Research and Economic Development Newsletter

May 17, 2022

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RED Updates

A Message from the Vice Chancellor

Dear Research Community,

The spring has come and COVID is giving us a break. It is great to see so many people around campus, meeting in person and sometimes even without masks!

We were hoping the budgets at the Federal and State levels would be resolved by now on several aspects that affect our research enterprise, but budget negotiations are still in the making. Among the things we want to keep an eye on at the Federal level is the creation of the new TIP doctorate at NSF, which is in place but has not been fully funded by Congress yet. At the State level, the $185M for climate change research and innovation proposed by the Governor is still in the recent May Budget Revise and the UC system is starting to work on how the funds will be used. We expect that a UC-wide competitive process will be put in place to distribute the funds.

Working with Government Relations, we continue to advocate for research whenever we have an opportunity. I participated in a briefing organized by the Task Force on American Innovation (TFAI) with the Research and Development Caucus, including the presence of Representatives Baird and Foster (two PhDs in Congress). The topic was *Research and Innovation: Where Are We Amidst Global Competition.* A recording of the event is on YouTube and a AAAS report on the subject can be foundhere. This report shows that, while still among the top countries, the US is losing some traction in terms of investing in R&D at the Federal level. We hope future budget allocations will reverse this trend.

We had a webinar about the OASIS Internal Funding Awards with great attendance, reaching at some point more than 70 people! Here is a link to the event recording. Please use the Access Passcode: =UEXhj3. I am very much looking forward to seeing your proposals.

I recently participated with Chancellor Wilcox and a group of individuals from other UC campuses in a trip to Mexico to Casa de la Universidad de California. In case you do not know it, the house is a great property (see picture above) owned by the UC in a nice neighborhood in Mexico City. It is a fantastic location for conferences and workshops. We visited the Universidad Autónoma (UNAM), the Centro de Investigación y de Estudios Avanzados (CINVESTAV), and the Instituto Politécnico Nacional. In addition, we also met with the US Embassy in Mexico and with the Undersecretary of Foreign Affairs of Mexico. Everyone showed a lot of interest in working with UC in common problems for both countries: climate, water, energy, migrations, binational culture, etc. In the coming months, we will be following up with the UC Alianza Mexico (Alianza MX) to formalize some collaborations. So, stay tuned and, if you have not done so already, please let me know if you have or are interested in collaborations with Mexico.

Please check the rest of the newsletter for other announcements and funding opportunities.

Stay safe,
Rodolfo

Office of Technology Partnership Update

OTP News:

Irvine Foundation Awards $1.9M to OTP to Break Barriers for High-Tech Startup Creation by Underrepresented Groups

The James Irvine Foundation has awarded the University of California Riverside (UCR) Office of Technology Partnerships (OTP) a $1.9 million grant to jumpstart the university's efforts to build an inclusive, more equitable technology innovation ecosystem.

The OASIS Accelerator aims to expand opportunities for Inland Empire innovators and entrepreneurs, in particular those from underrepresented groups, to create sustainability and climate technology-based startups with high societal impact. Focusing on equality and inclusivity, the program will address the systemic challenges that technology-driven innovation and entrepreneurship face in the region, evidenced by the underrepresentation of communities in STEM fields and the lack of venture capital funding available.

For Full Article and Details: https://techpartnerships.ucr.edu/news/2022/04/11/irvine-foundation-awards-19-million-ucr-break-barriers-high-tech-startup-creation

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First Acquisition of a UCR EPIC Supported Company

Learn about how UCR EPIC helped take a local startup from their initial investment stage to becoming acquired!

For Full Article and Details: https://techpartnerships.ucr.edu/news/2022/03/31/first-acquisition-ucr-epic-supported-company

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National Academy of Inventors Recognizes Four UCR Professors

Richard Schrock, Distinguished Professor of Chemistry, Hailing Jin, Professor and Plant Molecular Geneticist Biology, Cengiz Ozkan, Professor of Mechanical Engineering, and Anandasankar Ray, Professor of Molecular, Cell, and Systems Biology.

For Full Article and Details: https://insideucr.ucr.edu/awards/2022/02/11/national-academy-inventors-recognizes-four-ucr-professors

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Patent Spotlight

Congratulations to Professor Alexander Khitun for being awarded a new patent for the invention of a novel magnetometer based on spin wave interferometers!

Professor Gloria Gonzalez-Rivera Featured on KVCR

On Inland Edition, KVCR's Lillian Vasquez speaks with Dr. Gloria Gonzalez-Rivera. She's a UCR professor and part of the team leading Citrus Seeds LLC Angel Investors. Two Riverside startups received over $80,000 as winners of the Riverside Angel Summit. Dr. Gonzalez-Rivera shares more about the two local startups, their mission, and why they were selected.

For Full Article and Details: https://www.kvcrnews.org/show/inland-edition/2022-03-16/3-16-2022-dr-gloria-gonzales-rivera-discusses-citrus-seeds-angel-investors

Winners of The Riverside Angel Summit are Announced!

Congratulations to UCR faculty founded companies, FarmSense, founded by UCR professor Eamonn Keogh and Shailendra Singh, and SiLi-ion Inc, co-founded by UCR professor Lorenzo Mangolini.

For Full Article and Details: https://news.ucr.edu/articles/2022/02/16/agricultural-pest-control-and-energy-storage-startups-win-riverside-angel

Riverside ExCITE Grand Opening

On April 21st, Riverside ExCITE powered by UCR EPIC, held its grand opening at its new location in Downtown Riverside. Since its opening in 2015, as a partnership of the City of Riverside, the County of Riverside, and University of California, Riverside, ExCITE has supported more than 30 startups, that have created over 180 high-paying jobs and companies receiving over $9M in investment and SBIR funding. The new and bigger location will allow ExCITE to accelerate new technology businesses through facilities, networks, mentorship, and access to capital. As part of the celebration, two UCR Faculty-Founded startups, FarmSense co-founded by Professor Eamonn Keogh and SiLi-ion co-founded by Professor Lorenzo Mangolini, were recognized for being selected as winners of the Riverside Angel Summit investment Funding.

