

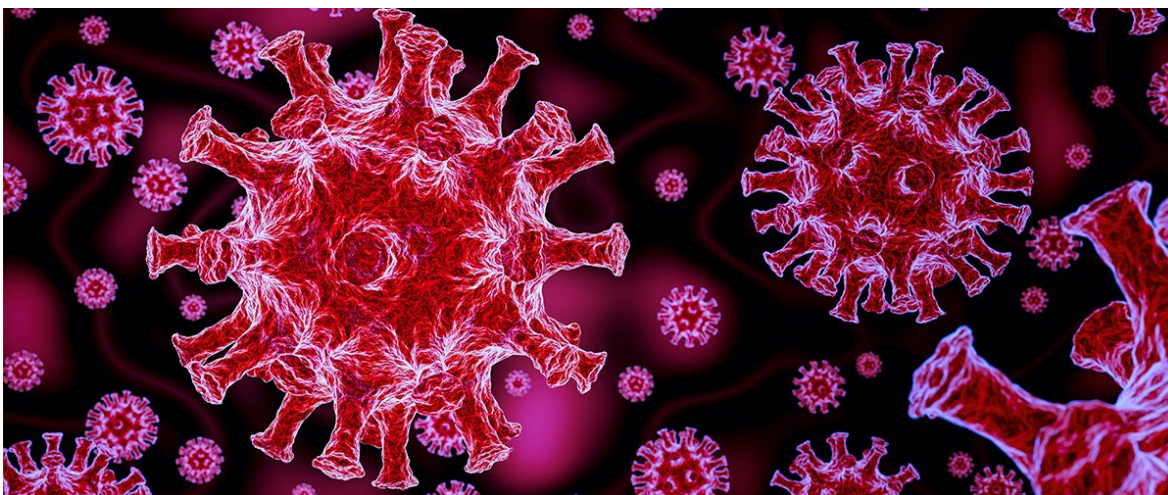
Consortium Connections

Connecting campuses to promote excellence in science and mathematics

Mark your calendar for upcoming events (see Upcoming Events section below for further details).

- March 31, 2022 Janet Andersen Award nominations due
- April 29-30, 2022 Executive Board Meeting
- June 17-19, 2022 (tentative) Mid-Career Faculty Development Workshop
- June 24-26, 2022 (tentative) Workshop for Early Career Success
- November 4-5, 2022 Biological Sciences and Psychology Undergraduate Research Symposium at the University of Chicago
- November 11-12, 2022 Physical Sciences, Mathematics and Computer Science Undergraduate Research Symposium at Washington University, Saint Louis

Comments from the Director



I accepted this position before the onset of the coronavirus pandemic and was looking forward to personally visiting each of the Midstates institutions and facilitating live undergraduate research symposia. When I actually stepped into the position we were in the early months of the pandemic and most of my first year was taken up with adapting. We needed to cancel our 2020 faculty workshops, and our speakers and consultation programs, and we held our executive committee meeting and undergraduate research symposia remotely. A year ago we were optimistic that we would be able to return to live meetings in 2021. Unfortunately, the coronavirus pandemic did not cooperate and we ended up doing the early faculty workshop and the two research symposia remotely. Although those programs were successful [see below], it is

my belief that they did not offer as rich an experience as live in-person meetings. It is my fervent hope that we will return to live in-person meetings in 2022.

The legacy of the pandemic has not been completely negative. It has forced us to become more familiar with remote technology and to explore some of the ways we can use it to foster connections within the consortium. This became particularly clear in a series of 17 zoom interviews that our administrative assistant, Ann Schutt, and I held with faculty members from our member institutions. These interviews were organized around four broad questions:

1. What kinds of programs or activities could the consortium sponsor that would help you with your research, teaching, mentoring, and career development?
2. What kind of programs or activities could the consortium sponsor that would help students in their development as scientists or mathematicians?
3. Are you interested in developing collaborations with faculty in other institutions which are members of the MCMS?
4. What, if any, larger issues in the development of the future scientific workforce should the consortium tackle?

