Dear Alumni, Students, and Friends,

Welcome to the first edition of the Department of Computer Science’s bi-annual newsletter. This is our first attempt to keep our alumni abreast of the developments at their alma mater. This fall, we welcome Dr. Shubham Jain and Dr. Cong Wang, our newest tenure-track faculty members who have joined our ranks. Dr. Jain received her PhD from Rutgers University and works in the areas of mobile computing, cyber-physical systems, and data analytics in smart environments. Dr. Wang received his PhD from Stony Brook University and works in the areas of cybersecurity, wireless networks, and algorithms. We also welcome our two new lecturers, Dr. Soad Ibrahim and Mr. Thomas Kennedy.

On the enrollment front, our bachelor’s program continues to grow to a total enrollment of more than 700 students in fall 2016. Our graduate enrollment has remained steady at around 125.

The department has also been active in various activities promoting women in computing. Since 2013, several of our women faculty and students have been actively participating in the Grace Hopper Celebrations and other related events. Dr. Jing He was promoted to full professor starting fall 2017. With the addition of Dr. Jain and Dr. Ibrahim, we now have 7 women faculty members in the department.

Since 2013, we have been conducting summer undergraduate workshops for students from India. This year, we hosted 19 students from three institutes in Bangalore, India: Acharya Institute of Technology, BNM Institute of Technology, and BMS Institute of Technology. During their stay, the students were involved in research projects and got to experience American culture. Many have expressed interest in returning to our department for graduate studies.

Summer internships are a great opportunity for our students to apply classroom learning to real-world problems. Last summer, three of our PhD students — Alexander Nwala, Christos Tsolaksi, and Aida Ghazi Zadeh — interned at Harvard University, Argonne National Labs, and Nationwide Mutual Insurance, respectively. MS student Prajakta Kanade interned at Electronic Arts, a video game company. We encourage more of our graduates and undergraduates to participate in internships while at ODU.

Our faculty continues to work on cutting-edge research in several areas of computer science. In this issue, we highlight research conducted in the Center for Real-Time Computing (CRTC), led by Dr. Nikos Chrisochoides and Dr. Andrey Chernikov. It is primarily focused on parallel mesh generation, medical image computing, and quantum and cloud computing. Several PhD, MS, and BS students are working in this center under faculty supervision. It receives funding from NASA, DoD, and NIA. We congratulate Dr. Weigle and Dr. Nelson for their recent grant from NEH/IMLS to research and develop tools for efficient visualization of and interaction with archived web pages.

Dr. Kurt Maly, former department chair from 1985-2004, retired last summer. He continues to be active in research as an emeritus faculty. On a sad note, Dr. Hussein Abdel-Wahab, who joined the department in 1980 as an associate professor, passed away last December. In his memory, the department has started the “Abdel-Wahab Memorial Graduate Fellowship Fund.” The scholarship will award fellowships to graduate students of exceptional merit.

This issue features three undergraduate alumni: Tyler Swayne, Christian and Caroline Rasmussen; and one graduate student, Dr. Justin Brunelle. We would like to hear from our alumni and share their progress in our future newsletters. Since we are also in the process of building our alumni database, please take the time to submit your information through the link provided on the last page of this issue.
ODU Well Represented at International Women in Computing Conferences

Dr. Michele Weigle
Associate Professor & Graduate Program Director

Since 2013, 10 different women graduate students in ODU’s Department of Computer Science have attended at least one conference highlighting women in computing. The annual Grace Hopper Celebration of Women in Computing, which touts itself as the “largest gathering of women technologists,” is the most well-known, with over 18,000 attendees at this year’s event. The Grace Hopper Celebration features keynotes from influential women in computing. Past speakers have included Megan Smith (former US CTO), Hilary Mason (Fast Forward Labs), Sheryl Sandberg (Facebook), and Shafi Goldwasser (MIT).

ODU Computer Science has been represented by students or faculty at the past 5 Grace Hopper Celebrations. PhD student Lulwah Alkwai received a travel scholarship to attend this year’s celebration in Orlando. Previous year’s attendees and travel scholarship winners include PhD alum Dr. Yasmin AlNoamany and current PhD students Maha Abdelrasoul, Tunazzina Islam, and Aida Ghazazideh.