Upcoming Events:

Business Model Canvas Workshop

When: May 18, 2022 at 3:00pm via Zoom or in person at Orbach Science Library

A hands-on workshop where participants have an opportunity to learn by doing. We will cover:

- The business model canvas
- The 9 blocks that make the business model canvas
- Importance of each of the blocks to have a strong business idea
- The benefits of explaining your business idea in one page

For Full Details: https://www.eventbrite.com/e/business-model-canvas-workshop-registration-332055987397

UC Riverside supports equitable recovery of the Inland Empire with $900,000 CARES Act EDA grant

UC Riverside has received a $900,000 CARES Act Recovery Assistance grant from the U.S. Economic Development Administration, or EDA, to provide technical assistance to small businesses to bolster the region's ability to withstand future economic disruptions. The EDA grant will be matched with $416,461 in local investment.

With this grant, UCR will provide technical assistance to 1,000 small businesses in the Inland Empire affected by the COVID-19 pandemic, focusing on minority-owned business, 800 of which will be from traditional industries and 200 of which will be high-tech startups. The support aims to revitalize growth of affected businesses, create new products, enhance competitiveness, and create or retain well-paying jobs.

The UCR team will make use of its validated research and commercialization infrastructure such as the Entrepreneurship Proof-of-Concept and Innovation Center, or EPIC, the EPIC Small Business Development Center, and its team of 20 staff and 16 entrepreneurs-in-residence with expertise in business creation and business growth, to support regional businesses connecting them to the opportunities and resources available to help them succeed.

Specifically, UCR will conduct community outreach with a focus on minority and female-owned businesses and will provide support to strengthen operational infrastructure, data and technology strategies, and online presence. The UCR team will also provide mentoring and support to assist with customer acquisition and business growth strategies, in coordination with regional partners.

The program will be implemented in collaboration with more than 15 regional partner organizations that will play a critical role in reaching the communities in need at a grassroots level and providing technical assistance. The execution of this grant will be an integrated part of the region's overall effort to help revitalize small businesses affected by the pandemic.

For full article and details: https://news.ucr.edu/articles/2021/09/28/uc-riverside-supports-equitable-recovery-inland-empire-900000-cares-act-eda

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NSF News

NSF Establishes New Directorate for Technology, Innovation and Partnerships

the U.S. National Science Foundation has established the **Directorate for Technology, Innovation and Partnerships**, or TIP. This new directorate — NSF's first in more than 30 years — builds upon the agency's commitment over seven decades to serve as a beacon of U.S. innovation, advancing the frontiers of research and education across all fields of science and engineering. TIP will be a critical first step to accelerate the development of new technologies and products that improve Americans' way of life, grow the economy and create new jobs, and strengthen and sustain U.S. competitiveness for decades to come. We look forward to Congress passing the Bipartisan Innovation Act, which will be key to reaching the goals of this new directorate.

Through TIP, NSF plans to launch a set of new and tightly integrated initiatives. Together, these initiatives will advance critical and emerging technologies; accelerate the translation of research results from the lab to market and society; and cultivate new education pathways leading to a diverse and skilled future technical workforce comprising researchers, practitioners, technicians and entrepreneurs. This will no doubt expand the geography of innovation and help deliver on our Missing Millions goals.

In addition, NSF is repositioning much of its extensive portfolio of innovation and translation programs within

the TIP Directorate. For example, the NSF Lab-to-Market Platform comprising the **NSF Innovation Corps** (I-Corps™), **Partnerships for Innovation** (PFI), and Small Business Innovation Research and Small Business Technology Transfer (**SBIR and STTR**) programs, along with the **NSF Convergence Accelerator,** are now in TIP. You should not see any operational changes to your existing NSF award or to these programs.

NSF has selected Dr. **Erwin Gianchandani** to be the inaugural Assistant Director for Technology, Innovation and Partnerships, leading the TIP Directorate. Dr. Gianchandani previously served as the Deputy Assistant Director for Computer and Information Science and Engineering for six years, and has been my Senior Advisor for Translation, Innovation and Partnerships for the last year.

More information about TIP can be found at **https://beta.nsf.gov/tip/latest**.

This is an exciting time for NSF, and your ingenuity, hard work and contributions to science, technology and innovation have paved the way for this new directorate. We look forward to working with you on this new endeavor, catalyzing new discoveries and innovations, and advancing our nation into the future.

Launch of NSF Regional Innovation Engines

The Directorate for Technology, Innovation and Partnerships, or TIP, is pleased to announce the launch of a bold, new initiative called the NSF Regional Innovation Engines, or NSF Engines, program and funding opportunity. NSF Engines is committed to creating technology-driven innovation ecosystems throughout every region of the U.S., driving economic growth, addressing key societal challenges, and advancing national competitiveness.

Collectively, NSF Engines has three core functions:

- Use-inspired research and development
- Translation of innovation results to society
- Workforce development to grow and sustain regional innovation

The NSF Engines program provides up to $160 million in funding for up to 10+ years to establish each Engine. This funding opportunity is a unique way to drive economic growth in regions that have not fully participated in the technology boom of the past few decades. NSF Engines embed a culture of innovation, form coalitions comprising a diverse set of sectors and organizational types—such as small businesses, two-year colleges, and minority-serving institutions—as well as demonstrate a strong commitment to diversity, equity, inclusion and accessibility.

MORE INFORMATION
The NSF Engines program resides in the TIP directorate within its three focus areas: fostering innovation and technology ecosystems, establishing translation pathways, and partnering across sectors to engage the nation's diverse talent.
TIP builds on an organizational culture of innovation and an extensive portfolio of programs that foster public and private partnerships to advance technological innovation and translation.
Programs under the TIP directorate also include America's Seed Fund (SBIR/STTR), Convergence Accelerator, NSF Innovation Corps, or I-Corps™, and Partnerships for Innovation, or PFI program.

LEARN MORE AND STAY INFORMED
Launched by TIP, the NSF Engines program envisions fostering multiple flourishing regional innovation ecosystems across the country, providing a unique opportunity to spur economic growth in regions that have not fully participated in the technology boom of the past few decades. For the latest NSF Engines information, bookmark their website, subscribe to their email list, learn about their funding opportunity and participate in their outreach events.

To stay informed about what's happening in TIP, visit their website and learn about current funding opportunities, and upcoming events.