The people we interviewed pointed out that the consortium's in-person activities were very helpful. However they also complained that it is difficult to keep up the connections made at these meetings, especially with people from other campuses. Remote technology might help to fill this gap. In the course of our interviews we also received many new ideas on how to use remote technology to better serve the students. Ann and I are currently reviewing the the interviews and are preparing a report for the executive committee which will contain programmatic suggestions. These are certain to include more extensive use of remote technology to supplement our in-person activities.

Congratulations to our two 2021 Janet Andersen Award Recipients!

Professor Janet Andersen was a faculty member in the Hope College Mathematics Department and served enthusiastically as the Midstates Consortium Director for five years before her life ended tragically in an automobile accident. To honor Janet Andersen's dedication and commitment to her work with students and faculty in her teaching, research and service to the Consortium, the Janet Andersen Lecture Award was established in 2008. The Midstates Consortium chooses two faculty members from among our member institutions each year who are exceptional mentors for undergraduate research students and are engaged and skilled teachers. The winners present the Janet Andersen Lecture during a fall Undergraduate Research Symposium on a topic of his or her choice.



Winner in Biological Sciences and Psychology

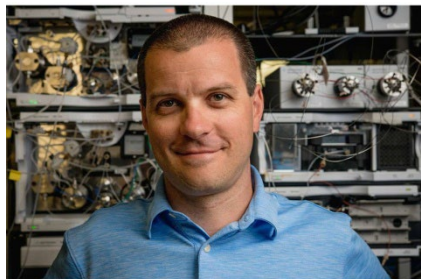
Dr. Gerald Griffin, Interim Provost and Professor of Biology and Psychology at Hope College, Holland, Michigan



It is clear from his nomination letter that Dr. Griffin is a master teacher. His use of an interdisciplinary approach in particular is in the spirit of Janet Andersen. As the writers of the letter put it “Dr. Griffin has used creative approaches to cross-train students for types of thinking and writing that are hallmarks of an excellent liberal arts education, addressing neuroscience in relation to ethics, law, and art.” The results of this approach have been exercises like business plans that connect neuroscience to the needs of the community and the “Jazz Session of the Brain” as a way of teaching about brain neural paths. Dr. Griffin also has an impressive record as a research mentor as indicated by the fact that he has mentored over forty-five undergraduate research students in the last decade and published papers with twelve of them. His record of service to the college community is also exemplary especially in his role of Interim Provost in the year of COVID-19.

Winner in Physical Sciences, Math, and Computer Sciences

Dr. Dwight Stoll, Professor of Chemistry at Gustavus Adolphus College



The writer of the nomination letter for Dr. Stoll noted that “His research lab is not just open to the ‘best and the brightest’. He is willing to offer an opportunity to any student who expresses a genuine curiosity about science and even seeks out students who have a glimmer of scientific potential. In other words, Dwight pays attention to his students and realizes their potential before they realize it themselves.” One measure of Dr. Stoll’s success as a research mentor is that 21 of the roughly 60 undergraduate research students he has worked with have been co-authors on his scientific papers. Another measure of the quality of his scholarly work as a separation scientist focused on liquid chromatography is his appearance on *The Analytical Scientist’s* ‘Top 100 Analytical Scientists’ 2019 Power List. Dr. Stoll is known as a skillful and dedicated teacher with strong interests in curricular and pedagogical innovation. He has provided outstanding service to both his scholarly and campus community, particularly during the pandemic crisis of the past year when he served as chair of the COVID Gustavus Adolphus faculty emergency planning committee and held a position on the college-wide COVID leadership team.

The 2022 Janet Andersen Lecture Award Nominations:

Nominations for the 2022 Janet Andersen Lecture Award are due March 31, 2022. See the link on the Midstates website (<https://mathsciconsortium.org/janet-andersen-award>) for complete information regarding nomination criteria and the information to be submitted.