One of the events that has had the greatest impact on our students is the CRA-W Grad Cohort Workshop. Eight different students have attended this event over four years. Yasmin AlNoamany attended in 2013 and came back to spread the word to her fellow PhD students. Since then PhD students Lulwah Alkwai (2014), Aida Ghazazideh (2016), Tunazzina Islam (2016), Maha Abdelrasoul (2016), Hind Aldabagh (2017), Susan Zehra (2017), and MS student Kristina Krasnolobova (2017) have attended. One of the main goals of the workshop is to “build mentoring relationships and develop peer networks.” This is accomplished through seminars given by senior female computing researchers and professionals, informal discussions, and social events. PhD student Lulwah Alkwai gives the following summary: (Cont’d on page 2)
The goals of the workshop were to increase the number of women in computing, provide information on navigating graduate school, get early insight into career paths, and to meet others. Some great speakers gave important talks such as networking, finding a research topic, balancing graduate school and personal life, the future of computer science, and much more. Other students have expressed the impact that attending the workshop is having on their graduate careers.

PhD student Susan Zehra: “Attending the workshop was quite enriching as it provided me with new ideas and approaches that made me more effective and efficient in my current graduate program.”

MS student Kristina Krasnolobova: “I cannot begin to express my gratitude for the opportunity. Meeting others in the same field as myself, networking, learning from people who are already established in their careers, the feeling of support, and finding ideas for future projects are all just a small part of the experience of attending Grad Cohort.”

PhD student Maha Abdelrasoul: “I went to Grad Cohort with one aim in mind, which is to get to know great women who make me feel that I am not alone in this field. However, I came out from Grad Cohort with much more than what I expected. I returned home with great passion that will keep me working hard in my career while being aware of the challenges that I might face.”

Grad Cohort 2017: Kristina Krasnolobova

Grad Cohort was a one of a kind conference that I had the pleasure of experiencing for the first time in my life. I cannot begin to express my gratitude for the opportunity. The inspiration I found from attending this conference was the most beneficial part for me personally. Meeting others in the same field as myself, networking, learning from people who are already established in their careers, the feeling of support, and finding ideas for future projects are all just a small part of the experience of attending Grad Cohort. I am pursuing a Masters of Science in Computer Science and before attending this conference, I never considered continuing my educational journey to obtain a PhD. This conference gave me the inspiration to do so after graduating from MS CS.

Picture Taken with Jamika Burge (Capital One), Janie Irwin (Penn. State U), Patty Lopez (Inte; Corp.).
Summer Undergraduate Research Workshop

Over this summer, the Department hosted a research workshop on campus for 19 international undergraduate Computer Science and Engineering students. Students who attended the workshop were selected from Acharya Institute of Technology, BNM Institute of Technology, and BMS Institute of Technology in Bangalore, India. The selection process was highly competitive and varied between the institutions.

During their visit, the students stayed at ODU’s Dominion House. They were divided into teams of 4 and given a problem to solve. Each team had to find a way to detect aggression in dementia patients using wearable and mobile devices. The research team in Ajay Gupta’s lab has been working on this same problem for about a year, so each team of students was assigned one graduate research assistant to help out.

In addition to working on the research problem, the workshop seminars included presentations by our PhD students. The students also attended a presentation given by Dr. Weigle on our graduate program and admission requirements. Dr. Olariu gave a presentation on an introduction to research and finally, the students attended a lecture by Mr. Jay Morris.

The students also had the opportunity to interact with Provost Augustine Agho, Dean of the Graduate School Dr. Robert Wojtowicz, and Director of Study Abroad Dr. Steve Bell. In addition to working on their research projects, the students got a taste of American life and culture by visiting Virginia Beach, Busch Gardens, Williamsburg, the Outer Banks, and Washington DC.