Latest Research.gov Proposal Preparation Functionality Updates

We are excited to share the latest Research.gov proposal preparation functionality updates, together with information about NSF Public Access Repository (NSF-PAR) enhancements.
Beginning **in January 2023, all new proposals must be prepared and submitted in Research.gov or Grants.gov. FastLane will no longer be a preparation and submission option.** The National Science Foundation strongly urges proposers to prepare and submit all eligible proposals in Research.gov now, to support a smooth transition from FastLane proposal preparation and submission to Research.gov in January 2023.
New Research.gov Proposal Preparation Functionality Available May 2nd
New Postdoctoral Fellowship Proposal Type

· The Postdoctoral Fellowship proposal type is available in Research.gov for proposals submitted in response to postdoctoral fellowship solicitations that do not contain reference letter requirements. The postdoctoral fellowship solicitations will be updated to include information about proposal preparation and submission in Research.gov.
· To initiate a postdoctoral fellowship proposal in Research.gov, the proposer must first have the Postdoctoral Scholar/Principal Investigator (PI) role, which is different from the PI role.
· Refer to the Postdoctoral Fellowship Proposals topic Frequently Asked Questions (FAQs) on the Research.gov **About Proposal Preparation and Submission** page for instructions to add the Postdoctoral Scholar/PI role. Additional guidance is available in the **Add a New Role – Postdoctoral Fellowship Principal Investigator section** of the Account Management Guide on the Research.gov **About Account Management** page.
· Postdoctoral fellowship program solicitations will only display in Research.gov and be available for selection for proposers preparing a proposal as a Postdoctoral Scholar/PI.

New Research.gov Proposal Features

· **Expanded Where to Apply Options**: Proposers now have to the ability to choose additional Directorate/Division/Program options (i.e., secondary units of consideration) to direct proposals to NSF. Refer to the Managing Where to Apply topic FAQs on the Research.gov **About Proposal Preparation and Submission** page for additional information.
· **Project Data Form**: The Project Data Form is now available in Research.gov and must be included in proposals for selected funding opportunities in the Directorate for Education and Human Resources (EHR)/Division of Undergraduate Education (DUE). See the Project Data Form topic FAQs on the Research.gov **About Proposal Preparation and Submission** page for details.
· **Separate Uploads of Multiple Supplementary Documents:** Proposers can now upload multiple PDF documents in the Other Supplementary Documents proposal section and will no longer need to combine documents into a single PDF prior to uploading.

NSF Public Access Repository (NSF-PAR) Enhancements Effective May 2nd

· PIs and co-PIs can now remove research datasets from NSF-PAR without assistance from the NSF Help Desk by disassociating the NSF award(s) from the dataset. Disassociating all NSF awards from a dataset removes the dataset from the NSF-PAR publicly facing search.
· Deposit of dataset information in NSF-PAR remains optional, and there are no changes at this time to NSF's Public Access policy or project reporting requirements.

Training resources are available on the Research.gov **About Public Access** page. Information about the NSF Public Access Initiative including FAQs is available on the **NSF Public Access Initiative** page. Feedback about the PAR 2.0 pilot may be submitted to **publicaccess@nsf.gov**.

For information about Research.gov proposal functionality planned for release in the coming months, please see the **Proposal Submission Capabilities** on the Research.gov **About Proposal Preparation and Submission** page. All enabled proposal and submission types are also available to try out on the **Research.gov Proposal Preparation Demo Site** (you will be prompted to sign in to Research.gov if you are not already signed in). Demo site FAQs can be found on the Research.gov **About Proposal Preparation and Submission** page left navigation menu.

Questions? If you have IT system-related questions regarding the new functionality and enhancements, please contact the NSF Help Desk at 1-800-381-1532 (7:00 AM - 9:00 PM ET; Monday - Friday except federal holidays) or via email to **rgov@nsf.gov**. Policy-related questions should be directed to **policy@nsf.gov**.

NSF Award Terms and Conditions Have Been Revised

We wanted to make you aware that the entire suite of NSF Award Terms and Conditions have been revised to implement the requirements of the Build America, Buy America provisions of the Infrastructure Investment and Jobs Act (P.L. 117-58).

The revised terms and conditions will apply to all new NSF awards and funding amendments to existing NSF awards made on or after May 13, 2022. All sets of award conditions are accompanied by a summary of changes made to that document.
(See https://www.nsf.gov/awards/managing/award_conditions.jsp?org=NSF)

Questions regarding NSF terms and conditions may be sent to the DIAS Policy Office at policy@nsf.gov.

Other Announcements

Decarbonizing with Hydrogen:

Challenges and Opportunities

Wed. May 25 10:30 AM PT

As California seeks to decarbonize its economy, how can hydrogen help to meet our renewable goals?

Join CCST to learn about the challenges and opportunities of hydrogen, featuring experts from **Lawrence Livermore National Laboratory, Stanford University, UC Davis**, and **UC Riverside**.

Hosted in partnership with the **Office of Senator Nancy Skinner**.

Register Now: https://us02web.zoom.us/webinar/register/3916523778470/WN_-qzzRAePTRiRGBkHrJMl-A

National Institutes of Health

June 2022 Updated eRA RPPR Module and Instruction Guide: Action Required for In-Progress Budget Forms (NIH NOT-OD-22-130)

The Research Performance Progress Report (RPPR) Module in eRA Commons is moving to the new visual appearance being adopted by other eRA modules, because of a required technology upgrade that enhances the security and stability of the module. The upgrade includes adding the new unique entity identifier (UEI) fields where applicable and required FORMS-G changes, including updated budget forms. These upgrades are expected to be released on June 23, 2022. https://grants.nih.gov/grants/guide/notice-files/NOT-OD-22-130.html

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Research Administrators INC.

Please join Research Administrators INC on **June 6th** for the (taped) webinar, "**Agency Updates with OMB, NSF and NIH.**"
Note: Due to the lengthiness of the 'live' webinar (which NCURA hosted last month), SPA purchased the MP4 to enable the later showing of the webinar in three separate sessions (i.e., one session per agency). Please register separately for each specific agency update you plan to attend, as each session will be different.

