VT | **INSTITUTE FOR CREATIVITY, ARTS, AND TECHNOLOGY** VIRGINIA TECH™

MAJOR SEAD GRANTS CALL FOR PROPOSALS FY 20-21

Submission Due Date
February 14, 2020 (5:00pm EST)

Awards Announced
April 10, 2020

SUMMARY

The Institute for Creativity, Arts, and Technology (ICAT) brings together scientists, engineers, artists, and designers to tackle some of the world's most complex challenges. Powered by advanced technology and networks of creative people, ICAT brings together and supports teams of faculty and students from across academic disciplines to address particular needs, ranging from large societal problems to industry-specific issues.

You know that "back-of-the-mind", risky idea you can't get out of your head – the one that may change the world? That's what we're looking for.

We invite proposals for projects that are creative, innovative, and show strong potential to contribute to ICAT's goals and those of its partners. These grants can be used to pursue a range of transdisciplinary activities, including creative projects, pilot or feasibility studies, and preliminary research. We're hopeful that projects supported by these resources will ultimately become larger projects, longer term initiatives, or one-time events, performances, or exhibitions that are visible at the national level.
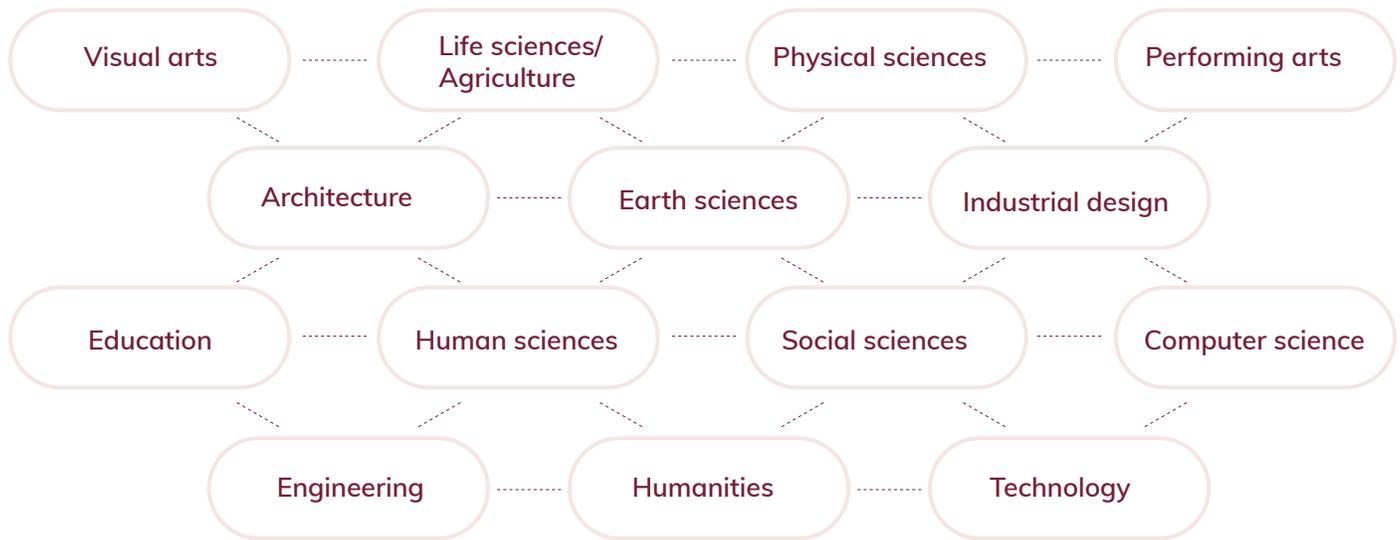
ELIGIBLE INVESTIGATORS

All faculty members at Virginia Tech are invited to submit an application and lead a project team. We're looking for teams comprised of faculty from at least two diff erent fi elds, with preference given to projects that include PIs from two or more colleges.

ICAT celebrates the critical importance of diverse teams of scholars. We want to encourage the diversity of our research teams as much as we can. ICAT is dedicated to InclusiveVT — serving in the spirit of community, diversity, and excellence to create a community that nurtures learning and growth for all of its members. See Virginia Tech's Principles of Community (inclusive.vt.edu) for more information.

RESEARCH AREAS

Proposals should involve two or more of the following areas represented by the Institute:

Visual arts	Life sciences/ Agriculture	Physical sciences	Performing arts
Architecture	Earth sciences	Industrial design	
Education	Human sciences	Social sciences	Computer science
Engineering	Humanities	Technology	

SPACE AND SUPPORT

In some instances, ICAT can provide access to staff and space to support of SEAD projects for the duration of the project award year.
As part of your proposal please highlight if you are requesting:

Assistance from ICAT staff

ICAT specialists can become project team members for approved projects. ICAT specialists can support projects using various facets of the Cube, including spatialized sound, immersive environments, visualization, and motion capture.

