a Principal and at least two Partner institutions, form the backbone of the NIN, and each Hub has at least five Affiliates that extend the network to other institutions. Each Hub is funded through a single award. Throughout this solicitation, the term "Hub" refers to all associated organizations identified in a proposal responding to this solicitation, including the Principal, Partners, and Affiliates.

Organizations may only be a participant (Principal, Partner or Affiliate) in one proposal per deadline.

USDA-NIFA: Biotechnology Risk Assessment Grants Program

The purpose of the [Biotechnology Risk Assessment Grants \(BRAG\) program](#) is to support the generation of new information that will assist Federal regulatory agencies make science-based decisions about the effects of introducing genetically engineered organisms (GE) into the environment. These organisms include: plants, microorganisms (including fungi, bacteria, and viruses), insects, fish, birds, mammals, and other animals excluding humans. Investigations on the effects of both managed and natural environments are relevant. The BRAG program accomplishes its purpose by providing Federal regulatory agencies with scientific information relevant to regulatory issues.

Letter of Intent Deadline: February 12, 2020 (encouraged, not required)
Proposal Deadline: March 18, 2020

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Proposal Development Program

The purpose of the Proposal Development Program is to provide a professional development opportunity for NDSU faculty new to proposal writing or those seeking a refresher to hone proposal writing skills and knowledge in funding agency opportunities.

The Proposal Development Program will cover topics ranging from tips for writing proposals to specific agencies to peer review and developing collaborations. The NSF CAREER Program will also be part of the programming.

An experienced grant consultant, faculty, and research support staff will lead the sessions. [Register](#) soon to reserve your spot!

Spring 2020 Sessions

Memorial Union Badlands Room | 12:30pm-1:30pm

- January 28 - Peer Review (*Rescheduled from December*)
- February 11 - NSF CAREER Program

- February 25 - NSF Broader Impacts and Intellectual Merit
- March 10 - Meeting Expectations of Funding Agencies: Foundations and NIH
- March 31 - Meeting Expectations of Funding Agencies: USDA
- April 14 - Developing Collaborations

[Register to Participate >>](#)

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NDSU Core Biology Facility

The [NDSU Core Biology Facility \(CBF\)](#) assists researchers by providing equipment and resources that might not otherwise be accessible in the standard laboratory. CBF is equipped with BD Accuri C6 flow cytometers, BD FACSJazz cell sorter, Agilent 2100 Bioanalyzer, BioTek Synergy H1 microplate reader, iBright FL 1500 imaging system, Thermo Nanodrop 2000c, and more. In addition, CBF contains the equipment and resources to perform tissue/cell culture. CBF is a reasonable fee structure-based facility with the goal of assisting and promoting research. If interested in touring the facility and/or discussing how the facility may assist your research, please contact the CBF Manager, Dr. Amber Chevalier Plambeck (amber.chevalier@ndsu.edu, 701-231-5334).

During January and February, the CBF is offering a free training session per laboratory on the iBright FL1500. The iBright FL1500 is used to image, document, and quantify/analyze samples on gels and blots. This free training time will benefit laboratories that are interested in using the instrument. Contact Dr. Chevalier Plambeck (amber.chevalier@ndsu.edu, 701-231-5334) if you are interested in this training.

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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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