

2020 CITRIS Seed Funding Program: Campus Info Sessions

Seeding novel technology solutions for society's greatest challenges.

**Application Deadline:
September 17, 2020**



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Workshop Agenda

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Introductions

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CITRIS Research Ecosystem

3

Seed Program Overview & Outcomes: 2008-2019

4

Seed Funding Opportunities: 2020 RFP

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Connecting with Co-Investigators

Your Name

Departmental Affiliation(s)?

Key Research Interests?

CITRIS Research Ecosystem

Center for Information Technology Research in the Interest of Society (CITRIS)
and the Banatao Institute



Created in 2001
by CA State
Legislature

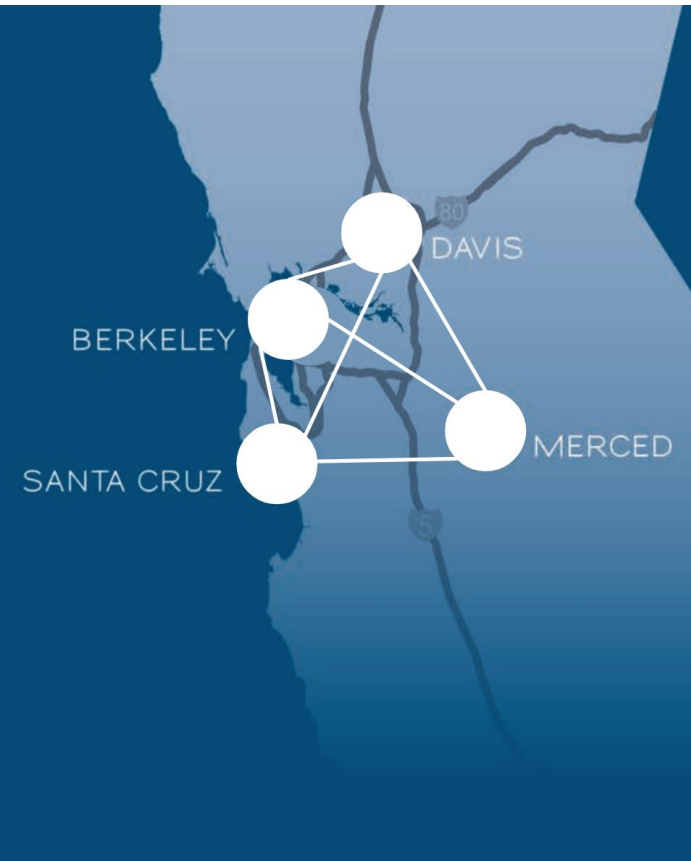
Connects 4
UC Campuses
(inc. UC Davis Health)

\$100M Annual
Research Activity

\$108M Raised
by 50+ Startups
in CITRIS Foundry

458 Principal Investigators

An “Invention Pipeline” for IT Applications



Core Research Thrusts

CITRIS Seed Funding Program

Major Grants & Institutional Memberships

Labs, Testbeds & Platforms

Startup Acceleration

Public Engagement on Societal Implications



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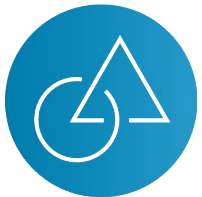
Vision 2025: CITRIS Research Thrusts



**CITRIS
HEALTH**



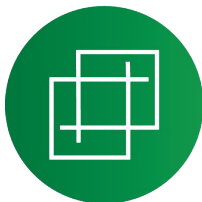
**CITRIS
POLICY LAB**



**CITRIS
PEOPLE & ROBOTS**



**FUTURE
OF WORK**



**CITRIS
SUSTAINABLE
INFRASTRUCTURES**



**WOMEN IN TECH
INITIATIVE**

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Details provided in next section.



