

EDISON

2025

23

Virginia Tech,
Blacksburg,
Virginia, USA
July 20-25, 2025



23rd International Conference on Electron Dynamics in Semiconductors, Optoelectronics and Nanostructures (EDISON 23)

The 23rd International Conference on Electron Dynamics in Semiconductors, Optoelectronics and Nanostructures will be held at Virginia Tech, Blacksburg, Virginia, USA, July 20-25, 2025. It is the 23rd meeting of the international conference series formerly named Hot Carriers in Semiconductors (HCIS), first held in 1973 in Modena, Italy, and since 2009 running under the name EDISON. Past conferences in this series were organized in Buffalo, USA (2017), Nara, Japan (2019) and Münster, Germany (2023).

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Conference Scope

The focus of the EDISON series is on the fundamental physics and applications of nonequilibrium classical and quantum carrier dynamics in semiconductors, optoelectronic devices, and nanostructures. Specific topics of particular interest include:

- Nonequilibrium electronic and thermal transport in materials, nanostructures and devices
- Terahertz phenomena in materials and devices
- Mesoscopic transport phenomena
- Electronic and optical properties of low-dimensional systems, including 2D materials and their heterostructures
- Fluctuations and noise in nonequilibrium carrier dynamics
- Carrier and phonon dynamics, including for quantum and sensor/detector technologies
- Carrier dynamics in ultrafast optical phenomena
- Spintronics, spin coherence, and magnetization dynamics
- Electronic properties, optical properties, and phase transitions of topological materials and devices
- Charge dynamics in energy conversion and energy harvesting processes
- Interaction of charges with plasmonic, phononic and mechanical excitations

Location and Important Dates

The conference will be held on the Virginia Tech campus in Blacksburg, Virginia, USA.

Abstract submission deadline: April 14, 2025

Notification of acceptance: late April - early May, 2025

Web site

<https://indico.phys.vt.edu/e/edison23>

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