

2006 Summer Conference

Sponsored by:

- The National Science Foundation through the Teacher Professional Continuum Program
- The Howard Hughes Medical Institute
- Fleet National Bank, a Bank of America Company and Trustee of the Lloyd G. Balfour Foundation

CALL FOR PAPERS AND REGISTRATION INFORMATION

June 25 to 28, 2006

Integrating Science and Mathematics Education Research into Teaching

*The University of Maine
Orono, Maine*

http://www.umaine.edu/center/2006_Summer_Conference

Important Deadlines:

Abstract submission: May 15
Early Registrations: May 22
Discounted Hotel Rooms: May 15

The Center for Science and Mathematics Education Research is sponsoring a conference from June 25 to June 28, 2006, at The University of Maine.

The conference will open with a banquet and keynote on Sunday evening, June 25th and proceed with plenary and session speakers, workshops, and poster sessions addressing the topic of "Integrating Science and Mathematics Education Research into Teaching." through Wednesday morning June 28th.

Talks and workshops will be suitable for middle, secondary, and post-secondary audiences from biology, chemistry, earth sciences, mathematics, physics, and related fields.

The conference will focus on the following themes:

1. Recent findings from science and mathematics education research.
2. Using discipline-based education research in middle, secondary, and post-secondary science and mathematics classrooms.

3. Research supported strategies to increase participation and learning in science and mathematics, particularly among students from under-represented groups.
4. Strategies for improving student learning using technology in the teaching of science and mathematics.
5. Building effective partnerships to implement research-guided practices in the classroom.

Contact information:

**Center for Science and
Mathematics Education
Research**

- **Conference Director**
Michael Murphy
michael.a.murphy@umit.maine.edu
- **Conference Secretary**
Leisa Preble
leisa.preble@umit.maine.edu

URL:

http://www.umaine.edu/center/2006_Summer_Conference

Following the conference, the Summer Academy, which runs from June 28 through June 30, will continue working along the theme of "Innovations Using Technology in the Middle and Secondary School Classroom."

For more information about the Summer Academy, please refer to the conference website listed above.

CALL FOR PAPERS

2006 National Summer Conference
“Integrating Science and Mathematics Education Research into Teaching”

June 25 to 28, 2006 • The University of Maine • Orono, ME

Sponsored by:
Center for Science and Mathematics Education Research

ABSTRACT SUBMISSION DEADLINE: MAY 15, 2006

ABSTRACT SUBMISSION

Please submit your abstract electronically to michael.a.murphy@umit.maine.edu. All abstracts will be considered for poster presentations. If scheduling permits, some authors will be contacted about the possibility of presenting their papers as twelve-minute contributed talks. The abstract should be no more than 250 words. Please include with your abstract your name, affiliation, mailing address, e-mail, phone and fax. The deadline for abstract submission is **May 15, 2006**. Abstracts received after the May 15 deadline will be considered if space is available.

GENERAL INFORMATION

EARLY REGISTRATION DEADLINE: MAY 22, 2006

REGISTRATION

Please complete the attached registration form, include full payment(if appropriate), and return to the address at the bottom of the form. Early registration deadline is **May 22, 2006**, but registrations will be accepted through the first day of the conference. Some registration fee waivers are available. See the registration form for details. Any further questions concerning waivers should be forwarded to Leisa Preble at leisa.preble@umit.maine.edu.

LODGING

Rooms at the following hotels have been blocked for the conference. Participants are responsible for making their own hotel reservations. Be sure to mention the 2006 Center for Science and Mathematics Education Research Summer Conference to receive the special conference rate. If you have problems with your reservations please contact us by phone or email. To guarantee your hotel room at the conference rate, reservations must be made by **May 15th**. For additional information on hotels in the area, please go to Conferences Service Division Website: http://www.umaine.edu/conferences/lodge_mall.html

University Inn Academic Suites
1-800-321-4921 (Local: 207-866-4921)
\$67.00 Single plus tax
\$77.00 Double plus tax

Country Inn at the Mall
1-800-244-3961 (Local: 207-941-0200)
\$55.00 Single plus tax
\$55.00 Double plus tax

