Bulldog Bytes

Department News

Greetings from Duluth, where at this writing in May some of us still had piles of snow in our yards! We've had some significant milestones, including the retirement of **Donald** Crouch and the adding of Henry Wang to our faculty (see the article below). Hudson Turner has been elected for a second 3-year term as department head, and Rich Maclin has taken a half-time position as associate dean of SCSE. Our new BA in CS degree, approved last year, has its first graduate this spring.

After seeing our graduate program through a very successful external review last year, Carolyn Crouch spent 2013-2014 on sabbatical, with Rich taking over as interim director of graduate studies. After two years as a McKnight visiting scholar, Andrew Brooks returned to a two-year term associate professor position, teaching operating systems, software engineering, and databases. He continues his software engineering research with undergraduates and graduates.

All units throughout the university system have been affected by budget problems. Our campus has gone through a difficult program prioritization exercise with SCSE as a whole coming through in good shape. Our department's major enrollment is up over 65% since its low point in 2007, and we will award the most undergraduate degrees (45) this year since 2005. We are currently searching for a tenure-track assistant professor, to begin in January 2015, specializing in operating systems, embedded systems, or security.

We've made some modifications and enhancements to our curriculum, including the adding of a Matlab course first offered in Fall '13. We are hoping that it will replace Visual Basic as a requirement for some of the engineering programs. Developed and first taught by Rich, Steve Holtz has now taken it over. We have also dropped the hardware-oriented Digital Logic requirement for the BS, and are now requiring a C- or better in all prerequisite courses for any courses required for the CS or CIS degree.

Finally, in what has become a running joke in the department, the planned Heller Hall renovation, which some of us have been awaiting for a decade or two, is still at the top of the list of campus projects, and still remains unfunded. ■

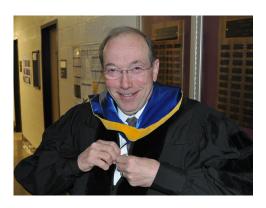
Faculty News

Donald Crouch is retiring after twenty-six years as a cornerstone of the UMD computer science department.

Donald joined us in the fall of 1988 after having served on university faculties at Florida, Alabama, Cornell, and Tulane. From 1989 to 1992 he served as our director of graduate studies, and in 1993 he began a twelve-year stint as department head. He presided over many significant events, including two national accreditations of the Computer Science degree, the establishing of the Computer Information Systems major, several major curricula changes, the transition from quarters to semesters, and the establishing of departmental student computer labs.

In addition, Donald oversaw the hiring of seven permanent faculty members and successfully shepherded five junior faculty through the promotion process. The graduate program expanded dramatically under his watch, and he was instrumental in procuring external grant money for the department in support of undergraduate research. He was principle investigator or co-PI on numerous funded projects, including the Northland Advanced Transportation Systems Research Laboratory, a CISE Instrumentation

Grant for Computationally Intensive Projects, a Minority Institution Infrastructure Program Grant, and various other NSF projects.



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Alumni Spotlight

Brian Winn

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Like many kids growing up in the 1970s and 80s, Brian Winn (BS CS 1993) got hooked on programming while playing games on machines with names like Atari and Apple II. Rather than buy him games, Brian's father gave him a book on how to program games in BASIC. "I first copied the code directly from the book into the computer and got it to run," he remembers. "Then I began to modify the code to change and expand the games. Eventually I was able to write entirely new games." The early self-education paid off, and today Brian enjoys a satisfying career as a professor in Michigan State University's Department of Media and Information, and director of the Games for Entertainment and Learning (GEL) Lab there.

While Brian's day is typical for an academic – preparing for and teaching classes, meeting with students, and grading – his work in the GEL lab allows him to pursue his passion, the development of interactive media for gamebased learning. His award-winning interactive media work has been presented, exhibited, and experienced around the world. One focus of this work, Brain Powered Games, has been customized as cognitive rehabilitation therapy for African children suffering from cerebral mal-

aria and HIV with successful results. "This was a really satisfying project," Brian says. "It was great to see my work having a positive impact on people's



daily lives in developing countries."

Brian's interest in games with a positive purpose extends to "exergames" that get the players off the couch. One such project was Olympus, which immerses players in ancient Greek history and myth through a unique combination of input devices. It contained over six hours of gameplay and was very well received by players. Olympus started a line of research for Brian that includes current projects with NASA and NIH. "We are creating and researching a game that tries to motivate astronauts to work out at peak levels of performance during a long-term space flight, such as a mission to Mars," Brian says. "It

was exciting to travel to Johnson Space Center and run a focus group with current astronauts."

