

The Math–Science Connector

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**Holiday Inn Fort Myers
Airport Town Center
9931 Interstate Commerce
Drive
Fort Myers, FL**

109th Annual Convention

“SUSTAINABILITY”

Ft. Myers, FL

Nov. 4-6, 2010

Make hotel reservations on the Website:

[Holiday Inn Ft. Myers Airport](#)

group code SSM

or call 239-561-1550

Make your reservations by Oct. 10 for the discounted rates in the room block.

Convention registration information

is available on the SSMA website:

<http://www.ssma.org/>

Convention Travel Information

Southwest Florida International Airport (RSW) -- more than 20 airline partners serve RSW with nonstop service throughout North America.

The Hotel offers free Airport shuttle service. Call the hotel (239-561-1550) for the shuttle and they will pick you up at door 5.

Convention Preview

The Theme for the 2010 annual SSMA Convention is SUSTAINABILITY. The Convention starts with 8:00 A.M. sessions Thursday morning and concludes Saturday afternoon. Eight roundtable discussions are scheduled throughout the day on Friday. Topics relate to issues surrounding the sustainability of quality science and mathematics education.

In addition to regular sessions, we will offer special sessions related to STEM education sustainability issues, as well as environmental sustainability issues unique to southwest Florida.

Special Saturday Sessions – Convention participants will select from among 4 options for Saturday sessions that begin immediately after the business breakfast. Each session will run from 9:00 AM to 1:00 PM. Lunch will be served at the hotel following the sessions. Participants will be asked to make their selection when they register for the convention to ensure adequate transportation arrangements for outdoor sessions.

- 1) **Guided wet walk through the majestic Six Mile Cypress Slough:** Participants will walk through this beautiful slough filled with Cypress trees and diverse populations of plants and animals, including some rare and listed species. The slough provides natural drainage for the area, collecting runoff water from a 33 square-mile watershed. During the wet season (June through October), water in the slough ranges in depth from 2 to 3 feet.
- 2) **Guided tram tour through The J. N. "Ding" Darling National Wildlife Refuge:** The refuge is part of the largest undeveloped mangrove ecosystem in the United States. It was created to safeguard and enhance the pristine wildlife habitat of Sanibel Island, to protect endangered and threatened species, and to provide feeding, nesting, and roosting areas for migratory birds. Today, the refuge provides important habitat to over 220 species of birds.
- 3) **Guided trail walk through Corkscrew Regional Ecosystem Watershed (CREW):** Home to many rare and endangered animals this autumn hike should be a pleasant easy walk along well maintained flat trails that include some board walk and a marsh overlook. Trails and boardwalks will take visitors through pine flatwoods, an oak hammock, a popash slough, and provide a view the marsh from an overlook.
- 4) **STEM Education Summit:** This session will engage the membership of SSMA in a discussion with national leaders engaged in STEM work from leading organizations that have a vested interest in STEM focused on national policy, research, and practice in this area. SSMA is poised to take a leadership role in the arena of STEM. This Summit will begin a conversation within the organization about the STEM talent crisis, the promise of integration of STEM subjects to address issues grounded in the real-world and suggestions for innovative approaches to practice.

Each outdoor session will be guided by experts in the field and include opportunities to learn about the environment and wildlife of the region.

Convention Social Activities: The following two social activities will require advance registration and payment to ensure accurate counts for planning purposes.

Friday Evening – 5:30 to 9:30 PM - *Dinner and Boat Tour at Florida Gulf Coast University’s Norm and Nancy Vester Marine and Environmental Science Research Field Station*

Enjoy a feast of local seafood and world famous alligator ribs, tour the back bay on pontoon boats or by canoe, and learn about the ongoing FGCU marine research. There may be some local entertainment as well. **(Cost is \$40.00 per person.)**

Saturday Afternoon and Evening - *Bus Transportation to and from Fort Myers Beach*

Buses will run regularly between the convention hotel and Fort Myers Beach between 2:00 PM and 10:00 PM to provide the opportunity to enjoy the beautiful gulf beaches, restaurants and shopping on Estero Island. **(Cost is \$10.00 per person; covers transportation only.)**

Planning your trip to Fort Myers – We invite you to take advantage of the pre-season hotel rates and beautiful weather. Bring the family or spend an extra couple of days visiting the many interesting and educational attractions in the area.

