# CS@ODU

# COMPUTER SCIENCE

Old Dominion University | Department of Computer Science
Bi-Annual Newsletter



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Welcome to the Fall 2022 edition of the Department of Computer Science's bi-annual newsletter. We are now completely back to a normal functioning, post-COVID environment.

On the enrollment front, our bachelor's program is rather steady with more than 900 undergraduate majors. Our graduate enrollment is growing at a rapid pace with more than 170 MS students and 70 PhD students. Our online degree enrollments are also growing at a rapid pace.

We also have some good news to share regarding our faculty. We have a new Assistant Professor, Dr. Rui Ning, who joined us in July 2022. His primary areas of interest are cybersecurity, Al, and blockchain technologies. We also have Dr. Sarah Hosni, who joined us as a Lecturer.

To address the changing programming language skills in the industry, we are revamping our undergraduate curriculum. We are now changing our primary programming language from C++ to Java. At the same time, we are also planning to offer 1-credit courses in C++, Java, and Python, for those who would like to catch up with different programming languages.

Dr. Shuai Hao, Assistant Professor, has been actively working in the cybersecurity area with a focus on the internet. In this issue, Dr. Hao describes his recently funded project on internet censorship. Two of our faculty members won awards for their outstanding achievements. Dr. Jian Wu received British Computer Society's award for pioneering the CiteSeerX platform along with his previous colleagues at Penn State. Dr. Soad Ibrahim was recognized for her efforts to integrate new technology in the classroom with ODU's Teaching With Technology Award. We congratulate both.

We recognize our outstanding teaching assistants and research assistants for 2020-21 and 2021-22. Mohammed Nauman Siddique, Yasith Jayawardana, Travis Reid, and Muntabir Choudhury were recognized as outstanding teaching assistants. Polykarpos Thomadakis, Bhanuka Mahanama, Yasir Alanazi, and Yasith Jayawardana were recognized as outstanding research assistants.

The department has been actively promoting undergraduate research. Kayla Pineda, under the supervision of Dr. Sampath Jayarathna, received Virginia Space Grant Consortium's research scholarship for 2022-23. She was also the recipient of VSGC's STEM Bridge scholarship last year. Congratulations, Kayla!

We also recognize the undergraduates, Brennen Gabriel and Cody Bonham, for their research with Dr. Ayman El Mesalami and Dr. Soad Ibrahim. The graduate research work of our master's student, Kavyashri Meda, is also reported here.

We congratulate our three faculty who received promotions effective July 2022. Dr. Ayman El Mesalami has been promoted to Master Lecturer, and Dr. Soad Ibrahim and Mr. Thomas Kennedy have been promoted to Senior Lecturer rank.

Finally, some of you may remember Dr. Jim Schwing and Mr. Dennis Ray. Both were faculty in Computer Science. After a long service, Dr. Schwing left ODU in 1988 to join Central Washington University. Dennis retired from ODU in 2006. We are saddened to inform you that Jim passed away on May 4, 2022, and Dennis passed away on May 18, 2022. Our condolences are with their families.

Once again, as emphasized in the last issue, we need your support to provide scholarships for our undergraduate student researchers. Our plan is to establish an endowment to provide incentives for undergraduate researchers. If you are interested in contributing towards this effort, please contact me. 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.

Sincerely, **Dr. Ravi Mukkamala**Dr. Ravi Mukkamala

Professor and Chair of Computer Science
Old Dominion University

# Advancing Internet Freedom and Openness:

Project for Understanding Global Internet Censorship



Dr. Shuai Hao Assistant Professor

Internet censorship controls what information can be viewed by a certain group of Internet users, typically placed by authority entities such as governments, ISPs, or organizations, for stopping Internet-related crime or preventing individuals from accessing harmful content. However, such information control could also be largely abused by authorities to limit the free flow of information such as news and suppress and silence discussion among citizens.

