

# NanoJapan 2015

Website: <http://nanojapan.rice.edu>, Email: [nanojapan@rice.edu](mailto:nanojapan@rice.edu)

**NanoJapan** aims to cultivate a generation of globally competent scientists and engineers through a program that combines a cutting-edge summer research experience in Japan with language and culture study. Research projects focus on terahertz science and/or nanoscale science, particularly electronic, magnetic, and optical phenomena in nanomaterials, nanostructures, and nanodevices, and we seek to encourage participants to pursue future graduate study in a related field.

### Eligibility Requirements

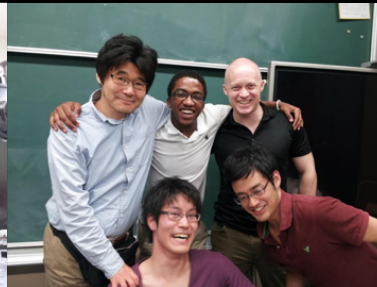
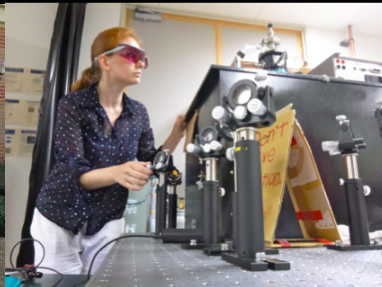
- U.S. citizen or perm. resident
- Freshman or sophomore
- Engineering or physics major
- No prior Japanese language or research experience required
- Women & students under-represented in STEM are strongly encouraged to apply

### Program Includes

- Up to a \$4,000 stipend + int'l airfare
- 3-wk language & culture Orientation in Tokyo
- 8-wk nanotechnology research internship
- In lieu of pgm fee, enroll in 1 credit of research (~\$1,000)

### Program Schedule

Applications Open:	Mid-November
Applications Due:	January 23
References Due:	February 1
Participants Notified:	Mid-March
Orientation in Tokyo:	Mid-May
Research Internship:	June - August
Research Symposium:	Early August



Southern  
Illinois University  
Carbondale



TEXAS A&M  
UNIVERSITY

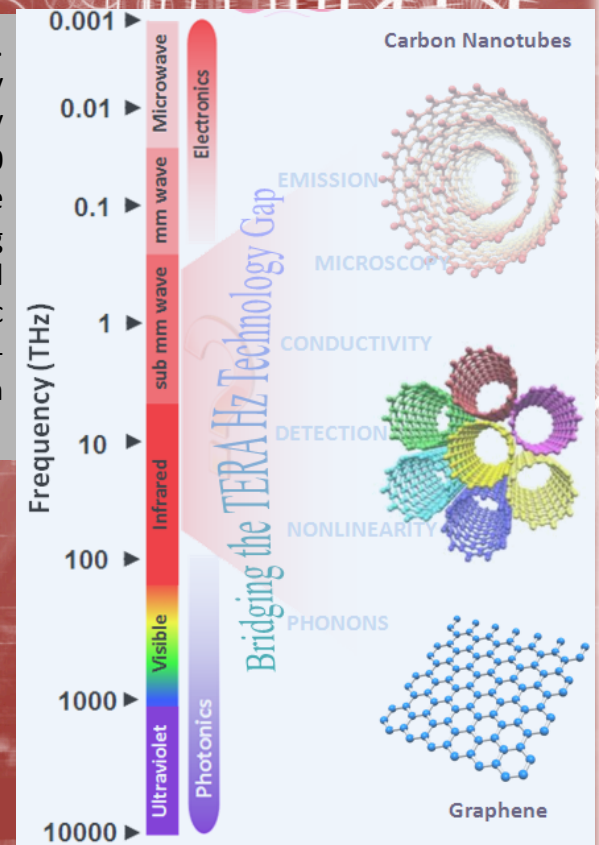
NSF-PIRE: U.S.-Japan Cooperative Research and Education on Terahertz Dynamics in Nanostructures (OISE-0968405)

# U.S.- Japan Cooperative Research and Education on Terahertz Dynamics in Nanostructures

Website: <http://terananopire.rice.edu/>



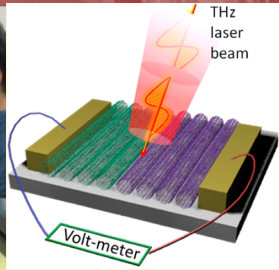
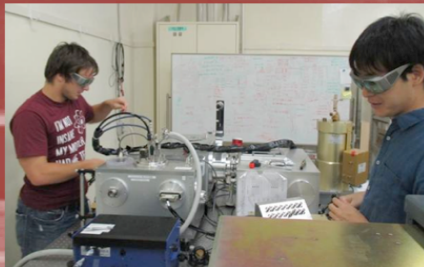
This U.S.-Japan partnership explores terahertz (THz or  $10^{12}$  Hz) dynamics in nanostructures. Electromagnetic waves with frequencies from 0.1 to 10 THz offer many opportunities to study physical phenomena, with potential payoff in numerous technologies. However, this frequency regime is poorly developed compared to those of electronics ( $< 100$  GHz) and photonics ( $> 10$  THz). By a judicious combination of THz technology and nanotechnology ("TeraNano"), we significantly advance our understanding of THz physics while improving existing, and developing new, THz devices. Although Japan and the U.S. are global leaders in both THz research and nanoscience, there remain obstacles to further collaboration between them, primarily linguistic and cultural barriers. By breaking down these barriers, this NSF-PIRE program achieves long-term scientific and societal impact, providing future generations of researchers with an understanding of both the culture, and state-of-the-art technology, in each country.



*Advances quantitative understanding of the THz dynamics of nanostructures and nanomaterials*

*Grows, synthesizes, and fabricates novel nanostructures for THz study and applications*

*Develops experimental techniques in THz spectroscopy and imaging*



Supported by a NSF Partnerships for International Research & Education (PIRE) Grant (OISE-0968405)