Ajay Gupta started the workshop in 2013 with 5 students and it has now grown to about 20 students. Several of the workshop attendees have joined the graduate program at ODU. Over the past 5 years, 12 students from the program have joined The MS program in the Computer Science Department, and 4 of the 12 are in PhD programs at either ODU or at other institutions.
Summer at Harvard

Alexander Nwala
Doctoral Student

In the Summer of 2016, I had the wonderful opportunity to collaborate with the Harvard Library Innovation Lab (LIL) on the Local Memory Project (http://www.localmemory.org/). The Local Memory Project (LMP) provides a suite of tools to help users and small communities discover, build, and archive collections of local stories or events from local newspapers, TV, and radio stations. LMP currently provides two tools to achieve this - Geo (http://www.localmemory.org/geo/) and the Local Stories Collection Generator (http://ws-dl.blogspot.com/2016/11/2016-11-16-introducing-local-memory.html). I presented a research paper for this work at the 2017 ACM/IEEE Joint Conference for Digital Libraries (JCDL). The research paper is co-authored with my PhD Supervisors - Dr. Michael Nelson and Dr. Michele Weigle, as well as Adam Ziegler and Anastasia Aizman of Harvard LIL. For more details, see http://ws-dl.blogspot.com/2016/09/2016-09-09-summer-fellowship-at-harvard.html.

Last summer, I returned to Harvard for research on media manipulation at the Berkman Klein Center for Internet & Society. I worked in collaboration with Dr. Rob Faris of Media Cloud. Given the widespread concern about the spread of fake news, especially during the 2016 US General Elections, we sought to study the various forms of media manipulation and possible measures to mitigate this problem. Partly motivated by the research from the Computational Propaganda Project at Oxford University regarding “Manufactured Consensus,” I explored the means of identifying consensus in news sources and in social media. Consensus is a state in which multiple news sources report on the same or highly similar stories. Sometimes consensus is organic, but sometimes it is coordinated or manufactured for the purpose of lending credibility to a false story. I took a step toward identifying consensus in news media by developing an algorithm that helps identify clusters of common themes in news stories. For more details, see https://ws-dl.blogspot.com/2017/08/2017-08-27-media-manipulation-research.html.
Experience at Argonne
Christos Tsolakis
Doctoral Student

During the first half of August we took part in the Argonne Training Program on Extreme Scale Computing (ATPESC) and worked for a few days in the Argonne Leading Computing Facilities center (ALCF) just outside of Chicago, Illinois. The training consisted of lectures and presentations on software and hardware advances as well as hands-on exercises using the supercomputers of Argonne. We had the chance to meet people working on some of the most influential high-performance computing projects like core members of the MPI Forum or the OpenMP committee.

Developers from leading companies like Nvidia presented their vision of future virtual reality technologies, and others from Intel and IBM showed current and upcoming architectures using quantum technologies. For most of the presented hardware, we were provided with hands on examples or given access to supercomputers where we could test our research applications. Each day concluded with a lecture by a special guest. Insights, anecdotal stories and a lifetime’s worth of advice were offered to us by people like the founding developer of MATLAB or one of the designers of the highly successful ARM architecture. Other presenters shared research strategies with different objectives: from planning how to reach Mars down to how to register human brain images at the neuron level. It was an eye-opening experience to meet other people who share the same passion, but have unique approaches to exascale computing.

These experiences will inform our research and maybe even the rest of our lives. Our last stop before coming back to ODU was the ALCF center where we worked on our projects. The Argonne National Lab has a rich history of projects, starting with research for nuclear power plants. Their research today includes projects that cover the entire spectrum of computational sciences. Working there every day was a humbling and inspiring experience.

Working and thinking “out of the box” (or in our case, ODU cubicles) unveiled many new ways of solving problems, and also brought us into contact with a wide variety of ideas and people of all professions. The innumerable experiences and knowledge gained in those few days were totally worth it.

Note: Anyone interested in the content of ATPESC can find slides at https://extremecomputingtraining.anl.gov/agenda-2017 Video recordings of the presentations will be available on YouTube by the end of September 2017.