As a kid, Brian was active in organized sports, downhill skiing, and music, which allowed him to tour the country with the Northfield Boys Choir. He enjoyed school, excelled at math and science, and by the time he graduated from high school in Northfield, MN, he had piled up a lot of college credit. Still, he had time to program not only games but a complete financial calculations program, which he sold to customers through the shareware market. "This gave me experience, while in high school, with many facets involved in running a small company," he recalls. This helped in later entrepreneurial efforts, resulting in commercial games with names like Mudcraft, Grumpy Snowmen, and Freaky Deaky Flashback.

Brian chose UMD because it was not as large as UMTC but "large enough to have excellent facilities, resources, and professors." He also wanted to live on his own further from home and appreciated that the campus buildings were connected. Brian is proud of the fact that he was on the honor roll every semester at UMD and graduated in just three years with a 3.97 GPA. "I never considered myself especially gifted. But I had a strong work ethic. At UMD, I would always try to get my work done before socializing."

After his freshman year, Brian was hired in the summer by an airport to manage a team developing an inventory, sales, and accounting system. The next summer he had an internship at IBM that, while a "great experience," convinced him that working on software development tools was not his passion. During his last semester at UMD Brian undertook a UROP project under Tim Colburn and Subhash Basak applying neural network technology to drug discovery. "This opportunity opened my eyes to the rewards of academic research," Brian says. "Little did I know then that I would eventually have a career in academia."

Brian went on to pursue graduate studies at MSU on the recommendation of Colburn, who also attended there. A course on hypermedia design in 1994 fixed his academic direction in the area of multimedia and he has never looked back. He became a research assistant and lead programmer in MSU's Communication Technology Lab and stayed on after graduating with his master's degree in 1995. In 1997 he was made assistant director of the lab, and he began to teach courses in interactive design and web

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Undergraduate News

In 2013 the department was pleased to award the following academic scholarships to meritorious computer science or computer information systems undergraduate majors:

Saturn Systems Scholarship: Adam Peterson

Alexandra Taylor

U.S. Steel Scholarship: Scott Redig

K. E. Differt Scholarship: Jesse Schmieg

In 2014, in addition to the continuing Differt scholarship, we are able to add two scholarships through the generosity of our department donors:

CS Department Scholarship: Jackson Houston

Jessica Randall

K. E. Differt Scholarship: Joshua Muhich

In May 2014 we also presented the annual CS department awards:

Academic Achievement: Adam Peterson

Outstanding Senior: Timothy Schoenheider

Oustanding Service: Alexandra Taylor

From left to right:
Jackson,
Jessica,
Joshua,
Scott,

Alexandra, Adam.



From left to right:
Jesse,
Timothy,
Alexandra,
Adam.

Alumni News

This issue of **Bulldog Bytes** introduces an expanded alumni news feature whereby alumni can submit personal and professional updates. If you would like to submit updates to future issues, send them to Clare at cford@d.umn.edu.

Chris Anderson (BS CIS 2008) is currently working as Network Engineering Lead for MTS Systems Corporation in Eden Prairie, MN. His projects include overhauling and enhancing 460,000 sq ft of network infrastructure.

Conrad Beaulieu (BS Math/CS 1979) works for Honeywell International as a System Architect and Engineering Fellow working with global development teams introducing ontology information system approaches to capture re-usable expert knowledge. He has 7 patents and has represented Honeywell on a number of standards committees.

Tim Biles (BS CS 1991) has worked nearly 15 years at UMD for ITSS, providing support for Microsoft technologies like Windows Servers, Active Directory and SCCM services for the UMD campus. He also supports several database systems for Food Services and Health Services, and has received a Team Project Outstanding Service Award.

Zachary Biles (BS CIS 2012) works as a Data Center Analyst/Systems Administrator at Sisu Medical Solutions, a Cloud Service Hosting Company specializing in Healthcare IT Software hosting, in Duluth, MN. He is leading a project for the implementation of two Microsoft System Center products in Sisu's Multi-Tenant environment.

Justin Chase (BS CS 2005) is a Software Developer Engineer at Microsoft in St. Paul, working on the F12 developer tools for Internet Explorer and Visual Studio.

Dave Diercks (BS IST 2002) is a Process Controls Engineer at Northshore Mining Company in Silver Bay, MN. He is 3 years into a multi-year, multi-million dollar complete control system upgrade which has to happen while the plant is in full operation.