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A Robust Network of Research Assets

Pacific Research
Platform

SimCenter for Natural
Hazards Research

CITRIS Aviation
(UAS / UAV)

Sierra Sensor
Network

California Institute for
Energy & Environment
(CIEE at CITRIS)

Building Automation
Testbeds

CITRIS Invention Lab

Center for
Virtual Care

Visual Thinking Lab

Marvell
Nanofabrication Lab

Transatlantic
Telehealth Research
Network

CITRIS Foundry
Startup Accelerator

CITRIS Community: Opportunities to Engage

**Principal
Investigators**

**CITRIS
Research Thrusts**

**CITRIS
Seed Funding**

**CITRIS External
Partnership Program**

**CITRIS Faculty
Advisory Councils**

**Postdocs
& Students**

**Tech for Social Good
Program**

**CITRIS
Seed Funding**

CITRIS Foundry

**External
Researchers**

**Visiting Scholars
Program**

**Innovator in
Residence**



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CITRIS Seed Funding Program

Overview and 2020 Request for Proposals (RFP)



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The CITRIS Seed Funding Program launched in 2008 as an innovative mechanism to drive early-stage IT research with the potential to benefit society.

To catalyze novel solutions, the program is designed to:

- Support promising proposals with the potential for substantial follow-on funding and impact
- Leverage multi-campus strengths and collaboration
- Encourage multi-disciplinary approaches to complex problems
- Emphasize a people-centered approach to technology development
- Fully support research activity; no overhead is taken.

Seed Funding Program Outcomes: 2008-2019

168

Multi-campus
projects funded

215 PIs and
430 students
supported

\$10.2M

in Seed Funds
awarded

\$60M

in follow-on
funds secured

Follow-on funding from:

NIH, NSF, DOE, CEC, Intel, Microsoft, Mellon
Foundation, Gates Foundation



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Examples of Recent Award Recipients



Persistent Autonomous Monitoring For Early Detection and Prediction Of Wildfires

Design, deploy, test, and evaluate under real-world scenarios a novel IoT system to enable accurate, timely, and scalable wildfire detection and prediction.

Katia Obraczka (UC Santa Cruz)
Stefano Carpin (UC Merced)
Scott Stephens (UC Berkeley)

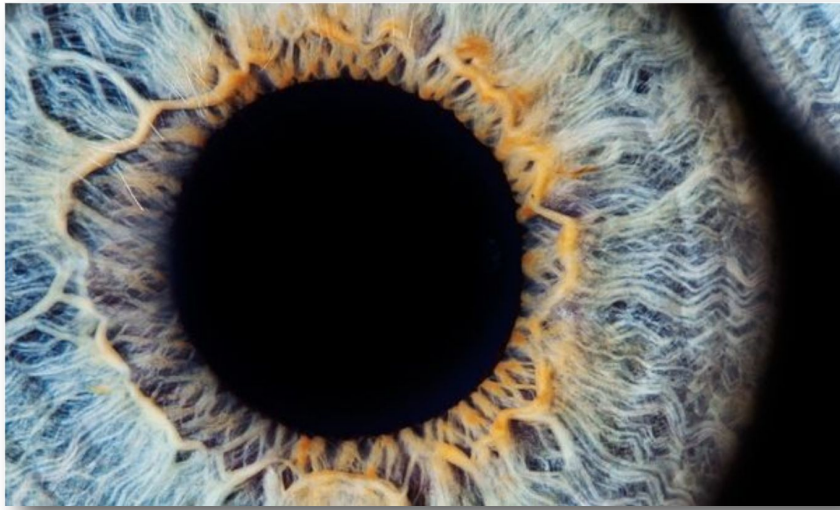


A Sensor System For Robotic Monitoring And Mapping Of Plant Root And Shoot Health

Develop an unmanned ground robot to non-destructively monitor plant root size and density using X-ray technology.

Reza Ehsani (UC Merced)
Alireza Pourreza (UC Davis)

Examples of Recent Award Recipients



Automation And Deep Learning For Diabetic Retinopathy Screening

Develop a program for automated diabetic retinopathy screening at UC Davis Health using deep learning algorithms developed at UC Berkeley.

Glenn Yiu (UC Davis Health)
Prabhu Shankar (UC Davis)
Chen-Nee Chuah (UC Davis)



Mapping Spatial Inequality: Immigrants In Poverty and Community Services

Build a web app that shows the spatial mismatch between where immigrants live and where community immigrant organizations are.