Internship at Electronic Arts
Prajita Dilip Kanade
Masters Student

This summer, I got the opportunity to work as an intern on the Cloud Team at Electronic Arts. This internship was very rewarding. I learned about cloud architecture, software development, strategies for organizing and analyzing tasks, and also other ways to formulate problems.

The cloud team effectively manages the development, server maintenance and monitoring of the different EA games on the cloud fabric. I worked on the Health Dashboard Project, a web-based application that gives detailed and monitored data on the cloud-based gaming servers. Team members can easily use this website to determine the total workload which runs on clusters and nodes. The website also gives resource information (e.g., usage of CPU, RAM, and Pods) of these nodes and checks whether a cluster is healthy or not.

I got the opportunity to learn, explore and work with different programming languages and software applications such as Go, Kubernetes, Docker, React-JS and AWS. I also explored and worked on internal applications like WatchDog and InfoBroker to retrieve and aggregate required information for Health Dashboard. This project taught me about the new and interesting area of software technologies in a cloud network. Through this internship, I learned a lot, and also had the chance to sharpen my skills in a professional working environment.
Internship at Nationwide Mutual Insurance

Aida Ghazizadeh
Doctoral Student

I had the opportunity to intern with Nationwide Mutual Insurance, which is a large U.S. insurance and financial services company based in Columbus, Ohio.

During my internship, I participated in the training sessions and panels organized by Nationwide such as Agile training, learning and knowledge sharing sessions, as well as meetings with different managers, the CIO, and VP of Information Technology. During the meetings that I had with the expert in IT, I got to learn about different opinions about the future of the technology, and how it affects companies and their customers. For example, in the future, the number of autonomous and self-driving vehicles will increase drastically and this fact will change the concept of vehicle and driver insurance. I also had the opportunity to discuss my research and the possibility of implementing it in a large company such as Nationwide and the positive feedbacks that I received have inspired me to look into a more realistic and better analysis of the problem and create enhanced solutions.

I also worked on different projects in different areas such as ETL, CRM, and Test Automation, using different software and technologies and learned new programming languages. I got hands on experience with tools for handling Big Data, such as IBM DataStage and Informatica. Employees at Nationwide are always happy to share their knowledge and skills with you and many free learning resources such as libraries or online learning tools are available for interns.

Finally, I participated in the summer Hackathon and our team was selected as one of the winning teams in the first round. Many full-time employees and experienced programmers had participated in the Hackathon, which made it even more challenging and interesting. I think overall the internship committee did an excellent job by organizing a productive and educational internship for us and I would definitely recommend a similar internship to other students.

| Undergraduate Updates |

Highlight in Undergraduate Research

With the increase of CS majors over the last ten years, we have seen more and more bright students participating in research. Dr. Jing He organized a session at the ODU Undergraduate Research Symposium on February 18, 2017. Four students (Devin Haslam, Michael Poteat, Chris Spillers, and John Rattz) gave oral presentations of their undergraduate research work at the symposium (see photo). They presented four projects in bioinformatics guided by Dr. Jing He, Dr. M. Zubair, and Dr. Desh Ranjan of the Computer Science Department and Dr. Willy Wrighers and Dr. Julio Kovacs of the Mechanical Engineering Department. and one project in computational physics guided by Dr. M. Zubair, Dr. Desh Ranjan, and Dr. Balsa Terzic (Physics).

One of them (Devin Haslam) was selected to present at the Virginia Collegiate Honors Conference, a conference that was held on April 8, 2017 for Honors Colleges of universities in Virginia. Two of them (Chris Spillers, and Devin Haslam) have joined the MS program in Computer Science at ODU. Their work “Detection and Evaluation of Protein Secondary Structure Patterns from 3D Cryo-TEM Maps at Medium Resolutions” was presented at Microscopy & Microanalysis Conference (M&M) at St. Louis, August 6-10, 2017. M&M is a major academic conference that hosted a keynote talk given by a Nobel Prize winner and live demos of imaging facilities from fourteen major companies.
Justin Brunelle, PhD

