

## Announcement

**NJIT FY 2024-2025**

### **Collaborative Early Research Translation (CERT) Seed Grant Awards**

#### **Congratulations to All Awardees!**

To accelerate NJIT's trajectory towards increased collaborative research and innovation funding for higher faculty and student success, a new strategic initiative, Collaborative Early Research Translation (CERT) Seed Grants has been launched to invest in translational research of high potential impact. These CERT seed grants will initiate early translation of research and innovation, working collaboratively with an external partner, towards developing proof-of-feasibility and potential intellectual property to build foundation to submit competitive proposals for external research translation acceleration funding opportunities, such as NSF ART (Accelerating Research Translation), NSF PFI (Partnerships for Innovation) and NIH Biomedical Research Partnerships, or internal NJIT TITA (Technology Innovation Translation Acceleration) seed grants for further advancement in translational research and market validation.

NJIT's internal seed funding opportunities including FSG, CERT and TITA seed grants are critical components of the strategic Research, Innovation and Technology Entrepreneurship (RITE) ecosystem as outlined in the 2030 Strategic Plan.

We are pleased to announce the inaugural round of 9 CERT Seed Grants for very exciting translational research projects with external collaborators and partners. Each CERT Seed Grant is awarded \$25,000 with a total investment of \$225,000 which is partially funded by the [NSF Accelerating Research Translation \(ART\)](#) grant and NJIT Collaborative Research and Innovation Strategic Partnership (CRISP) investment plan through the NJIT [Center for Translational Research](#).

Congratulations to all recipients of the FY2024-25 CERT Seed Grants (listed below)!

#### **Newark College of Engineering**

**NJIT Principal Investigator:** Murat Guvendiren, Chemical and Material Engineering

**Collaborator/Partner:** Dave Washburn, Chief Operating Officer

**Collaborator/Partner Affiliation:** Acuitive Technologies

**CERT Project Title:** Bone Allograft Composite Inks for 3D Printing of Bone Grafts

**CERT Funding:** \$25,000

**NJIT Principal Investigator:** Philip Pong, Electrical and Computer Engineering

**NJIT Co-Principal Investigators:** Mohsen Azizi, School of Applied Engineering and Technology; Marcos Netto, Electrical and Computer Engineering; SangWoo Park, Mechanical and Industrial Engineering, Joshua Taylor, Electrical and Computer Engineering

**Collaborators/Partners and Affiliations:** Andrew Chad Watson, Renewables Development Manager, PSEG; Rafael Wilches, Senior Development Manager, PSEG; Jason Kalwa, Offshore Wind Department Director, PSEG; Sid Parmar, Senior Manager, Invenergy; Wesley Jacobs, Senior Project Director, Invenergy; Michael Porto, Senior Director (External Engagement), Invenergy; Mahdiyeh Khodaparastan, Senior Interconnection Engineer, TotalEnergies; Favio Geran, Community Engagement Manager, TotalEnergies; Doug Copeland, Business Development & Strategic Partnerships Manager, Atlantic Shores Offshore Wind, David Wang, O&M Engineer – Offshore Projects Delivery, Atlantic Shores Offshore Wind; Tony Appleton, Offshore Wind Director, Burns & McDonnell

**CERT Project Title:** Empowering Grid Innovation: Collaborative Research and Industry Partnership in Power Systems Engineering

**CERT Funding:** \$25,000

**NJIT Principal Investigator:** Rayan H. Assaad, Civil and Environmental Engineering

**Collaborator/Partner:** Gilles Albeaino, Director of the Construction Automation, Safety, and Education (CASE) Lab

**Collaborator/Partner Affiliation:** Texas A&M University

**CERT Project Title:** Developing an Intelligent Multi-Modal, IoT-enabled, AI-integrated, Sensor Fusion-based Wearable Device for Improving Human-Robot Interaction

**CERT Funding:** \$25,000

**NJIT Principal Investigator:** Vivek Kumar, Biomedical Engineering

**Collaborator/Partner:** Dr. Stella Elkabes

**Collaborator/Partner Affiliation:** Rutgers Medical School

**CERT Project Title:** A novel cyclic peptide therapeutic platform for the treatment of Multiple Sclerosis, and broader autoimmunity

**CERT Funding:** \$25,000

**NJIT Principal Investigator:** Petras Swissler, Mechanical and Industrial Engineering

**Co-Principal Investigator:** Oladoyin Kolawole, Civil and Environmental Engineering

**Collaborator/Partner:** Nejm E. Jundi, Principal

**Collaborator/Partner Affiliation:** JZN Engineering

**CERT Project Title:** Algorithm-guided Geotechnical Surveying using Wearable Miniaturized Sensors

**CERT Funding:** \$25,000

### **College of Science and Liberal Arts**

**NJIT Principal Investigator:** Niccolo Pescetelli, Humanities and Social Sciences

**Collaborator/Partner:** Georgina Denis, Chief Executive Officer

**Collaborator/Partner Affiliation:** People Supported Technologies Limited; London, UK

**CERT Project Title:** A collective intelligence approach to aligning AI to human values

**CERT Funding:** \$25,000

**NJIT Principal Investigator:** Hao Chen, Chemistry and Environmental Sciences

**NJIT Co- Principal Investigator:** Zeyuan Qiu, Chemistry and Environmental Sciences

**Collaborators/Partners and Affiliations:** Bob Averill, the Cupsaw Lake Improvement Association (CLIA); Maureen Jobrack, The Environmental Commission Chair, CLIA; Alan Fedeli, New Jersey Coalition of Lake Associations; Alan Fedeli, New Jersey Coalition of Lake Associations; Tom Conway, North America Lake Management Society

**CERT Project Title:** Development of a Novel Peptide Tracer for Tracing Potential Septic Pollution Sources

**CERT Funding:** \$25,000

### **Ying Wu College of Computing**

**NJIT Principal Investigator:** Hai Phan, Data Science

**NJIT Co- Principal Investigators:** Cristian Borcea, Computer Science; Abdallah Khreishah, Electrical and Computer Engineering

**Collaborators/Partners and Affiliations:** Ruoming Jin, Professor, Computer Science, Kent State University; Jonathan Maletic, Professor, Computer Science, Kent State University; Yelong Shen, Principal Research Manager, Microsoft

**CERT Project Title:** XCopilot: Private Code Generation with Large Language Models

**CERT Funding:** \$25,000

**NJIT Principal Investigator:** Zhi Wei, Computer Science

**Collaborator/Partner:** Dr. Hakon Hakonarson

**Collaborator/Partner Affiliation:** The Center of Applied Genomics (CAG), the Children's Hospital of Philadelphia

**CERT Project Title:** Deep Learning and Large Language Models for Personalized Cancer Vaccine Design

**CERT Funding:** \$25,000