

113th Annual Meeting
The Ohio Academy of Science

Meeting jointly with the
Ohio Branch of

The American Society for Microbiology (OBASM)

Hosted by
Youngstown State University

April 16-17, 2004

About the Annual Meeting

The Ohio Academy of Science's Annual Meeting is for academic, governmental, and industry scientists and engineers, university and pre-college educators and teachers, and pre-college, undergraduate, and graduate students, and interested lay citizens in the Ohio region.

Welcome!

Youngstown State University welcomes you to the 113th Annual Meeting of The Ohio Academy of Science. We invite you to explore our campus and to share in the excitement and opportunities provided in this program.

REGISTRATION: Registration is required for all meeting presenters and attendees. On-site registration will be available at a higher rate. The Ohio Academy of Science must receive forms by April 7, 2004. Please use Registration Form on the last page. Mail completed form and fee to:

OAS Annual Meeting Registration
The Ohio Academy of Science
PO Box 12519
Columbus OH 43212-0519
FAX 614/488-7629 (for Credit Card or PO only)

Registration by credit card or purchase order only will be accepted by FAX at 614/488-7629. Your registration materials, receipt, and name tag will be ready at the meeting registration desk upon your arrival. For further information, please call 614/488-2228.

An Adobe PDF form is available at:

<http://www.ohiosci.org/YSURegistrationForm.pdf>

Online payment option www.merchantamerica.com/ohiosci

Friday, April 16: Your registration materials will be available at the door if you will be attending the Friday early evening reception in Moser Hall.

Saturday, April 17: Registration in the DeBartolo Hall from 8:00AM-3:00PM. On-site registration is possible by check, VISA, or MasterCard. Cash is discouraged.

FREE PARKING: In lot off Fifth Ave. across from DeBartolo Hall. See map on page 43.

SMOKING POLICY: Smoking is not permitted in any building.

MEALS: Friday, April 16. Hosted Open Reception followed by Annual Address by the President of The Ohio Academy of Science. There is no Friday evening banquet. Saturday, April 17. Lunch available on campus and nearby. Saturday evening dinner for members and guests of OBASM. Contact Dr. Chet Cooper at Youngstown State University: Phone 330-941-1361; fax 330-941-1483 or by email crcooper.01@ysu.edu

HOUSING: Contact hotels and motels directly. See list on page 4.

GENERAL SCHEDULE

Friday, April 16, 2004

2:00 PM-4:00 PM The Ohio Academy of Science
Board of Trustees Meeting
Presidential Suite, Kilcawley Hall

5:00 PM-6:00 PM Welcoming Reception
Lobby of Moser Hall

6:00 PM Annual Address by the
President of The Ohio Academy of Science
Schwebel Auditorium in Moser Hall

by ROBERT T. HEATH, PH.D.

PRESIDENT

THE OHIO ACADEMY OF SCIENCE

2003-2004

Bob Heath is Professor of Biological Sciences and Director of the Water Resources Research Institute at Kent State University. He received his B.S. in pre-medical studies from The University of Michigan in 1963 and his Ph.D. in biophysics from the University of Southern California in 1968. He conducted postdoctoral research in molecular biology at the California Institute of Technology until joining the faculty at Kent State in 1970. Wanting to apply biochemical and molecular biological approaches to problems in freshwater ecology, he did his first sabbatical with Prof. Eugene P. Odum at the University of Georgia. He is a microbial ecologist currently investigating the role of natural bacterial assemblages in plankton communities of the North American Great Lakes, primarily Lake Erie. He studies energy flow and Carbon and Phosphorus dynamics in nearshore and offshore pelagic habitats. Bob is a Lifetime Member and a Fellow of The Ohio Academy of Science.