A former doctoral student of Dr. Michael Nelson, Justin graduated with his PhD in May 2016. After finishing his Master of Science at ODU, Justin began working with MITRE, a not-for-profit organization that operates research and development centers sponsored by the federal government. While working on his doctorate MITRE provided him financial support. MITRE recently featured an article about Justin’s work in cloud computing in August. To read the full article please go to https://www.mitre.org/careers/working-at-mitre/employee-voices/cloud-computing-expert-advances-government-missions

Christian & Caroline (Lario) Rasmussen

While attending ODU in the 1990s, we were both looking for opportunities that would fit into our studies. And by chance, we happened to find a great opportunity in the Computer Science department, which was located in the old Education building at the time. Under the guidance of Kurt Malo and Ajay Gupta, there was a group, known as the Systems group, which provided jobs to students.

The Systems group was in charge of managing any and all aspects of the CS department’s student labs as well as workstations for professors and staff. We were all students and we did it all. We ran coax cable for networking, ran nightly backups, upgraded systems, worked the help desk, and developed utilities and applications. We even came up with policies and procedures as needed. The Systems group is also where we met each other.

At the Systems group, we were privileged to enjoy a lot of vendor attention, which exposed us to a large number of hardware platforms and the joy of creating a cross-platform process for deploying software. We learned how to manage users and home directories across multiple platforms. (We had a single sign-on, long before it was called single sign-on.) All these skills came in handy later during our own careers.

The Systems group also facilitated relationships with NASA and local businesses, where we got additional exposure to other computer facilities and projects. One such project was the initial prototype of Teletechnet, which would become a Virginia wide educational collaboration tool that enabled rural area community colleges to offer remote learning and classes.

The experience we gained garnered job offers. We didn’t realize until later that the skills and experience we accumulated at the Systems group could have taken up to ten years to obtain elsewhere. This experience opened many doors for us at some of the leading tech companies. Over the years, we have worked at a number of different places, such as NASA, iTribe, Sun Microsystems, Oracle, NetApp, Symantec as well as smaller companies, including some startups.

Twenty years later we both continue with well-established careers that were set in motion by our experiences with the Systems group. And as our own children reach this point in their lives, we note that life is all about chances and opportunities. Take a chance! You never know which opportunities will change your life.
**Featured Research**

**Computer Science Faculty Weigle and Nelson Receive NEH/IMLS Grant in Collaboration with Columbia University Libraries and the New York Art Resources Consortium**

Dr. Michele C. Weigle (PI) and Dr. Michael L. Nelson (Co-PI) from the Department of Computer Science have been awarded one of eight Digital Humanities Advancement Grants that are jointly supported by the National Endowment for the Humanities (NEH) and the Institute of Museum and Library Services (IMLS). The 18-month grant provides $75,000 for student and faculty support to develop prototypes for a set of open-source visualization tools to ease navigation of web archive collections. The “Visualizing Webpage Changes Over Time” project is a collaboration between ODU, the New York Art Resources Consortium (NYARC), and Columbia University Libraries (CUL). The team will research and develop tools for efficient visualization of and interaction with archived web pages. Part of the work includes developing scripts for easy embedding of visualizations in live web pages, providing tighter integration of the archived web and the live web. This work will be informed by and in support of CUL’s and NYARC’s existing web archiving activities.

https://www.ws-dl.blogspot.com/2017/10/2017-10-16-visualizing-webpage-changes.html

Dr. Nikos Chrisochoides, the Richard T. Cheng Chair Professor of Computer Science at Old Dominion University is a computational scientist with a world-wide reputation for his ground-breaking work on Parallel Finite Element Mesh Generation, a branch of Engineering Geometry that develops methods of tessellating large complicated computer aided design and/or image-based systems. Dr. Chrisochoides was awarded the John Simon Guggenheim Fellow in Medicine and Health, for his work on medical image computing for image guided neurosurgery. He received one of the two awards in medicine and health for 2007-08 out of the top 2,800 scientists in USA and Canada. This year he is appointed to be a Niarchos Fellow as one of twenty-one Greek- and Cypriot-born scholars, hailing from a cross-section of sixteen prominent United States and Canadian universities. He was also previously elected a distinguished visiting fellow of the Royal Academy of Engineering at UK.

