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6th Annual Student Scholars’ Expo of the School of Mathematics, Engineering, and Business

Messiah College

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Sharpening Intellect | Deepening Christian Faith | Inspiring Action

Messiah University is a Christian university of the liberal and applied arts and sciences. Our mission is to educate men and women toward maturity of intellect, character and Christian faith in preparation for lives of service, leadership and reconciliation in church and society.

www.Messiah.edu
Dean’s Welcome
Dear Friends of Messiah College:

Welcome to the sixth annual Student Scholars’ Expo of the School of Mathematics, Engineering, and Business. This is the time each year when we celebrate the scholarly work our students have been engaged in throughout the year. Each student you meet and hear from has been working long hours alongside his/her professors and fellow students in these endeavors, and we welcome you to come and support them as they showcase their work through a series of stimulating presentations. Senior year projects will be presented throughout the day. Our student organizations, faculty, and staff from each academic department will also be delivering a variety of presentations. As in years past, there is the opportunity to learn more about the new and exciting initiatives of our Collaboratory for Strategic Partnerships and Applied Research — the organizational entity of the school that enables our students and educators to engage their academic disciplines in service to others in our region and in countries around the world. Please take time to meet our outstanding students and faculty, visit our facilities at Frey Hall, and learn more about our ongoing mission to educate students for lives of service, leadership, and reconciliation in church and society. A very warm welcome to each of you.

Mission Statement
The mission of the School of Mathematics, Engineering, and Business is to graduate students who are competent in their disciplines, broadly educated in the liberal arts, aware of the ethical challenges and dilemmas of a fallen world, and prepared to be lifelong learners. Faculty, staff, and students will work together, both in and outside the classroom, to foster professional, intellectual, and spiritual maturity in preparation to live, learn, and serve in the workplace, the church, and the world as agents of redemption, peace, reconciliation, and justice on behalf of Christ.

The Collaboratory for Strategic Partnerships and Applied Research
The Collaboratory for Strategic Partnerships and Applied Research brings Messiah College students and educators together to apply disciplinary knowledge and express value commitments through creative, hands-on problem solving. Participants engage the knowledge content of their academic disciplines to address needs brought by sponsoring clients. Areas of engagement include projects in mathematical and information sciences, engineering, and business. For comprehensive results, we also partner with disciplines and departments from across campus. Our focus is projects that empower the poor, promote justice for the oppressed, reconcile adversaries, and care for the earth. Clients are organizations, businesses, and communities that receive a tangible benefit and contribute to educational objectives for students. The Collaboratory fosters learning that supports and builds on quality classroom instruction. Projects enable students to engage classroom fundamentals in an authentic client-provider environment, and the Collaboratory is run by student leaders and the educators who mentor them. Our programs also connect faculty scholarship and service directly to student learning. The purpose of the Collaboratory is to serve the pressing needs of our world today while advancing the mission of our College to prepare men and women for lives of service, leadership, and reconciliation.

1:20 p.m. in Frey 110
MED Group of The Collaboratory for Strategic Partnerships and Applied Research
Over 60 percent of households in the communities where the Brethren In Christ Church-Zambia has local congregations, most of which care for HIV and AIDS patients and/or orphans, do not have the economic power to provide for their own food, health care, education, appropriate shelter, or clean water. The Messiah College Microeconomic Development (MED) Group was given the opportunity to partner with BICC-Z and the Messiah College art department to assist in creating a sustainable business enterprise to empower locals and improve the quality of their living conditions. After spending a year in research and planning, a summer 2008 site team traveled to Choma, Zambia, to implement the business. They trained locals in art and business skills and established a connection with the local museum to serve as a market for the goods. The art cooperative is still functioning and will be revisited this summer on a second site team trip.

1:40 p.m. in Frey 110
Communications Group of The Collaboratory for Strategic Partnerships and Applied Research
Asperger Syndrome (AS), a form of high functioning autism, affects 1 in every 150 children in the United States. Adults with AS experience impaired social interactions, with a tendency toward restricted and repetitive patterns of behavior, though they are gifted with average to above-average intelligence. While no specific cause or cure for AS is known at this time, social coaching for the purpose of job training and successful independent living may be facilitated by wireless communications technology. Wireless Enabled Remote Co-presence (WERC) has been developed in partnership with The Simmons Foundation (TSF) to enable a coach to talk to a selected AS client, such as on a job site, and receive audiovisual feedback via a micro-camera device worn by the client. This wireless communication technology intends to ease the transition of AS clients into the workforce and provide them more potential for successful independent living. This presentation will review the need for the technology, the development of the current WERC prototype, and the results of testing with AS subjects.

About Messiah College
As a private, four-year Christian college, Messiah College offers you a world of opportunities. You’ll share your college experience with other inquisitive students, learning together from professors who are deeply involved in teaching and the emerging scholarships in their fields. Your college endeavors may include everything from debating in the classroom to researching with the latest lab equipment, from pushing yourself on the athletic field to lifting your voice in a music ensemble, from caving during an outdoors club trip to expressing yourself through Acclamation Dance Ministry, from sharing experiences in your residence hall to serving in nearby towns, cities, and around the world.

Visit us at: www.messiah.edu/schools/math_eng_bus/
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