



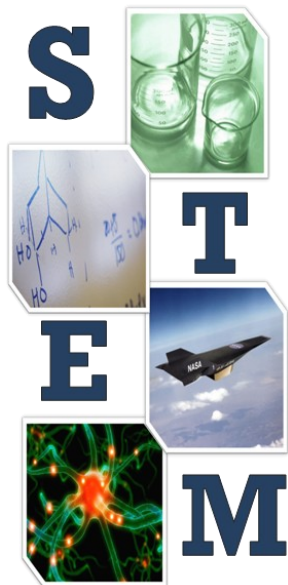
Ohio's STEM Ability Alliance

STEM Degrees and Careers for Ohioans with Disabilities



OSAA E-NEWS

Issue 3, March 2010



Ohio's STEM Ability Alliance (OSAA)

It is hard to believe that spring quarter is upon us and time to begin planting seeds for our upcoming academic year. Both the Dayton and Columbus QUADs have been meeting with highly qualified high school students with disabilities who express interest in the Science, Technology, Engineering and Mathematic fields and encouraging them to take part in our programs. These students are offered an opportunity to participate in programs that promote transitioning to college with

STEM majors. Once on campus, OSAA provides them access to individualized advising, enhanced tutoring, student learning communities, research internships and professional mentoring to support persistence in their studies and develop skills necessary to succeed in the workforce. This newsletter reports on some of OSAA's accomplishments during the winter quarter of 2010 and outlines ongoing programs and plans for the upcoming academic year.

OSAA Scholars receive Choose Ohio First Scholarships

Wright State President David R. Hopkins hosted a Presidential Reception Ceremony on March 9, for the university's 200 students in STEM majors who received Choose Ohio First Scholarships (COF) for the 2009-2010 academic year.



OSAA Choose Ohio First students at Wright State recognized at Presidential Reception

Twenty-seven of the scholarships were awarded to OSAA Scholars under a COF grant award to Wright State University on behalf of the entire NSF RDE Alliance. President Hopkins praised the awardees for their accomplishments and recognized the significance of the program noting that "It is important for our future that we prepare the talent needed to excel in the 21st century in a knowledge-based economy. Choose Ohio First has the potential to transform the economy of the region, the state of Ohio, the nation, and the world."

grees awarded to students with disabilities was used as a match for the Ohio Board of Regents COF award which will eventually provide over \$2.5 million in scholarships to students with disabilities participating in OSAA at member colleges and universities.

In the Columbus QUAD, the Ohio State University awarded twenty-five COF-OSAA scholarships to college-level OSAA students who met the GPA and program participation requirements.

OSAA's NSF-sponsored programming to increase the number of STEM de-

Inside this issue:

| | |
|--|---|
| Ohio's STEM Ability Alliance | 1 |
| OSAA Scholars receive COF Scholarships | 1 |
| OSU Mentor Mingle | 2 |
| WSU DIVERSE-ABILITY U. | 2 |
| Sinclair Campus Visit Day | 3 |
| Intro to Cave and Karst | 4 |
| WSU Wtr Scholars' Mtgs | 4 |
| Columbus News Bits | 5 |
| Dayton News Bits | 5 |



This project is supported in part by the National Science Foundation under grants #HRD-0833644 & #HRD-0833561. Any opinions, findings and conclusions or recommendations expressed in this material are those of the author (s) and do not necessarily reflect the views of the National Science Foundation.

The Ohio State University hosts OSAA MENTOR MINGLE

On February 19th the OSAA Columbus Quad hosted its first, of many, quarterly Mentor Mingles. A total of 16 OSAA students and 13 mentors attended. The Mentor Mingle was hosted at The Center for Emergent Materials located in the OSU Physics Research Building.

The Mingle was kicked off with an hour of "Speed Networking", where students and mentors briefly get to know each other and have the chance to network with multiple mentors from the OSAA community. This activity gives our students the opportunity to set up connections with prospective mentors, even if they are not currently matched on a one-to-one basis. Those students who are matched can find out about other interesting opportunities made available to them by the additional connections. The encompassing goal of the Mentor Mingles is to facilitate OSAA as a community and build on

the one-to-one mentor-mentee relationships.

