



# 15th International Workshop on Computational Electronics

May 22-25, 2012

University of Wisconsin, Madison, USA

<http://iwce2012.engr.wisc.edu/>

## First Call for Papers

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I. Knezevic (USA)

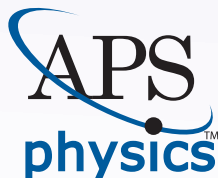
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Division of Computational  
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The workshop covers all aspects of advanced simulation of electronic transport and optoelectronic processes in semiconductors and semiconductor devices based on both inorganic and organic materials. The scientific program consists of invited lectures, contributed talks, and poster presentations. The workshop is held in a single-session format and is intended to be an international forum for discussions on the current trends and future directions of computational electronics. The emphasis of the contributions is on interdisciplinary aspects of computational electronics, touching physics, engineering, applied mathematics, as well as chemistry and biology. Active participation of graduate students, including student presentations, is strongly encouraged.

### General Topic Areas

- 1) Technology CAD
- 2) Semiclassical transport simulation techniques
- 3) Quantum transport simulation techniques
- 4) Ab-initio and atomistic simulations
- 5) Multiscale and multiphysics simulations
- 6) Low-dimensional nanostructures and novel semiconductor device architectures
- 7) Optical processes and optoelectronic devices; intersubband dynamics in nanostructures
- 8) Ultrafast optical and electronic phenomena
- 9) Molecular and organic electronics
- 10) Graphene and graphene-based nanostructures/devices

### NEW FOCUS TOPICS AT IWCE 2012

- 11) Simulation of thermal, thermoelectric, and electrothermal phenomena in nanostructures
- 12) Spin transport
- 13) Materials simulation for energy applications (other than thermoelectrics)

### Abstract and Proceedings

A two-page abstract, consisting of one page text and one page figures, should be prepared as specified on the conference website and emailed to [iwce-abstract@engr.wisc.edu](mailto:iwce-abstract@engr.wisc.edu). Accepted abstracts will be collected in a Book of Abstracts, available at the conference. The authors will have the option to submit a 4-page proceedings paper to be published by IEEE.

### Important Dates

Abstract submission: **January 15, 2012**  
Notification of acceptance: **February 29, 2012**  
Registration open: **February 1, 2012**  
Early registration deadline: **May 1, 2012**  
Conference: **May 22-25, 2012**

### Venue

The conference will be held in Engineering Hall, 1415 Engineering Dr, Madison, WI 53705, USA

**NEW!** Companion Two-Day School on  
**Phonon Dynamics, Heat Transfer, and  
Thermoelectric Phenomena in Nanostructures**  
May 21-22, 2012

More information on the IWCE 2012 website  
<http://iwce2012.engr.wisc.edu/>



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