Detecting such censorship activities is an important step to advance inclusive and safe access to global Internet, facilitating the free flow of information, increasing at-risk-users' digital security, and enabling free expression. To this end, collaborating with researchers from Virginia Tech and the University of Delaware, Dr. Shuai Hao, serves as PI of "Measuring and Investigating Internet Censorship through Ground-truth based, End-to-End Framework," a project aiming to explore, develop, and deploy a novel framework for accurately and automatically investigating global Internet censorship practices.

This project is funded by the Open Technology Fund (OTF), an independent non-profit organization and a grantee of the U.S. Agency for Global Media committed to support global Internet freedom technologies. The project has directly produced multiple publications in top-tier conferences, including ACM SIGMETRICS 2022 and WWW 2021. Moreover, the effort made through the project has been facilitating or integrated with other research projects from global institutes and organizations, including Princeton University, University of Maryland, Loughborough University (UK), University of Oxford (UK), as well as the Open Observatory of Network Interference (OONI), the largest global community for documenting Internet censorship worldwide.

# DR. SOAD IBRAHIM RECEIVED TEACHING WITH TECHNOLOGY AWARD IN 2022



# Dr. Soad Ibrahim

In 2022, Dr. Soad Ibrahim received the "Teaching With Technology" Award which recognizes excellence and innovative contribution to the quality of teaching and learning through the application of information technology.

In the spring of 2018, the low-cost, credit card sized computer called "Raspberry Pi" was introduced in CS 150. Each Raspberry Pi computer cost only \$35 and could do almost everything that desktop computers could do, such as browsing the internet, running application programs, and interacting with the outside world by controlling external devices. These devices were funded in part by the Faculty Innovative Grant (FIG), which Dr. Ibrahim received with Dr. El Mesalami from the Center of Learning and Teaching at ODU in December 2017. Teaching assistants were trained to teach the new technology in CS 150 labs to integrate Raspberry Pi software into the classroom, which created a hands-on and collaborative place for student experimentation, creative innovation, and critical thinking.

Furthermore, students participated in the Raspberry Pi Programming Contest created by Dr. El Mesalami. The objective was to help students integrate the knowledge they gained in CS 150 and CS 250 courses and design creative algorithms to implement a solution to a problem. This competition environment encouraged students to work and collaborate in teams outside the classroom, and the winners presented their projects at the Undergraduate Symposium at ODU. In the summer, Dr. Ibrahim and Dr. El Mesalami continue to supervise many undergraduate research projects that utilize Raspberry Pi computers to solve real world problems.

These extracurricular activities increased students' interest in computer science and programming. Results from an anonymous survey showed 92% of students found that the use of Raspberry Pi helped them retain the knowledge they gained from taking the problem-solving course(s), and 89% of students found that the use of Raspberry Pi increased their appreciation of the computer science major. These findings prove that using Raspberry Pi in the classroom prepares the student population with diverse technological needs to succeed in an ever-changing discipline and job market.

# ASSISTANT PROFESSOR JIAN WU RECEIVES BRITISH COMPUTER SOCIETY AWARD FOR PIONEERING PLATFORM

Jian Wu, assistant professor, has been recognized for his work on CiteSeerX, a world-renowned academic search engine.

Wu contributed to the work of C. Lee Giles, the David Reese professor of information sciences and technology at Penn State University and creator of the search engine. Wu, Giles, and a team of computer scientists were honored by the Information Retrieval Specialist Group of the British Computer Society (BCS) with the "Best Open Source Project" award at the organization's 2021 Search Industry Awards. The BCS recognizes people, projects, and organizations that have excelled in the design of search and information retrieval products and services.



Assistant Professor Dr. Jian Wu

Giles developed CiteSeerX, an adaptive, worldwide large-scale open-source academic search engine that launched as CiteSeer in 1998, later renamed CiteSeerX in 2008. Wu joined the team in 2012. This search engine houses more than 10 million full-text English documents along with metadata from 32 million authors and 240 million citation mentions. More than three million users globally access the site, allowing for one billion hits and hundreds of millions of downloads every year.