Irene Bloemraad (UC Berkeley)
Veronica Terriquez (UC Santa Cruz)

Seed Funding Opportunities: 2020 RFP

6 Proposal Categories

\$40K–\$60K Awarded Per Project

Jan 8, 2020	RFP Announced
Jan 8	Application Portal Opened
Jan–Feb	Campus Info Sessions; Proposal Team Formation
September 17	Applications Due
October	Awardees Notified
Dec 1, 2020	Performance Period Begins
Dec 15, 2021	Performance Period Ends

Eligibility & Proposal Requirements

Eligibility

- Must have campus PI status
- Each proposal must include:
 - ◆ **At least 2 PIs**
 - ◆ **At least 2 campuses**
- Budget cannot be used for PI salary or out-of-state tuition
- Each PI can participate in two proposals per cycle, and serve as Lead PI on only one
- For prior awardees: A status report must be submitted before applying for new Award

Proposal Components

- ❑ Name, campus, department, CV link for each PI
- ❑ Project Title
- ❑ Abstract (*250 words*)
- ❑ Narrative (*1500 words*)
- ❑ Impact Statement (*500 words*)
- ❑ Potential Applications (*500 words*)
- ❑ Budget summary (*500 words*)
- ❑ Illustrative graphic file (*optional*)
- ❑ *SPO approval not necessary

Proposal Evaluation

Proposals are reviewed by the CITRIS Campus and Initiative Directors using the following criteria:

- 1. Feasibility:** Achievable within 12-18 months?
- 2. Creates solution to a societal challenge:** Is problem and potential impact clearly identified?
- 3. Potential for follow-on funding:** Will seed support strengthen case for larger external proposal?
- 4. Alignment with CITRIS and the Banatao Institute initiatives:** Furthers one or more of the CITRIS interest areas in RFP
- 5. Use of CITRIS research assets:** Utilizing the Marvell NanoLab, CITRIS Invention Lab, or other CITRIS-affiliated assets is encouraged but not required.
- 6. Inclusion of pre-tenured faculty:** Highly encouraged, but not required.

Reporting & Impact Tracking

Tracking these project outcomes helps us continue the program and promote your successes!

- Publications & Scholarly Presentations
- Follow-on Funding — *pending and/or confirmed*
- Commercialization or Entrepreneurial Spin-offs
- Media Recognition
- Students Engaged in the Work

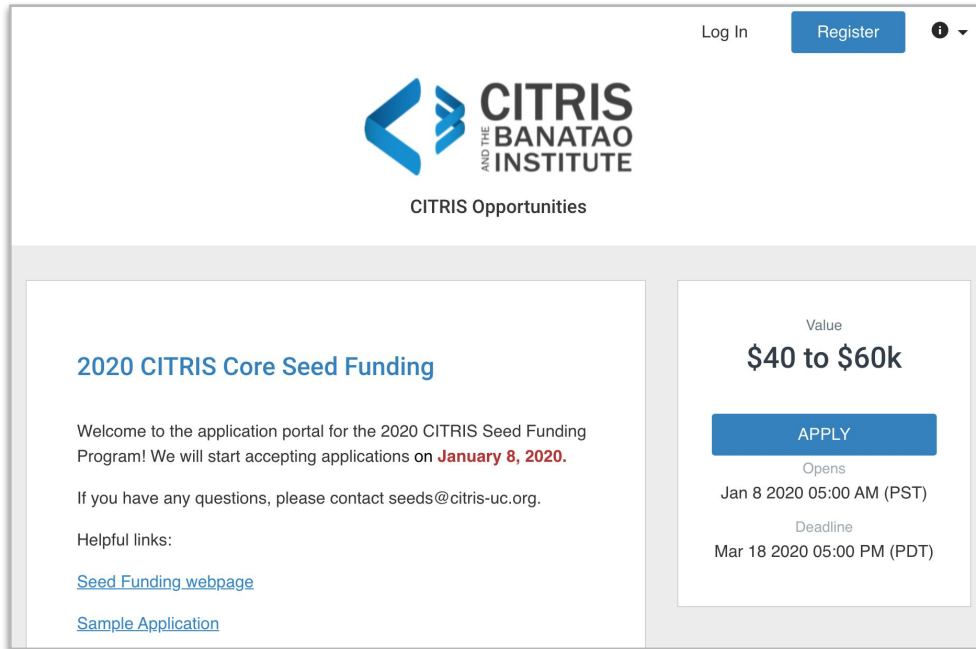
Awardees will receive reminders to complete a brief, online Final Report or No-Cost Extension request.

How To Apply: Use Online Portal

Access the online application at:

bit.ly/CITRISSeed2020

Or select Programs & Labs > Core Seed Funding in the top menu of our [homepage](#).



