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## *Outstanding Graduates and Scholarship Awards*

The class of 2016 Awards Ceremony was held on Tuesday, April 26th with Outstanding Graduates and Scholarship awards being presented. Sean Suehr received the Outstanding Mathematics Graduate, Dillon Sloat received the Outstanding Mathematics Education Graduate, and Cody Armock received the Outstanding Computer Science Graduate. Scholarship recipients for 2016-2017 were: Joseph Sullivan, Frank F. Otis Scholarship; co-recipients Leah Bartz, Ahmed Basmaier, Jennifer Carpenter, and Robert Hollowell, the Gerald M. Samson Mathematics Scholarship; and co-recipients Jacob Cedolia and Brooke Leverton, the Faculty of Mathematics and Computer Science Scholarship. Congratulations graduates and scholarship recipients!

## *Farewell and Thank You Professors Boger and Terwilliger!*



Professor Tom Boger retired from LSSU in December 2015 after 34.5 years of service at LSSU. Professor Boger grew up in Sault Ste. Marie, MI. He earned his bachelor's degree and master's degree in computer science with a minor in mathematics, at Michigan State University. Before joining the faculty at LSSU, he worked for three years at Jamestown Community College in Jamestown, NY, and four years at University of Wisconsin-Stout in Menomonie, WI. So far, he has enjoyed his retirement, spending his free time working in his woodshop and traveling to his grandson's Central Michigan University football games.



Professor Mark Terwilliger left LSSU in May after accepting a position at University of North Alabama. Professor Terwilliger served on the faculty at LSSU for 26 years. Seven of those years he served as the department chair, four years as the head tennis coach and for the last three years served as the co-director of the Faculty Center for Teaching. Professor Terwilliger grew up in Bay City, MI and then completed his bachelor's degree in computer and mathematical sciences at LSSU. He then earned his master's degree in computer science from Michigan State University before returning to LSSU to serve on the faculty. He earned his PhD in computer science from Western Michigan University while still on the LSSU faculty.

Congratulations to both. They will be sorely missed.

## Math & CS

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#### We offer Bachelor's degrees in:

Mathematics  
Computer Science  
Computer Networking  
Web Development  
Secondary Education—  
    Mathematics  
    Computer Science  
Elementary Teaching—  
    Mathematics

#### We offer Associate's degrees in:

Computer Science  
Internet/Network Specialist

## Senior Research

- ◇ Cody Armock, *Website for Fundraising for a New Pipe Organ for Holy Name of Mary Church*
- ◇ Brittany Wallo, *Laker Community Forums using Moodle*
- ◇ Taylor Barnum, *Sault Ste. Marie iPhone Tourism App*
- ◇ Cody Armock, *Online Registration for LSSU Athletic Camps*
- ◇ Joshua Hester, *Curriculum Committee Database*
- ◇ Max Ison, *City of Sault Ste. Marie Information Technology Internship*
- ◇ Robert McBain, *Upward Bound Student Progress Tracking Website*
- ◇ Eric Minaker and Deborah Rempala, *Lake Superior State University Student Organization Management*
- ◇ Matt Peabody, *Aquatics Research Lab Equipment Database*
- ◇ Sean Suehr, *Complex Analysis: Stereographic Projection, Riemann Spheres, and Möbius Transformations*
- ◇ Matt Peabody, *Upward Bound Equipment Management System*

## Alumni Spotlight



Bo Lu graduated in 2012 with a degree in Computer and Mathematical Sciences. Immediately after graduation, he worked as a computer programmer analyst for the Canadian Forest Service (CFS) at the Great Lakes Forestry Center in Sault Ste. Marie, ON. He worked on many innovative research projects involving optimal surveillance strategies of forest invasive species as well as departmental initiatives in modeling the effect of climate change on the national timber supply. Near the end of 2015, he started a new position with the CFS as a physical scientist-geoinformatics. Bo is now working on the Canadian Wildland Fire Information Systems (CWFIS) and modernizing the Spatial Fire Management System. The CWFIS provides daily and forecast maps for the fire weather index and fire behavior prediction throughout the forest fire season and the SFMS is the number crunching program used to generate these maps. Bo received a Red Cross Rescuer Award in 2014 which is an award to “non-professional rescues and off-duty first responders who go out of their way to save a life, prevent further injury and/or provide comfort to the injured”. Bo states: “I really enjoyed the Computer and Mathematical Sciences program offered at LSSU. Without the math courses (Math 401 in particular!), I would not have the knowledge to perform the analytical work in my first job and without the computer science courses, I would not be able to write the high performance code required for my current job. In addition, I am also very happy with the glut of job opportunities in the math and computer science field. There is definitely a synergy between the two.”