"The team had to overcome both financial and technical challenges to maintain such a production system in an academic setting," Wu said. "The BCS award is a recognition of the persistent work of several generations of team members."

From its inception, CiteSeerX was created to adapt to users' requirements.

"Automatically, we were able to bring up how many citations a paper had gotten," Giles said. "Indexing based on importance was revolutionary at the time."

To perform this indexing and information extraction as scale, CiteSeerX uses several machine learning methods. The digital archive search engine was one of the pioneer platforms that implemented the automated citation indexing technique to connect papers and researchers as a network. It actively crawled and harvested academic and scientific documents online and used automatous citation indexing, making it possible for users to find related papers using citation graphs. It is often considered a predecessor of academic search tools such as Google Scholar and Microsoft Academic Search.

"Dr. Wu is a very productive and creative researcher," said Gail Dodge, Dean of College of Sciences. "We are proud of his contribution to the innovative CiteSeerX project, and congratulations to him and his team on receiving the BCS award."

"I am very glad to hear that Jian received the prestigious BCS award because this indeed is a recognition of his long-term commitment to the CiteSeerX project," said Ravi Mukkamala, professor and chair of the Department of Computer Science. "He is very active in research and is a shining star among the new faculty that the department has recruited in recent years."

Wu is working with Penn State researchers on the next generation CiteSeerX.

"We are refactoring CiteSeerX from Solr Lucene and mySQL to Elasticsearch, all of which is open source," Wu said.

The BCS has more than 60,000 members in 150 countries and is a charity with a royal charter that aims to lead the information technology (IT) industry through its ethical challenges, support the people who work in the industry, and make IT good for society.

# Outstanding Teaching Assistants of 2020-2022

# 2020-2021

### **Mohammed Nauman Siddique**

Mohammed Nauman Siddique obtained his BTech degree in Computer Engineering from Jamia Millia Islamia in India in 2014. He currently is pursuing an MS degree in Computer Science at ODU. He has been teaching assistant for CS 250 Problem Solving and Programming II for three semesters, and he has taught labs and recitations in different formats, including face-to-face and online. "He has exceeded [...] expectations with his teaching skills in many ways." He also helped in the Raspberry Pi extracurricular activity by helping judge the first Raspberry Pi Programming Contest in fall 2020.

### Yasith Jayawardana

Yasith Jayawardana obtained his BS degree in Computer Science and Engineering from University of Moratuwa in Sri Lanka in 2018. He joined the Computer Science PhD program at ODU in January 2019. He was the teaching assistant for CS 250 Problem Solving and Programming II and CS 620 Introduction to Data Science in the spring of 2021. Before the spring semester he was a teaching assistant for CS 250, CS 300T, CS 355, CS 361. "He has an extensive experience and background knowledge in data science and machine learning, and the ability to explain and make complex coding problems understandable to students, putting students at ease with him."

# 2021-2022

#### **Travis Reid**

Travis is a current PhD student in our department. He received his BS and MS in Computer Science at ODU in 2017 and 2019 respectively. He has done exemplary work assisting undergraduate students as a TA for CS 150 and CS 250. Travis also assisted students in their Raspberry Pi projects. His passion for computer science shows in his current research involving the gamification of web archiving and the integration of web archiving and video games.



### **Muntabir Hasan Choudhury**

Muntabir joined the PhD program in the fall of 2019. He was a TA for CS 418/518 Web Programming, CS 170 Introduction to Computer Architecture, and CS 722/822 Machine Learning. Muntabir assisted graduate students with their project work, reviewed students' codes, and helped them debug and troubleshoot. His performance as a TA was highly recommended by instructors. In addition, he co-taught two CS 418/518 classes and shared his industrial experiences as a guest speaker.