Upcoming Events

Executive Board Meeting (April 29-30, 2022): The Midstates executive committee – one representative from each member school - is tentatively scheduled to meet in person this year. We will gather at the Courtyard Minneapolis-St. Paul Airport hotel. The meeting will begin with dinner together Friday, April 29. The business meeting will begin Saturday, April 30 with breakfast and will conclude by 3:00 pm. We plan to include a hybrid option for the business meeting for those who are not able or willing to travel.

Faculty Workshops: At this point we are planning to hold both of our faculty workshops in person during 2022. The probable venue of both workshops will be Gustavus Adolphus College although that has not been finalized. The scheduled workshops are:

Mid-Career Faculty Development Workshop (June 17-19, 2022): The middle-career stage, the time between earning tenure and verbalizing a retirement timeline, can be the longest and most challenging stage for many faculty. This workshop will provide structured time for faculty to reflect on the middle stages of their career and to identify future professional opportunities related to teaching, scholarship and service. Through discussion, reflection and interaction with each other, participants will set goals, shape strategies and develop an action-oriented agenda for the next 3 to 5 years. **Registration will open up on the MCMS website in early April.**

Workshop for Early Career Success (June 24-26, 2022): This workshop is open to early career faculty, post-docs and senior graduate students, and will follow the format of our successful early career workshops from previous years. Peer coaching and deep-listening experiences will help participants structure an individualized strategic action plan that will be a guide for personal, meaningful and rewarding career development. **Registration will open up on the MCMS website in early April.**

Undergraduate Research Symposia: It is our hope that we will be able to host in-person undergraduate research symposia by November 2022. Should travel restrictions or safety issues make it necessary, we can switch to a virtual format. Our tentative schedule is:

Biological Sciences and Psychology Symposium (November 4-5): The symposium will be at the University of Chicago. The online application will be available on the Consortium web site (<http://mathsciconsortium.org>) from August 22 – September 30.

Physical Sciences, Mathematics and Computer Science Symposium (November 11-12): The symposium will be at Washington University in St. Louis on November 11 and 12. The online application will be available on the Consortium web site (<http://mathsciconsortium.org>) from August 22 – October 7.

2021 Virtual Undergraduate Research Symposia

Filters

New Multi-Select

- Beloit College
- Carthage College
- Colorado College
- Grinnell College
- Gustavus Adolphus College
- Hope College
- Knox College
- Lawrence University
- Macalester College
- St. Olaf College
- University of Chicago
- Washington University in St. Louis

Subject

- Astronomy and Astrophysics
- Chemistry
- Computer Science
- Engineering

Search Keyword(s) Or Author(s) Search

Preview

Investigating Diversity, Equity, and Inclusion in Statistics and Data Science Courses

Presenters: Elizabeth Rahmel, Lydia Rehder

Type of Presentation: Poster

Preview

Differences Between Black Hole Solutions in General Relativity and Conformal Gravity

Presenters: Ethan Podolsky, Isaac Thronson

Type of Presentation: Talk

Preview

A Model of Bundle Expulsion in the Actomyosin Contractile Ring

Presenter: Zachary Andersen

Type of Presentation: Poster

Time of the live poster session: Poster Session III: 3:50 pm - 4:50

General Overview: Up until late summer we were hoping to hold our 2021 research symposia in person. However, by the end of the summer it was obvious that this would not be possible, and our symposia were held remotely for the second year in a row. As in 2020 we used the ForagerOne Symposium web platform. Using Symposium, we created web pages for each symposium. Students presenting posters were able to upload their posters, along with an optional short video, to the conference web page. Students giving talks uploaded their abstracts into the conference web page with the option to include supplementary material. Anyone registered for the conference could send comments or questions to students about their poster or talk.

Each of the symposia included a series of concurrent sessions in which students delivered talks on their research. Each session ran for 90 to 100 minutes and contained three to four to talks. Sessions were moderated by either a faculty member from a Midstates Consortium school or a graduate student from one of the two research universities. For each meeting, students presenting a poster were assigned to one of three hour-long poster sessions. Students giving a poster had an hour in which they were available online to run through their poster and answer questions. People interested in visiting a student's poster visited the Zoom meeting associated with their poster session and then entered a breakout room in which the student was waiting. Ed Hansen and Ann Schutt acted as hosts for these meetings helping people find the breakout rooms for the posters they wanted to visit.