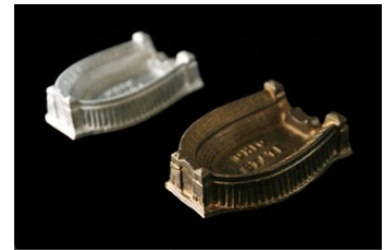


Making the Connection

The Speed networking was followed by tours of the Center for Emergent Materials <http://cem.osu.edu> and the Metal Casting Laboratory. Students and mentors visited the Pulse Laser Deposition Lab, and the Superconductivity lab. Students and mentors were given a first-hand view of pulsed laser deposition of thin films and shared the potential applications of IRG-2's research into double perovskite interfaces and heterostructures. At the Metal Casting Laboratory, part of the

Department of Materials Science and Engineering, www.matsceng.ohio-state.edu, students and mentors viewed a study of metallurgy, ceramics, and advanced composites. OSAA participants viewed how to process a material to get the atomic structure needed to bring about properties to meet desired performance requirements.

Students and mentors were given Ohio Stadium castings made by students at The Ohio State University.



Ohio Stadium Castings

Wright State Preparing First Residential Campus Experience for High School Students

OSAA faculty and staff are completing plans and beginning recruiting for the first OSAA residential on-campus experience for high school students with disabilities set for July 25-29 on the Wright State campus. DIVERSE-ABILITY U. is a pre-college science and engineering residential camp open to students with disabilities entering 11th and 12th grades. While on campus, students will live in the residence halls and attend classes to prepare them for the challenges of living independently and succeeding academically on a college campus while learning about opportunities for studies and careers in Science, Technology, Engineering and Mathematics (STEM) fields. There will be no charge for attendance.



A Residential Science & Engineering Campus Experience for College-Bound Students with Disabilities



Summer Camp

However, only a limited number of spaces will be available. All college-bound students in the qualifying grades with any type of documented disability are invited to apply. For this year, selection priority will be given to students with a demonstrated interest in STEM careers and those who have physical disabilities. Educational workshops will include such topics as: Brain and Behavior, Applied Cognitive Science/Human Factors, Geology, Biology, Applied Mathematics/Statistics, Robotics and Just in Time Mathematics for Engineering. For more information on applying contact: OSAA.dayton@wright.edu. Telephone (937) 775-5123.

Sinclair Community College – Campus Visit Day for Students with Disabilities

On Saturday, January 23rd, 2010, a group of twelve pre-college students and their parents visited Sinclair’s downtown Dayton campus as part of the Ohio STEM Ability Alliance Dayton QUAD On-Campus experience program. This half-day event allowed students with all types of disabilities and their parents learn more about education after high school and opportunities for college studies and careers in Science, Technology, Engineering, and Math (STEM)



Sinclair College Campus Visit Hands-on STEM Agenda

- **Mathematics Laboratory - Calculator-controlled Robot**
- **Energy Laboratory**
- **Astronomy- Telescope construction**
- **Chemistry - Creating a ball and making ice cream with liquid nitrogen!**

offered by Sinclair Community College. Students were given an overview of the OSAA program and a tour of pertinent areas on Sinclair’s campus such as the library, dining areas, and student services. Dr. Holly Brown-Wright, Manager of Disability Services coordinated this campus visit day and is overseeing the grant activities at Sinclair. The Sinclair College event was the second OSAA DAYTON Day on Campus. A similar student visit to Wright State University was conducted in August 2009.



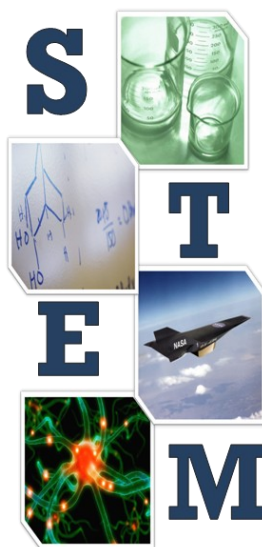
Sinclair Chemistry Lab



Math Lab Robotic Demonstration

Asperger’s Syndrome (AS) Support Group.

OSAA Dayton Scholars diagnosed with Asperger’s are invited to participate in a biweekly AS Support Group that meets at Wright State University, 023 Student Union, Office of Disability Services. This support group will give you the opportunity to meet



new friends in a friendly and nonjudgmental setting allowing you to share your successes and struggles. This can be a valuable tool to increase your social skills. Come and meet with others who are there to support you. For more information and times please contact Dr. Lopez-Garcia at (937)775-5680.

Wright State University offers EES 199— Introduction to Cave and Karst Systems Spring Quarter

Ohio State Researcher and PhD candidate Chris Atchison is studying the accessibility of field-based geology courses for students with significant mobility impairments. Past research shows that traditional field experience is a critical aspect of the geoscience curriculum, however Chris intends to create an equally effective supplement to traditional field experience using virtual reality.