Saturday, April 17, 2004

8:00AM-3:00PM
General Meeting Registration
Lobby of DeBartolo Hall

9:00 AM -11:00 AM
Morning poster and podium sessions in DeBartolo Hall

11:15AM All Academy Lecture
Auditorium, DeBartolo Hall
Intellectual Property: Essential Capital for the New Economy
PANEL

Dr. Robert Bolla, Dean

College of Arts and Sciences

Dr. Gretchen Ann Bender

University of Dayton Law School

Others to be announced

12:15 PM Lunch
Various restaurants nearby and in Kilcawley
Center and Winslow's cafe near Butler Museum of Art

1:15 PM OFFICIAL NOTICE of Annual Business Meeting
for *Academy Members Only*
Room 260, DeBartolo Hall

2:00 PM-5:00 PM Afternoon poster and podium presentations

About Our Host

Chairperson, Local Arrangements: DR. CHESTER R. COOPER, JR. IS AN ASSISTANT PROFESSOR OF BIOLOGY AT YOUNGSTOWN STATE UNIVERSITY.

About Youngstown State University

For almost a century, Youngstown State University (YSU) has prepared its graduates to become leaders in the region, the state, and the nation. Located on a beautiful 140-acre campus near downtown Youngstown, Ohio, YSU offers its students a comprehensive selection of major programs backed by a strong tradition of teaching and scholarship. YSU's diverse student body of 12,698 and a student-faculty ratio of 19:1 provide the personal contact associated with a smaller institution, and its connection to the Ohio state system of higher education enables it to draw on the vast resources of that system. The average undergraduate class size is 27 for lectures and 9 for labs. Youngstown State seeks to offer its students a vital living and learning environment with a relatively small, cohesive campus and a wealth of curricular and cocurricular activities. Attractive residence halls house close to 1,000 students and include a special residential honors facility. A privately operated apartment complex, University Courtyard Apartments, offers a variety of living arrangements to 400 YSU students within easy walking distance of the center of campus. Student activities abound, with more than 130 student organizations, including social sororities and fraternities, and opportunities for participation in theater, performing groups, student publications, intramural and intercollegiate athletics, and activity planning. Youngstown State University competes in NCAA athletics and in the past decade, has captured four Division I-AA national football championships. During the same decade, the women's basketball team won five Mid-Continent Conference titles and played three years in the NCAA tournament. The University fields ten women's and eight men's intercollegiate Division I teams. Fitness and recreational facilities are free to all YSU students in the Beeghly Physical Education Center and the Stambaugh Sports Complex, including track, tennis, swimming, racquetball, basketball, handball, Nautilus, aerobic conditioning, and free weights.

Of the 12,698 students at YSU, 11,375 are undergraduates. Multicultural students make up 13 percent of the student body and international students hail from fifty-five countries. Students benefit a wide range of student services: complete tutorial assistance in all subject areas, with special centers for writing, study skills, reading, and mathematics; counseling and health services; career testing, planning, and placement; special programs for multicultural, women, and adult students (those older than 25); and an orientation program that includes mentoring by faculty and staff members and upperclass students.

The University seeks a balance between teaching, service, and scholarly activity that serves both its students and the larger community of scholars. The University is committed to keeping its doors open to all who seek higher education and equally committed to giving students every opportunity to enrich their minds, develop their creativity and problem-solving abilities, and become informed, conscientious citizens of the world.

Location

Youngstown is at the center of a metropolitan area of 600,000, located 60 miles from both Pittsburgh and Cleveland. The campus is within easy driving or walking distance of restaurants, shopping centers, museums, and parks. The University is a major contributor to the city's cultural and recreational vitality, each year presenting hundreds of

concerts, exhibits, lectures, performances, and athletic contests. The city offers an outstanding symphony orchestra, three community theaters, a vital arts community, and unlimited recreational options provided by 2,500-acre Mill Creek Park, located a mile from the campus. YSU students can take advantage of close ties to area businesses for internships and work co-op programs, which provide valuable on-the-job experience.