Mike Drees (BS CIS 2006) is a Senior Software Engineer at General Mills.

Peter Edstrom (BS CS 1999) is a Project Director at Software for Good which actively works to make the world a better place through software. The company is building personalized lymphoma vaccines, working with RE-AMP to connect climate change and energy policy efforts across the Midwest, and working to bring music education to stu-

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Donald has taught a variety of courses including fundamentals of information systems, information technology and hardware, database system concepts, data communications and network technology, database management systems, comparative programming languages, and compiler design. He has supervised 37 master's students and served on 41 master's committees.

Donald's most famous graduate student is Google senior vice president Amit Singhal, who credits Donald with instilling a passion for information retrieval and search. In 2010, an endowment was made by the Amit Singhal Family Charitable Fund to establish the ACM SIGIR Donald B. Crouch Travel Grant for support of students living and studying in developing countries.

When asked what he plans to do with his copious spare time, Donald plays it very close to the vest, but we suspect it may have something to do with spending more time with his beloved dogs, or perhaps ice fishing on Lake Superior, or netting smelt in Beaver Bay. Whatever he chooses, it is well earned. The department sincerely thanks Donald for over a quarter century of leadership and

New faculty hire **Haiyang (Henry) Wang** joined the department in the fall of 2013. Henry comes to us by way of Simon Fraser University in Vancouver where he completed his Ph.D. in computer science and developed his interest in cloud computing. He has already taught networks and advanced systems programming; begun setting up a lab and supervising a graduate student; and started the grant application process.

Henry was born and raised in Jiangxi province in China. He notes that Jiangxi has been known as the "hometown of porcelain" for more than a thousand years, but in a testament to his youth he admits that his main interest growing up was video games. As a college student he was especially interested in software and web development, and by 2001 he became involved in the implementation of BitTorrent-like peer-to-peer applications.

Henry did his master's degree work at Shanghai's Tongji University. Before moving to Canada, he was on the development team of China's first IPv6/IPv4 dual-stack core router (BitEngine 12000 Series) and RFC 5747: 4over6 Transit Solution Using IP Encapsulation and MP-BGP Extensions at Tsinghua University. At SFU he did his Ph.D. research under the supervision of Dr. Jiangchuan Liu, who Henry describes as "visionary and energetic."

After finishing his dissertation, Henry found himself struggling with visa issues in Vancouver when UMD's fall 2013 semester began. "Luckily, Pete Willemsen kindly took over my teaching load at the beginning," Henry recalls. "He also showed me how to design and organize a course step-by-step before my first class." Henry is grateful for this and the support he's received from Lori, Clare, and Jim in setting up his new work home. "First-year teaching is a difficult challenge for anyone," he says. "I am extremely lucky

because our staff and faculty have helped me a lot. I owe everyone a big thank you."

Henry has also found UMD students active and comfortable



to work with. "Our students are smart and ask interesting questions in class," he says. This may be due to the fact that Henry's ready smile brightens any room. "Everyone here is so nice and supportive," Henry beams. "Although we had a harsh and snowy winter this year in Duluth, I feel really warm inside."

This spring also marks the retirement of **Linda Deneen**, director of UMD's Information Technology Systems and Services (ITSS) for the last 21 years. Before that, Linda joined the UMD mathematics faculty in 1985 and was in-

strumental in the creation of a new UMD computer science department in 1987. From 1989 until 1992 she served as computer science department head.

Linda has always enjoyed a close relationship with our department, particularly since she is married to our own **Gary Shute**. In retirement, she intends to play a lot of bridge, become



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dents through Instruments in the Cloud.

Daniel Ellison (BS CS 1989) has been building data warehouses for more than 15 years, for several large banks, the State of MN, and now for Optum Insight, the consulting arm of UnitedHealth Group. He just started a contract helping the federal government build a new health care data warehouse for the federal employees' health benefits.

Ken Erickson (BS CS 1992) has been Senior Engineer for Tucson Embedded Systems for over 16 years, working with embedded systems and controllers of all kinds, ranging from FAA certified engine controllers for aircraft, medical devices, and missiles, to military platforms. The company covers everything from requirements, design, code, test, verification, and validation to systems engineering.

Michael Frederick (BS CS 2002) is a development lead at Aon Corporation in Minneapolis, working extensively with Microsoft .Net technologies and Microsoft SQL Server. He currently has a team of 8 people ranging from 2 interns to Senior Application Architects managing about 30 applications in a larger application suite that has about 4000 users globally.