ICAT Studios

ICAT is also home to a number of unique spaces and studios on campus that may be utilized for ICAT SEAD grant projects. This will be somewhere within the Creativity and Innovation District as needed and when available. For information about ICAT studios, please visit icat.vt.edu/studios. Please include requests for these spaces as part of your proposal document.

FUNDING INFORMATION

- Awarded funds will be available Wednesday, July 15, 2020. All project expenses must be posted to Banner within 30 days of the project's end date.
- Unspent funds must be transferred back to ICAT within 45 days of the project's end date.
- Funds will not be awarded for conference travel or food.
- Funds can be used to buy out faculty time during the academic year or summer, pending home department approval.

GRANTS AVAILABLE

Please note that by selecting a grant category on the coversheet and Google drive that it will NOT preclude you from being considered for other categories during the review process. We'll look to see if your proposal would be a better fit in another category, but please pick one as your first choice.

GENERAL

A **Open Call for SEAD Projects** | up to $25,000

ICAT will fund several transdisciplinary projects, pilot/feasibility studies, and preliminary research. We're looking for project teams that involve two or more of the research areas listed in this document. Project duration should be set for one year, beginning Wednesday, July 1, 2020. And keep in mind that failure IS an option here, so take a chance on something big... something great. Go ahead, put your peanut butter in the chocolate.

B **Cube Project** | up to $25,000

ICAT is seeking proposals for transdisciplinary projects of any sort that will use and push the boundaries of the Cube (not literally, though). The Cube is a four-story-high, state-of-the-art theatre and high- tech laboratory that serves multiple platforms of creative practice by faculty, students, and national and international guest artists and researchers. The Cube is a highly adaptable space for research and experimentation in big data exploration, immersive environments, intimate performances, audio and visual installations, and experiential investigations of all types. Projects may include, but are not limited to, simulation, data visualization or sonification, architectural visualization or sonification, visual and performing arts, user studies, and more. Features of the Cube including:

Motion capture	Tetherless, multi-user virtual and augmented reality with head -mounted displays
Immersive 360-degree projection	Spatial audio

Project development support in the creation of immersive environments and the use of the facilities, including technological support, is available through ICAT staff. Significant development support may be built into the grant, substituting some portion of the grant for staff support. Preference will be given to projects with teams that include at least one affiliated faculty from the Center for Human Computer Interaction.

SPECIAL PROJECTS:

C **Special Project in Support of Affect as a Unifying Theme for Science, Engineering, Art, and Design** | up to $25,000

ICAT is seeking proposals for projects that engage faculty from across science, Engineering, Art, and Design to explore the role of affect in the generative processes of practitioners in those fields, and in the recipients' responses to artifacts from those fields. For example, experts in a given field will have an appreciation for elegance within that field that would not be apparent to non-experts; is there a common element of affect that would indicate or explain that appreciation of elegance? Proposals in this category must be integrative and interdisciplinary and exhibit strong potential for long-term impact, including securing secondary/ or external funding from either government agencies, foundations, or both. Accepted teams will be working closely with the ICAT leadership to formulate a long-term strategy for the role of affect in ICAT's future initiatives. Examples of "Affect as a Unifying Theme" collaborations may look like: Multidisciplinary Perspectives on Bodily, Affective and Social Perception

Design of Affective Loop and Affective Dialogue Systems

Cultural Differences in Affective Design and Interaction

Affect Recognition from Different Modalities

Affect Recognition in Everyday Settings

Affective Text Processing and Sentiment Analysis

Human-Centered Human-Behaviour-Adaptive Interfaces

Technological and Biological Bodies in Dialogue: Multidisciplinary Perspectives on Bodily, Affective and SocialPerception

The role of affect in AI and autonomous systems

Affect and Aesthetic

http://emotion-research.net | http://acii-conf.org/2019

D Special Project:
Smart Ag – Technologies, Data, Interpretation – Advancing Ag Through Technology Innovation

| up to $25,000

The College of Agriculture and Life Sciences, in partnership with ICAT, seeks proposals that advance agriculture through the use of innovative technologies, cyberbiosecurity of life science-based data, and/or facilitate the interpretation of large data sets for advancing the use of new technologies in agriculture. We're interested in new technologies that promote the rapid collection of data or sensing of biological, biochemical, or physical observations with direct relevance to agricultural applications. We'll consider proposals that integrate advanced technologies to help facilitate the human factor, such as workforce efficiencies or overcoming disabilities to allow continued agricultural engagement. Preference will be given to proposals that focus on new technologies with large data sets relevant to agriculture and life sciences or include CALS faculty as PI or co-PI with a collaborative team to advance data analysis, visualization, and/or protection of data in a meaningful way for research outcomes and translation into potential application. We're looking for projects that include strong partnerships between CALS faculty and non-CALS faculty, especially those that incorporate aspects of art and design.