Dr. Chrisochoides received his MSc (in mathematics) and PhD (in computer science) degrees from Purdue University. Then he moved to Northeast Parallel Architectures Center (NPAC) at Syracuse University as the Alex Nason Postdoctoral Fellow in Computational Sciences. After NPAC he worked in the Advanced Computing Research Institute, at Cornell University. He joined (as an assistant professor in January 1997) the Department of Computer Science and Engineering at the University of Notre Dame, where he received his NSF CAREER award and SUR IBM award. In the Fall of 2000, he moved to the College of William and Mary (W&M) as an associate professor. In 2004 he was awarded the Alumni Memorial Distinguished Professorship and in 2008 he became full professor. Currently, he is an adjunct professor at W&M. Chrisochoides has more than 200 technical publications in parallel scientific computing. He has held visiting positions at Harvard Medical School (spring 2005), MIT (spring 2005), Brown (fall 2004) as an IBM Professor, and NASA/Langley (summer 1994).

Dr. Andrey Chernikov joined the Department of Computer Science in the Spring of 2011 after he received his PhD from the College of William & Mary in 2007 and completed his post-doctoral work at W&M and ODU with Dr. Chrisochoides. Dr. Chernikov’s research focuses on algorithmic and mathematical foundations of parallel mesh generation, which is an important step in physics-based simulations on supercomputers. It has numerous applications, primarily in the design and analysis of aerial and marine vehicles, and in image analysis for personalized medicine. This work lies in the intersection of computational geometry, parallel computing, and formal methods. One of the main challenges he is addressing is the need for automating the execution of parallel software, since the intervention of a human operator into a massively-parallel and/or real-time computation is no longer practical or even feasible. This need has motivated him to work on the development of parallel algorithms that are backed by certain assurances about their correctness, either in the traditional paper-and-pencil form or as propositions processed by a special software environment. Dr. Chernikov’s research is supported by grants from the National Institute of Aerospace, National Science Foundation, and Department of Defense.

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Dr. Andrey Chernikov
Assistant Professor

Dr. Nikos Chrisochoides
Richard T. Cheng Endowed Chair Professor

Dr. Michele Weigle
Associate Professor & Graduate Program Director

Dr. Michael Nelson
Professor
Center for Real-Time Computing

Computational Science is one of the newest pillars of science and engineering, complementing traditional theoretical and experimental studies. Dr. Nikos Chrisochoides, the Richard T. Cheng Chair Professor of Computer Science, is a computational scientist with a worldwide reputation for his ground-breaking work on Parallel Finite Element Mesh Generation, a branch of Engineering Geometry that develops methods of tessellating large complicated computer-aided design and/or image-based systems.

CRTC is focused on parallel mesh generation, medical image computing, quantum and cloud computing. The group’s research is application-driven. CRTC is focused on:

- Exascale parallel mesh generation using a novel telescopic approach proposed by Dr. Chrisochoides. This is joint work with his PhD students Christos Tsolakis, Kevin Garner, Thomas Kennedy and former students, Dr. Drakopoulos (now a senior engineer in Synopsys Inc), Dr. Andriy Kot (senior software engineer at NCSA/UIUC) and Dr. Andrey Chernikov (an assistant professor in the Computer Science Department). This effort is funded in part by ODU’s M&S fellowship for Mr. Tsolakis, NASA’s VSGC Fellowship, NSF, DoD and NIA/NASA.
- Extreme-scale and real-time image-to-mesh conversion for Big Brain Data and biomedical applications like deformable registration for Image Guided Neurosurgery, with Daming Feng and Eleni Adam and his former PhD students Dr. Drakopoulos (graduated 2017) and Dr. Yixun Liu (a senior engineer at Broncus Inc), Dr. Andriy Fedorov (assistant professor at Harvard Medical School). This effort is funded in part by the Cheng Endowment and in the past from NIH.
- Parallel runtime systems for extreme scale computers with Dr. Chrisochoides’ PhD student Polykarpos Thomadakis and funded in part by Dominion fellowship and NSF.
- E-learning technologies for online and hybrid education/training settings that vary from K-12 geometry to ASD kids, with his former postdoc Dr. Michalis Giannakos (associate professor at NTNU, Norway), Prof. Jonna Bobzien in the School of Education and Prof. Chen, Chung Hao in School of Engineering at ODU. This effort is funded in part by Dragas Scholars program at ODU and the Cheng Endowment and NSF.
Dr. Shubham Jain recently finished her PhD at Rutgers University, where she worked on designing inertial and camera sensing techniques for smart cities. Her research interests lie in mobile computing, cyber-physical systems, and data analytics in smart environments. Her research in pedestrian safety received the Large Organization Recognition Award at AT&T Connected Intersections challenge, and has featured in various media outlets including the Wall Street Journal. She interned at Microsoft Research, Redmond, where she worked on building scheduling algorithms for cameras. She has also published in prestigious venues, and has been an active participant in various conference and workshop organizations.