Lori Gilbertson (BA Math/CS 1980) is Director of Engineering, Platform Software Team, for SGI. Her team covers firmware, BIOS, OS, kernel, and development tool kits for SGI platforms, with primary OS focus on Linux. They're always looking for new talented software engineers.

Aaron Goldberg (BS CS 2005) is the iOS/Android Solution Architect for Best Buy in Richfield, MN. He has also been an Android Developer at Best Buy and Code 42, and created mobile games for Concrete Software on multiple mobile platforms.

Benjamin Hart Jr. (BS CS 2012) is an Associate Software Engineer at Kroll Ontrack, having interned there for three years previously. He currently works on Ontrack Power Controls.

Kevin Hinds (BS IST 2003) works in website development on the east coast. His projects have included a media distribution system for encoding and uploading independent music and video around the clock, and a web services driven advertising network.

Sean Janssen (BS CIS 2010) worked for Claire's World headquarters doing level 3 VPN firewall support for 3 years and is now at tax company Convey Compliance Systems working to become a system administrator.

Zachary Kaiser (BS CS 2013) works for CH Robinson as a programmer analyst. His major projects include global billing process streamlining and helping develop better development practices by organizing testing presentations and demonstrations and design pattern training.

Makito Kano
(BS CS 2013),
Christopher
Becker (MS
2012), and
Kaushik
Satyavolu (MS
2010) are in the
computer science
graduate program



at the University of Utah.

Andrew Kasper (BS CS 2006) works in Atlanta for a Silicon Valley startup called Tapjoy. Andrew's projects include a web service that responds to thousands of web requests per second, uniquely identifying over a billion mobile devices in real time, and shooting co-workers with Nerf guns.

Adam Keim (BS CS 2002) is Senior Software Engineer at Kroll Ontrack in Eden Prairie MN. He received an MBA from UMTC, and in 2010 became a Certified Business Intelligence Professional. Adam also serves on the UMD Computer Science Industry Advisory Board.

Mark Kennedy (BS CS 1987) is vice president of IT Operations at Surescripts in Minneapolis. Surescripts operates a national clinical network that connects pharmacies, payers, pharmacy benefit managers, physicians, hospitals, integrated delivery networks, health information exchanges and health technology firms to enable the efficient and secure exchange of health information.

Julie Kmoch (BS CS 1990) is Senior Development Manager of Adobe Lightroom at Adobe in Arden Hills, MN.

Brian Malecha (BS CS 1997) is a Senior Principal IT Business Analyst at Medtronic. Brian has worked on a web portal for physicians and led an IT project to automate critical sales and physician relations tasks for a new product, CoreValve, a transcatheter aortic valve replacement technology. He also continues to serve in the Minnesota National Guard and is director of IT for the 34th Infantry Division.

Laurie Mazanec (BA CS/Technical Writing 1985) is Senior Project Manager at Medtronic in the Cardiac Rhythm Disease Management business unit, where she

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CS and CIS Graduating Seniors 2013-2014

Eric Boggs Taylor Leaf Brenda Bosveld Chee Lee **Alex Carnes** Zhiren Lu **Phonsai Chanhvongsak Adam Lundeen Eric Chaplin Dylan Mcguire Timothy Duch Bryniel McIntyre Justin Gaedke Forest Mead Rvan Grewatz Dylan Miller Nicholas Neville Daniel Hammond** John Heitkamp Vanick Ng **Emily High Luke Nomeland** Jordan Hoeft **Seth Peters Daniel Hopson Adam Peterson Abhijeet Jha** Joshua Reprecht **Abhinay Jha William Rutford Dalton Johnson Logan Sales Blaed Johnston Andrew Schaar Zachary Kaiser Timothy Schoenheider Solan Kano Jay Stoneburner** Rachmat Kasmani **Alexandra Taylor** Jonathan Klein John Telega **Jack Ladwig Melissa Vosberg**

Employment Opportunity for Undergraduates

Every year a number of undergraduate CS and CIS students seek summer internships, often away from Duluth where the jobs usually are. Now there is an excellent paid opportunity for students to work on real-world projects part-time and year around while going to school in Duluth.

Maverick Software Consulting has partnered with **Co.Lab** in downtown Duluth to create an office where 10-15 local undergraduate computer science students will work with a Java lead to produce software for **Menard's Inc.** Several of our students have already been hired, and the first Java lead is our 2013-14 graduate **Blaed Johnston**.