The MP4 will be posted on the RA webpage for those who are unable to join us.
Session 1: OMB Update
The Office of Management and Budget oversees the implementation of the President's vision across the Executive Branch. This RA INC session was held on Monday, April 18th. For those of you who were unable to join us, but would still like to view the OMB Updates, the video may be accessed here. (The video along with the slide presentation are filed at https://redit.ucr.edu/OrApps/Org/OrgEvents/Default.aspx?g=inc.)
Presenter:
Gilbert Tran, Senior Policy Analyst, Executive Office of the President, Office of Management and Budget
Session 2: NSF Update
This session will covered new developments related to proposal and award policy at NSF. NSF staff provided a comprehensive review of recent policy changes as well as major updates to NSF's proposal system modernization efforts. This RA INC session was held on Tuesday, May 3rd. For those of you who were unable to join us, but would still like to view the NSF Updates, the video may be accessed here. (The video along with the slide presentation are filed at https://redit.ucr.edu/OrApps/Org/OrgEvents/Default.aspx?g=inc.)
Presenter:
Jean Feldman, Head, Policy Office, Division of Institution and Award Support, Office of Budget, Finance & Award Mgmt., National Science Foundation
Session 3: NIH Update
Don't miss this opportunity to hear about what is new and what is being developed within the National Institute of Health's (NIH) programs, policies, and budgets. In this comprehensive review, participants will learn about the newest policy updates and how their respective institutions may be impacted. Topics include recent and upcoming changes to NIH policy, compliance requirements, and so much more!
Monday, June 6th from Noon – 1:00PM
Via ZOOM
To attend this Research Administrators INC session, please register here.
A Zoom link will then be emailed to each registrant on the morning of the RA INC session.
Learning Objectives:
Participants will learn about NIH's budget priorities. Participants will learn about new policies and compliance initiatives. Participants will gain insight into current issues at NIH
Presenter:
Michelle Bulls, Director, Office of Policy for Extramural Research Administration, National Institutes of Health

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California Air Resources Board

Now accepting research concepts and comments for fiscal year 2023-2024

Comments accepted through June 15 will be considered for 2023-2024 funding

CARB fulfills its mission to protect public health and the environment by relying on robust science. Each year CARB funds scientific research to guide policy by setting research priorities that are guided by program needs as well as public input. Public input is collected through various mechanisms including the annual research concept and comment survey and public meetings to discuss priorities and get further input. CARB is accepting research comments and concepts through our annual survey. The final date to submit concepts in order to be considered for funding year 2023-2024 annual research will be June 15, 2022. Any concepts or comments provided within the last year will be considered in this year's research planning.

We have created a video that summarizes information on CARB's Research Program and the comment and concept collection process.

Watch Video

To access the survey, please follow the link below or access it through theresearch concept collection portal.

Take Survey

For more information about CARB's Research Program, please go to ourwebsite.

Background
The California Air Resources Board (CARB) has a robust Research Program that is designed to be responsive to agency priorities, emerging topics, and community, and stakeholder input. Each year, CARB initiates the annual research planning process by collecting research comments and concepts from the public. The concepts and ideas that are submitted help to inform CARB's priorities for supporting future research.

CARB uses a survey to collect both comments and concepts from the public on topics they would like CARB's Research Program to address. The comment option provides a way to submit research questions and concerns related to air quality, sustainable transportation and communities, and climate change. These comments can be more open ended and be submitted by members of the public who feel their local community concerns could be addressed by CARB's research program.

Community and academic researchers can submit more detailed research concepts on the various topics that the CARB Research Program focuses on.

After the comment/concept collection period concludes, CARB will review all research concepts to inform the projects that CARB will fund in fiscal year 2023-2024. Note that the CARB Research Program funding is limited and only a small subset of projects are funded each year. Project comments/concepts that align with the Triennial Strategic Research Plan for fiscal years 2021-2024are more likely to be developed into full projects. We welcome you to review the Triennial Plan to gain a better understanding of our program goals and priorities. A FAQ/summary can also be found at the Proposed Triennial Strategic Research Plan and Research for Fiscal Years 2021-2024 website.

The final date to submit concepts in order to be considered for funding year 2023-2024 annual research will be June 15, 2022.

BIOLOGICAL CONTROLS TRAINING OPPORTUNITIES

On May 11, 2022, the Bureau of Industry and Security (BIS) will be hosting a free webinar on the topic of *Biological Controls*. Co-chairs of the Cal State University system Export Control Officer group have worked with BIS to offer this training, and are sharing the event with the UC System. Click **here** to learn more and to register.

On May 19, 2022, the Export Compliance Office at UC Berkeley Lab will be offering a similar event via zoom. Click **here** to learn more and to register.

Please feel free to forward this information to those on your team that may benefit from either of these offered trainings.

For additional training materials and topics, please visit the Training Resources block of UCR's Export Control websitehttps://exportcontrol.ucr.edu/.

NIH News

Same Systems, New Look to eRA Website

A refreshed eRA website was launched on Monday, April 25. The redesign updates the home page, as well as the *About eRA* page with extensive new information about eRA and the services it offers to existing and potential agency partners.

Don't worry – the information sections you rely on every day for applicants, recipients and reviewers remain unchanged. https://nexus.od.nih.gov/all/2022/04/26/same-systems-new-look-to-era-website/

TIPS BEFORE YOU SUBMIT: When Instructions Conflict – Which One Wins?

NIH grant application instructions can be found in several places:

- **How to Apply – Application Guide** (often simply referred to as Application Guide)
- Funding Opportunity Announcements (FOAs), and
- Notices posted in the **NIH Guide for Grants and Contracts**.

It is important to read and follow all provided guidance. What happens when guidance between these sources conflicts? Which one wins?

In summary, NIH GUIDE NOTICES win over Application Guide and Funding Opportunity Announcements when instructions conflict.

NCURA Supporting Research...Together

NCURA YouTube Tuesday - EXCEL Tip: Using the "Goal Seek" Function in a Budget to Hit that Magic Number

Elijah Luebbe, University of Nebraska-Lincoln

Watch Now

Keep an eye out every Tuesday for the week's YouTube Tuesday video!**A link to NCURA's YouTube Tuesdays is available at the bottom of the SPA home page.**

NCURA "YouTube Tuesdays" are videos produced by the National Council of University Research Administrators (NCURA). These short videos (typically 2 – 5 minutes in length), are presented by various research administrators from around the country and provide educational information on various pre and post award administration topics.