Edith Patch Hall (on-campus housing)
(207) 581-1016 (*Leisa Preble*)
\$50.00 Single
\$33.00 Double (per person)
Roommate's name: _____

**** BOTH HOTELS INCLUDE A COMPLIMENTARY CONTINENTAL BREAKFAST AND HIGH-SPEED INTERNET ACCESS ****

Invited Talks

The relationship of coherence of thought and conceptual change to ability

Pamela A. Kraus, Ph.D.
Research Scientist
FACET Innovations, Seattle, WA

The physical sciences as a basis of integration: The Academy of Science model

Jayne Fonash
Director of Guidance
Loudoun County Public Schools, Academy of Science, Sterling, VA

Gender in science and math education

Laura McCullough, Ph.D.
Science Education Program Director
Associate Professor, Physics Department
University of Wisconsin-Stout, Menomonie, WI

Development of laboratories for introductory physics

Luanna G. Ortiz, Ph.D.
Department of Physics and Astronomy
Arizona State University, Tempe, AZ

What we know about preparing secondary science teachers: a few facts, many assumptions and great deal of unanswered questions.

Nicole M. Gillespie, Ph.D.
Senior Program Officer, Science
Knowles Science Teaching Foundation

Implementing and evaluating instructional reform in the urban physics classroom

Mel Sabella, Ph.D.
Department of Chemistry and Physics
Chicago State University, Chicago, IL

Crossing cultural borders for Native American students in the Earth Sciences

Eric Riggs Ph.D.
San Diego State University, San Diego, CA

The role of proportional reasoning in science instruction

Stephen Kanim, Ph.D.
Department of Physics
New Mexico State University, Las Cruces, NM

Conference website: www.umaine.edu/center/2006_Summer_Conference/

For updated lists, please check the website. We are expecting 30 speakers at this year's conference. New speakers will be added as the details of their presentations become available.

Summer Academy

"Innovations Using Technology in the Middle and Secondary School Classroom" June 28 to 30, 2006 • The University of Maine • Orono, ME

Please note: Each of these courses may be taken as a workshop for CEUs or continued into the Fall 2006 semester as a one-credit graduate course. Registrants are responsible for tuition and fees. Additional workshops will also be available during the Summer Academy.

For detailed description of courses please check online at:

http://www.umaine.edu/center/2006_Summer_Conference/Academy_Courses.htm

Sponsored by: The University of Maine - Center for Science and Mathematics Education Research

Academy Registration

Last Name: _____ First Name: _____ Middle Initial: _____

eMail: _____

Select the courses you wish to participate in below (at most one from each time slot, Section 3 and the Aquaculture workshop are off site and will each take the full time).

SMT598 Section 1: Learning Mathematics with Excel

Target audience: Pre-service or in-service middle or high school mathematics and science teachers.

Taught by: John Donovan, Assistant Professor of Mathematics and Mathematics Education

Initial meetings: Wednesday and Thursday afternoons

SMT598 Section 2: UV-Spectroscopy: Compounds, Color and Concentration

Target audience: Science teachers in grades 7-12.

Taught by: Mitchell Bruce and Francois Amar, Associate Professors of Chemistry

Initial meetings: Thursday and Friday mornings

SMT598 Section 3: Data Data Everywhere! Making sense of environmental inquiry in a sea of online data

Target audience: In-service and pre-service middle and high school science or mathematics teachers, Maine Learning Technology Initiative teachers, and environmental educators at public and private environmental education institutions.

Taught by: Molly Schauffler, Assistant Professor, Climate Change Institute and Center for Science and Mathematics Education Research (Adjunct)

Initial meetings: Wednesday afternoon through noon Friday, at the Schoodic Education and Research Center; housing will be provided.

SMT598 Section 4: Using Computer Tools to Diagnose Student Reasoning

Target audience: In-service and pre-service secondary and middle school science and mathematics teachers.

