

Consortium Connections

Connecting campuses to promote excellence in science and mathematics

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Mark your calendar for upcoming events (see sections in newsletter for more information)

- Sept. 29, 2017 Registration deadline for Research Symposia (<http://mathsciconsortium.org>)
- Nov. 3-4, 2017 Physical Sciences, Mathematics and Computer Science Symposium in Chicago
- Nov. 10 - 11, 2017 Biological and Psychological Sciences Symposium in St. Louis

Comments from the Director



As I was riding to campus this past week I noticed a tree starting to show some yellow and red leaves. This same tree is always one of the first to change color and is a consistent harbinger of the upcoming fall season. In a similar way, the start of the fall semester on each of our campuses is a harbinger of the annual Midstates Consortium for Math and Science Undergraduate Research Symposia. The Symposia to be held this fall will mark the 30th year of students from the member schools coming together to present their research in the physical sciences, mathematics, computer science, biology and psychology. The Midstates Consortium, established in 1988 through funding from The Pew Charitable Trusts, was one of 8 such clusters that included a total of 72 institutions across the country. When the Pew funding

for the program ultimately ended in 1998, the Midstates member schools decided that the benefits of the consortium activities were worth a sustained investment and determined to continue certain aspects of the program through financial support provided by the member schools. In a 1996 report to the Pew Charitable Trusts, Director Jim Swartz wrote “We are convinced that the undergraduate research symposia are successful in that they bring together students and faculty to not only share their research results, but to build a community which is supportive of undergraduate participation in research as effective teaching.” After 20 years of member institution investment in the Midstates Consortium, which is indeed a remarkable achievement, the idea of a shared community to support science research and teaching is as important as ever. It is essential for both students and faculty to be connected to ideas and have face-to-face discussions with people beyond their home institutions, to expand their community for learning. During my first year as Midstates Director it has been rewarding to see the interactions at meetings and workshops and to learn about new contacts that lead to continued professional discussions. As we begin another academic year, I encourage everyone to consider how the various Midstates programs can lead to further connections for collaborative research and learning within our Consortium community.



*Mike Seymour
MCMS Director*

The following pages of the newsletter have a brief description of activities that have already taken place during the spring and summer of 2017 and information on upcoming 2017 events. Best wishes to all for a great start of the 2017-18 academic year.

2016-17 Annual Executive Committee Meeting

The annual executive committee was held on April 22, 2017 at the Aloft Hotel in Rosemont, IL. The campus representatives from 12 of the 13 member institutions were in attendance, as well as the Director (Mike Seymour) and Administrative Assistant (Ann Schutt). This was the first executive committee for the new Director, who had started his appointment on July 1, 2016. He thanked key people who had been involved with the consortium operations during 2015-16 while the search for the new Director was underway, as well recognizing the previous Director and Administrative Assistant, Brandy Russell and Sara Sletten, for their valuable assistance and advice as the consortium administration was moved from Gustavus Adolphus College to Hope College.

The committee discussed reports for the two Undergraduate Research Symposium that were held at the University of Chicago and Washington University in St. Louis. The biological sciences/psychology meeting in Chicago had 83 students and 17 faculty in attendance, while the St. Louis meeting for physical sciences/mathematics/computer science had 102 students and 16 faculty in attendance. On-line survey results for both meetings indicated they were well received by students and faculty, and that they would recommend participation to future students.

Other programs reviewed for the year were the 2016 Early Career Workshop held at Gustavus Adolphus College with 16 participants from 10 member institutions, support for one Short Term Consultation, and funding for 5 presentations through the Seminar Speaker Series.

The nominations for the Janet Anderson Lecture Award were considered and the 2017 recipients are Dr. Julie Legler (St. Olaf College) and Dr. Thomas Varberg (Macalester College).

The proposed budget for continuation of the current programs for the 2017-18 program year was approved, keeping the annual institutional support from each member school at \$10,000. It was decided that support for additional faculty development events or programs of topical interest would be based on a Request for Proposal that would be reviewed by the committee. The RFP will be sent via campus representatives later this fall semester.

Details of the above items will be included in the Annual Report that will be sent to Executive Committee members and appropriate campus administrators in early December.

2017 Early Career Workshop



2017 Early Career Workshop participants at Gustavus Adolphus arboretum

The 2017 Early Career Workshop took place July 14–16 at Gustavus Adolphus College with 26 participants from 8 schools and was facilitated by Scott Bur and Brandy Russell from Gustavus Adolphus College. The goal of the workshop was to help each person develop a strategic plan for their career that takes into account research, teaching, service, collegial interactions, mentoring and life beyond work. In order to have a systematic approach for setting and prioritizing the plan, the facilitators suggested breaking the content of the process into four levels: vision, mission and vocation; major goals; strategies; action plans and timelines. Through various discussion sessions, peer coaching, reflection and individual work time, everyone was able to outline their plan on a poster and using a poster session format, each poster was visited by the participants who left stickie notes with comments, suggestions or observations on the poster. Each person left the meeting with their poster and the feedback and were encouraged to post it, share it, use it, review it and revise it. In addition to the strategic action plan, everyone also extended their network of colleagues who can provide support as their careers grow and flourish.