The NCURA YouTube channel has hundreds of short education videos made for research administrators. (*Please note that these videos do not specifically represent the University of California's or UC Riverside's policies or procedures.)*

Funding Opportunities

Funding Opportunities

OASIS Internal Funding Award (OASIS-IFA)

Deadline for Submission: June 1, 2022

UCR's Office of Research and Economic Development (RED) is pleased to announce the first call for the **Opportunities to Advance Sustainability, Innovation, and Social Inclusion Internal Funding Awards (OASIS-IFA)**. The intention of the program is to enable UCR faculty to initiate, continue, or expand research, scholarly, and creative activities in areas under the OASIS umbrella and increase their competitiveness for extramural funding in those areas. A total of $1.7M will be available for this first competition as described below. Faculty from all disciplines and methodological approaches from all schools,

colleges, departments, and programs are encouraged to apply. This internal competition may be continued on an annual or biannual cycle based on its initial outcomes, applicants' and awardees' feedback, and funds availability. For this initial competition, funds will need to be spent between July 1 to June 30, 2023.

PURPOSE

OASIS is a partnership with public and private stakeholders led by UCR to promote regional economic development in the Inland Empire through solutions-driven research, entrepreneurship, and workforce development focusing on sustainability, innovation, and social inclusion. OASIS addresses the climate, environmental, energy, health, and socio-economic challenges of our region and promotes further engagement of UCR with the community, government organizations, philanthropic foundations, and the private sector. The objective is to transform the Inland Empire producing original, creative, and scalable solutions applicable also at the national and global level. UCR is uniquely position for this task by taking advantage of its stablished record as the only R1 university in the Inland Empire, and the commitment to social mobility, inclusion, and equity, which are hallmark features of the higher education institutions in the region. UCR can also capitalize on the diverse population it serves as well as the diverse geography and natural resources of inland Southern California.

The OASIS project consists of physical infrastructures and programmatic activities. The funding in this internal competition is intended to support a first set of programmatic activities. Such activities complement the infrastructure developments of the OASIS Clean Tech Park for which UCR has already received both state ($15.0M) and federal ($1.5M) funding. The Park will anchor diverse stakeholders that leverage strengths in agriculture, environment, and community health; incubate start-up companies; provide entrepreneurial training, strengthen partnerships with workforce initiatives; and welcome, and inspire the next generation of diverse research and business leaders. Through the attraction of companies, the Park will also provide internships and jobs opportunities for students and alumni and integrate economic development efforts of the Cities, Counties, Chambers of Commerce, and other stakeholders in the region.

In terms of programmatic activities, OASIS is supported by six pillars in broad areas of transportation, energy, agricultural, natural resources, health, and human development, which are weaved across by the horizontal OASIS goals of Sustainability, Innovation, and Social Inclusion and the university mission in Education and Workforce Development, as represented in the matrix below.

The following is a non-exhaustive list of topics included in OASIS pillars.

Sustainable Transportation & Infrastructure: Intelligent transportation systems, vehicle computing and sensing technology, smart cities, sustainable freight and logistics, greenhouse emissions monitoring and controls, vehicle-to-grid (V2G) systems.

Renewable Energy and Fuels: Zero emission vehicles; sustainable fuels (e.g., hydrogen); energy storage, batteries manufacturing and characterization; lithium extraction, purification, and recycling; new materials; renewable energy infrastructure (e.g., geothermal, smart grids, wind energy, solar energy, hydrogen); industrial decarbonization; electrical systems models.

Agriculture Technology and Food Security: Urban agriculture, controlled environment agriculture, remote sensing, food production, plant breeding and propagation, new plant varieties, plant disease control and cures, pest control, wildfire and forest resilience, pollination programs.

Natural Resource Management: Pollution, air quality, air monitoring, water resources, irrigation, ecology, climate change, conservation science, the Salton Sea, drought resilience, water conservation programs, extreme heat resilience, healthy soil programs.

Community Health and Health Disparity: health disparity across different populations, community engagement, community health training and education, disease monitoring, pandemic readiness and mitigation, health policies.

Human Development: Sustainability, human impact on the planet, earth stewardship, social justice, inequality effect of climate change and climate change mitigation, human migrations and displacement, circular economy, environmental policies, economic growth and wealth distribution vs equitable human development, food security, other climate change and social justice initiatives focused on the humanities and the arts. The programmatic activities envisioned include the development and/or implementation of research and creative activities, proof of concept funds, living laboratories, pilot and demonstration programs, innovation and entrepreneurial projects, outreach and community engagement, policy and decision making based on new knowledge and research, workforce development, and internship initiatives under the pillars of OASIS.

Regarding the horizontals goals broad (also non-exhaustive) definitions are provided by the following examples.

Sustainability (from https://www.mcgill.ca/sustainability/files/sustainability/what-is-sustainability.pdf): "Sustainability means meeting our own needs without compromising the ability of future generations to meet their own needs. In addition to natural resources, we also need social and economic resources. Sustainability is not just environmentalism. Embedded in most definitions of sustainability we also find concerns for social equity and economic development."

Innovation (from Drucker, Peter F. Innovative and Entrepreneurship Practice and Principles. Harper & Row, Publishers, Inc. 1985. See also https://www.extension.iastate.edu/agdm/wholefarm/pdf/c5-10.pdf): "Innovation involves finding a new and better way of doing something. Much of our modern society is based on innovations that have occurred in the past that provide us with the standard of living we enjoy today. Entrepreneurship and innovation are companion terms."

Social Inclusion (World Bank Definition, https://www.worldbank.org/en/topic/social-inclusion#1): Social inclusion is the process of improving the terms on which individuals and groups take part in society "improving the ability, opportunity, and dignity of those disadvantaged on the basis of their identity."

Education and Workforce Development (from Lyn E. Haralson (2010), "What is Workforce Development?" Federal Reserve Bank of St. Louis, https://www.stlouisfed.org/publications/bridges/spring-2010/what-is-workforce-development): "Workforce development is defined as training programs that provide existing and potential workers with the skills to complete tasks needed by employers to let the organizations stay competitive in a global marketplace."

TYPES OF AWARDS
There are two tracks for this program but in each of them the proposals need to identify the main pillar to which they will contribute.