# Outstanding Research Assistants of 2020-2022

2020-2021

## **Polykarpos Thomadakis**

Polykarpos Thomadakis obtained his BS degree in Computer Engineering from University of Thessaly in Greece in 2016 and joined the PhD program of Computer Science at ODU in the same year. He "has shown his flexibility to work on multiple disciplines, having also worked on projects related to the application of Machine Learning in nuclear physics for Jefferson Laboratory's (JLab) CEBAF accelerator." He is a co-author of three publications and six papers under submission or preparation. "Polykarpos' leadership and collaboration skills were observed as he successfully mentored and supported both an undergraduate and a graduate student with research projects relevant to his interests."

### **Bhanuka Mahanama**

Bhanuka Mahanama obtained his BS in Engineering from University of Moratuwa in Sri Lanka in 2018. He joined the PhD program of Computer Science at ODU in 2019. Bhanuka's research involves designing an eye tracking system that leverages classroom environments to collect data via web camera. "Bhanuka has been a crucial asset to my research team and has proven through hard work." He "devoted numerous hours developing a new eye tracking game for an inclusive event for Autistic kids." Bhanuka is the co-author of one publication.

2021-2022

#### **Yasir Alanazi**

Yasir started the PhD program in our department in the fall of 2017. He has made significant contributions to the development of generative models to solve problems in femto-scale physics. He is an author in five published journal/conference papers and two others that were submitted, and he is the first author in three of them. He actively serves our department's graduate community in events and by providing technical help. Yasir has also accepted a postdoctoral position in Jefferson Lab's Data Science Department.



### Yasith Jayawardana

Yasith joined ODU in the spring of 2019 and is a recipient of Dominion Scholarship. His work involves using machine learning models for EEG features in the study of autism spectrum disorder. He is the first author in six conference papers, as well as a co-author in one journal paper and three other conference papers. Yasith was a visiting doctoral research student at the Center for Advanced Imaging at Harvard University in spring 2022. He was also one of the lead instructors at the Virginia Space Grant Consortium-funded summer 2020 coding camp for high school students from the Hampton Roads area.



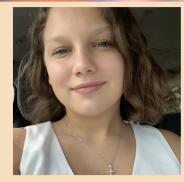
# Outstanding Undergraduate Student Awards for Fall 2021 & Spring 2022

# **Fall 2021**

# Virginia Zamponi

In December 2021, Virginia Zamponi earned a Bachelor of Science in Computer Science with a minor in computer engineering while maintaining a GPA of 3.96. She is currently pursuing a Master of Science degree in Modeling and Simulation, which she began as a linked program student during her undergraduate studies.

Virginia was on Team Green, P.A.W.S., as the project lead for her senior project. "Planning Ahead, Advising, Worldliness, and Success (P.A.W.S.)" is an online personal student navigational tool built to help guide college students throughout their semesters by keeping students informed about opportunities and important steps they must take to graduate and be successful in their academic career. The application also aims to assist university advisors, making it easier for them to assist and provide opportunities for their students.



Reflecting on her time in ODU's computer science program, Virginia shared, "I believe that the perfect blend of theory and practical experience that the CS program gave me, made me feel very well prepared, and confident, to deal with the real-world challenges that I face now, during my graduate studies and job."

Virginia is currently working as a graduate research assistant at VMASC. She has been involved in multiple projects, including one which focuses on making an agent-based model to grow a possible explanation of health inequities in Norfolk. She hopes to continue this type of work that uses modeling and simulation, as well as computer science, to solve real-life issues.

# Spring 2022

#### **Kendall Christlieb**

Kendall Christlieb earned a Bachelor of Science in Computer Science in spring of 2022 with a GPA of 3.96. She attended ODU as a distance learner from outside of the state of Virginia. Prior to her time at ODU, she also obtained a Bachelor of Arts in Modern Foreign Languages: Spanish Language from the University of Mary Washington.

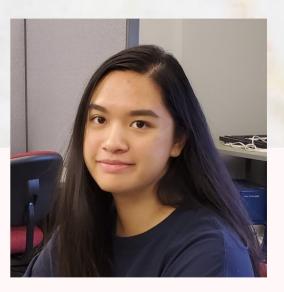
Kendall was on Team Copper as the attention assistant (webmaster) for her senior project. This team successfully prototyped a toolset designed to help adolescents with ADHD channel their energy towards success.