Academic Programs

Youngstown State University is one of a few comprehensive metropolitan institutions in Ohio that provide associate, baccalaureate, and graduate instruction and continuing education in one location. Currently, the University offers a broad curriculum in the School of Graduate Studies and six colleges: Arts and Sciences, Business Administration, Education, Engineering and Technology, Fine and Performing Arts, and Health and Human Services. The spirit of cooperation among departments and colleges permits students to pursue interdisciplinary majors and minors, to major in one department or college and minor in another, or to pursue double majors. An individualized curriculum program is available to students whose needs are not met by existing conventional programs. Students may design curricula to suit their particular needs, allowing alternative paths for earning the undergraduate degrees currently offered.

Majors and Degrees

The College of Arts and Sciences offers majors in African studies, American studies, anthropology, biology, chemistry, computer information systems, computer science, earth science, economics, English, environmental studies, French, geography, geology, history, information technology, Italian, journalism, mathematics, philosophy, physics/astronomy, political science, professional writing and editing, psychology, religious studies, social studies, sociology, and Spanish.

The Beeghly College of Education offers majors in early and middle childhood education, gifted and talented educational specialist studies, multiage education (with specialized teaching fields), adolescent/young adult education (with specialized teaching fields), vocational education, and special education.

The Rayen College of Engineering and Technology offers majors in chemical engineering, civil engineering (structural and transportation option and environmental option), civil and construction engineering technology, drafting and design technology, electrical and computer engineering, electrical engineering technology, electric utility technology, industrial and systems engineering, mechanical engineering, and mechanical engineering technology.

The College of Fine and Performing Arts offers majors in studio art, art history, music/history and literature, music education, music/performance, music theory, music composition, communications studies, telecommunication studies, and theater.

The Bitonte College of Health and Human Services offers majors in allied health, Army and Air Force ROTC, clinical laboratory science, clinical laboratory technology, community health, criminal justice, dental hygiene, dietetic technology, emergency medical technology, family and consumer sciences education, exercise science, family and consumer studies, food and nutrition, health science, histotechnology, hospitality management, medical assisting technology, merchandising (fashion and interiors), nursing, nursing home administration, physical education, prekindergarten, pre-physical therapy, respiratory care, social service technology, and social work.

The Williamson College of Business Administration offers majors in accounting, advertising and public relations, business economics, finance, general administration, human resource management, management, management information systems, marketing, and marketing management.

Associate degrees are offered with concentrations in accounting, finance, labor studies, management, and marketing. Interdisciplinary minors are offered in gerontology, linguistics, peace and conflict studies, professional ethics, statistics, and women's studies. Students may also enroll for a combined B.S./M.D. program with the Northeastern Ohio Universities College of Medicine. Each student successfully completing this program is awarded the Bachelor of Science degree from Youngstown State University and the M.D. degree from the College of Medicine.

Academic Facilities

Maag Library houses more than a half-million books and more than 200,000 government documents and subscribes to more than 3,100 periodicals and scholarly journals. Online research services provide access to all state university libraries in Ohio and a wide range of other information sources. The library's resources are augmented by the Curriculum Resource Center in the College of Education. A Multimedia Center, housed in Maag Library, offers research materials in a variety of formats. Comprehensive computing facilities are readily available to students throughout the campus. Scientific laboratories at YSU are fully outfitted with up-to-date instructional and research equipment. Studios and performance halls in the College of Fine and Performing Arts have been recently renovated for acoustic excellence, and the McDonough Museum of Art is an innovative exhibit space for student and faculty work.

