INSTITUTE OVERVIEW

**VISION:** The Institute for Electronics and Nanotechnology enables Georgia Tech research, development, and deployment of nanotechnology and nanoscience solutions to challenges of global significance.

**MISSION:** IEN facilitates innovation in micro/nano-enabled electronics & photonics by catalyzing and translating research, connecting Georgia Tech researchers, companies, & government agencies, and preparing the workforce of the future.

IEN provides a focal point for information, facilities & infrastructure for all nanotechnology and nanoscience research at Georgia Tech.

- Over 29,000 sq. ft. in state-of-the-art cleanrooms & laboratories with over 200 shared-user fabrication, test, and characterization tools.
- Shared-user, fee-based tool access available for academic, industry, and government clientele currently serving over 800 users each year.
- Extensive equipment and safety training programs for users coupled with guidance from Georgia Tech’s world-class researchers.
- Intellectual property protection for clients via direct user control of projects and project development.
- Seminars, lectures and short courses that cover the latest nanotechnology research, develop lab-based technical skills, and inform users of the latest in tool and materials advancements.
- 8 research centers and programs that connect nanotechnology research across the fields of materials science, biomedical engineering and electrical engineering.
- Research support for students and faculty via thematic and interdisciplinary ‘grand challenge’ seed grants.
- Wide variety of public outreach programs in nanotechnology that educates school aged children through adult professionals.
- Flexible 2-tier sponsorship model allowing companies the ability to set the level of their support, enabling IEN to enhance programs, relationships, and infrastructure.
- Annual Technical Exchange Conference to connect Georgia Tech faculty with industry and government agencies.
Miniaturization: scaling of CMOS; new materials and devices to extend or replace conventional transistors,
Integration: techniques to combine and integrate micro-/nano-enabled electronics and photonics
Diversification: sensors, actuators, optics, passives, high-frequency communications, and energy harvesting that provide functionality beyond information processing.

Micro-/Nano-enabled electronics and photonics have revolutionized our ability to analyze, store, collect, use and move information using very low power, providing solutions to numerous global challenges including health, mobility, energy, security, infrastructure, and information accessibility.

IEN Executive Director Professor Oliver Brand and Graduate Students in the Marcus Nanotechnology Systems & Devices Laboratory

IEN enables interdisciplinary interactions between researchers in materials and processes, devices and components, circuits, architectures, and systems. There are three primary overarching themes that have enabled this revolution

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