(E) Creativity + Innovation Tech for Humanity Integrated Research and Experiential Learning | up to $25,000

The Creativity + Innovation (C+I) transdisciplinary community explores intentional integration of arts, design, humanities and technology. Using and reflecting upon the technology and its impact on the human condition, C+I is empowered to leverage arts, design, and humanities to design new and reflect upon the existing and/or forthcoming solutions and their societal impact. In the spirit of the Tech for Humanity initiative, C+I seeks opportunities that will inform and inspire rapid integration of human and machine. A growing group of new and experienced faculty from across campus supports this integration by re-imagining transdisciplinary research models.

We are interested in funding a project to create or improve teaching and learning experiences within the Creativity + Innovation community with particular focus on the Tech for Humanity. Proposals should come from interdisciplinary teams including DA hires, tenure-track/tenured faculty, as well as collegiate faculty, with a plan to engage both faculty and students in practices and scholarship of quality teaching and learning. In particular, this call is looking for two or more faculty who will develop and pilot a collaborative, co-taught, and ideally pathways approved course that integrates core values of C+I, including arts, design, humanities, and technology, and their use to reflect upon the human condition, focus on the experiential learning with a balance of hands-on and theoretical elements, and interdisciplinarity. Such a course should have a potential to scale, be sustainable and responsive to the current curricular goals of C+I (e.g. a capstone within the existing or newly proposed pathways minors). The expectation is that the course pilot will be taught outside the regular academic year, including (and not limited to) wintermester and summer. It will be piloted through C+I and ICAT on the main, Northern Virginia campus, and/or online. The funding may be used for any expenditures necessary for the design and implementation of the proposed course, including (and not limited to) partial academic year course buyout, materials, guest speakers, travel and/or lodging expenses, and promotion. The course needs to be piloted within 1 calendar year since the onset of the award and for which the assigned faculty will be compensated on top of the awarded grant funds. In addition to funding, the Center for Educational Networks and Impacts (CENI) will help awardees construct research-based evaluation activities that support their ideas for teaching and learning that is interesting and impactful for future community members of C+I. Given, this grant is co-sponsored by C+I/ICAT and IIHCC, the awardees are also expected to present at the ICAT Creativity and Innovation Day in spring 2021 regarding research ideas and outcomes.

SUBMISSION PROCESS

After you have entered your team data in the Google form, email a PDF copy of your submission, including cover page with all necessary signatures, to Melissa Wyers at mwyers68@vt.edu by 5:00 p.m. EST on Friday, February 14, 2020.
Please address each section in your proposal using Times New Roman 12 point font. Proposals should be limited to five pages, including images. Proposals received without cover sheet signatures will not be considered.

SUBMISSION GUIDELINES

Step 1 Google Form   https://forms.gle/c5cgymrMjkhoki2x8

Complete team information
- PI Name, Email, Home Department
- Team Member Names, Emails, Home Departments
- Bios and expertise of team members unique to the project
- Current and pending funding of the PI(s)
- Space requests (if needed)
- ICAT specialist request (if needed)
- Budget and Budget Justification
- Total budget request
- Budget justification and amounts requested for
    1. Student time   2. Faculty salary time
    3. Equipment   4. Materials and supplies

Step 2 Proposal Document
(PDF submission to Melissa Wyers at mwyers68@vt.edu)

Please address each section in your proposal using Times New Roman 12 pt. font. Proposal should be limited to five pages, including images.

Times New Roman
12 pt

limited to
5 pages (including images)

Statement of Need/
Project Description
- Listing of research areas involved (see first page)
- Description of the challenge the team is looking to explore
- Linkage to ICAT mission and goals
- Vision of project impact
- Where project work will happen and whether technical resources from ICAT are needed

Methods and Strategies
- Describe the activities that will be conducted as part of your project

Goals and Objectives
- Describe the overall outcome your project aims to achieve
- Describe project outputs
- Describe plans for future funding, exhibition, etc.

Plan for Evaluating Project
Success
- Describe how you will determine if your project has been successful
- Describe anticipated outcomes and deliverables

Timeline
- Timeline should begin after Wednesday, July 1, 2020 and end by Tuesday, June 1, 2021. Describe anticipated outcomes and deliverables

REVIEW CRITERIA

The proposals will be reviewed by the institute director, associate director, and ICAT senior fellows, and then evaluated based on the following criteria:

1 Intellectual merit and innovation

2 Interdisciplinary nature of the team

3 Correlation to the mission of ICAT and its studios

4 Broader impact of the project

5 Potential channels to advance the proposed research

6 Timeline

7 Clear outcome and deliverables

8 Alignment with project categories and/or themes

After the proposals are reviewed, a member of the proposal team may be asked to make a brief presentation to the review committee.