Youngstown Area Housing

Days Inn Youngstown

1610 Motor Inn Dr
Girard, OH 44420
Telephone: 330.759.3410
URL: <http://www.daysinn.com>

Days Inn Youngstown/ Boardman South

8392 Market St
Youngstown, OH 44512
Telephone: 330.758.2371
URL: <http://www.daysinn.com>

Econo Lodge Girard

1615 E Liberty St
Girard, OH 44420
Telephone: 330.759.9820
URL: <http://www.econolodge.com>

Fairfield Inn

7397 Tiffany South
Poland, OH 44514
Telephone: 330.726.5979
URL: <http://www.marriott.com>

Hampton Inn Youngstown North

4400 Belmont Ave
Youngstown, OH 44505
Telephone: 330.759.9555
URL: <http://www.hamptoninn.com>

Hampton Inn Youngstown/ Boardman

7395 Tiffany South
Poland, OH 44514
Telephone: 330.758.5191
URL: <http://www.hamptoninn.com>

Holiday Inn Express – North Lima/Boardman

10111 South Ave
North Lima, OH 44452
Telephone: 330.549.00070
URL: <http://www.holiday-inn.com>

Holiday Inn North Metroplex

1620 Motor Inn Dr
Girard, OH 44420
Telephone: 330.759.0606
URL: <http://www.holiday-inn.com>

Holiday Inn South

7410 South Ave
Boardman, OH 44512
Telephone: 330.726.1611
URL: <http://www.holiday-inn.com>

Microtel Inn

7393 South Ave
Boardman, OH 44512

Telephone: 330.726.1747
URL: <http://www.marriott.com>

Quality Inn & Suites North

4055 Belmont Ave
Youngstown, OH 44505
Telephone: 330.759.3180
URL: <http://www.qualityinn.com>

Ramada Limited of North Lima

9988 Market St
North Lima, OH 44452
Telephone: 330.549.0157
URL: <http://www.ramada.com>

Red Roof Boardman

1051 Tiffany South
Poland, OH 44514
Telephone: 330.758.1999
URL: <http://www.redroof.com>

Residence Inn Youngstown

7396 Tiffany South
Poland, OH 44514
Telephone: 330.726.1747
URL: <http://www.marriott.com>

Super 8 Motel Youngstown

4250 Belmont Ave
Youngstown, OH 44505-1004
Telephone: 330.
URL: <http://www.redroof.com>

Restaurants near or on the YSU Campus

Arby's, YSU Campus inside
Kilcawley Hall

Buffalo Wild Wings 3 (BW-3), 950 Great East Plaza (on the corner of Market and Commerce Streets in downtown Youngstown about 0.5 miles southeast of DeBartolo Hall)

Inner Circle Restaurant, 318 Elm Street (Corner of Elm Street and Lincoln Avenue; 0.1 mile south of DeBartolo Hall)

Little Jimmy's Pizza, 135 Lincoln Avenue (0.1 mile southeast of DeBartolo Hall)

McDonalds, 570 Fifth Avenue (across from Stambaugh Stadium, which sets next to DeBartolo Hall)

MVR (Mahoning Valley Restaurant), 410 North Walnut Street (about 0.25 miles directly east of DeBartolo Hall on the far side of the Wick Parking [M1] Garage)

Taco Bell, 420 Fifth Avenue (across DeBartolo Hall)

The Beat Coffeeshouse, 215 Lincoln Avenue (0.1 mile south of DeBartolo Hall)

Winslow's Café, YSU Campus on the west side of the Butler Art Museum (across campus directly east of DeBartolo Hall)

Maps will be made available at the meeting registration table.

NOTES

Friday's Welcoming Reception from 5:00-6:00 PM will be in Lobby of Moser Hall followed by the 6:00 PM Address of The President of The Ohio Academy of Science.

The Mineral Museum will be open during the social hour and there will be free planetarium show tickets for performances at 7:00 PM and 8:00 PM available during the social hours in the Moser Hall Lobby.

Saturday night's meal for OBASM will be in the Chestnut Room of Kilcawley Center. OBASM welcomes Academy members. Cost of the buffet dinner is \$16.00. Reservations MUST be made to Dr. Chet Cooper no later than Friday, April 9th. Payment can be made at the door, but prior reservations are REQUIRED. Phone 330.941.1361. Email crcooper.01@ysu.edu