

2011 Conference “*Innovations in Engineering and Technology Education*”



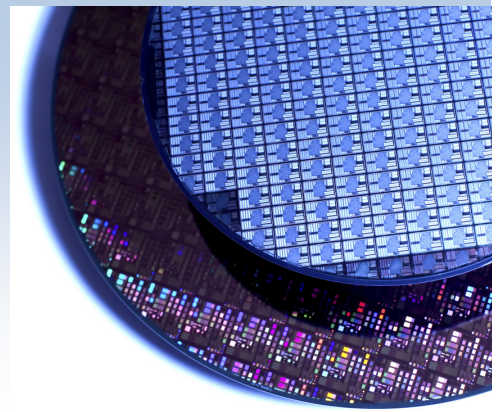
St. Lawrence Section

OF THE AMERICAN SOCIETY FOR ENGINEERING EDUCATION



March 18-19, 2011
Albany, NY

Official Program



Hosted by



**EXCELSIOR
COLLEGE®**

**ASEE
St. Lawrence Section
2011 Conference**

***“Innovations in Engineering and
Technology Education”***

March 18-19, 2011
Albany, NY

Hosted By
Excelsior College

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General Chair:

Dr. Jane LeClair
Dean, Excelsior College

Program Chair:

Dr. Vladimir Mitin
SUNY Buffalo

Treasurer:

Dr. Kathryn Dimiduk
Cornell University

Secretary:

Charles Snead
Excelsior College

Awards Chair:

Dr. Shane Rogers
Clarkson University

Webmaster:

Dr. Kenneth Manning
SUNY Adirondack Community College

Special Thanks:

Dwight Wardell - Membership Manager
Joan Dannenhoffer - Past Chair
John Stratton - Past Chair
Michael Lesczinski
Eileen Young
Tina Perfetti
Sarah Quaile

Conference Information

TRACK THEMES

1. Technological Innovations in Engineering Education
2. Women, Minorities and Veterans in Engineering
3. Mechanical Engineering Education
4. Trends/Open Topics in Engineering Education
5. Electrical and Chemical Engineering Education
6. Renewable Energy & Related Programs

CONFERENCE REGISTRATION

Registration is required for all attendees and presenters. Badges are required for admission to all events. Registration fees (except **Student - not attending banquet**) include admission to the banquet on Friday, March 18. Additional banquet tickets may be purchased for \$30.

REGISTRATION HOURS

Registration hours are Friday, March 18 10:00 a.m. - 5:00 p.m. and Saturday March 19 from 8:00 a.m. - 3:00 p.m.

The Conference registration desk will be located at the Excelsior College main desk in the front lobby at 7 Columbia Circle, Albany, NY 12203.

HOTEL ACCOMODATIONS

Accommodations at the discounted group rate are provided by Holiday Inn located at 205 Wolf Road, Albany, NY 12205. The group ID is ECX.

CONFERENCE PROCEEDINGS

Conference proceedings will be published on the ASEE St. Lawrence Section website <http://stl.asee.org>.

SOCIAL FUNCTIONS

COCKTAIL RECEPTION

Holiday Inn - Upper Mezzanine
6:00 - 6:30 p.m.

CONFERENCE BANQUET

Holiday Inn - Stonehenge Room
6:30 - 8:00 p.m.

COLLEGE OF NANOSCALE SCIENCE AND ENGINEERING TOUR

There will be two tours of the College of Nanoscale Science and Engineering. Tours begin at 11:00 a.m. and 12:00 p.m. on Friday, March 18, 2011. Attendees must register prior to their tour and are required to wear name badges.

Conference Schedule

FRIDAY, MARCH 18, 2011

10:00 a.m. - 5:00 p.m.	Registration
11:00 a.m. - 12:00 p.m.	Nanotechnology Center tour #1
12:00 p.m. - 1:00 p.m.	Nanotechnology Center tour #2
1:00 p.m. - 2:00 p.m.	Refreshments
2:00 p.m. - 3:45p.m.	Invited Speaker's Session
3:45 p.m. - 4:00 p.m.	Break
4:00 p.m. - 4:30 p.m.	Workshop - High Tech Cheating in Engineering
4:30 p.m. - 5:15 p.m.	Keynote Speaker - John Sammarco (ABET)
6:00 p.m. - 6:30 p.m.	Social Hour - Holiday Inn
6:30 p.m. - 7:15 p.m.	Dinner
7:15 p.m. - 8:00 p.m.	Keynote Speaker - Sohail Anwar (Pennsylvania State University, Altoona College)