Campus News

SCSE Dean **James Riehl** is stepping down after 14 years... **Maurices** announced it is donating a downtown building to UMD... **Stadium Apartments** have been demolished to make way for green space and future elements of the UMD Master Plan.

Graduate Program News

2014 CS Master's Degree Recipients



From left to right: Vamshi Thotempudi, Jack Gilbert, Venkataravikiran Ravva, Lakshmi Lavanya Singampalli, Matthew Overby, Ramakanth Vanga, Vidya Attivilli

The award for Outstanding Graduate Teaching Assistant for 2013-14 went to **Lavanya Singampalli**, shown at right.

The year included its usual slate of social events, including the graduate student picnic at the home of **Lori and John Lucia**.

Top: A. Koppula,
M. Overby.
2nd row from top:
R. Ravva, S. Movva,
M. Faris.
2nd row from bottom:
R. Pallelra, V. Vuggumudi, S. Karumuri,
C. Chitirala,
V. Thotempudi.
Bottom: M. Alla,
V. Attivilli,
L. Singampalli, S.
Chittamuru,
R. Repaka, J. Gilbert





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writes physician and patient literature for pacemakers, defibrillators, heart monitors, cardiac instruments, etc. She credits UMD CLA professor Ken Risdon with helping her create, at the time, the Computer Science/Technical Writing Interdisciplinary Studies major.

Naveed Memon (BS CS 2004) is founder and CTO of Verge Systems, a company with 22 employees and offices in Pakistan and U.A.E. He developed WebHR, cloudbased social Human Relations software that is currently being used by more than 8,800 companies in 173 countries.

Josh Michaud (BS CS 2002) is a senior software engineer at Kroll Ontrack working on the Legal Technologies side of the business. He writes C# applications that interface with SQL databases, and his software runs on data centers in Minnesota, UK, and Tokyo with more than 30 petabytes of storage just in Minnesota.

Nathan Moreau (BS IST 2001) is Director of Sales and Marketing for the medical device company Stryker. The company's focus is to help hospitals implement efficient workflow initiatives within large health systems across the US and globally.

David O'Keefe (BS CS 2007) is Director of Information Services at Netgain in St. Cloud, MN. Netgain is a health care information technology provider with dedicated cloud and private cloud offerings allowing organizations to enjoy cloud computing benefits without compromising control or security.

Mike Ranfranz (BA Math/CS 1982) is senior IT Architect at Optum Technology, and a Subject Matter Expert for AIX. His career has also included Programmer Analyst, Software Engineer, System Integrator, and System Administrator on systems including CDC Cyber 205/180, Sun Solaris, and IBM AIX.

Andrew Reitz (BS CS 2011) is an Android developer III at The Nerdery.

Ryan Salsman (BS CS 2006) is the Development Lead for Design Center, Inc., a design and software company based in St. Paul which is currently focused on developing mobile applications for businesses. The company creates tools and interactive presentations to increase the knowledge, productivity and service of its clients' sales staff.

Joe Sauve (BS CIS 2008) is doing mobile app development in the Twin Cities. Some of the apps he has created himself or on behalf of companies include: NAU Crop Insurance iPad app; ByME, a new social deals app for UMN students; and an iOS app for dermatologists.

Bobby Schmitt (BS CS 2001) is working as a Senior Software Engineer for Kroll Ontrack, Inc. on the Ontrack Power Controls product. He recently was certified as a professional scrum developer.

Dan Sivertson (BA Math/CS 1983) says that the interesting thing about his career is not so much what he is doing currently, but all of the places he has been, like working for NASA on manned spaceflight avionics systems to go to the moon and Mars. To Dan, the path and the journey is the most interesting; there is no true destination.

Oli Smith (BS CS 1994) is a self-employed web development consultant, and has been in software development and consulting for the past 20 years since graduating from UMD. He is currently working independently for Disney on web/mobile solutions for their travel partners.

Joshua Stahnke (BS CS 2011) works at Brocade Communications Inc. helping with firmware development for new FCIP extension switch hardware platforms, as well as basic testing, maintenance, etc. He also produces psychedelic electronic music, is trying to get an online retail store started selling products created by individuals in the Midwest, and is making plans for a non-profit company to organize music festivals sending profits to charity.

Andrew Thomas (BS CS 1995) has been at Intel Corporation for almost 19 years. He is the Lean and Agile Champion of a team of 1100 circuit design and design automation engineers charged with creating pieces of reusable hardware which are used in anything from smart phones to thermostats to minivans to microservers.

