After graduation, I worked for Compuware Corporation, Inc. as a J2EE Java consultant. I stayed with Compuware for a little over two years and then moved to a smaller company, Centare Group, LLC. In the summer of 2005, I moved to a smaller company still, Corporate Technology Solutions, Inc. (http://www.consult-cts.com), where I became a managing partner in January of 2007. Consulting is a great career choice for me, because it provides me with the opportunity to interact with two different domains: people and corporate environments. It also demands role versatility: developer, designer, mentor, tester, recruiter, business analyst, project manager, and salesperson. In 2003, I spoke on an automated web testing at the No Fluff Just Stuff symposium. I’m considering speaking again at the NFJS tour this fall (2007) or next year. Currently, I am still focused on J2EE Java development, and I’ve just started learning .NET development as well. Agile Development is my passion, and I specialize in Agile Development techniques, such as Test Driven Development, which I have been practicing since graduation from Marquette.

Albin Laga  
M.S. COMPUTING ’06

Does missionary and service work in Tanzania.

Songlin Tan  
M.S. MSCS ’00

I wanted to let you know that with your help, I have moved to Chicago and work with Discover Financial Service. It is a similar data warehouse position as my previous job, but the systems, procedures, and tools are much more complex. I am looking forward to, and enjoying, the challenges. I don’t know how to say “thank you” enough. I appreciate your help from my heart, and feel fortunate that I can always turn to you for help on my career growth.

Kimberly Aksamit  
B.S. MATH ’07

Graduate school [at the University of Colorado Denver] is going well. I was really overwhelmed at first and didn’t quite trust that I could do it, but I’m now settled in and absolutely loving it.

In addition to school, I’m also working two very part-time jobs: as a private tutor for a 10th grader and as an instructor for Sylvan Learning Center where I teach SAT/ACT preparatory courses, and also do individual tutoring. I presented a talk, In the Pipeline, at the Mathematics and Science Symposium at Minnesota State Community and Technical College in Fergus Falls, Minnesota in May, 2007.

This summer, I worked as a teaching assistant for the Johns Hopkins University’s Center for Talented Youth (CTY) in Easton, PA. CTY summer programs consist of two 3-week sessions geared towards fostering the educational development of gifted children. I was employed for both sessions, helping to plan and give classroom instruction for two courses: Mathematical Modeling and Chaos Theory and Fractals.

WHERE IN THE WORLD IS DR. JONES?

Your memory of the last picture in “Where in the world is Dr. Jones?” may be pretty foggy by now, unlike the picture itself. It was from Mount Hood, in Oregon. Dan Kumprey (B.S.Mathematics,1991) picked it up right away and gets “the prize”. The quiz in this issue is not going to stump too many of you, I suspect, but prizes to Dan Kumprey (B.S.Mathematics,1991) picked it up right away and gets “the prize” pretty foggy by now, unlike the picture itself. It was from Mount Hood, in Oregon.
Systems Lab Unveils Experimental Embedded Operating System

Dr. Dennis Brylow wants to change the way that core systems courses are taught in the computer science major, and he doesn’t care how many wireless routers have to be sacrificed to do it.

Recipient of an $80K grant from Cisco Systems for “Creation Of An Embedded Systems Curriculum And Laboratory,” Brylow has been building up the hardware and software infrastructure needed to refocus outdated computing courses on the technology of the future.

"With the proliferation of wireless networking, wireless access points have become ubiquitous on campuses, in businesses, even in people’s homes," says Dr. Brylow. "While this kind of consumer electronic device used to be made out of special purpose circuitry, it now contains an embedded processor. It’s a computer inside; more powerful than desktop PCs were in the early 1990’s. It is readily available at retail electronic stores at the reasonable price of approximately $50. Somebody needs to build the software for these devices, and that somebody is going to be people like our graduates."

"Up until recently, it was assumed that only large, state-funded research Universities could afford the specialized equipment needed to provide practical lab experience with a lot of these kinds of embedded devices," Dr. Brylow explains. "Our work here at Marquette has shown that we can build a top-notch educational lab for a small fraction of the cost of the larger institutions, and without the huge investment in specialized lab space."

Student involvement in the research is one of Dr. Brylow’s top priorities. “Eight students are currently involved directly on the project, both graduate and undergraduate, either working off the grant, or earning independent study credit. Another six students are working on associated senior design projects. Students meet twice weekly during the semester to discuss current related research, design new system components, formally review their completed software, and troubleshoot practical obstacles to the groups goals."

Dr. Brylow’s idea has already had a significant impact on the sophomore year sequence of hardware systems and operating systems courses, and is beginning to be duplicated at other universities. “Our goal was not just to lead the way in building this curriculum, but to pave the way for those who would follow.” A dedicated team of student research assistants released the first version of the Embedded XINU operating system this past summer, and have amassed a significant body of support documentation on the project’s website.

Dr. Brylow further added, “Faculty at other schools want to show students how to modify code for a real system, and run it on an actual embedded processor -- we can show them how to do that now.