Her main interest is in Quality Assurance. Kendall is currently employed as a Functional Tester at JAGGAER in Lynnwood, Washington after completing a successful internship with the company.



# VSGC Undergraduate Research Scholarship

Old Dominion University rising junior Kayla Pineda is the recent winner of a 2022-2023 Virginia Space Grant Consortium (VSGC) Undergraduate Research Scholarship. Kayla was awarded \$8,500 to help fund drone research she has been conducting with ODU Computer Science Assistant Professor Sampath Jayarathna.



The project she has been working on is a gaze-based drone navigation. "We see it being useful in NASA search and rescue missions," said Pineda. As a sophomore, she worked alongside computer science Ph.D. students and was able to contribute to the development of an initial prototype.

Drones are permeating many sectors of industry and are increasingly being employed as data collection platforms to support of an array of applications across disciplines and industries and can include package delivery, search and rescue, real estate, transportation, agriculture, infrastructure inspection, public safety, and many others. One of the significant research contributions of Pineda towards this regard is to help create a novel drone navigation framework. Her idea is based on using eye tracking to control a drone point-to-point navigation utilizing machine learning to designate waypoints in the visual field. In particular, the drone operator would be able to control the drone navigation by moving their eyes to a series of desired targets in a visual field.

Dr. Jayarathna nudged Pineda to apply to the VSGC for this scholarship and last year's VSGC STEM Bridge Scholarship which she also received.

Pineda has her sights set on combining her love of technology and art together. "One of my goals is to see how to apply what I learned in computer science to the world of art," said Pineda. Before coming to ODU, she was an art student at Salem High School in Virginia Beach. "One of the things I want to see is if I can apply computer science into virtual reality (VR) educational games," said Pineda. "High school educators and now ODU professors have been a big influence in my life." She wants to be able to give back to students while unlocking new ways of educating students in the future.

See the full article here:

https://www.odu.edu/sci/news/2022/5/kayla\_pineda\_wins\_vs

For further details on the VSGC Undergraduate Research Scholarship visit: https://vsgc.odu.edu/undergraduatescholarships/

# UNDERGRADUATE RESEARCH

# **Brennen R. Gabriel**

During the summer of 2022, Brennen Gabriel had the opportunity to do a research project under the supervision of Dr. El Mesalami and Dr. Ibrahim. His project was to design a home security system using a Raspberry Pi, a motion sensor, and a camera. During the summer project, he gained valuable experience in his professional career, and was given terrific help and advice from both professors.



# Cody Bonham



This summer, Cody Bonham was given the opportunity to participate in a research project with Dr. Ayman El Mesalami and Dr. Soad Ibrahim. He says it was one of the best decisions that he could have made as an undergraduate student. He had only completed one semester at ODU so far, so his experience level was low compared to the others in the group, but he knew that it would be a great chance to learn by working with programming languages that he didn't have any experience with and to learn from the other students. Bonham's project was to use a Raspberry Pi to create a program that would monitor and log how many times the door of his squirrel feeder is opened during the day and the time of day when it is opened. Using a new programming language was a challenge at first, but he knew that what he would learn from completing this project would benefit him for the rest of his time at ODU and even after graduation. He enjoyed having both Dr. El Mesalami and Dr. Ibrahim as professors for his classes at ODU, and he is incredibly grateful to have had the opportunity to work with them and learn from them during this project.

# A COMPREHENSIVE FRAMEWORK AND RESEARCH BEHIND SOCIAL MEDIA AND RECRUITERS



Kavyashri Meda, a master's student in Computer Science, published a new scientific study titled "A Comprehensive Framework and Research Behind Social Media and Recruiters" on March 2nd, 2022. In this research paper, Meda touched upon the opportunities and challenges employers and employees face with social media and provided a fresh perspective on the growing dependency between social media and talent acquisition. These studies, have been useful in determining how to sustain the US economy following the epidemic, according to experts.

