Chen, Ren and Ko honored for academic excellence

Three CSE researchers – Chang Wen Chen, Kui Ren and Steven Ko – were honored Oct. 20 at UB’s annual Celebration of Academic Excellence. Chen, who joined CSE in 2008, is a professor who conducts research in multimedia analysis, encoding, transmission, search, adaptation and security. He was one of five UB researchers to receive the SUNY Chancellor’s Award for Excellence in Scholarship and Creative Activities. The award honors “outstanding academic and creative achievements” of faculty members who “consistently go above and beyond their teaching and professional duties to make extraordinary contributions to their respective fields.”

FOOD-TRACKING WEARABLE DEVICE MAY HELP FIGHT DIABETES, OBESITY AND MORE

Carrots and apples not only taste different. They make distinct sounds when chewed. This may seem trivial, but not in the lab of assistant professor Wenyao Xu, who is developing a wearable device called AutoDietary that catalogues the unique sounds that foods make as we bite, grind and swallow them.

AutoDietary is like Fitbit, only instead of tracking burned calories, it monitors caloric intake – in other words, what we eat.

CSE welcomes new graduate students

GROUP GETS A CLOSE UP LOOK AT NORTH CAMPUS, CSE LABS AND MORE

Nepal. Italy. Taiwan. Iran. India. While it may sound like a United Nations summit, it’s actually just a glimpse of where CSE’s newest graduate students come from.

The students – all 232 of them – gathered on Aug. 26 to tour parts of North Campus, hear from CSE faculty and learn what to expect when the fall semester kicked off a few days later. They even had the chance to chat with UB President Satish K. Tripathi, a computer scientist himself, who
Dear CSE Alumni and Friends,

Although computer science is a relatively new field, we are one of the nation’s earliest departments to offer a computer science program—and we will be celebrating our 50th anniversary in 2017. We are proud of our heritage and that our department has grown from five faculty in 1967, to the largest department in UB’s School of Engineering and Applied Sciences with 45 faculty and 11 staff members. We are equally proud of our alumni and their achievements, as well as many talented students who embody the hope of tomorrow.

We kicked off our 50th anniversary Sept. 27 with a condensed version of our promotional video (http://bit.ly/2eRhT55) at an alumni event in Mountain View, California (photos here: http://bit.ly/2dSd6d1). Attendees were super excited about our anniversary celebration, which includes a year-long Distinguished Speaker Series featuring very successful female computer scientists. The series starts Nov. 10, 2016 with Nancy Amato of Texas A&M University (an all-female lineup allows us to commemorate the 110th birth year of Grace Hopper, a pioneer in computer science.)

Our main celebration will be Sept. 28-Oct 1, 2017, and feature a welcome reception, fun social events and great panels, talks and discussions.

I know you will also be thrilled to join us in celebrating our excellence in creativity, scholarship and education over the past 50 years. So please come to our next event Nov. 4 in Davis Hall on North Campus to meet students, local alumni, board members and friends, and corporate partners.

Finally, I want to thank our alumni and friends who have generously donated funds, time and effort the past few decades to support students and faculty, and help build a department as strong as we are today. The popularity of CSE as a discipline has led to a skyrocketing increase in student enrollment. Consequently, we face many challenges offering high-quality educational programs and conducting world-class research with limited lab space, fellowships and named/endowed positions. Your continued support is essential to enable us to position the department well for the future. “A stronger CSE@UB. Better you and me!”

Chunming Qiao, PhD, IEEE Fellow
Professor and Chair
You can contact Dr. Qiao at qiao@buffalo.edu

A Message from the Department Chair

CSE leads $630K effort to improve Wi-Fi

The proliferation of wireless devices and bandwidth-hungry computing applications has created wireless traffic jams that slow the transmission of data. UB engineers are working to solve that problem.

A research team led by Dimitrios Koutsonikolas, CSE assistant professor, has received a $630,000 National Science Foundation (NSF) grant to create a one-of-a-kind testbed featuring software, hardware and other tools that takes advantage of unoccupied, high-frequency bands (60 gigahertz) that provide an opportunity to greatly increase the rate at which wireless data is shared.

Co-principal investigators include Dimitris Pados, Josep Jornet and Zhi Sun—all faculty members in UB’s Department of Electrical Engineering.

Ren, who joined CSE in 2012, is a professor who conducts research on security and privacy in cloud computing and wireless networks. He was one of seven UB faculty members to receive the UB Exceptional Scholars Award for sustained achievement in research.

The award recognizes work that has garnered public and/or professional acclaim beyond the norm.” Recipients are selected based on their body of work in recent years.

