



New Jersey Institute  
of Technology

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# Chapter of the National Academy of Inventors

Office of Research

NJIT

New Jersey Institute of Technology



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# NJIT Research Clusters: 2025 Strategic Plan

## Material Science and Engineering

Nanotechnology, Nanophotonics  
Smart Materials; Biomaterials  
Particulates, Quantum Materials  
Reactive & Composite Materials  
Membrane Technology, Polymers  
Additive/Advanced Manufacturing

## Robotics and Machine Intelligence

Human Machine Interface  
Cyber-Human Systems  
Robotics: Bioinspired, Medical,  
Social & Industrial  
Autonomous Systems  
Intelligent Infrastructure  
AI, Machine Learning & VR/AR

## Bioscience and Bioengineering

Biomedical Devices, Sensors  
and Instrumentation  
Brain Health & Neuroscience  
Biological Sciences &  
Behavior  
Molecular Biology  
Gene Therapy & Phenotype

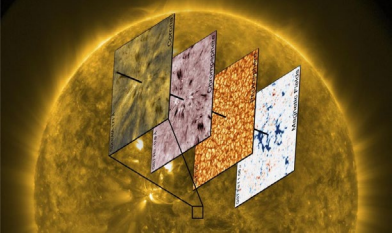
## Environment and Sustainability

Space Weather, Solar Terrestrial,  
Environmental Sensors, Sustainable  
Infrastructure, Global Climate Change,  
Biodiversity and Conservation, Clean  
Water, Waste Management,  
Renewable Energy, Smart Grid Systems.

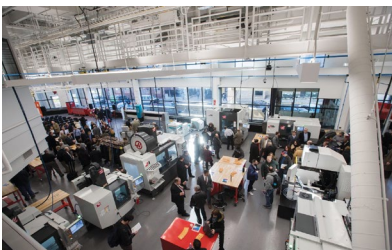
## Data Science and Management

Data Fusion , Big Data Analytics,  
Geospatial Data Processing,  
Cybersecurity and Networking,  
Quantum Computing, Tech &  
Business, Management, Social  
Networking