There’s no need to simulate modern RISC architectures for courses in machine organization -- we’ve got the real thing here.” In addition to the practical education delivered, the project is now beginning to produce research dividends. Several conference publications have already come out of the project, and several more are planned. The research group will accompany Dr. Brylow to the top computer science education conference in Portland this March where he will present his SIGCSE Paper, “An Experimental Laboratory Environment for Teaching Embedded Operating Systems.”

The Embedded XINU Project webpage is at http://xinux.mscs.mu.edu/.

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**FROM THE CHAIRS**

Although Steve Merrill has been Acting Chair this fall, while I take a sabbatical, I thought I would include a few words, since I will be back at my desk come January. It has been somewhat of a tumultuous semester, and I have actually been at my desk more than I hoped would be the case (but less than I feared). The Sword of Damocles hanging over our doctoral program – a picture of which I included in my Annual Report for last year – came down rather sharply in September. Our two-headed chairmanship has vigorously counterattacked by instead proposing that we realign the program along the lines of Computational Science, rather than simply Mathematics, thereby integrating the strains of our department much more tightly into a program that would be at the vanguard of a movement towards interdisciplinary doctoral studies across the nation. Through our living over the past seven years, particularly in computer science, we have the foundations of a program that would be unique in that its core - mathematics, statistics and computer science - would be housed within one department, while incorporating faculty from various disciplines within sciences and engineering in an integral way. As I write, we have received great encouragement to proceed from the Board of Graduate Studies, but given the administration’s desire to close our program, the status is very unclear.

**Peter Jones, Chair**
Dept. of Mathematics, Statistics and Computer Science

A department is composed of many parts – the names that appear on faculty and staff lists, lists of students and majors, as well as labs and offices. A department also is defined by its connections to other entities in the University and community through research and teaching activities.

Another aspect of a department is its history – alumni, former faculty, and programs which have shaped what exists today. As with a human, the path to adulthood matters. The experiences, education, people you meet, and your family have an indelible influence on the person you are to be.

The Department of Mathematics, Statistics and Computer Science through this Newsletter, acknowledge your contribution in the past and interest in the future of the Department. We welcome your continued participation.

**Stephen J. Merrill, Acting Chair**
Dept. of Mathematics, Statistics and Computer Science

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**Letters from the Chairs**

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This newsletter is a publication written by students and MSCS faculty for alumni of the Department of Mathematics, Statistics, and Computer Science Marquette University.
**ACTIVITIES & AWARDS**

**Sheikh Iqbal Ahamed**
Presented: High Confidence Software Technologies, Peking University, organized by Key Laboratory of High Confidence Software Technologies, Peking, China, July 2007.

**Ruta Bajounaite**

**Awarded:** The Redesign Alliance First Annual Conference, Orlando, FL, March, 2007.

**Awarded:** Co-PI Techniques for Modeling Complex Longitudinal Studies, (Principal Investigator: John P. Klein, Division of Biostatistics, Medical College of Wisconsin), National Institute of Health, 2007 - 2011.

**Paul Bankston**
Presented: Un Continuous Images of Acyclic Continua, Spring Topology and Dynamics Conference 2007, University of Missouri, Rolla, MO March 2007; Chainability and Unidimensionality from a Model-Theoretic Perspective, Canadian Math, Society and MITACS Joint Conference, University of Manitoba, June, 2007.

**Dennis Brylow**

**Anne Clough**

**Kim Factor**

**Pi Mu Epsilon Inductees 2007-08**

**Sarah Kuchta**

**Peter Jones**
Attended the national conference as a delegate of the Marquette Chapter of SIGMA XI, the Scientific Research Society, Orlando, FL, November, 2007.

**Gary Krenz**

**John Moyer**

**Awarded:** Creation of an Embedded Systems Curriculum and Laboratory, Cisco Systems, $80,000, 2007; Faculty Development Award, Marquette University Klinger College of Arts and Sciences, $5000, 2007.

**Annie Cundicio**
Awarded: Mathematics Education Award (no photo available). Anne is currently a doctoral student in mathematics at the University of Wisconsin, in Madison.

**Miriam Conne!an Mathematics Education Award**

**Sarah Schmidt**

**Craig Struble**


Complete publication listing is available at: www.marquette.edu/research/

Iqbal Ahamed


Ruta Bajorunaite
Two-sample Tests of the Equality of Two Cumulative Incidence Functions (with Klein, J.P.), Computational Statistics and Data Analysis, 51, (9), 2007, pp. 4269-4271.


Comparison of Nanointervention Measurements Between Osteogenesis Imperfecta Type III and Type IV and Between Different Anatomic Locations (Femur/Tibia versus Iliac Crest) (with Fan, Z., Smith, P.A., Harris, G.F., Rauch, F.J), Connective Tissue Research, 48, (2), 2007, pp.70-75.

Naveen Bansal

Dennis Brylow

Jim Factor

Kim Factor
Digraphs with Isomorphic Underlining and Domination Graphs: Connected UG (D), (with Larry Langley), Discussiones Mathematicae: Graph Theory, 27 (1), (2007), pp.51 – 67.


Gary Krenz


Praveen Madiraju

John Moyer

Stephen Merrill

Craig Struble


Dennis Brylow

Jim Factor

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