Ko, who joined CSE in 2010, is an assistant professor who conducts research on distributed systems, networking and operating systems. He was one of two UB researchers to receive the UB Exceptional Scholars Award for teaching innovation.

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CSE trains the next generation of cybersecurity experts

TEENS DEFEND AGAINST SIMULATED CYBERATTACK

Home Depot, Target, Sony Pictures.

The list of companies – as well as governments and individuals – that fall victim to cyberattacks continues to grow.

That is the reason why CSE, the School of Management and other UB entities hosted a free, weeklong summer camp in July called GenCyber that introduces dozens of bright teenagers to cybersecurity as a future career option.

Each day, the students participated in hands-on activities, learning about cybersecurity topics including firewalls, denial-of-service attacks, encryption, phishing and more.

One lesson involved 10 things not to do on social media, including listing your full name, date of birth and important contact information such as phone numbers and home addresses. Another activity involved building a miniature closed-circuit internet, where students moved around the room delivering code, cyberattacks and more to approximating how the internet acts.

“With businesses, government and other organizations struggling to deal with these attacks, there is an every-growing need to train people with the technical and managerial skills required in cybersecurity,” says Shambhu Upadhyaya, CSE professor. “This is a field that will only continue to grow.”

Upadhyaya is director of the UB Center of Excellence in Information Systems Assurance Research and Education (CEISARE), which along with the National Science Foundation and the National Security Agency acted as camp sponsors.

Students who successfully completed the camp received a certificate of achievement at an awards presentation.

Since an earlier incarnation of the program began in 2009, UB has taught thousands of middle school students, high school students and college students the basic principles of cybersecurity.

For more info about UB GenCyber Camp visit: ubgencyber.camp

AUTODIETARY

It wraps around the back of the neck like a choker necklace. A tiny high-fidelity microphone records the sounds made during mastication and as the food is swallowed. That data is sent to a smartphone via Bluetooth, where food types are recognized.

In preliminary tests involving apples, carrots, potato chips, cookies, peanuts and walnuts, AutoDietary worked 85 percent of the time.

“Each food, as it’s chewed, has its own voice,” says Xu, who is designing the device to help people suffering from diabetes, obesity, bowel disorders and other ailments by enabling them to better monitor their food intake and, thus, improve how they manage their conditions.

While promising, AutoDietary cannot differentiate similar foods such as frosted corn flakes and regular corn flakes, or the ingredients of complex foods like chili.

To address this, Xu is developing a complementary biomonitoring device to determine the nutritional value of the food via blood sugar levels and other measurements. The system then gathers and presents the information on a smartphone, while providing suggestions on healthier eating.
CSE IS CELEBRATING ITS 50th ANNIVERSARY!

CSE 50
1967-2017

Please keep your calendar open:

SEPT. 28- OCT. 1, 2017

We are planning events that will highlight 50 years of excellence at CSE, and we want you join us. More details to come.

ATTN: CSE ALUMNI

We want to hear from you! Keep us updated on your personal and professional lives. Visit: bit.ly/2BiqAdK and complete the “STAY IN TOUCH” survey.

Also, feel free to send news, photos, videos, awards, achievements and other related content to cse-dept@buffalo.edu or

FACEBOOK facebook.com/ubcompsci

TWITTER @UBCompsci

We’d like to thank all the alumni who responded to our previous message, including Amazon card winners: Sarbani Banerjee (‘89), Derek Falter (‘12), Mukul Patil (‘06) and Reid Simmons (‘78).

CSE hosts Silicon Valley alumni event

Momentum is building for CSE’s 50th anniversary bash. On Sept. 27 in Mountain View, California, a record-breaking crowd of 69 alumni, faculty and industry members discussed the future of computer science and, of course, UB. Don’t be surprised to see a few of these faces in Buffalo next fall!

Above: The event’s panelists (from left): Milind Bhandarkar, founder and CEO of Ampool, Inc.; Pratap Subrahmanyam, fellow at VMware; Raghu Ramakrishnan, CTO for data and a technical fellow in the cloud and enterprise division at Microsoft; Venu Govindaraju, UB vice president for research and economic development; and Andrew Mendelsohn, executive vice president for database server technology at Oracle.

Above left: Pratap Subrahmanyam (left), fellow at VMware, and Chunming Qiao, chair and professor of UB CSE.

Above right: (from left) Debashish Niyogi, director of programs at Silicon Valley Product Management Association, Venu Govindaraju, and Kannan Govindarajan, co-founder and chief product officer of DxContinuum.

Below left: CSE graduates (from left) Mohit Virendra (‘08), Duc Ha (‘09), Joy Ghosh (‘06), Anantharaman Ganesh (‘04), and Nirmal Thangaraj (‘07).