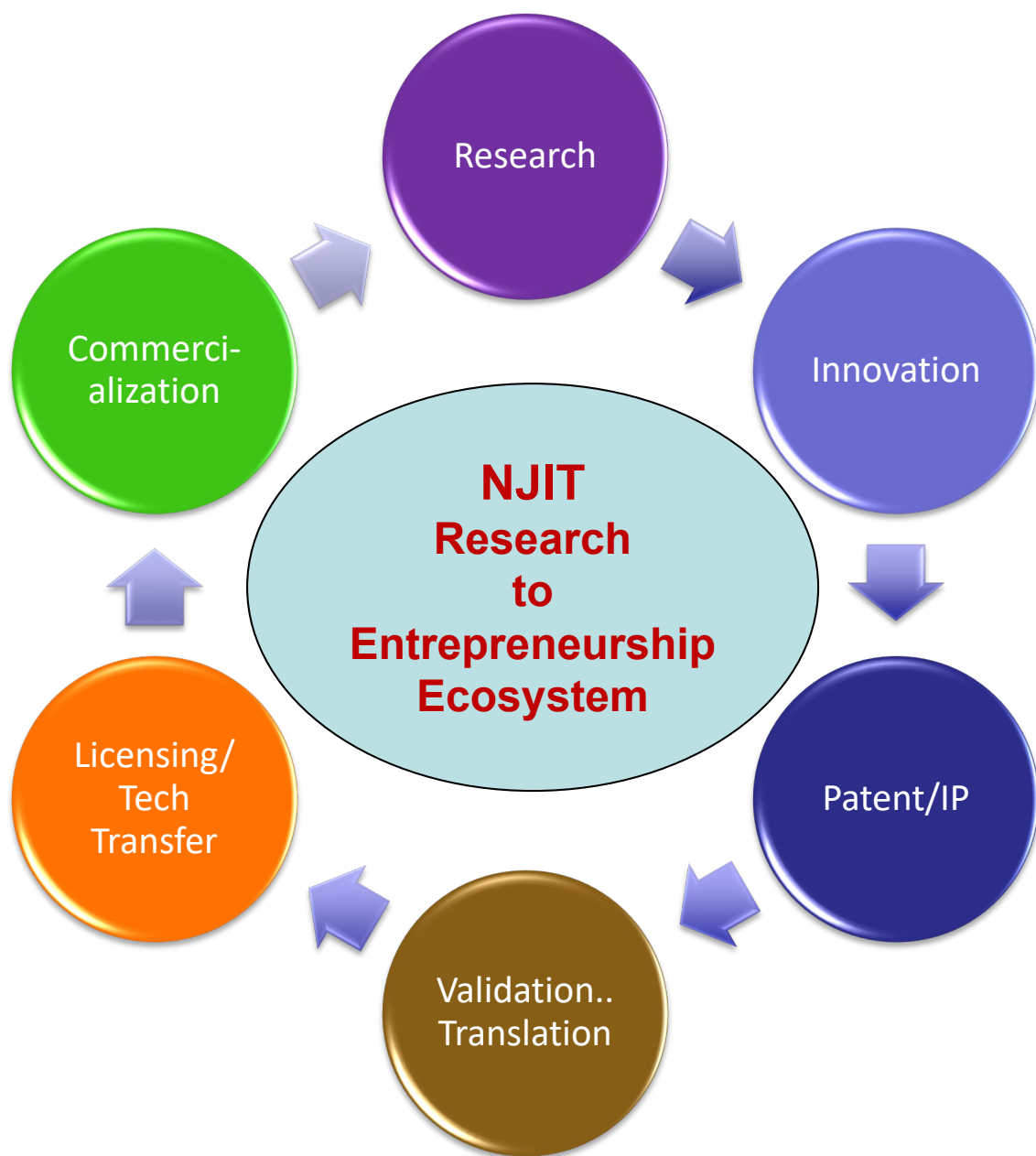


142% Increase in External Research Funding

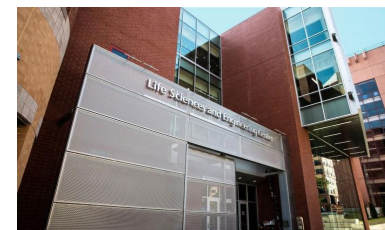


Makerspace at NJIT: \$10 M resource to design, build and test prototypes of innovative products

\$2.8 billion impact on New Jersey's economy each year



\$161+ million Annual Research Expenditure



\$40+ million research facility for material characterization, and devices & sensors microfabrication

145+ Research Institutes, Centers, Specialized Labs

# NAI Chapter at NJIT: Mission

The mission of the NJIT NAI Chapter is to **recognize and promote inventions** in translational research and technology development. In addition, the NJIT NAI Chapter activities would foster opportunities for faculty and student inventors to facilitate acquisition of intellectual property (IP) assets and learn **entrepreneurial pathways from research and innovation to translation to market and commercialization.**

The synergistic interactions with stakeholder groups will enhance the **entrepreneurial ecosystem** to mentor NJIT inventors towards commercialization of their IP assets in order to impact the economic growth.

# NAI-NJIT Chapter: Charter

- Recognize and honor faculty, student and affiliate inventors with intellectual property (IP) assets
- Promote NJIT inventions and its translation to market towards commercialization to benefit society
- Foster invention focused networking and educational activities, such as workshops and seminars on innovation and IP development working with IP commercialization and licensing administration offices at NJIT and NJII
- Provide mentoring and advising services to faculty and student inventors on further development of IP assets
- Facilitate technology innovation entrepreneurial pathways to help faculty and student inventors develop stakeholder partnerships through internal and external resources

# NAI-NJIT Chapter: Activities

## Recognize Inventors and Promote Innovation

- Recognition and Networking Events
  - NAI-NJIT Chapter Annual Awards and Member Recognition Workshop
  - Innovation Day
  - Summer Research Symposium
- Technology Development Workshops, Seminars and Meetings
  - IP Acquisition
  - Technology Licensing and Commercialization
  - Entrepreneurship Pathways: VentureLink @ NJIT
- Technology Innovation Translation Acceleration (TITA) Programs
- NAI-NJIT Student Inventor Club and URI Programs
  - URI Seed Grants and Workshops
  - Newark Innovation Acceleration Club
  - NSF iCorps and REU programs