5-20 minutes from Hotel:

- FGCU Campus (5 minutes from hotel) www.fgcu.edu
- Boardwalk at Six Mile Cypress Preserve (20 minutes from hotel) <http://www.leeparks.org/sixmile/>
- Koreshan State Historic Site (15 minutes from hotel) <http://www.stateparks.com/koreshan.html>

20-50 minutes from Hotel:

- Corkscrew Swamp Sanctuary (30 minutes from hotel): <http://www.corkscrew.audubon.org/>
- Lover’s Key State Recreation Area – beach, canoeing, fishing (40 minutes from hotel) <http://www.floridastateparks.org/loverskey/default.cfm>
- Naples Botanical Garden (40 minutes from hotel) <http://www.naplesgarden.org/>
- Edison Home & Laboratory (Downtown Fort Myers - 30 minutes from hotel) <http://www.efwefla.org/>
- Butterfly Estates (Downtown Fort Myers – 30 minutes from hotel) <http://thebutterflyestates.com/public/welcome.asp>
- Lake Trafford – air boat ride (40 minutes from hotel) <http://www.laketrafford.com/>
- Ding Darling National Wildlife Refuge – birding (on Sanibel Island - 40 minutes) <http://www.fws.gov/dingdarling/>
- Sanibel and Captiva – beaches, dining, shopping (40 minutes from hotel) <http://www.sanibel-captiva.org/islands/index.asp>
- ECHO: Educational Concerns for Hunger Organization (40 minutes from hotel) <http://www.echonet.org/>

An hour or more from the Hotel but worth the trip:

- Shark Valley Tram Ride (in Everglades National Park)
<http://www.sharkvalleytramtours.com/>
- Clyde Butcher Galleries (near Everglades National Park)
<http://www.clydebutcher.com/clyde-butcher-galleries.cfm>
- Everglades City Rod and Gun Club <http://www.evergladesrodandgun.com/>
- Fakahatchee Strand Preserve State Park (60 minutes from hotel)
<http://www.floridastateparks.org/fakahatcheestrand/>
- Cayo Costa State Park (60 minute drive then ferry ride to the island)
<http://www.floridastateparks.org/cayocosta/>
- Myakka River State Park (60-75 minutes from hotel) <http://www.myakkariver.org/>

Shopping Malls in the vicinity of the hotel:

- Gulf Coast Town Center (Across the street from hotel)
<http://www.gulfcoasttowncenter.com/shop/gulf.nsf/index>
- Miromar Outlet Mall (5 minutes from the hotel) <http://www.miromaroutlets.com/>
- Coconut Point Shopping Mall (15 minutes from hotel)
<http://www.simon.com/mall/default.aspx?id=1202>

We look forward to seeing everyone in sunny Fort Myers!



City of Fort Myers <http://www.cityftmyers.com/>

Fort Myers Chamber of Commerce <http://www.fortmyers.org/>

The Best Things to Do in Fort Myers http://www.10best.com/Fort_Myers,FL/

SSMA President's Column: Alan Zollman

Defining College Readiness

I am a member of my university's Higher Education Transitions Committee. This committee is charged with addressing a long-standing problem – the lack of alignment among institutions about expectations for knowledge and skills that incoming university students need in order to graduate in a timely fashion. This issue affects many aspects of curriculum, instruction, assessment and operations in high schools, community colleges, and universities, but the heaviest burden falls on students – their academic performance, their finances, and their hopes. Specifically we are charged to answer: What cognitive strategies, content knowledge, academic behaviors, and contextual skills are essential for a high school student successfully to be “college ready”?

One aspect of my committee work is identifying and reading a multitude of reports, white papers, and national studies. Many of the reports have similar findings and recommendations. In particular, I found three reports to be very interesting and useful.

Mid-continent Research for Education and Learning (McREL) reviewed 230 books and research reports on quantitative studies to correlate certain student characteristics and elements of college success. The McREL report, *College Readiness* (McREL, 2010), identified several findings from the literature. First and foremost was a rigorous, comprehensive curriculum (of mathematics, English, and the sciences) throughout a K-12 education as the most important factor. Second was the ability of the student to set learning goals and be a self-regulated learner.