SATURDAY, MARCH 19, 2011

8:00 a.m. - 3:00 p.m.	Registration
8:30 a.m. - 9:00 a.m.	Poster Session
9:00 am - 9:45 a.m.	Opening Plenary - Don Millard (NSF)
9:45 a.m. - 10:00 a.m.	Break
10:00 a.m. - 11:45 a.m.	Technical Session: Technological Innovations in Engineering Education Technical Session: Mechanical Engineering and Renewable Energy Technical Session: Women, Minorities, Veterans
11:45 a.m. - 1:00 p.m.	Conference Luncheon Luncheon Speaker - Stephanie Farrell (ASEE)
1:15 p.m. - 3:00 p.m.	Technical Session: Trends/Open Topics in Engineering Education Technical Session: Electrical and Chemical Engineering Education Technical Session: Trends in Assessment of Engineering Education
3:00 p.m.	Reception
3:00 p.m. - 4:00 p.m.	Board Meeting

FRIDAY, MARCH 18, 2011, 2:00 p.m. - 3:45p.m.

Invited Speaker's Session

Rooms C&D

Session Chair: Vladimir Mitin

2:00 p.m.

The Benefits of Incorporating Socially Relevant Projects into the Engineering Curriculum, Kris Schindler, (*University of Buffalo*)

2:20 p.m.

Nanophotonics Modules for Diverse Curricular Incorporation, Albert Titus, Alexander Cartwright, Vladimir Mitin, Natalia Litchinitser (*SUNY - Buffalo*)

2:40 p.m.

Molecular simulation modules for instruction in thermodynamics, transport, kinetics and materials, David Kofke, Andrew Schultz (*SUNY - Buffalo*)

3:00 p.m.

Quantum Optics Laboratory for the Undergraduate Curriculum: Teaching Quantum Mechanics with Photon Counting Equipment, Svetlana Lukishova (*University of Rochester*)

3:20 p.m.

WEB Based Experimentation for Courses on Semiconductor Devices, Michael Shur, Venkata Chivukula (*Rensselaer Polytechnic Institute*)

FRIDAY, MARCH 18, 2011, 3:45 p.m. - 4:00 p.m.

Refreshment Break

Rooms A&B

FRIDAY, MARCH 18, 2011, 4:00 p.m. - 4:30 p.m.

Workshop

Rooms C&D

Session Chair: Kathryn Dimiduk

4:00 p.m.

High Tech Cheating in Engineering, Linette Koren, Susan Mee (*Rochester Institute of Technology/The Wallace Center*)

FRIDAY, MARCH 18, 2011, 4:30 p.m. - 5:15 p.m.

Keynote Speaker - John Sammarco (ABET)

Rooms A&B

Session Chair: Jane LeClair

SATURDAY, MARCH 19, 2011, 8:30 a.m. - 9:00 a.m.

Poster Session/Morning Reception
Rooms A&B

SATURDAY, MARCH 19, 2011, 9:00 a.m. - 9:45 a.m.

Opening Plenary
Rooms A&B
Introductions
Plenary Speaker - Don Millard (NSF)

SATURDAY, MARCH 19, 2011, 10:00 a.m. - 11:45 a.m.

Technological Innovations in Engineering Education Session
Room C
Session Chair: Kathryn Dimiduk

10:00 a.m.

360 Degree Feedback: A Glimpse from the Future Helps Students Now, James Antonakos, Christopher Brandt, Excelsior College

10:20 a.m.

Video Tutorials for the Mobile Studio, Cyril Acholo, Gavin Anaya, Justine Fortier, Christopher Shing, Kenneth Conor, Rensselaer Polytechnic Institute

10:40 a.m.

Innovative Applications of 3D Multimodal Visualizations in Engineering and Technology Education as a Function of Memory Rehearsal, Phuong Do, John Moreland, Korchev Dennis, Purdue University Calumet

11:00 a.m.

Adult Learners and the Online Environment, Charles Snead, Excelsior College

Mechanical Engineering and Renewable Energy

Room D
Session Chair: Vladimir Mitin

10:00 a.m.

An Innovative Approach to a Wind Power Course, Larry Villasmil, Carl Lundgren, Rochester Institute of Technology

10:20 a.m.

“Energy” as a Vehicle to Convey Societal Context, Current Issues, and Varied Perspectives, Steven Pilgrim, Alfred University

10:40 a.m.

Project Based Learning - Student’s Perspective, Devin Hamilton, Elizabeth Kiefer, and Carl Lundgren, Rochester Institute of Technology

Women, Minorities, Veterans, Transfer students, Pre-college students

Room E

Session Chair: Jane LeClair

10:00 a.m.