- Large Awards (total budget $1,200,000): Six awards of up to $200,000, one in each of the pillars, will be awarded. Each proposal requires the participation of at least two Colleges/Schools/Other Units (for example it could include one College/School and another administrative unit such University Extension, Graduate Division, etc.). Proposal only involving various departments in the same College/School will not qualify.
- Small Awards (total budget $500.000): Proposal with one or more PIs with budgets in the range from $5,000 to $25,000 will be awarded. Co-participation of PIs from different units is encouraged but not required for the small awards.

ELIGIBILITY
Proposals are invited from all UCR individuals eligible to serve as a Principal Investigator. (For additional information on PI eligibility see Policy #527-3). Additional personnel may include students and staff.

USE OF FUNDS
The use of funds for this solicitation is intended to be very flexible. Funds may be used for any activity directly related to the conduct of the research, scholarly, creative, or outreach activity, e.g., salaries and benefits for any participant, faculty, staff, undergraduate students, graduate students, postdoctoral researchers, or similar position; software or supplies; small pieces of equipment (less than $5,000); facility recharge; travel to meet with funding agencies, attend proposer workshops, coordinate with collaborators, and conduct field work; or other research expenses required to facilitate preparation of the proposal. Funds may not be used for cost-share in external funding opportunities, seminar speakers, or travel to regular conferences. Use of funds for consultants and other participants external to UCR will be particularly scrutinized and only a few well-justified exceptions may be approved. All funds must be expended by the end of the project period. To focus on projects that can make rapid progress, no extensions of the award will be approved, and unexpended funds will be recovered. No cost-share or matching funds from other units are required and such contributions will not be considered in the selection process.

SELECTION CRITERIA AND REVIEW PROCESS

The selection criteria will include the following

- Proposal clarity and specificity in its objectives
- Project feasibility
- Matching to this solicitation in terms of the OASIS verticals pillars
- Potential impact of the project in one or several of the horizontal OASIS goals (not all goals need to be addressed)
- Budget commensurable with activities proposed
- Strength and background of the multidisciplinary team

In addition, for the Large Awards

- Need for interdisciplinary collaboration in the proposed activities and the substantial involvement of more than one unit.

The applications for the Large Awards will be reviewed and the selections will be made by a committee of RED and Deans. For the Small Awards, the applications will be reviewed and recommendation will be made by a committee of RED and Faculty. Because of the large number of proposals anticipated and the focus on disbursing funds speedily, no detailed review feedback will be provided. However, recipients may be asked to reformulate part of the proposal or modify their proposed budgets.

DEADLINE
The internal proposal deadline for both tracks is June 1st, 2022.

PROGRESS TRACKING AND REPORTING
Awardees will be required to submit a two-page final project report within 60 days of the end of the award period. The final project report should include the results of the research, a financial statement, information about external funding opportunity submission or efforts underway to obtain external funding if any. Lack of timely reporting may result in exclusion from future award opportunities. RED will use the reporting information to evaluate the efficacy of the program and its sustainable continuation.

APPLICATION FORMAT
Bearing in mind that not all reviewers will have an extensive knowledge of their field of inquiry, faculty should use proposal language accessible to reviewers with different backgrounds. Both tracks of the program use the same application format:
1. Application Form (pdf)
2. Research Plan - No more than 8 pages narrative for the Large Awards and no more than 3 pages for the Small Awards, single-spaced, 12-point font with at least one-inch margins all around. Proposals not complying with these space and page limitation requirements will not be reviewed.
3. Typical proposals should include in their narrative: a brief introduction and objectives, specific aims, and anticipated results (if applicable).
4. Proposals should also contain a separate section, within the total allocated pages for the narrative, addressing the contributions of the proposed activities to one of more of the OASIS horizontal goals (Sustainability, Innovation, Social Inclusion, Education and Workforce Development).
5. List of publications or creative works cited in the narrative, if any (no page limitations for this list).
6. Budget with breakdown of broad cost categories and brief justification (no more than 2 pages for budget and justification).
7. CVs (no more than 2 pages for each investigator).
8. Results of prior UCR internal seed grant(s) in the last two years if applicable (1 page max.).

APPLICATION SUBMISSION
Applications should be submitted through the "EasyChair" system at https://easychair.org/conferences/?conf=oasisifa2022.

Questions about the EasyChair application system should be directed to Marisela Martinez at VCREDadmin@ucr.edu.

Physics Frontiers Centers (PFC)

UCR Internal Deadline: Thursday, June 23 at 4:00pm
Limit 2 Preproposals per institution

Synopsis of Program:
The Physics Frontiers Centers (PFC) program supports university-based centers and institutes where the collective efforts of a larger group of individuals can enable transformational advances in the most promising research areas. The program is designed to foster major breakthroughs at the intellectual frontiers of physics by providing needed resources such as combinations of talents, skills, disciplines, and/or specialized infrastructure, not usually available to individual investigators or small groups, in an environment in which the collective efforts of the larger group can be shown to be seminal to promoting significant progress in the science and the education of students. Activities supported through the program are in all sub-fields of physics within the purview of the Division of Physics: atomic, molecular, optical, plasma, elementary particle,

nuclear, particle astro-, gravitational, and biological physics. Interdisciplinary projects at the interface between these physics areas and other disciplines and physics sub-fields may also be considered, although the bulk of the effort must fall within one of those areas within the purview of the Division of Physics. The successful PFC activity will demonstrate: (1) the potential for a profound advance in physics; (2) creative, substantive activities aimed at enhancing education, diversity, and public outreach; (3) potential for broader impacts, e.g., impacts on other field(s) and benefits to society; (4) a synergy or value-added rationale that justifies a center- or institute-like approach.

For Full Details:
https://www.nsf.gov/pubs/2022/nsf22592/nsf22592.htm?WT.mc_ev=click&WT.mc_id=USNSF_34&utm_medium=email&utm_source=govdelivery

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National Science Foundation Research Traineeship (NRT) Program 21-536

UCR Internal Deadline is Thursday, May 26 at 4pm.

Limit on Number of Proposals per Organization: 2

Synopsis of Program:
The NSF Research Traineeship (NRT) program seeks proposals that explore ways for graduate students in research-based master's and doctoral degree programs to develop the skills, knowledge, and competencies needed to pursue a range of STEM careers. The program is dedicated to effective training of STEM graduate students in high priority interdisciplinary or convergent research areas, through a comprehensive traineeship model that is innovative, evidence-based, and aligned with changing workforce and research needs. Proposals are requested that address any interdisciplinary or convergent research theme of national priority, as noted above.