A high school student's gender, socio-economic status, ethnical background, GPA, test scores, or listed school curriculum are **not** indicators of success in college as identified in the DOE report, *Toolbox Revisited: Paths to Degree Completion High School through College* (Adelman, 2006). This report is based upon national grade-cohort longitudinal studies, conducted by the National Center for Education Statistics, that followed 8th graders on through college. The highest level of mathematics reached in high school is the key identifier, with the tipping point now firmly above Algebra 2. But along with the course selection is the *rigor* of the course. Does an “A” received in high school trigonometry (or chemistry) relate to the entrance knowledge, skills and abilities expectations in college for an “A”, or is it more like one would expect of a “C” student?

David Conley in *Toward a More Comprehensive Conception of College Readiness* for the Gates Foundation (Conley, 2007) talks about the expectation disconnect by high school students and college faculty. The students believe taking and passing college-prep courses prepares them for college courses. There is a difference between college readiness and high school competence. With the high number of students who are taking remedial courses in college (approximately 40%), there is an extrication in expected rigor.

College faculties identify key cognitive strategies (such as analysis, precision, reasoning and problem solving) as being more important than any specific college-prep content knowledge. Interestingly, 65% of college students, based on what they now know, say they wished high schools would had tougher expectations. They would have worked harder and applied themselves more in high school, even if it meant less time for other activities (Hart Research Associates, 2005).

What is in store for us in the future? First, traditional measures of college readiness (courses taken, grades received, and national test scores) have not proven to be good measures. So states are preparing to follow each student beyond grade 12 to measure success of public schools – an outcome-based assessment. Second, with the acceptance of the *K-12 Common Core State Standards* (National Governors Association Center for Best Practice, 2010), there is a movement to increase rigor for specific content, possibly through end-of-course examinations. Third, K-16 teachers will have responsibly in teaching academic behavior to help students develop into self-regulated learners. Fourth, colleges will be expected to assist students to become more mature students, to navigate college as a social system and as a learning environment.

References

- Adelman, C. (2006). *The Toolbox Revisited: Paths to degree completion from high school through college*. Washington, D.C.: U.S. Department of Education.
- Conley, D. T. (2007). *Toward a more comprehensive conception of college readiness*. Eugene, OR: Education Policy Improvement Center.
- Hart Research Associates, (2005). *Rising to the challenge: Are high school graduates prepared for college and work?* Washington, D.C.: Achieve, Inc.
- Mid-continent Research for Education and Learning. (2010). *College Readiness*. Denver, CO: McREL.
- National Governors Association Center for Best Practice. *K-12 common core state standards*. Washington, D.C.: National Governors Association and the Council of Chief State School Officers. June 8, 2010



Thank you to Co-Executive Director Sandi Cooper for 5 years of faithful service!!

Sandi will be concluding her term at the end of June.



Juliana Utley, Oklahoma State University, will be joining Julie Thomas as Co-Executive Director effective July 1, 2010.

Report of the Spring SSMA Board of Directors Meeting: Alan Zollman

The organization is in very fine shape. The Board of Directors is professional, respectful, efficient and effective. Each of the seven standing committees has done a wonderful job this past year. Specifically:

The move of the *Math-Science Connector*, SSMA's newsletter, from past-editor Valeria Amburgey to new editor Gil Naizer has been seamless. Past newsletters are now online at <http://www.ssma.org/>. We miss Valeria, but are pleased with Gil's superb work.

The transfer of the *School Science and Mathematics Journal* to Wiley-Blackwell was completed with the January 2010 issue. In January the massive snow storms in the East caused delays, but everything is now on time. As well as the *Journal* now being in both electronic and print format, we have transferred all manuscript submission, review, and decision procedures to the ScholarOne Submission and Review System. The Wiley-Blackwell website has the current issues of the journal. In addition, Wiley-Blackwell has made electronic archive copies of all articles of the journal – back to 1901. These are available to SSMA members, at no cost, by logging into the SSMA web site. The *Journal* issues currently are set in-press until December, 2011.

The Board approved the Call for Editor to replace Gerald Kulm when his term ends July, 2011. Applications will be accepted until August 15, 2010. Finalists will be interviewed during the Fall Board meeting in November. See information about the position in this newsletter.

The Board also approved Juliana Utley of Oklahoma State University to be Co-Executive Director of SSMA with Julie Thomas. Welcome Juliana!

The 2009 Reno Convention was a rousing success in all aspects. The Board thanks the Reno Convention Committee for a great job. The 109th SSMA Convention is set for warm, beautiful Ft. Myers, FL, November 4-6, this year. The 110th Convention will be in picturesque Cheyenne Mountain Resort in Colorado Springs, CO, November 10-12, 2011. Again, information on both upcoming conventions is in this newsletter.