Dr. Soad Ibrahim Lecturer
Dr. Ibrahim received a PhD in Computer Science at the University of Guelph, Ontario. She was a postdoctoral research fellow at the School of Engineering, University of Guelph, Canada. Previously, she was an adjunct faculty member in the Department of Computer Science at Old Dominion University.

Mr. Thomas Kennedy Lecturer
Thomas Kennedy is a lecturer at the ODU Department of Computer Science. Mr. Kennedy is a graduate of ODU (MS ’14 & BS ’12) and has been teaching for the program since 2014. We welcome him as one of the newest additions to our esteemed department.

Dr. Cong Wang Assistant Professor
Dr. Cong Wang is an assistant professor in the Center for Cybersecurity Education & Research and Computer Science Department at Old Dominion University. Cong’s research interests include mobile computing, cybersecurity, machine learning, network optimizations and energy-efficiency. He has publications in various academic conferences and journals, including Trans. on Mobile Computing (TMC), Trans. on Computers (TC), INFOCOM, ICDCS, IPDPS, SECON and served as a reviewer for a number of premier conferences and journals including JSAC, TON, TMC, TPDS, TC, TWC, Globecom, ICC. He is the co-author of the book, Wireless Rechargeable Sensor Networks, and has one U.S. Patent. Cong received his PhD from the Department of Electrical and Computer Engineering at SUNY Stony Brook University, advised by Prof. Yuanyuan Yang. He received BEng in Information Engineering from the Chinese University of Hong Kong (08’) and MSc in Electrical Engineering from Columbia University (09’).
Dr. Kurt Maly received his PhD from NYU where he worked under Dr. Jack Schwartz at the Courant Institute on the SETL language. His academic career began at the University of Minnesota, Minneapolis. His early publications involved research into data structures in general and network communication protocols. He developed a number of data structures for file systems and language support. One data structure he developed for simulation languages is still being used in the UNIX operating system.

Dr. Maly got his taste for administration in the late seventies when his mentor at Minnesota (Dr. Rosen) took him to the first Snowbird conference of chairs of PhD granting computer science departments. This was the time of bulging enrollments in computer science with too few faculty while many doubted that computer science even was a discipline. He returned as head of the department at Minnesota and participated in the evolution of the conference from some 30 to 200 departments with an extraordinary impact on the research side of the discipline through the creation of, for example, the Computer Research Association and the Taulbee survey.

In the mid-eighties, he was recruited to Old Dominion University as the department chair, charged to transform the department from a teaching to a research focus. With the help of Dr. Wahab, he created a PhD program and hired young assistant professors, Dr. Olariu, Mukkamala, and Zubair, who became national leaders in their field. Dr. Maly believed in the tenet of leading by example and continued an active research program. Nearly all the department faculty were at some point Co-PIs on his grants as he was Co-PI on other faculty grants. In relation to his algorithm research he was influential in developing efficient network protocols, one resulting in a patent. Over the years he developed a number of high-bandwidth protocols for multimedia traffic. One such effort was work with Bob Kahn on the development of gigabit routers for ATM. He also worked with high-level committees (for the National Academy of Sciences and the National Information Standards Organization) in developing standards.