The NRT program addresses workforce development, emphasizing broad participation, and institutional capacity building needs in graduate education. The program encourages proposals that involve strategic collaborations with the private sector, non-governmental organizations (NGOs), government agencies, national laboratories, field stations, teaching and learning centers, informal science centers, and academic partners. NRT especially welcomes proposals that include partnership with NSF Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science (INCLUDES) and leverage INCLUDES project efforts to develop STEM talent from all sectors and groups in our society (https://www.nsf.gov/news/special_reports/big_ideas/includes.jsp). Collaborations between NRT proposals and existing NSF INCLUDES projects should strengthen both NRT and INCLUDES projects.

For Full Details:
https://www.nsf.gov/pubs/2021/nsf21536/nsf21536.htm

NSF Convergence Accelerator Phases 1and 2 for the 2022 Cohort - Track H, I, and J

Letter of Intent (required): May 31, 2022
Full Proposal Deadline: July 20, 2022

The NSF Convergence Accelerator has issued a new funding opportunity for three new research track topics aligned to the 2022 cohort.

Researchers and innovators have two submission pathways to submit their proposals: Solicitation,NSF-22-583 and Broad Agency Announcement (BAA), NSFBAA-CA22-02.
The funding opportunity track focuses include:

Track H: Enhancing Opportunities for Persons with Disabilities
- This track will converge a wide range of disciplines to include social sciences, behavioral sciences, engineering, computer science, ethics, and economics to develop use-inspired solutions to enhance the quality of life, employment access, and opportunities for persons with disabilities (PWDs).

Track I: Sustainable Materials for Global Challenges
- This track will converge advances in fundamental materials science with materials design and manufacturing methods with the goal to couple their end-use and full life-cycle considerations for environmentally and economically sustainable materials and products that address global challenges.
- The Commonwealth Scientific and Industrial Research Organisation (CSIRO), an Australian Government agency, is partnering with the NSF Convergence Accelerator on Track I.
- Australian researchers have the opportunity to be on multidisciplinary teams that submit proposals aligned to Track I.

Track J: Food & Nutrition Security

- This track will converge a wide range of disciplines to address intertwined challenges in supporting population health, combating climate change, and addressing the nutritional needs of the most vulnerable by empowering youth, women, and disadvantaged communities.

Participating in the NSF Convergence Accelerator
Selected teams begin in phase 1, participating in an accelerated 12 month planning effort, with grant funding up to $750,000.

Phase 1 teams participate in the program's innovation curriculum designed to strengthen each team's convergence approach and to further develop the solution concepts.

At the end of phase 1, teams participate in a formal NSF pitch and proposal evaluation.
Selected teams advance to phase 2 to continue developing sustainable, impactful solutions.

Teams are eligible to receive up to $5 million of funding during phase 2.

For full details:
NSF-22-583 or NSFBAA-CA22-02

US - Israel NSF-BSF Funding Opportunities

We want to draw your attention to several opportunities with the NSF. Before starting to work on an application to any of these programs, the US PI must contact the NSF to make sure they are willing to receive joint NSF-BSF applications.

Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) | Beta site for NSF - National Science Foundation

https://beta.nsf.gov/funding/opportunities/sentinel-systems-detect-recognize-actuate-and-mitigate-emergent-biological

https://beta.nsf.gov/funding/opportunities/geospace-environment-modeling-gem

- BSF Regular Research Grants Program (exact and social sciences). Deadline for applications is **November 16, 2022**. The website will open for submission on Sept. 1, 2022. The regulations will be published on a later date, please check our website for details.

These following NSF-BSF programs have deadlines as specified:

Directorate of Mathematical and Physical Sciences:

- NSF-BSF program in **Mathematical Biology**. Deadline for application by the U.S. partner to the NSF is September 5, 2022 and by the Israeli partner to the BSF is September 11, 2022. Call for Proposals can be found here.
- NSF-BSF program in **Probability**. Deadline for application by the U.S. partner to the NSF is September 25, 2022 and by the Israeli partner to the BSF is October 2, 2022. Call for Proposals can be found here
- NSF-BSF programs in **Combinatorics; Foundations**. Deadline for application by the U.S. partner to the NSF is September 27, 2022 and by the Israeli partner to the BSF is October 3, 2022. Call for Proposals can be found here
- NSF-BSF program in **Analysis**. Deadline for application by the U.S. partner to the NSF is September 30, 2022 and by the Israeli partner to the BSF is October 6, 2022. Call for Proposals can be found here
- NSF-BSF program in **Algebra and Number Theory**. Deadline for application by the U.S. partner to the NSF is October 14, 2022 and by the Israeli partner to the BSF is October 20, 2022. Call for Proposals can be found here.
- NSF-BSF program in **Geometric Analysis; Topology**. Deadline for application by the U.S. partner to the NSF is November 1, 2022 and by the Israeli partner to the BSF is November 7, 2022. Call for Proposals can be found here.
- NSF-BSF program in **Basic Plasma Sciences and Engineering**. Deadline for application by the U.S. partner to the NSF is November 21, 2022 and by the Israeli partner to the BSF is November 27, 2022. Call for Proposals can be found here.
- NSF-BSF program in **Applied Mathematics**. Deadline for application by the U.S. partner to the NSF is November 15, 2022 and by the Israeli partner to the BSF is November 21, 2022. Call for Proposals can be found here.
- NSF-BSF program in **Astronomy and Astrophysics**. Deadline for application by the U.S. partner to the NSF is November 15, 2022 and by the Israeli partner to the BSF is November 22, 2022. Call for Proposals can be found here.
- NSF-BSF program in **Atomic Molecular and Optical Physics – Experiment and Theory; Gravitational Physics – Experiment and Theory; Integrative Activities in Physics; LIGO**

Research Support. Deadline for application by the U.S. partner to the NSF is November 23, 2022 and by the Israeli partner to the BSF is November 29, 2022. Call for Proposals can be found here.
- NSF-BSF program in **Nuclear Physics – Experiment and Theory; Elementary Particle Physics – Experiment; Particle Astrophysics – Experiment**. Deadline for application by the U.S. partner to the NSF is December 6, 2022 and by the Israeli partner to the BSF is December 12, 2022. Call for Proposals can be found here.
- NSF-BSF program in **Computational Mathematics**. Deadline for application by the U.S. partner to the NSF is December 1, 2022 and by the Israeli partner to the BSF is December 7, 2022. Call for Proposals can be found here.
- NSF-BSF program in **Elementary Particle Physics – Theory; Particle Astrophysics and Cosmology – Theory; Quantum Information Science; Physics of Living Systems**. Deadline for application by the U.S. partner to the NSF is December 13, 2022 and by the Israeli partner to the BSF is December 19, 2022. Call for Proposals can be found here.
- NSF-BSF program in **Statistics**. Deadline for application by the U.S. partner to the NSF is December 15, 2022 and by the Israeli partner to the BSF is December 21, 2022. Call for Proposals can be found here.