Membership continues to grow, SSMA policies are streamlined, the endowment increased, and our finances are strong.

Ron Zambo, Arizona State University, and Zhonghe Wu, National University, will begin their terms on the Board this fall. Nominations are being sought for Board elections for next year.

Respectfully submitted,
Alan Zollman, President

Call for Proposals

Journal Editor – *School Science and Mathematics*

The School Science and Mathematics Association (SSMA) has served science and mathematics communities for over 100 years, facilitating communications, research and dissemination of knowledge among K-12 teachers and higher education faculty. The official journal of SSMA, *School Science and Mathematics* (continuously published since 1901), is one of the most prestigious journals among science and mathematics educators. Currently the Association is soliciting applications for the position of Editor of *School Science and Mathematics*, for the term July 1, 2011 to June 30, 2016. The Board of Directors plans to select the new Editor (or Co-Editors) at its meeting in November, 2010. Prospective applicants for the five-year term of Editor need to provide the Search Committee with *evidence of the following*:

1. Strong professional commitment to the editorial role of a major international professional journal
2. Available logistical support to produce a quality journal punctually, including the time required for accomplishing the duties of the Editor (e.g., institutional support – minimum 50% release time for Editor, 50% secretarial support), adequate office space, accepted procedures to update the Executive Director on budgetary matters
3. Appropriate professional background knowledge and experience to support both science and mathematics education
4. Sound organizational, administrative, and communication skills
5. Personal commitment to goals of the School Science and Mathematics Association
6. Proven editorial abilities and experience, including the capability to work cooperatively with other professionals.

The SSMA typically awards the editorship as a grant contract to the host institution. The Association characteristically provides annual support to hire an appropriate editorial staff, plus furnishes supplies and a computer system. SSMA allots some support for the one-year transition before assuming the editorship. The Association pays the expenses of the Editor to attend the Board Meetings twice per year.

Submitted proposals should describe specifically the Editorial Office operations, the composition of the internal Editorial Board specific to both science and mathematics education, and the planned resource utilization procedures. Submit the proposal, with appropriate documentation, electronically by August 15, 2010, to office@ssma.org. Finalists will be interviewed during the Board Meeting in May 2010 in Ft. Myers, Florida.

For more information, contact Don Balka (donbalka@sprintmail.com)

School Science and Mathematics Journal Information

Manuscript Submission

Authors who wish to submit manuscripts to the Journal should use the ScholarOne website <http://mc.manuscriptcentral.com/ssm>. For manuscript guidelines, see the inside back cover of the Journal, or the website at ssmj.tamu.edu. The review process takes 4-6 months; however, there is currently a backlog of accepted manuscripts, so publication is six months to a year following acceptance.

Reviewers are needed. To volunteer for this important professional service, please use the ScholarOne website.

Call for Proposals School Science and Mathematics Special Issue on STEM Education

The *School Science and Mathematics* editorial staff requests the submission of manuscripts for an upcoming special issue on Science, Technology, Engineering, and Mathematics (STEM) education. In a growing era of STEM related policy, research, and practice, there is an emerging need to disseminate cutting edge educational research focused on STEM in PreK-20. In particular, we are seeking manuscripts on integrated STEM in the following areas:

- Implications of STEM related policy at the federal, state, or local levels
- Studies of PreK-12 teachers and or schools/districts implementing STEM programs and/or themed schools
- Post-secondary STEM discipline student recruitment programs – growing of the pipeline
- Integration of STEM careers into K-12 curriculum
- Partnerships between private and public organizations, higher education, and PreK-12 schools to address regional, state, or national STEM talent shortages
- Studies of the impact of integrated STEM instruction on student achievement in science and/or mathematics

All manuscripts must meet the length and format guidelines for the journal (see the information at <http://ssmj.tamu.edu/>). A group of Reviewers and Associate Editors will be identified to review the manuscripts. A total of five manuscripts will be selected for publication in the STEM Special Issue to be published in January, 2012.

Manuscripts need to be submitted by January 31, 2011 through the Scholar One website: <http://mc.manuscriptcentral.com/ssm>. Please indicate in your cover letter that your manuscript is to be considered for the STEM special issue.