Engineering a place for women: A study of how departmental climate influences the career satisfaction of female mechanical engineering faculty members, Monica Young, Syracuse University

10:20 a.m.

Creating an educational pipeline STEM initiative for Women, Minorities and Veterans in Nanoscale Science and Engineering, Joseph Bowman, Celia Rouse, University at Albany, Harl'O Fisher, Center for Urban Youth and Technology, SOE

10:40 a.m.

Strategies for Attracting and Retaining More Women in Technology Programs, Diane O'Connor-Easton, Andrew Wheeler, Ellen Lahr, and Anne Connor, Excelsior College

11:00 a.m.

Helping Transfer Students Succeed in Engineering and Engineering Technology Programs, Surendra Gupta, Vincent Amuso, Daniel Johnson, Michael Eastman, John Morelli, RIT

SATURDAY, MARCH 19, 2011, 11:45 a.m. - 1:00 p.m.

Conference Luncheon

Rooms A&B

Keynote Speaker: Stephanie Farrell (ASEE)

SATURDAY, MARCH 19, 2011, 1:15 p.m. - 3:00 p.m.

Electrical and Chemical Engineering Education

Room C

Session Chair: Kathryn Dimiduk

1:15 p.m.

A Hardware Platform for Implementing Control Designs on the Quanser DC Motor Control Trainer, Shouling He, University of Pittsburgh - Johnstown Campus

1:35 p.m.

Magnetic Levitation Systems Using Analog and Digital Controllers for Control Systems Courses, Jianxin Tang, Alfred University

1:55 p.m.

Hand on Materials Engineering Education at Rensselaer, Daniel Lewis, Rensselaer Polytechnic Institute

2:15 p.m.

Integrating Collaboration, Communication, and Biotechnology into Sophomore-level Chemical Engineering Course, Susan Daniel, Cornell University

Trends in Assessment of Engineering Education

Room D

Session Chair: Vladimir Mitin

1:15 p.m.

A Systematic Outcomes Assessment Plan for a Non-traditional EET Program, Arnold Peskin, W. David Baker, Li-Fang Shih, Excelsior College

1:35 p.m.

A New Course to Assess the Professional Skills Required by ABET, Daniel Jones, S. Jayne Baran, Atlas Hsie, SUNYIT

1:55 p.m.

Tracking Program Outcomes, Michael Morrell, New Mexico State University

2:15 p.m.

The syllabus in assessment and accountability: A window on student learning outcomes, Zsuzsanna Szabo, Jack Mahoney, Marist College, RPI

2:35 p.m.

Development of a New Lecture/Lab Course on Quantum Mechanics for Engineering Students, Vladimir Mitin, Nizami Vagidov, Xiufeng Liu, University at Buffalo, SUNY

Trends/Open Topics in Engineering Education

Room E

Session Chair: Jane LeClair

1:15 p.m.

Teaching Practical Software Tools Using Screencasts While Simultaneously Reinforcing Theoretical Course Concepts, Jonathan Ashdown, David Doria, Rensselaer Polytechnic Institute

1:35 p.m.

Using Contemporary Technical Literature to Teach Engineering Fundamentals, James Smith, University of Southern Maine

1:55 p.m.

Revising Disasters as a Curricular Component, Steven Pilgrim, Alfred University

2:15 p.m.

Safety Trends in Engineering Design and Manufacturing Courses, Junichi Kanai, Sam Chiappone, Rensselaer Polytechnic Institute

2:35 p.m.

Engineering Technology Partnership with Industry, Harvey Lyons, Eastern Michigan University

SATURDAY, MARCH 19, 2011, 3:00 p.m.

Reception

Rooms A&B

Board Meeting

Room F



St. Lawrence Section
OF THE AMERICAN SOCIETY FOR ENGINEERING EDUCATION

Outstanding Teacher Award Recipient



Dr. Susan Daniel
Cornell University

Awarded to Susan Daniel for her enthusiasm in sharing the breadth and scale of chemical engineering with her students, for the resulting revision of her course, Energy and Mass Balances, and for creating a new biotechnology student team project and sharing it with other faculty through ASEE.

About the College of Nanoscale Science and Engineering



The College of Nanoscale Science and Engineering (CNSE) of the University at Albany - State University of New York (SUNY) is a global education, research, development and technology deployment resource dedicated to preparing the next generation of scientists and researchers in nanotechnology.

Excelsior College Map



Main Entrance