Directorate of Computer Science:
- NSF-BSF programs in **Smart Health and Biomedical Research in the Era of Artificial Intelligence and Advanced Data Science (SCH)**. Deadline for application by the U.S. partner to the NSF is November 10, 2022 and by the Israeli partner to the BSF is November 16, 2022. Call for Proposals can be found here.
- NSF-BSF programs in **Computational Neuroscience (CRCNS)**. Deadline for application by the U.S. partner to the NSF is November 22, 2022 and by the Israeli partner to the BSF is November 28, 2022. Call for Proposals can be found here.

Directorate of Geosciences:
- NSF-BSF programs in **Physical Oceanography; Chemical Oceanography**. Deadline for applications by the U.S. partner to the NSF is August 15, 2022 and by the Israeli Partner to the BSF is August 21, 2022. Call for proposals can be found here.

Directorate of Biological Sciences:
- NSF-BSF program in **Ecology and Evolution of Infectious Diseases**. Deadline for application by the U.S. partner to the NSF is November 16, 2022 and by the Israeli partner to the BSF is November 22, 2022. Call for Proposals can be found here.
- NSF-BSF program in **Integrative Strategies for Understanding Neural and Cognitive Systems**. Letter of intent is required by NSF by Dec. 15, 2022. Deadline for application by the U.S. partner to the NSF is February 15, 2023 and by the Israeli partner to the BSF is February 20, 2023. Call for Proposals can be found here
- NSF-BSF program in **Enabling Discovery through Genomics (IOS-EDGE)**. Deadline for application by the U.S. partner to the NSF is February 16, 2023 and by the Israeli partner to the BSF is February 22, 2023. Call for Proposals can be found here

Directorate of Social, Behavioral and Economics Sciences:
- NSF-BSF programs in **Social Psychology**. Deadline for applications by the U.S. partner to the NSF is July 15, 2022 and by the Israeli Partner to the BSF is July 21, 2022. Call for proposals can be found here.
- NSF-BSF programs in **Developmental Sciences**. Deadline for applications by the U.S. partner to the NSF is July 15, 2022 and by the Israeli Partner to the BSF is July 21, 2022. Call for proposals can be found here.
- NSF-BSF programs in **Economics and Decision Sciences**. Deadline for applications by the U.S. partner to the NSF is August 18, 2022 and by the Israeli Partner to the BSF is August 24, 2022. Call for proposals can be found here.
- NSF-BSF programs in **Science of Learning and Augmented Intelligence Program** Deadline for applications by the U.S. partner to the NSF is July 13, 2022 and by the Israeli Partner to the BSF is July 19, 2022. Call for proposals can be found here.
- NSF-BSF programs in **Perception, Action and Cognition**. Deadline for applications by the U.S. partner to the NSF is August 1, 2022 and by the Israeli Partner to the BSF is August 7, 2022. Call for proposals can be found here.
- NSF-BSF programs in **Cognitive Neuroscience**. Deadline for applications by the U.S. partner to the NSF is August 13, 2022 and by the Israeli Partner to the BSF is August 18, 2022. Call for proposals can be found here.

The following NSF-BSF programs have no deadlines and are open for submission throughout the year:
- NSF-BSF programs in **Computing and Communication Foundations (CCF)** are open to receive applications anytime throughout the year. Call for Proposals can be found here.
- NSF-BSF programs in **Computer and Network Systems (CNS)** are open to receive applications anytime throughout the year. Call for Proposals can be found here.
- NSF-BSF programs in **Information and Intelligent Systems (IIS)** are open to receive applications anytime throughout the year. Call for Proposals can be found here.
- NSF-BSF programs in **Chemical, Bioengineering, Environmental, and Transport Systems** are open to receive applications anytime throughout the year. Call for Proposals can be found here.

- NSF-BSF programs in **Materials** are open to receive applications anytime throughout the year,. Call for Proposals can be found here.
- NSF-BSF program in **Electrical, Communications and Cyber Systems** is open to receive applications anytime throughout the year. Call for Proposals can be found here.
- NSF-BSF program in the **Civil, Mechanical and Manufacturing Innovation (CMMI)** division is open to receive applications anytime throughout the year. Call for Proposals can be found here.
- NSF-BSF program in **Earth Sciences** is open to receive applications anytime throughout the year. Call for Proposals can be found here.
- NSF-BSF program in **Atmospheric and Geospace Sciences** is open to receive applications anytime throughout the year. Call for Proposals can be foundhere.
- NSF-BSF program in **Cyber Security** is open to receive applications anytime throughout the year. Call for Proposals can be found here.
- NSF-BSF program in **Marine Geology and Geophysics** is open to receive applications anytime throughout the year. Call for Proposals can be found here.
- NSF-BSF program in **Biological Oceanography** is open to receive applications anytime throughout the year. Call for Proposals can be found here.
- NSF-BSF program in **Molecular and Cellular Biosciences** is open to receive applications anytime throughout the year. Call for Proposals can be found here.
- NSF-BSF program in **Integrative Organismal Systems (IOS)** is open to receive applications anytime throughout the year. Call for Proposals can be foundhere.
- NSF-BSF program in **Environmental Biology (DEB)** is open to receive applications anytime throughout the year. Call for Proposals can be found here.
- The **Research Resources Cluster of the Division of Biological Infrastructure** Currently, NSF-BSF proposals are welcomed only in the bioinformatics tracks of the Innovation and in the Capacity program of this cluster. These programs accept proposal submission without a deadline. You can find more details in our call for proposals here