Unless the student opted out, their posters and abstracts for talks were archived in publicly accessible websites. At the end of each symposium the website was taken off line and a message was sent to each participant asking if they wanted us to remove their abstract or poster. If the student answered yes we deleted their materials. If not, their materials became available for public viewing once the website went on line again two weeks later. The websites for the symposia are:

Biological Sciences and Psychology Symposium

<https://symposium.foragerone.com/mcms-2021-symposium-in-biology-and-psychology>

Physical Sciences, Mathematics and Computer Science Symposium:

<https://symposium.foragerone.com/mcms-2021-symposium-physical-sci-math-computer-sci>

Biological and Psychological Sciences Symposium

The Midstates Consortium for Math and Science
Undergraduate Research Symposium in the
Biological Sciences and Psychology
Hosted by Washington University in St. Louis

Online November 5 & 6, 2021

Beloit College
Carthage College
Colorado College
Grinnell College
Gustavus Adolphus
College
Hope College
Knox College
Lawrence University
Macalester College
St. Olaf College
University of Chicago
Washington
University in St. Louis



Find details and apply at mathsciconsortium.org by October 15, 2021

This symposium began with a graduate school panel between 3:30 and 4:30pm central time on Friday, November 5. The panel was organized and hosted by Washington University in St. Louis. The moderator was Andrew Richards, Director of Admissions & Recruitment and

Information Systems of the Division of Biology and Biomedical Sciences (DBBS). The panelists were graduate students Clara Kao, Sasha Dmytrenko, and Hannah Gurholt. After a brief introduction to the graduate programs in the DBBS and brief talks by the three graduate students, the panelists answered questions from the audience.

The Saturday program began at 8:30am November 6 with an address titled “Firestarters” by Dr. Gerald Griffin, the winner of the Janet Andersen Lecture Award in Biological Sciences and Psychology. Starting at 9:40am were 3 concurrent oral sessions in which 12 students gave talks. The moderators of the sessions were Morgan Timm, Nicole Fazio, and Swanne Gordon, all of the University of Washington in St. Louis. The morning poster session, which followed the oral sessions, had 19 students presenting a total of 17 posters. After a lunch break the second poster session had 16 posters. This was followed by 3 concurrent oral sessions in which a total of 11 students gave 9 talks. The moderators for the oral sessions were Morgan Timm and Travis Law from Washington University in St. Louis and John Kennedy from the University of Chicago. The meeting concluded with a poster session in which a total of 19 students gave 17 posters.

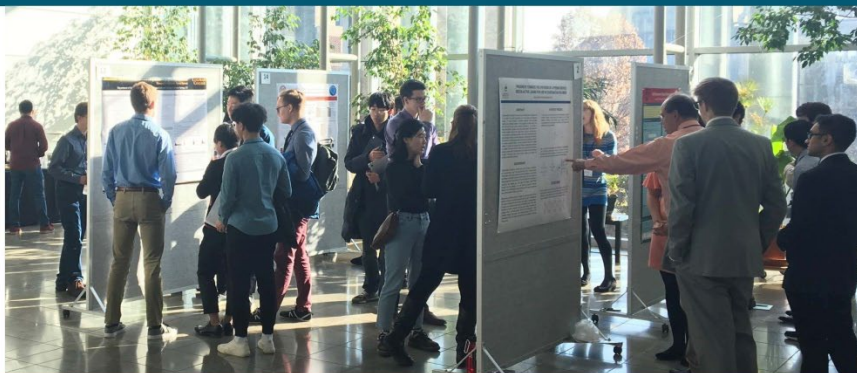
Altogether the Biological and Psychological Sciences symposium gave 67 students, representing 11 of our 12 institutions, a chance to present their research. There were a total of 1058 visits to the symposium website and 908 unique visits to poster presentations or talks.

