



Important Dates

Abstract Deadline: March 1, 2005
Author Notification: May 2, 2005
Early Registration Deadline: June 20, 2005
Hotel Reservation Deadline: June 20, 2005
Manuscript Deadline: July 25, 2005

Website

HCIS-14 Conference information will be posted at the following website address:
<http://hcis14.beckman.uiuc.edu>

Abstract Preparation

The abstract should be no longer than one standard sheet of paper (sizes A4 or 8.5" x 11") including figures. The abstract should be submitted electronically in pdf format or MS-Word doc format. A minimum 10 pt. font should be used. We also ask to limit file size to 2.0 MB or less. Details on the submission process will be available on the website.

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14th International Conference on



Nonequilibrium Carrier Dynamics in Semiconductors (HCIS-14)

July 24-29, 2005
Chicago, Illinois

Hyatt Regency McCormick Place
2233 S. Martin Luther King Drive
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FIRST ANNOUNCEMENT

14th International Conference on Nonequilibrium Carrier Dynamics in Semiconductors (HCIS-14)

This "International Conference on Nonequilibrium Carrier Dynamics in Semiconductors" is the 14th meeting in the series originally known as "Hot Carriers in Semiconductors" (HCIS). Previous HCIS meetings were held in Modena, Italy (1973), Denton, USA (1977), Montpellier, France (1981), Innsbruck, Austria (1985), Boston, USA (1987), Scottsdale, USA (1989), Nara, Japan (1991), Oxford, UK (1993), Chicago, USA (1995), Berlin, Germany (1997), Kyoto, Japan (1999), Santa Fe, U.S.A. (2001), and Modena, Italy (2003).

The conference has been a focus of the hot electron community since its inception in the early 1970s and it has enjoyed increased attendance over the years. In the 1980s, the rapid developments in ultra-fast optical measurements in semiconductor systems brought the optics community together with the hot-carrier community. Likewise, rapid advancements in fabrication of quantum confined semiconductor systems has shifted the interest from primarily bulk materials and devices, to a whole host of material and device structures based on quantum wells, quantum wires, and quantum dots.

Recently, new challenging fields have been added to the traditional subjects of interest to the transport scientific community, including: experiments and theoretical modeling on conduction in organic molecules and biological systems; coherent and entangled carrier dynamics for quantum data processing; semiconductor-based spintronics.

Topics covered by the conference will include:

- Non-equilibrium carrier transport in low dimensional and nanostructure systems
- Non-equilibrium carriers in superlattices and devices
- Small devices and related phenomena
- Non-equilibrium carrier dynamics and fluctuations
- Quantum carrier dynamics
- Coherent/incoherent carrier dynamics of optical excitations and ultra-fast optical phenomena
- Non-linear optical effects
- Transport in organic matter
- Semiconductor-based spintronics
- Coherent dynamics in solid state systems for quantum processing and communications
- Novel materials and devices

Papers from HCIS-14 will be published as a volume of the IOP Conference Series, abstracted and indexed in all the same databases as the IOP journals.

Confirmed Invited Speakers:

Aldo Di Carlo: *Atomistic simulation of transport in organic nanostructures*

Steve Goodnick: *Full band Monte Carlo simulation of hot electron transport in GaN materials and devices*

Mordehai Heiblum: *Interference effects in mesoscopic systems*

Kaz Hirakawa: *Dispersive terahertz Bloch gain in semiconductor superlattices*

Wojciech Knap: *Terahertz nanotransistors*

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