Portal Benefits:

- ✓ Easily manage team applications with multiple PIs
- ✓ Add editors or admin support staff to your proposal
- ✓ Submit reporting forms
- ✓ Personal account with your award history
- ✓ No paper or mailing required

**Applications due by 5:00PM on
Thursday, September 17, 2020**



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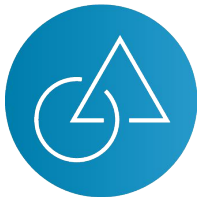
2020 Request for Proposals: Areas of Interest



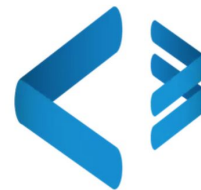
**CITRIS
HEALTH**



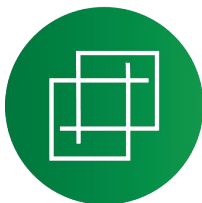
**CITRIS
POLICY LAB**



**CITRIS
PEOPLE & ROBOTS**



**THE FUTURE
OF WORK**



**CITRIS
SUSTAINABLE
INFRASTRUCTURES**



**WOMEN IN TECH
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Please find detailed category descriptions
in the full RFP document [on our website](#)



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How can technology improve health care in the digital era?



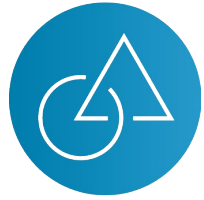
**CITRIS
HEALTH**

- Data analytics
- Care management solutions
- New platforms and sensors
- Integrated wireless, mobile, and app-based solutions
- Technology solutions for aging and chronic disease

citris-uc.org/initiatives/health



How do we harness the power of AI and robotics to enrich human capability and experience?



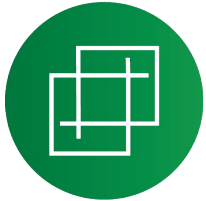
CITRIS PEOPLE & ROBOTS

- Human-Centric Automation
- Bio-Inspired Robotics
- Deep Learning
- Cloud Robotics
- Healthcare Robotics
- Internet of Things

citrис-uc.org/initiatives/robotics



How can we apply emerging technology to support tomorrow's infrastructure?



CITRIS SUSTAINABLE INFRASTRUCTURES

- Integrated sensors, data management, and advanced controls to increase productivity and sustainability of energy systems
- Energy generation, storage, distribution
- Intelligent water infrastructures
- Traffic and mobility management, UAS/UAV, energy footprint of transit
- IT that supports UCOP's goal to become carbon neutral by 2025



How do we build — and harness — technology that protects privacy, security, and democracy?

**CITRIS
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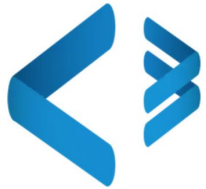
**CITRIS
POLICY LAB**

- Computational Propaganda
- Inclusive AI
- Digital Inclusion
- Democratic Innovations
- Disaster Risk Reduction
- Digital ID Systems
- Blockchain for Public Sector

<https://citrispolicylab.org>



How will automation, intelligent tools, and algorithms forever change the way we work?