The Midstates Consortium for Math and Science
**Undergraduate Virtual Research Symposium in the
Physical Sciences, Mathematics and Computer Science**

including

Graduate School Exploration Seminar hosted by The University of Chicago
Online November 12 & 13, 2021

Beloit College
Carthage College
Colorado College
Grinnell College
Gustavus Adolphus
College
Hope College
Knox College
Lawrence University
Macalester College
St. Olaf College
University of Chicago
Washington
University in St. Louis



All students and faculty of Midstates member schools are encouraged to attend.

Full details and schedule at :

<https://symposium.foragerone.com/mcms-2021-symposium-physical-sci-math-computer-sci>

The symposium began on Friday afternoon, November 12, with a Graduate School Exploration Seminar organized by the University of Chicago and moderated by Holly Bland, the director of Graduate Enrollment Initiatives. The hour and half seminar began with the presentation “Applying to Fellowships” by Nichole Fazio, followed by an overview of the graduate admissions process led by Holly Bland. The seminar ended with a graduate student panel during which current graduate students at the University of Chicago answered questions from the audience.

The activities on Saturday, November 13, began with a welcoming session led by Stuart Kurtz from the University of Chicago and featured a keynote address by Mark Levin, Assistant Professor of Chemistry at the University of Chicago. Dr. Levin’s talk, “The Precision Revolution in Synthetic Science” focused on our increasing ability to edit complex molecules on the atomic level. This was followed by three concordant oral sessions moderated by University of Chicago graduate students Eric You, Jasmine Lyu and Elaine Liang. During these three sessions 14 students gave a total of 12 talks. Saturday morning ended with the first Poster Session in which 20 students presented 15 posters. A short lunch break was followed by a second poster session with 15 posters and 18 student presenters. The afternoon oral sessions were next in which 11 students gave 10 talks in three concordant sessions moderated by University of Chicago graduate students Joel Gardner, Shinelle Black and Sarah Melton. The day ended with the third poster session with 15 posters and 20 student posters. Altogether the Physical Sciences, Mathematics, and Computer Science symposium gave 70 students, representing all twelve of our member institutions a chance to present their research. There were a total of 1195 visits to the symposium website and 793 unique visits to poster presentations or talks.

Evaluation: An evaluation form was sent to presenters, moderators and faculty moderators involved in the symposia. A total of 168 evaluation forms were sent out and a total of 35 were returned. This response rate of 21% is about the same as last year. Although many respondents noted they would have preferred a live symposium, by and large the responses were positive. Twenty-five out of the twenty-seven people who answered the question “Would you recommend attending this virtual symposium to other undergraduates at your school?” answered affirmatively and some were enthusiastic. The most common goal students had for attending the symposium was to gain practice in presenting their results to an audience and the overwhelming majority thought that this goal had been met. The most common complaint in last year’s [2020] evaluation was relatively low attendance especially at poster sessions and we put a fair amount of effort into trying to boost attendance this year. However, the results of the evaluations show that we are only partially successful with a number of respondents still complaining about low attendance. Should we need to do virtual symposia in the future, attendance at both talks and posters is something we need to continue to improve.

2021 Virtual Early Career Workshop

The early career workshop is attended by early-career faculty (both term and tenure-track) and future faculty (senior graduate students and postdoctoral fellows interested in faculty careers). Many participants have reported that the workshop was very helpful in their career development. For at least ten years prior to 2020, this workshop has been held every summer. Due to the coronavirus pandemic the workshop was not held in 2020. At the beginning of last summer it was evident that it would not be prudent to hold an in-person workshop in the summer of 2021. Rather than cancel this extremely valuable program, the workshop mentors, Brandy Russell and Scott Bur of Gustavus Adolphus University, stepped up to lead a virtual workshop. The workshop was held on July 9 and 10, 2021. As was the case in the past, the workshop utilized a variety of techniques, including deep listening and peer coaching to help the participants develop a strategic plan for the early part of their career. There were a total of 22 attendees from 8 Midstates schools, more than double the number of attendees from the last live workshop during the summer of 2019.