Taught by: Michael Wittmann, Assistant Professor of Physics and Cooperating Assistant Professor of Education

Initial meetings: Wednesday and Thursday afternoons

SMT598 Section 5: Geometer's Sketchpad for Standards-Based Middle School Mathematics

Target audience: Middle school in-service and pre-service mathematics and science teachers

Taught by: Robert Franzosa, Professor of Mathematics

Initial meetings: Wednesday and Thursday afternoons

SMT598 Section 6: Using Data Acquisition Tools to Enhance Learning in Secondary Physical Science

Target audience: In-service and pre-service physical science teachers

Taught by: Michael Wittmann, Assistant Professor of Physics and Cooperating Assistant Professor of Education

Initial meetings: Thursday and Friday mornings

SMT598 Section 7: Real-Time Data Collection Software Use in Algebra, Pre-Calculus, and Calculus

Target audience: Middle and high school in-service and pre-service mathematics teachers

Taught by: Robert Franzosa, Professor of Mathematics

Initial meetings: Thursday and Friday mornings

Aquaculture Workshop: Domestication of Aquatic Organisms

This workshop will be held at the Schoodic Education and Research Center June 28th through June 30th.

Presented by: Dr. Paul Rawson, School of Marine Sciences, University of Maine and Neil Greenberg, Aquaculture Research Complex, University of Maine

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Conference Registration

Complete the pre-registration form, include full payment (if not waived), and return to the Conference Administrative Office at the address below. Registration includes 2 banquets, 3 continental breakfasts, 1 lunch, coffee breaks, and 2 afternoon workshops. 1.5 CEU's can be obtained for Conference attendance. More information on CEU's will be available during the conference.

Pre-Registration Deadline: May 22, 2006

Pre-registrations **WILL NOT** be accepted after May 22, 2006. Cancellations received before May 22, 2006 will receive a refund less a \$25.00 administrative fee.

Last Name: _____ First Name: _____ Middle Initial: _____

Name as you would like it to appear on nametag: _____

Title: _____ Affiliation: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Work Phone: _____ Home Phone: _____

Fax: _____ eMail: _____

Special Accommodations Required: _____

Meal Sensitivities or Restrictions: _____

Registration Fee: \$150.00

TOTAL \$ REMITTED _____

Registration fees are waived for members of the following groups. If you qualify, please indicate which.

<input type="checkbox"/> Middle or Secondary School Teacher <input type="checkbox"/> Knowles Science Teaching Fellowship Fellow <input type="checkbox"/> UMS Faculty <input type="checkbox"/> Student in science, mathematics, or education program	<input type="checkbox"/> Postdoctoral Research Associate <input type="checkbox"/> Conference invited speaker <input type="checkbox"/> Curriculum coordinator
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- Stipends will be provided for the first 100 middle or secondary school teachers who agree to attend the Conference and the Summer Academy immediately following the conference. If you would like to be considered for this stipend, please check here. Be sure to complete the Summer Academy registration form.

Special Event: Please indicate your choice of entrée for the Banquet on June 27

- Lobster Steak Vegetarian

If you will not be attending one or both of the banquets please indicate which here:

- I will **not** attend the banquet on Sunday, June 25th I will **not** attend the banquet on Tuesday, June 27th

Lodging: Rooms at the following hotels have been blocked for the conference. Participants are responsible for making their own hotel reservations. Mention the 2006 Center for Science and Mathematics Education Research Summer Conference to receive the special conference rate. If you have problems with your reservations please contact us by phone, fax or email. To guarantee your hotel room, reservations must be made by May 1st. For additional information on hotels in the area, please go to Conference Services Division Website: http://www.umaine.edu/conferences/lodge_mall.html

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 \$50.00 Single
 \$33.00 Double (per person)
 Roommate's name: _____

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Payment Information (registration will only be confirmed when payment is enclosed)		
<input type="checkbox"/> Check	Check # _____	(Please make checks payable to: The University of Maine)
<input type="checkbox"/> Purchase Order	PO# _____	

Please send completed registration form to:
Patricia L. Byard
Department of Physics & Astronomy
2006 Summer Conference
120 Bennett Hall
University of Maine
Orono, ME 04469-5709

Contact Information
Department of Physics and Astronomy Office
 Tel: (207) 581-1016 Fax: (207) 581-3410
Conference Director: Michael Murphy
Email: michael.a.murphy@umit.maine.edu

Conference Website:
http://www.umaine.edu/center/2006_Summer_Conference