This comprehensive study, backed by expert analysis, framed hypotheses to be tested that confirmed a significant relationship between social media usage and talent management strategies.

## **KEY RESULTS:**

- Social media has a significant impact on the talent acquisition decisions within organizations.
- Social networks play a decisive role both for HR managers and management graduates.
- Social media is incredibly appropriate for talent acquisition, employer branding, employee engagement, and job searches.

## **ABSTRACT:**

Human Resources functions, especially recruitment, have gone through a dramatic change in the last few years due to technological innovation. The recruitment process has become more efficient and agile with each technological succession. All Human Resources functions, performance management, human resource flow, rewards and benefits, and talent acquisition play a pivotal role in an organization's success. However, talent management has emerged as an exclusive source of competitive advantage.

The research paper notes that Facebook and LinkedIn play a decisive role in the recruitment process compared to other social media platforms. They both are used extensively by both recruiters and job aspirants.

Talking about her research, Meda, a former Google employee, said, "It was clear to me that making Google better would not be enough, so I decided to start my work in the United States to improve the world."

Linked below is one of her research papers, which was published in various journals and covered by US media including Digital Journal, Benzinga, and Deccan Herald. Meda reported that her paper was also accepted in IEEE.

#### Research article:

https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=4057538

US Media covering Meda's research article:

https://www.digitaljournal.com/pr/india-born-u-s-researchers-work-helps-u-s-gdp-from-smashing-into-a-wall

Benzinga covering Meda's research article:

https://www.benzinga.com/pressreleases/22/03/ab26251702/india-born-u-s-researchers-work-helps-u-s-gdp-from-smashing-into-a-wall

# **Promotions**



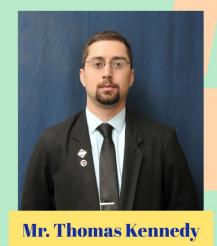
Dr. Ayman El Mesalami has been promoted from Senior Lecturer to Master Lecturer.

Dr. Ayman El Mesalami

Dr. Soad Ibrahim has been promoted from Lecturer to Senior Lecturer.



**Dr. Soad Ibrahim** 



Mr. Thomas Kennedy has been promoted from Lecturer to Senior Lecturer.



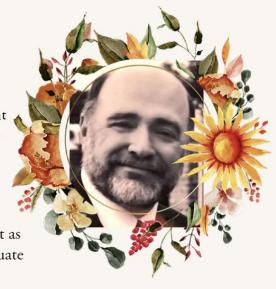
Congratulations!!

# Gone from our sight, but never from our hearts.

## Dr. Jim Schwing

Dr. Jim Schwing, a long time faculty in ODU's Computer Science Department, passed away on May 4th, 2022. He began his career studying at Worcester Polytech Institute in Massachusetts, and then went on to The University of Utah as a graduate student. After graduation, he got his first job at Old Dominion University, where he worked for 22 years. In 1988, he left ODU to join Central Washington University, Ellensburg, WA, as chair of the Computer Science Department.

He was a chair of this department at CWU for 16 years, and then taught as faculty for two. Dr. Schwing worked with both graduate and undergraduate students alike, helping them excel in their programs and assisting with research.



"When I (as the new chair if the department) needed advice on how to engage and motivate students I went to Jim. His rapport with students was unique, and any student I talked to mentioned him as the one faculty they would go to for any help they needed." Dr. Kurt Maly, Kaufman Professor and Eminent Scholar Emeritus of Computer Science at ODU

"Jim Schwing, known by all to be a person of integrity. It was my privilege to have known and worked with him at ODU. He was one of the hardest working individuals I have known. He successfully balanced his role as a mentor, teacher, researcher, and administrator. I have never heard anyone say a bad word about James L Schwing. A paragraph in the Central Washington University memorial statement accurately describes the Jim Schwing I knew at ODU." - Dr. Stephen Olariu, Professor of Computer Science at ODU