# NAI Fellows and Senior Members

## NAI Fellows

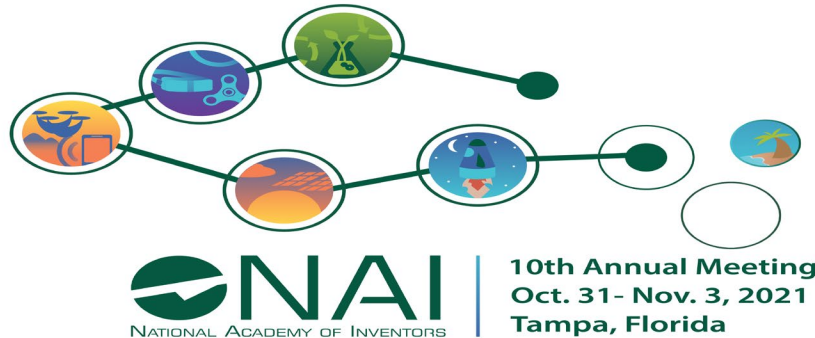
Election to NAI Fellow status is the highest level of membership in the NAI. Nominees should have made outstanding contributions to innovation in areas of such as patents and licensing, innovative discovery and technology, significant impact on society, and support and enhancement of innovation. Nominees must be a named inventor on patent(s) issued by the United States Patent and Trademark Office. (The median patent count among current NAI Fellows is 20.)

## NAI Senior Members

Senior Members include active faculty, scientists and administrators with success in patents, licensing and commercialization and have produced technologies that have brought, or aspire to bring, real impact on the welfare of society. NAI Senior Members receive:

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**Look Back, Think Forward: Framing the Future of Innovation**