Dan Thomsen (BA Math/CS 1987) conducts computer science research for SIFT, a small research company in Minneapolis, specializing in computer security, distributed human computation, and gamification. His current project turns therapy for veterans with PTSD into an online game to tell their story through comics.

Kristy Vanhornweder (BS CS 2000, MS 2002) is a tenure-track professor at Lenoir-Rhyne University in Hickory, North Carolina, in the Math & Computing Sciences department. She teaches primarily web programming and Java courses, and likes to find ways to work the courses around her personal interests, such as having her students develop a website around hiking in the North Carolina mountains.

Kevin Vlasich (BS CS 1994) is Principal Cyber Security Research Scientist at Honeywell in Golden Valley, MN. Kevin was introduced to Emacs by Prof. Colburn in a programming class back in 1990. He and Prof. Colburn

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still use it today.

Jerry Von Berge (BS CS 1993) has been a Software Engineer at IBM, Rochester MN, for 20 years. He recently joined the IBM Watson Group development team working on cognitive computing solutions.

Joe Walker (BS CS 2003) started with Accenture in Minneapolis as an Operations Engineer. He then moved to Microsoft, where he was part of a team that engineered the infrastructure behind the development, testing, and release of Office 2010 and most of 2013 from a storage and virtualization perspective. He now works at Brocade Communications where he is able to help customers define, articulate and solve significant engineering issues around cloud computing, infrastructure migration, and Hadoop. He likes Seattle, especially because of the Seahawks.

Yanlin Yu (BS CS 2001) is a System Engineer at Lockheed Martin where he is working on the Windows Azure Cloud Computing system. Prior to Lockheed, he was Lead Engineer on a virtualization project at the University of Washington that won a UW-IT ACE (Achievement, Collaboration, and Excellence) award. Currently in Seattle, Yanlin enjoys the variety of foods, the diversity of cultures, the surrounding national parks, and, most of all, the Seahawks.

Charles Yust (BS CS 2000) lives in Brooklyn, NY, where he works for Unified Field Inc. developing interactive software for museum exhibits, multi-touch tables, mobile devices and spatial environments for clients all over the country. Last year he completed software/media development on the interactive simulators and some of the exhibits that surround the Space Shuttle Atlantis in its new home at Kennedy Space Center, building a shuttle landing sim, spacewalk sim using Kinect, and Robotic Arm and Docking sims. He got to meet a bunch of astronauts, some of whom tried out his simulators at the museum opening.

Syed Muhammad Raza Zaidi (BS CS 2010) works at Business Incentives Worldwide as a Senior Technical Analyst, working on incentive and recognition applications for clients around the globe. His latest project includes a native iOS and Android app for the same programs.

Syed Tahir Raza Zaidi (BS CS 2004) is an IT industry consultant with various architect roles. He is currently working as an infrastructure engineer to develop Best Buy's Cloud environment. In his spare time, he runs two IT Marketing companies, Raza Systems Inc. and Raza Global.

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design. By fall 2000, Brian felt he had peaked in his position at the lab and started to look toward industry (and California). At the same time, MSU was searching for a full-time, tenure-track professor in his area, and he was lured by "job security, better pay, opportunity for advancement, and a lot of academic freedom!" So he stayed on once again, this time as assistant professor and associate director of the lab. It was then he decided to make games the focus of his work.

Brian taught the first-ever course in game design and development at MSU. It grew to two courses and became the basis for a new interdisciplinary specialization bringing together students in Media and Information, Computer Science, and Studio Art. The specialization has grown to be a top-rated program in North America for the last four years, according to the Princeton Review.

Brian is now married, the father of a boy, and has advanced to associate professor and director of the GEL lab, an association of several faculty and students researching and designing games. He loves his work, because "as an academic and developer in this space, you constantly have to learn, grow, and adapt," he says. It also helps that he gets to travel around the world to present his work. "I recently

returned from a conference that took place on a 5-day cruise from Florida to Cozumel, Mexico and back. I know there are not many jobs out there that



come with such perks," he says with a smile. ■

Donate

If you would like to help defray the cost of education for worthy students, please consider donating to the UMD Department of Computer Science Scholarship Fund. Just go to http://www.d.umn.edu/development and click **Make a Gift to UMD**.

Bulldog Bytes is conceived, written, and produced by Tim Colburn (tcolburn@d.umn.edu) with assistance from Clare Ford.