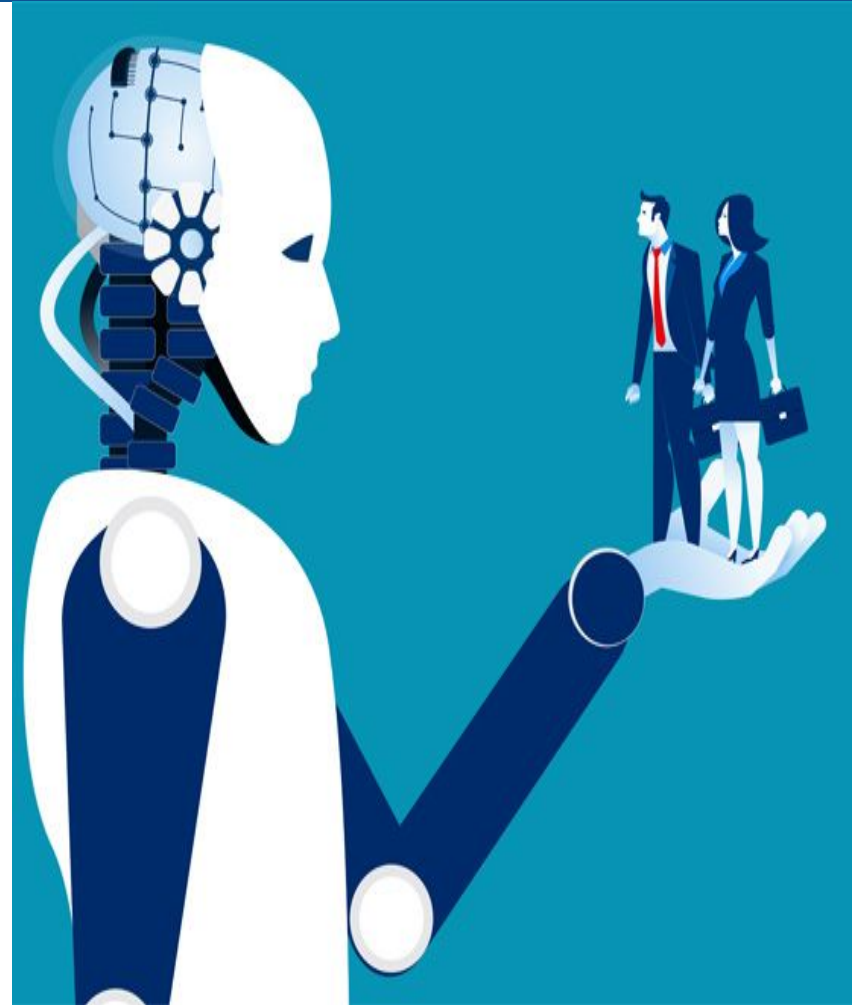


THE FUTURE OF WORK

Ways of working, earning, and learning that support the healthy development of societies and economies:

- Rise of the Platform Economy
- Intelligent Tools Deployment
- Technology Assessment
- Job Creation and Entrepreneurship
- Solutions for Upskilling Workers

<http://wits.berkeley.edu>



How can CITRIS and UC foster a more inclusive workforce, from education to employment to leadership?



WOMEN IN TECH INITIATIVE

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**Novel analyses, benchmarks,
and interventions to advance:**

- Diversity Metrics
- Women in Entrepreneurship
- Bridges to STEM
- Telling Women's Stories



<https://witi.berkeley.edu>

Program Support & Contacts

Info Session Q&A

Resources for Applicants: <http://bit.ly/CITRISSeed2020>

- Link to this presentation
- Sample application form
- List of all prior awardees
- FAQ page

Further Questions?

- Connect with your CITRIS Campus Director and Staff
- Email our Seed Funding team at seeds@citris-uc.org

Connecting with Co-Investigators

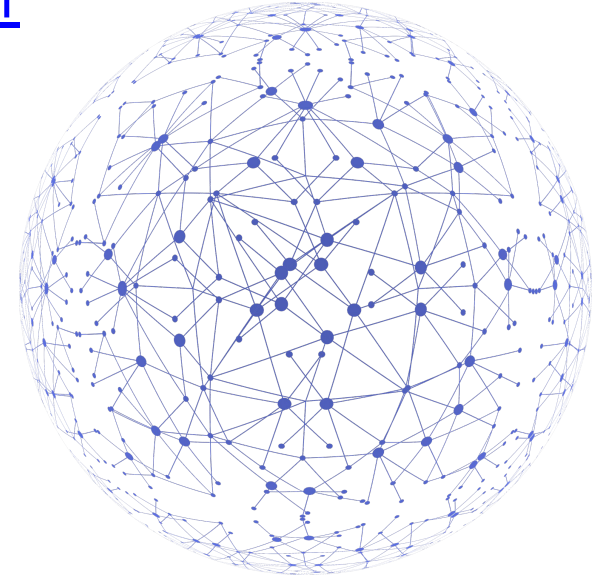
- ➔ **Access the CITRIS Researcher Database:**
<https://citris-uc.org/people/researcher>

Search by keyword (name, campus, discipline, application area)

- ➔ **Join the team formation interest list:**
<http://bit.ly/CITRISSeedInfo2020>

List is shared with CITRIS Campus and Initiative Directors to assist you with forming proposal teams, if needed

- ➔ **Attend an upcoming CITRIS event**





Thank you for your interest

You are welcome to share this presentation with fellow investigators on CITRIS campuses.

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