# NAI Fellows



Raj Dave', 2020



Mengchu Zhou, 2020



Nirwan Ansari, 2019



Craig J. Gotsman, 2018



Kamallesh K. Sirkar, 2016



Somenath Mitra, 2015



Atam P. Dhawan, 2015





# NAI Senior Members



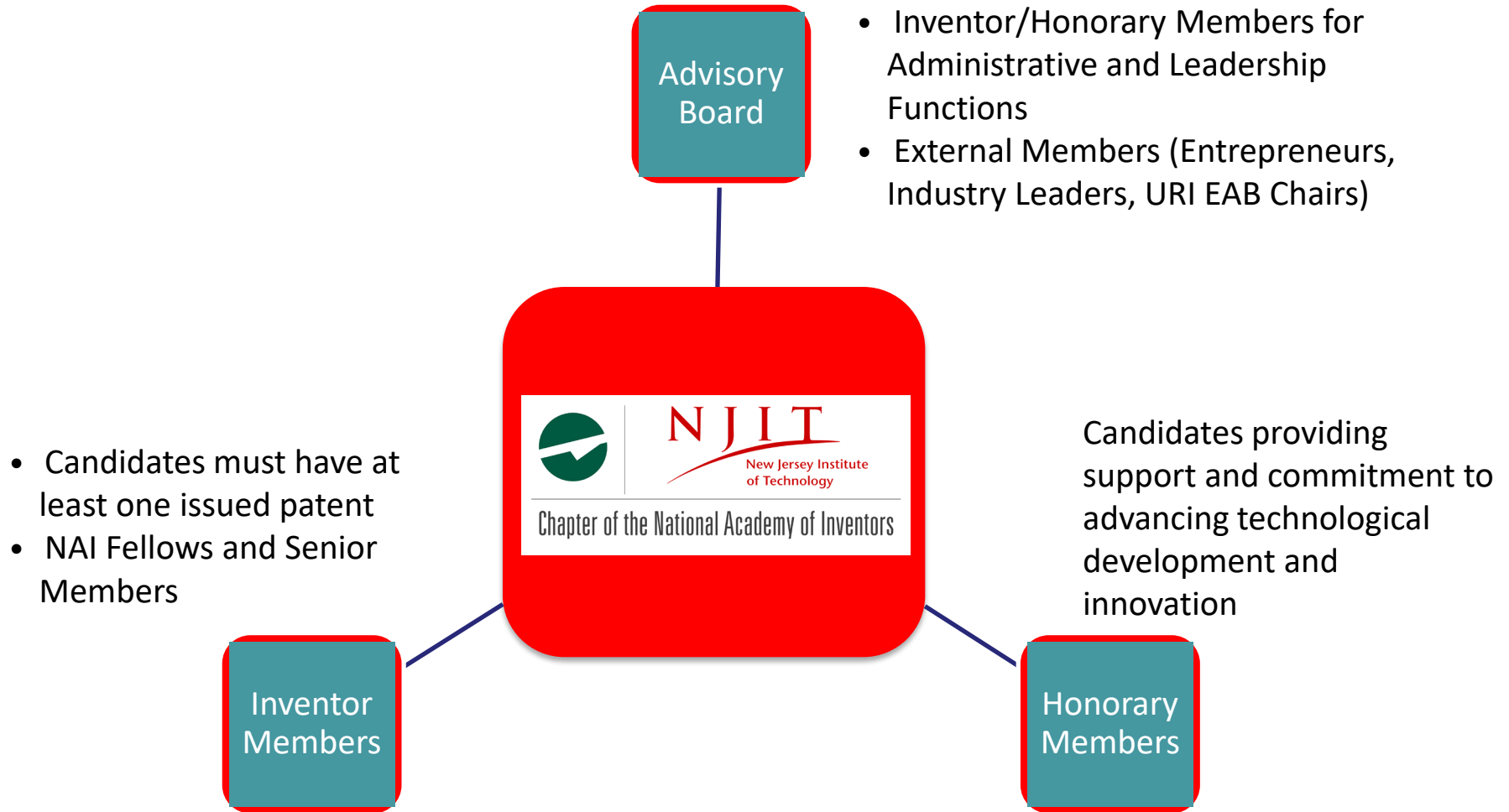
Sagnik Basuray, 2019



Eon Soo Lee, 2020



# NJIT Chapter of the NAI



# NJIT Chapter of the NAI: Advisory Board

- Atam Dhawan, FNAI, President NAI-NJIT Chapter
- Nirwan Ansari, FNAI
- Somnath Mitra, FNAI
- Kamalesh Sirkar, FNAI
- Craig Gotsman, FNAI, Dean YWCC
- Moshe Kam, Dean, NCE
- Kevin Belfield, Dean, CSLA
- Brian Kiernan, Angel Investor, Executive VP and Chief Scientist (ret), InterDigital Communications Corp.
- Govi Rao, CEO, Phase Change Energy Solutions, Inc.
- Manish Patel, Founder and CEO, TrickyWater
- Daniel Henderson, Inventor and Entrepreneur
- Shivon Boodhoo, Director, Faculty Awards; Coordinator
- Sanjiv Chokshi, Director, Intellectual Property & Asstt General Counsel
- William Lutz, Director, Commercialization

# NJIT Chapter of the NAI: Inventor Members

## NCE

Haim Grebel  
Eecevit Bilgili  
Chang Yaramothu  
Jay Meegoda  
Mesut Sahin  
Pushpendra Singh  
Wen Zhang  
Roberto Rojas-Cessa  
Sotirios Ziavras  
Edip Niver  
Zhiming Ji  
Vivek Kumar  
Tara Alvarez  
Treena Arinzeh  
Boris Khusid  
Edward Dreizin  
Xiaoyang Xu  
Murat Guvendiren  
Moshe Kam (Dean)

## CSLA

Mengyan Li  
Hao Chen  
Omowunmi Sadik  
Ian Gatley  
Kevin Belfield (Dean)

## YWCC

James Geller  
Cristian Borcea  
Senjuti Basu Roy  
Mark Cartwright  
Ioannis Koutis  
Baruch Schieber

## MTSM

Cesar Bandera

## URI Board

Brian Kiernan  
Daniel Henderson

### NAI Fellows

Mengchu Zhou  
Rajesh Dave  
Nirwan Ansari  
Craig Gotsman  
Kam Sirkar  
Som Mitra  
Atam Dhawan

### NAI Senior Members

Eon Soo Lee  
Sagnik Basuray

# NJIT Chapter of the NAI: Honorary Members

## **Faculty:**

Murat Guvendiren

Xuan Liu

Hao Chen

## **Administrative Leadership and Support: Research, Innovation and Technology Development:**

Joel Bloom, President

Fadi Deek, Provost and Senior Executive Vice President

Simon Nynens, Vice President and Chief Commercial Officer, CEO NJIT

Govi Rao, Chief Executive Officer at Phase Change Energy Solutions, Inc.