His most significant contribution as a researcher is his decades-long effort to develop tools to support distance learning. As far back as 1994, he described the first-ever proposed distance learning system that supported students over a network. By the end of 2000, IRI (Interactive Remote Instruction) had become one of the best-known, high-performance distance learning systems and in one year he logged some 50 visits to his lab.

He developed relationships with chairs of PhD granting departments (including famous computer scientists Anita Jones from UVA and Peter Denning from George Mason) and lead that group’s effort to have the state infuse significant funds into the computer science departments in Virginia. This eventually became the Equipment Trust Fund, which still exists today for all disciplines.

His work in digital libraries can be traced back to work published in the second WWW conference in Chicago (he has publications in eight of 25 WWW conferences). With collaborators at Virginia Tech, UVA, and SUNY at Buffalo, they created the first technical report server (WATERS) over the Internet. This early server became the ground for NCSTRL, a much more significant service of which Dr. Maly along with Bob Kahn (chair the steering committee at CNRI), Barry Leiner from Darpa, Steve Griffin from NSF were members. These two services evolved into more general digital libraries and led directly to his involvement with OAI (Open Archive Initiative). As part of the National Science Foundation’s initiative, his research team was funded to develop significant digital libraries such as ARC, Kepler, and ARCHON. The research continued along the lines of automated metadata extraction and the use of the semantic web to link a large amount of data for efficient retrieval.

The digital library research group (including department faculty Drs. Zubair, Nelson and Bollen, Olariu, Wahab, Mukkamala, Wild, Zeil, Keyes and Pothen, and Grosch) established the department as one on the forefront of research in the country, which led to continuous visits from renown of researchers. In the last decade the department graduated some of its best PhD students who’ve gone on to become faculty at research universities.

Dr. Maly’s success in research and time as department chair (5 years at Minnesota and 22 years at ODU) was made possible by the hard-working faculty such as assistant chairs Drs. Schwing, Wilson, Levinstein and Brunelle. While he spent the early years establishing the PhD program, devoted faculty (in addition those previously mentioned and Drs. Shen and Toida as well as lecturers Morris, Price, Ray, Wadaa) developed an undergraduate program that was accredited by CSAB and considered as one of the best equipped and well-rounded undergraduate programs in Virginia.
IN MEMORIAM

The Dr. Hussein Abdel- Wahab Memorial Graduate Fellowship was created in January 2017 to honor the memory of Dr. Hussein Abdel-Wahab, an inspiring and well-loved professor in the Department of Computer Science at Old Dominion University, after his sudden and untimely passing on December 24, 2016.

Dr. Abdel-Wahab joined ODU’s Department of Computer Science in 1980 as an associate professor. While at ODU, he played a critical role in developing the BS, MS, and PhD programs in Computer Science and served as graduate program director for 15 years. He graduated 15 PhD students at ODU, served as co-advisor for four PhD students at other institutions, and graduated more than 40 MS students. Dr. Abdel-Wahab was a popular teacher among both undergraduate and graduate students. He developed and taught 25 different courses during his time at ODU. Dr. Abdel-Wahab was a highly respected faculty member, dedicated teacher, and a compassionate man. Dr. Abdel-Wahab was passionate about his students and aiding them in their first steps of success.

In his honor, Old Dominion University wishes to continue that supporting hand for graduate students in the Department of Computer Science in the form of the Dr. Hussein Abdel-Wahab Memorial Graduate Fellowship. This fellowship will provide stipend support for graduate students in the department. We highly appreciate the generosity of our donors that helped make this fund a reality.

There are two ways to donate to this fund.

Online: http://bit.ly/HusseinAbdelWahabODU

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The Department of Computer Science is working to improve our communications with our alumni.

Please fill out the survey at https://graduate.cs.odu.edu/alumni/

We’d love to hear any other comments about your job or the job search process that might help future graduates.

We are proud of your success and want to stay in touch. If you’re ever back in the Norfolk area or on campus, please stop by to visit.

Want to contribute to our newsletter? Email us at Newsletter@cs.odu.edu

The submission deadline for the next newsletter is April 15, 2018.

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