Dr. Carla C. Johnson, Associate Professor of Science Education, University of Cincinnati, will serve as the Guest Editor for this special issue. If you have questions regarding the appropriateness of a topic/manuscript for this special issue, please contact Dr. Johnson at Carla.johnson@uc.edu.

Call for SSMA 2010 Awards

Deadline for submission of nominations: September 15, 2010

The SSMA Awards Committee invites the membership to submit nominees to be considered for the following awards:

- **GEORGE G. MALLINSON DISTINGUISHED SERVICE AWARD**
 - How nominee has shown substantial participation and leadership in SSMA activities
 - How nominee has exhibited scholarship, leadership, and/or teaching excellence in mathematics/science education
- **AWARD FOR EXCELLENCE IN INTEGRATING SCIENCE AND MATHEMATICS**
 - How person or group has fostered, promoted, and extended the integration of mathematics/science at the elementary, secondary, or university level
 - How person or group has impacted science/mathematics education
- **SSMA SCIENCE AND MATH GRANT AWARD**
- **OUTSTANDING EARLY CAREER SCHOLAR AWARD**

The criteria for each award can be found online at <http://www.ssma.org/awards.php>. Any member of SSMA is free to nominate a person(s) satisfying the criteria noted above. An application may remain active for three years. Winner receives a complimentary conference registration. The recipients of these awards will be recognized at the SSMA Annual Convention.

Materials (for each award) are to be sent electronically to **Alfinio Flores** (alfinio@udel.edu) prior to **September 15, 2010**.

Nominations for SSMA Board of Directors

Members may suggest candidates to serve on the SSMA Board of Directors, by contacting Georgia Cobbs, Chair of the Nomination and Election Committee by October 1, 2010. Self-nominations are accepted as well.

In addition to the two Board members, this year we will elect a new President-Elect. The President-Elect position is a four year commitment with one year as President-Elect, President (2 years), and one year as Past President.

Responsibilities of the SSMA President include:

- Articulate the organization's mission and purpose
- Ensure effective long-range organizational vision
- Manage resources effectively
- Determine and monitor the organization's programs and services
- Enhance the organization's public image
- Evaluate the organization's performance in fulfilling its responsibilities

If you are interested, or would like to nominate someone, contact.

Georgia Cobbs
The University of Montana
105 Education
Missoula, MT 59812
georgia.cobbs@mso.umt.edu

Also the Association always seeks volunteers for its six standing committees of Awards & Endowment, Conventions, Finance, Nomination & Election, Policy, and Publications. If you are interested in any of the committee positions, just contact the SSMA Office at office@ssma.org.

Save the Date:

**SSMA 2011 Annual Convention
Colorado Springs, Colorado
November 10 - 12, 2011**

Where: The beautiful, mountainside Cheyenne Mountain Resort in Colorado Springs, Colorado. See view from the hotel below.

<http://www.cheyennemountain.com>

CALL FOR PROPOSALS - Look for the proposal announcement at the fall convention. ***The proposal due date will be January 31, 2011.*** This will ensure that speakers are notified of their acceptance prior to the ending of the academic year.



About Our Organization...

SCHOOL SCIENCE AND MATHEMATICS ASSOCIATION

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Oklahoma State University

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(405) 744-8018

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(405) 744-6290

E-Mail:
office@ssma.org
We're on the Web!

See us at:

<http://www.ssma.org/>

Membership in the School Science and Mathematics Association is open to any person who supports the objectives of the Association, who has paid membership dues, and completed an application.

Benefits of SSMA Membership include:

- Membership in an association encompassing both science and mathematics teaching and learning.
- Choice of electronic or print subscription to the 8 issues of the official journal *School Science and Mathematics*.
- Free electronic access to archive articles of the previous 110 years of Journal
- 2 issues of the SSMA newsletter *The Math-Science Connector*.
- Opportunities to submit presentation proposals for the Annual Convention.
- Voting privileges for Association business and election of officers.
- Opportunities to serve on an SSMA Committee or Leadership Team.

Additional information about SSMA is available at our website (<http://www.ssma.org>) or by contacting **Julie Thomas and Juliana Utley** (office@ssma.org).



To contribute news items for inclusion in the SSMA newsletter (*The Math-Science Connector*), please contact **Gil Naizer** (gilbert_naizer@tamu-commerce.edu).

Contact information for all SSMA Board Members and Committee Members can be found online at <http://www.ssma.org/>