Manish Patel, Founder and CEO, TrickyWater

William Lutz, Director Commercialization

Sanjiv Chokshi, Director, Intellectual Property & Asstt General Counsel

Shivon Boodhoo, Director, Faculty Awards; Coordinator

# NAI-NJIT Student Inventor Club

- Mission
  - Promote Research, Innovation, Technology Development and IP Acquisition towards Entrepreneurship, and Mentor and Recognize Student Inventors
- Programs and Activities
  - URI Phase-1 and Phase-2 Seed Grants
  - URI Provost Summer Research Fellowship Program
  - Newark Innovation Acceleration Center (NAIC)
  - NSF REU and iCorps Programs
  - Workshops and Networking Events
    - URI Workshops
    - Innovation Day, Stevenson Innovation Awards and Student Inventor Award
    - Open Forums (Coffee Club) at VentureLink @ NJIT
- Eligibility
  - Open to post-doc, graduate and undergraduate students
  - Recipients of URI Student Seed Grants, Provost Summer Research and REU programs, NSF iCorps grants; grant funded UG and Graduate students

# APPENDIX



# NJIT – A Member Institution

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## Member Institution as Defined by NAI:

This most prevalent level of NAI institutional membership offers members visibility of research and innovation and the opportunity to recognize and honor inventors on campus. Included in this category is membership for up to **40 individual inventor members**.

## Member Institution Benefits

- Honor the inventors and innovators among your institution's faculty, staff, students, alumni and affiliates, and encourage the creative thinking and spirit of innovation in your community.
- Support development and commercialization of academic patents and inventions, and the disclosure of intellectual property.
- Advocates, serving as a voice for academic inventors at universities and federal and nonprofit research institutes with the USPTO and Dept. of Commerce.
- Opportunity to publish in the NAI journal, Technology and Innovation. Institutions that join during the Charter Member period have the opportunity to name a member to the journal's editorial board.
- Annual meeting featuring world-class presentations and networking with renowned inventors from across the U.S. and around the world, representatives from our Member Institutions, NAI Fellows and Annual Meeting participants, such as the USPTO, Smithsonian's Lemelson Center for the Study of Invention and Innovation, The National Academies of Sciences, Engineering, and Medicine, American Association for the Advancement of Science, Association for American Universities, Association of Public and Land-grant Universities and more.
- A member-focused organization, with active participation from our member institutions.
- Reasonable institutional membership fees for academic organizations and affordable annual meetings.
- Opportunity to start your own Chapter (not required). If you wish to establish a chapter, the NAI will provide you with templates, examples and assistance for an event
- Recognition and promotion through NAI media communications
- Listed on NAI national and Annual Meeting websites

# Institutional Individual Chapter Membership

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**Membership for Individuals is only available to individuals at a Member Institution with a Chapter and consists of:**

- Regular Members of a chapter include academic inventors who hold at least one issued U.S. patent and may include eligible faculty, staff, students, alumni, and affiliates.
- Honorary Members of a chapter include leadership and representatives from your institution and community who do not hold patents but have facilitated and nurtured innovation and economic development at your institution.

**Individual Member benefits include:**

- NAI Certificate of Membership
- NAI Official Lapel Pin
- Opportunity to receive special recognition for work in various NAI publications including the NAI Journal, presentations and national press releases
- Exclusive news and updates from the NAI sent directly to their email
- The ability to hold leadership positions within an active chapter as a Chapter Officer or Executive Committee member
- Member discount for NAI annual meetings
- Access to GAIN Network of Inventors: **NAI Global Academic Inventors Network**

# NAI Fellow & Senior Member Criteria

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## NAI Fellows

- Nominees should have made outstanding contributions to innovation in areas of such as patents and licensing, innovative discovery and technology, significant impact on society, and support and enhancement of innovation
- Nominees must be a named inventor on patent(s) issued by the United States Patent and Trademark Office. (The median patent count among current NAI Fellows is 20.)
- Nominees should have reached professional maturity and be recognized as pioneers in their field
- Nominees must be affiliated with an academic organization, e.g., university, college, non-profit research institute, or government agency
- Nominees do not have to be current members of, nor affiliated with a Member Institution of the National Academy of Inventors (although recommended)
- All U.S. and non-U.S. citizens are qualified for nomination

## NAI Senior Members

- At a minimum, candidates must demonstrate a high degree of innovation by holding one issued U.S. patent that has been licensed or commercialized and/or possess five or more issued U.S. patents
- Candidates must be in professional practice or research in his/her current field for at least seven years
- Candidate must be affiliated with an NAI Member Institution
- Self-nominations are accepted