Short Term Consultations (STC) and Seminar Speakers for 2017-18

These programs provide funds to facilitate connections among faculty at Consortium institutions. The STC grants fund faculty and students in a particular area to visit a member campus for many reasons including consultation on curriculum, collaboration on research projects, participation as an outside examiner in a senior thesis exam, demonstration of a laboratory technique suitable for an undergraduate laboratory or advising faculty or departments on proposal writing or project assessment.

The Consortium has a database of speakers who are willing to visit other consortium campuses to give a seminar. Consortium funds are available to pay for travel, lodging, and meals and the online application process is simple. See <http://mathsciconsortium.org> for complete information on these programs.

Undergraduate Research Symposium in the Physical Sciences, Mathematics, and Computer Science, University of Chicago, November 3-4, 2017

The arrangements for the 2017 Physical Sciences meeting in Chicago will be different from previous meetings in that participants will be staying at the Hyatt Place Chicago - South, conveniently located near the University of Chicago campus. Meeting sessions will be held in the Gordon Center for Integrative Science and the William Eckhardt Research Center, which was opened in the fall of 2015.

Prior to the formal Research Symposium program, there will be a Graduate School Exploration Seminar from 12:00 pm-5:00 pm Friday, starting with lunch, then lab tours at 1:00, followed by a variety of faculty and graduate student panels. In addition to the poster and podium presentations of student research, there will be a keynote presentation by Professor Yamuna Krishnan, University of Chicago Department of Chemistry, highlighting her work in chemical biology and DNA nanotechnology. The Janet Andersen Lecture will be presented by Dr. Thomas Varberg from the Chemistry Department at Macalester College. Participants can also look forward to enjoying Chicago style pizza for Friday dinner.

Undergraduate Research Symposium in the Biological and Psychological Sciences Symposium, Washington University in St. Louis, November 10-11, 2017

The 2017 Biological and Psychological Sciences meeting will be held on the Medical Campus at Washington University, with accommodations at the Parkway Hotel. The Friday evening program will be held at the Eric P. Newman Educational Center. The after-dinner events will include hands-on science demonstrations by the Young Scientist Program and a keynote presentation given by Professor Gautam Dantas, Washington University Division of Biology and Biomedical Sciences. His research areas include the dynamics, ecology and evolution of antibiotic resistance; engineering enhanced probiotics to treat GI disorders; and engineering microbial biofuel catalysts. The Saturday program will feature student poster and podium presentations of their research, as well as the Janet Andersen Lecture that will be presented by Dr. Julie Legler from the St. Olaf College Department of Mathematics, Statistics and Computer Science.

The 2017 Janet Andersen Lecture Award Recipients



*Dr. Julie Legler
Professor of Statistics and Statistics Program Director
Department of Mathematics, Statistics and Computer Science
St. Olaf College*

After completion of her Sc.D. in Biostatistics at the Harvard School of Public Health, Dr. Julie Legler spent 8 years with the National Institute of Health where much of her work was with the Cancer Surveillance Research Program. A colleague recalls that “Upon arriving at St. Olaf in 2001, she believed, rightfully, that undergraduate statistics students could (should) work in collaborative, interdisciplinary research teams modeled on the type she knew so well from her work at the NIH.” Since then Julie has received almost \$3 million from National Science Foundation grants to create and sustain the St. Olaf Center for Interdisciplinary Research (CIR). The CIR has provided a structure in which hundreds of students have been able to engage in meaningful – and often life changing – collaborative research with faculty and other students. While many projects are broadly health related, they have ranged from biology, psychology, and neuroscience to economics and political science, as well as many other areas. Julie herself has been personally involved in dozens of undergraduate research projects, including international collaborations with entities such as the World Health Organization in Geneva. Julie’s work to inspire the next generation of leaders in STEM is exceptional. Dr. Legler will be recognized for her contributions to undergraduate research by presenting the Janet Andersen Lecture at the 2017 Midstates Consortium Undergraduate Research Symposium in the Biological Sciences and Psychology.



*Dr. Thomas Varberg
DeWitt Professor of Chemistry
Department of Chemistry
Macalester College*

While physical chemistry is often viewed as one of the more challenging areas of chemistry, the nomination letter for Dr. Thomas Varberg describes him as an enthusiastic teacher whose “passion for pchem is clear and effusive; Tom enjoys stimulating student interest in physical chemistry and making the material accessible.” This passion is evident in both his teaching and mentoring of undergraduate research at Macalester College. Chemistry majors regularly identify his quantum chemistry course as one of their favorite chemistry classes, while his teaching in the Accelerated and General Chemistry courses encourages many first-year students to continue with a chemistry major. Tom has obtained over \$1 million in NSF-RUI funding to support students, both chemistry and physics majors, in molecular spectroscopy research projects at Macalester. Of the approximately 40 students he has mentored in the laboratory, 21 have been included as co-authors for peer reviewed publications. Tom is seen as a strong advocate of the liberal arts and his global perspective obtained from multiple sabbaticals in international venues supports Macalester’s emphasis on internationalism and multiculturalism. Dr. Varberg will be recognized for his contributions to undergraduate research by presenting the Janet Andersen Lecture at the 2017 Midstates Consortium Undergraduate Research Symposium in the Physical Sciences, Math and Computer Science.

Nominations for the 2018 Janet Andersen Lecture Award are due March 30, 2018. Contact your campus representative or Consortium Director for information (midstatesdirector@gmail.com).