



August 11, 2026

Dear Colleagues:

The NSF E-CORE Research Infrastructure for AI-based Sustainable STEM Technologies in Puerto Rico (RAIS-PR) Center at the University of Puerto Rico at Mayaguez (UPRM) hereby announces its interest in receiving applications from Emerging Research Institutions (ERIs) in Puerto Rico particularly encouraging junior and early-career faculty members to submit research proposals on (1) creating Artificial Intelligence (AI) readiness in their campus by training students on machine learning and AI methods, (2) edge computing, and (3) energy resilient systems in one of the following application domain areas per proposal (one application domain per proposal): remote sensing, weather-related hazard monitoring systems, cybersecurity, communications, energy efficient systems, biotechnology, health care, and data management. To ensure feasibility of their proposal idea, PIs are requested to contact RAIS-PR investigators outlined in Table 1. It is mandatory for the projects to strongly incorporate artificial intelligence methods, edge and/or quantum computing and partner with an industry or startup in Puerto Rico. In addition, a partnership with an industry or startup in Puerto Rico is highly recommended.

Table 1: Investigators of RAIS-PR

Investigator	Research Areas	Emails
Dr. Vidya Manian	AI, edge computing, and quantum systems for biotech, communications, and remote sensing	vidya.manian@upr.edu
Dr. Heeralal Janwa	AI and quantum computing	heeralal.janwa@upr.edu
Dr. Fabio Andrade	Sustainable energy and machine learning	fabio.andrade@upr.edu
Dr. David Suleiman	Clean energy and machine learning	david.suleiman@upr.edu
Dr. Dibin George	Wireless communications and quantum sensors	dibin.george@upr.edu
Dr. Venkataramani Kumar	Cybersecurity and edge computing	venkataramani.kumar@upr.edu
Dr. Jesus Sanchez	Edge computing and artificial intelligence for health care, remote sensing, and energy resilience	jesus.sanchez25@upr.edu

Collaboration with one of the RAIS-PR investigators is essential for the successful preparation of the project proposal and, if awarded, for its implementation.

Projects should combine data and modeling approaches to improve predictability in the application domains mentioned above and develop new tools to improve decision-making. The project should support at least one graduate and one undergraduate student. If the institution does not have a graduate program, two or three undergraduate students can be recruited. The goals of the seed award project are to:

- Preparation of the studenta on AI readiness through AI educational engagement, attending workshops and AI training provided by E-CORE mentors
- Perform data collection for training, testing, and validation of an AI model in an application domain of the PIs expertise
- Develop projects that utilize machine learning and artificial intelligence methods for targeted areas of: clean energy, energy resilience, biotechnology, remote sensing, cybersecurity, communications, and health care in Puerto Rico;
- Research should focus on developing methods using datasets that are publicly available or can be readily collected;
- Develop new tools for decision-making in the targeted areas to strengthen energy resilience and the reliability of energy-efficient systems; and
- Train the next generation workforce and entrepreneurs in AI and related research areas.

E-CORE Team expects that successful applications will be hypothesis-driven and clearly address all four of these goals through an integrated approach that incorporates AI methods, edge and/or quantum computing, energy-resilient and low-latency system modeling for the domains of remote sensing and communication, biotech, health care, and data management.

Projects should also develop and use advanced analytics and tools, such as artificial intelligence and machine learning, to analyze complex datasets, improve predictability, enhance modeling capabilities, and build decision-support frameworks to implement energy-resilient systems. Applicants are encouraged to contact the E-CORE investigators for any clarification on this solicitation.

Anticipated Award Information:

- Seed Funding amount: \$75,000
- Performance period: One (the second year will be dedicated by the faculty to prepare and submit a full proposal based on the outcomes of the seed award research activity)
- Anticipated number of awards for 2027-28: 8
- Start Date: The budget period for the awarded projects should begin on January 1, 2027. ¹
- End Date: 1 year from the start date

Eligibility information:

1. The PI of this proposal must be holding a doctoral degree at ERI; Though this call is open to all faculty, junior and early career faculty members are highly recommended to submit their research proposals.
2. An individual may serve as PI in only 1 proposal per year. No Co-PIs are allowed from the submitting academic institution. A PI should submit only one proposal that he/she thinks will result in maximizing the goals of the seed project within the seed award duration. However, there are no limits on the number of proposals submitted by any academic institutions.

Solicitation specific requirements:

Applicants are encouraged to email their preferred RAIS-PR investigators in addition to copying Dr. Vidya Manian by September 30, 2026, on the planned regional focus areas, expected teaming arrangements, and potential industry engagement. Since these emails are for planning purposes specifically PIs should not expect a response. RAIS-PR anticipates holding merit review panels in November 2026 and strongly encourages applications to be submitted by October 31, 2026, for consideration. The other requirements are outlined below.

¹The start date can be negotiated if an application is recommended for funding.

- Clearly state the research question that the project will address backed up with literature review
- The investigator is required to submit a conference and if possible, a journal publication with the collaborating investigator and E-CORE project director as Co-authors. They will assist the investigator. Journal publication cost should be included in the seed award budget to be \$2,500.
- The investigator is required to enable the student working in the project to present the work in a conference in the US
- The investigator is required to submit a full proposal to a federal funding agency with RAIS-PR infrastructure sustainability cost included in the budget at the end of the one year period of the seed award. The RAIS-PR investigators will give guidance on preparing the proposal and budget
- The investigator and the supported students in the seed project are required to attend the E-CORE RAIS-PR Research Symposium and present a poster
- The investigator and the supported students are required to assist in all workshops and tutorials organized by RAIS-PR
- The investigators and supported students will be given access to the RAIS-PR slack channel and publications

Proposal submission guidelines:

The proposal submitted to be considered for the seed grant should follow same formatting style as that of the regular NSF proposal. In general, the proposal must include the following details with well-defined sub-headings.

1. Title page (1-page): Title of the research proposal; PI specific information namely: Investigator name, department, and designation; University information namely: Address, and point of contact; Name of the RAIS-PR Investigator (from Table 1); Industry partner/angel/venture investor or start-up company.
2. Project description (5-pages): It should well-defined sections with the following headings (must be on its own line with no other text on that line): Introduction, Background, Objectives, Methodology, Anticipated Outcomes, Deliverables, Timeline, and Sustainability. The narrative should explicitly define the federal, state, regional or local agency or agencies to which they plan to submit the full-proposal. References do not count towards the 5-page limit. Font: Times/Times New Roman 11-point
3. Supplementary documents:
 - Budget: Well-defined and clearly presented budget and its justification.
 - Bio-sketch (2-pages): NSF style bio-sketch of the PI.
 - CPS (Current and Pending Support): PI's current and pending support (NSF format).

We look forward to receiving your innovative applications and working together to advance AI-based sustainable STEM technologies in Puerto Rico. The NSF E-CORE RAIS-PR center will provide investigators with access to the Research and Computing Facility AI cluster to implement the AI models to be developed in the projects selected for seed awards. If you have questions about this research initiative, please contact one of the investigators.

The submission may be sent to one of the investigator emails. A web portal will soon be shared for submission.

Submission deadline: October 31, 2026

Sincerely,

NSF EPSCOR E-CORE: RAIS-PR Project Leadership Team
University of Puerto Rico at Mayagüez