## *Mathematics and Computer Science*



Three retired Mathematics and Computer Science faculty received emeriti status at the April 29th Board of Trustees meeting. Mr. Galen Harrison was appointed as a mathematics faculty beginning in the fall of 1963, retiring in December 1996. Galen strove to instill an understanding and appreciation for the importance of mathematical rigor to his students at all levels, from developmental mathematics up through calculus and differential equations. He devoted countless hours of service to his faculty colleagues as treasurer of the Faculty Association for over 20 years, and one of its founding members, as well as a frequent representative of the faculty during contract negotiations.

While at LSSU, Professor Harrison was a valuable colleague, able and willing to teach a broad range of coursework in mathematics and introductory computer programming, while serving in a variety of important service capacities to the university as a whole. He provided thoughtful input and analysis on a wide variety of important departmental issues and curricular matters, and, prior to his retirement, served as a role model for all through his commitment to the university. Galen Harrison generously founded the Galen H. Harrison Mathematics and Computer Science Scholarship.

Mr. Randall Suggitt was appointed to the mathematics and computer science faculty in the fall of 1983 until his retirement in May of 2012. While at LSSU, Professor Suggitt always projected a love for the subject matter to his students, constantly looking for new and innovative ways to present the content in order to capture the students' interest. Mr. Suggitt served on a variety of departmental and campus-wide committees, as well as working both formally and informally with military veterans who were returning to college following their service during his 30 years at LSSU. Mr. Suggitt taught a broad range of coursework, from developmental to advanced mathematical content, probability, and statistics, and computer science, demonstrating an excellent command of the content, regardless of the discipline or level. Professor Suggitt enthusiastically represented LSSU as the Master of Ceremonies for its annual Math Bowl. He was instrumental in the development of a variety of curricular recommendations, ranging from developmental and service-level mathematics through upper-level computer science.

Mr. Thomas Boger was appointed to the mathematics and computer science faculty in the fall of 1981 until his retirement in December 2015. Professor Boger was the key leader in establishing the computer science programs and authored multiple computer science textbooks while at LSSU. He always projected enthusiasm for his subject matter and respect for his students during his 34.5 years at LSSU. During his later years, Professor Boger supported regional high school mathematics teachers through significant concurrent enrollment cooperation. He taught a broad range of coursework, from developmental to advanced mathematical content, and theoretical and applied computer science, demonstrating an excellent command of the content, regardless of the discipline or level. Thomas Boger served two stints as the department chair, for a total of 11.5 years, during which time he served to both represent and serve the department faithfully and tirelessly. Mr. Boger served the LSSU athletic programs as the NCAA Faculty Athletics Representative from 2001 through 2013. He lifted departmental morale, through problem-solving sessions, BB & B gatherings, and posting comic strips on office doors.



## HIGH SCHOOLERS TAP THIRD ANNUAL LSSU FIELD DAY TO EXPLORE MATH, COMPUTER SCIENCE



More than 150 high school students from Sault Ste. Marie and Pellston enjoyed hands-on activities during Lake Superior State University's third annual Mathematics and Computer Science Field Day on Oct 10.

The students attended two sessions out of eight choices. In mathematics, there were sessions on the geometry of origami, statistics of color in a hard-chocolate treat, logistics of locking through the Soo Locks, summing infinite sums using Baravelle spirals, using mathematics to find errors, and matching of wits in a contest of logic. In computer science, students were able to program Arduino robots to traverse a maze and texture 3-D models. Stu-

dents and teachers had opportunities to ask questions about careers in mathematics and computer science and programs of study at LSSU.

"We look forward to this opportunity every year. Part of the university's mission is to serve the regional community in disseminating knowledge," said Kimberly Muller, chair of LSSU's School of Mathematics and Computer Science, which has organized the event since 2014. This is a great opportunity for us to give back to the community. This year we had about three times as many students in attendance than previous years. Every year we make improvements. We are already working on improvements for next year.



While Michigan high school students now take four years of mathematics, there is often not enough time available in the high school classroom for most students to learn about other topics in mathematics outside of the high school curriculum. Many mathematicians study logic, operations research, cryptography, fractals and other fields. LSSU's field day is an opportunity for students to be exposed to a wider array of mathematical topics. And according to [code.org](http://code.org), only one in four high schools offer computer programming, even though there are far more jobs available in computing in Michigan (14,689) compared to the number of computer science graduates (1,612 in 2014). There have been some statewide efforts to improve computer science education in Michigan. In 2015, Governor Rick Snyder encouraged growth in this area during Computer Science Education week. "We need students to be proficient in science, math and coding for Michigan's comeback to continue," said Gov. Snyder.

Lake State started the event in 2014 when the campus adjusted its schedule to add a holiday on Columbus Day, which is also Thanksgiving for Canadian students. The department chair at the time, Professor Emeritus Tom Boger, thought it would be a perfect opportunity for faculty to share their love of mathematics and computer science with regional high school students.