Having received funding from the National Science Foundation, and in conjunction with OSAA, Chris will begin teaching the Introduction to Cave and

Karst Systems (EES199) course this Spring quarter to approximately ten students with mobility impairments. The course consists of three, three-hour classroom sessions covering an introduction to cave geology, geology careers and current accessibility issues in the geology curriculum. In addition, the course will conclude with a three day, two night trip to Mammoth Cave National Park in southwestern Kentucky, during which time the students will participate in group activities related to the course and the research study.

As a result of data gathered from this study, Chris will begin working with a research and development team from Ohio State, as well as some of the students taking part in the course to design a recreation of the cave environment using virtual reality. Our students have truly been given a once in a lifetime opportunity to not only experience Mammoth Cave National Park first-hand, but also to be critical members of a research team that is addressing accessibility barriers for people with physical disabilities.



Chris Atchison, Jeff Vernooy, Brittany Boyne and a group of graduate students check the feasibility of turning this into a reality

Winter Quarter OSAA WSU Scholars' Meetings

Twenty students attended our first meeting of winter quarter on **January 12, 2010** in the WSU Student Union Pathfinder Lounge. The business portion of the meeting included collecting applications for the Choose Ohio First Scholarships and an informative presentation by Chris Atchison, Ohio State University Ph.D. candidate, to recruit Scholars for an opportunity to participate in a project to develop a cave geology field training tool using virtual reality techniques. Participants will receive academic credit for the classroom and field activities at Mammoth Cave Na-



A Challenging Game of Wheelchair Football

tional Park that will be conducted in May. The serious business was followed by a challenging game of wheelchair football which eventually

evolved to "no-holdsbarred" *wheelchair tag*.

Fifteen students attended the **February 16, 2010** OSAA meeting on resume writing in the Honors Dorm. Deborah Wilburn, the liaison for students in the College of Science and Math employed by WSU Career Services did a presentation on the importance of having a working resume at all times, and how to get started. The presentation allowed time for students to ask for specific feedback on their personal resumes, and to comment on each others' resumes as well.

Ohio's STEM Ability Alliance

STEM Degrees and Careers for Ohioans with Disabilities

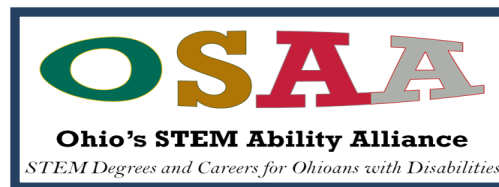
The Ohio STEM Ability Alliance is supported by the National Science Foundation under NSF Award Number HRD-0933061. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect those of the National Science Foundation.

Columbus QUAD Winter 2010 News Bits

Twenty-five OSAA students attending the Ohio State University have been awarded Choose Ohio First Scholarships for academic achievement in their chosen STEM field.

Seven OSAA high students successfully completed the winter Student Learning Community (SLC) and are set to give their presentations on self-advocacy and self-determination on March 30th to an audience of SLC alumni, incoming students and project staff.

OSAA Columbus Quad is currently recruiting high school rising juniors and seniors to participate in the summer SLC scheduled for July 26, 27 & 28.



Dayton QUAD Winter 2010 News Bits

On February 23, 18 students from Wayne High school in Huber Heights, OH joined an increasing number of students with disabilities who visit Wright State's campus to learn about transitioning to college, available academic programs and OSAA. Dr. Shingledecker and Brittany Boyne presented these potential college students with information on the benefits of choosing a STEM major and entering the ranks of our OSAA Scholars program. Students completed forms to express interest in OSAA near-peer mentoring while in high school and On-Campus pre-college events including the upcoming residential summer camp. Katherine Myers, from the Office of Disability Services, discussed the various services provided by her office and the main differences between services provided in high school and college. The Office of Undergraduate Admissions provided students with general information about Wright State University, and led the students on a campus tour.

Wright State University held its winter *Wright From the Start* recruiting event on February 27. *Wright From the Start* gives students interested in attending Wright State an opportunity to discuss their academic goals and interests with members of the faculty, take a campus tour, and learn more about college life. Representatives from the OSAA program office were available to provide information to prospective STEM students and recruit future OSAA Scholars.

Dr. Shingledecker, Brittany Boyne and the WSU Office of Disability Services traveled to various high school campuses including Dublin/Hilliard City Schools, Northwest Local Schools, Warren County and Pickerington, OH to attend regional college and transition fairs and to speak on transition preparation and promote OSAA STEM programming.