"Jim – Professor James Lyman Schwing -- known as Jim to all, was a man of honor, intellect, integrity, honesty, and caring: whether it was in his professional or personal life; whether it was through his formal employment or work he was doing for his community or the organizations to which he belonged; or whether he was just there, doing whatever was needed, wherever it was needed. He was one who was beyond kind, selfless, who believed in and encouraged others; an amazing person and a tremendous educator and researcher. So many of us were touched by his strong compassion and belief in our ability to succeed no matter the odds. As a mentor to both faculty and students, his guidance was encouraging, positive, and demanding of honesty, but was also done with humor and gentleness."

- Dr. Larry Wilson

"Fun to play with on the golf course, but a horrible putter." - Gene Hill Price, Senior Lecturer of Computer Science at ODU

# Gone from our sight, but never from our hearts.



### Dennis Edward Ray

Dennis Edward Ray, a retired Naval officer and Old Dominion University Department of Computer Science lecturer, passed away on May 18th, 2022, at the age of 80. He assisted the development of many computer science courses at ODU as well as courses for middle and high school teachers. Dennis also published books and papers about computer science, examining and evaluating software production and development technology. He was interested in research aspects of artificial Intelligence (AI) for expert systems and robotics, and he worked to merge aspects of both of those fields to produce "minimally capable robotic devices for common everyday household use." Dennis also received grants from organizations such as AT&T Information Systems and NASA.

Dennis earned a Bachelor of Science in Computer Science from the United States Naval Academy in 1971 and a Master of Science in Marine Engineering from the U.S. Postgraduate Naval School. After retiring from the Navy in 1984, Dennis accepted a position as lecturer in the Computer Science Department at ODU and held that position until retiring in 2006.

At ODU, he made many meaningful contributions to the students and faculty alike. He gave back to the up-and-coming generation of scientists, sponsoring the Careers in Science and Engineering Young Scholars' Program and "Miracles," a program designed to provide insights into computer science for underprivileged youth in Hampton Roads.

"Dennis was a pillar of our undergraduate program for over 22 years. He had the utmost enthusiasm for teaching. He spent most of his time in his office room, always helping students or trying to come up with some innovative ways to teach undergrads. He was also involved in our original CS 410/411 course design." - Ravi Mukkamala, chair of Computer Science at ODU

"Dennis was the most hard working lecturer I knew. You could find him in his office late in the evening grading students' homework or meeting them for late office hours for students who worked and could not make it during the day. Without complaints he taught a full load of courses and all of them highly enrolled courses. He topped each semester the list of faculty with the most students enrolled. He was a stern master who did not tolerate mischief from students or missed assignments, yet he was eminently fair." - Dr. Kurt Maly, Kaufman Professor and Eminent Scholar Emeritus of Computer Science at ODU

"He chose to always teach our CS 150 classes and labs. He preferred to control or teach all sections and to control the lab and TAs associated with that course. This was a massive task in the early '80s, involving over 600 students per semester. He worked long hours to make this work, and he worked the TAs long hours." - Dr. Larry Wilson

"Dennis Ray was my mentor and inspiration. He was instrumental in helping me transition from my careers as a NASA aeronautical engineer and then stay-at-home mom....to a lecturer at ODU. He championed many courses and was extremely passionate about the content, design, and student learning outcomes. His courses' designs have lived through the decades.

The Capstone course sequence and Introductory Programming courses are two such areas where his well-constructed design still exists, even with many changes in programming and instructional tools.

Dennis was a great friend and colleague." - Janet Brunelle,

Master Lecturer and assistant chair of undergraduate programs of Computer Science at ODU

Dennis Ray's memorial page: odu.edu/news/2022/5/dennis\_ray\_obituary#.Yr8kpC-B0mI



#### | Connect With Us!

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 would love to hear any other comments about your job or your 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?

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Click on the icons below and follow us on Twitter & Facebook:





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