Dear Colleagues and Friends:

As we begin the 2013-2014 academic year, we have several news to share with you.

The total College of Engineering enrollment has increased this year by 14% over last fall, and the CSE enrollment is up by more than 20%. As early as July, it became clear to us that CSE will be facing a big surge in enrollments this fall. Thus, while being the second largest department in the College of Engineering, we are also experiencing the fastest rate of growth, reaching a total student body of about 1070 students. Of these, we have the largest number of Masters students in the college (316 - up 51%). Undergraduates are up by 9.2% and enrolled Ph.D. students reached 90. We are particularly interested in doubling the number of Ph.D. students who enroll and graduate in the next few years.

The CSE Department plays a very special role in the University, as it provides a center of computer based innovations and multidisciplinary research and learning. CSE is, after all, a field designed to find efficient solutions for problems in other fields, such as in healthcare, transportation, telecommunications, security, manufacturing, business, medicine, architecture, the arts, and many others. With the exponential growth of data, fast evolving or new computer technologies and the massive proliferation of computing devices, there is huge demand for graduates in computing.

CSE is interested in attracting talented faculty and students who will help us build new thrusts in areas of national need, such as cybersecurity, health informatics, big data science and environmental computing, among others. CSE faculty are doing research to address these needs while also exploring new applications and innovations to service the great state of Texas.

In this newsletter, you will find news and events covering the period between March 2012 and October 2013. It includes news on faculty awards, student distinctions, hiring, and other news. Some of the highlights are: a new MS program in software engineering, a new GAANN award, several best paper awards, a new NSF industry-university center on assistive technologies, and several competitive NSF grants awarded to CSE faculty.

We are especially proud and want to showcase the successes of our CSE graduates, especially those securing positions in very competitive industries and universities. This year, our Graduate Student Association will make special efforts to maintain closer ties with our alumni and build a stronger family of CSE friends.

In closing, we welcome our new dean of the college, Prof. Khosrow Behbehani, former chair of the Department of Bioengineering. We also welcome our new University President, Dr. Vistasp M. Karbhari and look forward to his vision and support towards a stronger and more visible CSE department, which does a better job in reaching out to our community, nearby industry and other departments and colleges in the University. “Reaching out” is our motto and the name of this newsletter. Special thanks go to Ms. Rong Zhang who put this newsletter together. Please feel free to send us your feedback and thank you for reading it.

Wishing you a nice fall season,

Fillia Makedon
Jenkins Garrett Professor and Chair,
Computer Science and Engineering Department
University of Texas at Arlington
We are pleased to announce that Dr. **Taylor Johnson** joined our faculty as a tenure-track Assistant Professor. Taylor completed his PhD in Electrical and Computer Engineering at the University of Illinois at Urbana-Champaign in 2013, where he worked in the Coordinated Science Laboratory with Prof. Sayan Mitra. Taylor completed his MSc at Illinois in 2010, earned a BSEE from Rice University in 2008, and was a visiting research assistant at the Air Force Research Laboratory's Space Vehicles Directorate at Kirtland Air Force Base in 2011. Taylor worked in industry for Schlumberger at various times between 2005 and 2010 helping develop new downhole embedded control systems. Taylor's research focus is developing algorithmic techniques and software tools to improve the reliability of cyber-physical systems. He will direct VITAL: the Verification for Intelligent and Trustworthy Autonomy Laboratory, which will focus on fundamental embedded systems problems with numerous applications, including power and energy systems.

Dr. **Alexandra Stefan** was hired as senior lecturer in CSE. Dr. Stefan received her BS degree in Mathematics and Computer Science from the University of Bucharest in 2002, the MS degree in Computer Science from Boston University in 2008, and the Ph.D. degree in Computer Science from the University of Texas at Arlington in 2012. Her research interests include computer vision and data mining. Her publications have focused on efficient similarity-based retrieval in multimedia databases, with applications to sign language recognition, time series analysis, and recognition of a large number of classes. Besides teaching, she will also serve as an undergraduate advisor and continue her research in the Vision-Learning-Ming Research lab (VLM) supervising students.

Dr. **Sabatino Bianco** joined Computer Science and Engineering Department as adjunct professor. Dr. Bianco is the chief neurosurgeon of Bianco Brain and Spine. He attended the University of Naples Federico II medical school and graduated Summa Cum Laude presenting a thesis on “Neuroendoscopy in Neurosurgery”. Dr. Bianco is involved in brain and spine research, development, and teaching. His dream is to further deepen the knowledge of brain and spine functions and pathologies to better care for his patients with neurosurgical problems. He is one of the few neurosurgeons that have mastered the skills necessary to perform minimally invasive brain and spine surgery, neuroendoscopy, neurovascular procedures, and spinal deformity correction.
Dr. Gergely Zaruba (PI), Dr. Phil Cohen, Dr. Fillia Makedon, Dr. Vassilis Athitsos, Dr. Jean Gao, Dr. Junzhou Huang, Dr. Heng Huang, Dr. Manfred Huber, Dr. Farhad Kamangar, and Dr. Gian-Luca Mariottini have received a $533K grant from the Department of Education for their GAANN proposal titled “Graduate Assistance in Areas of National Need - Education Health Informatics Researchers at the Computer Science and Engineering Department of the University of Texas at Arlington”. The GAANN (Graduate Assistance in Areas of National Need) program supports fellowships for graduate students who are U.S. citizens or permanent residents to pursue a Ph.D. degree in CSE. These fellowships are awarded on a competitive basis to outstanding applicants satisfying the eligibility criteria. This is a five-year grant that will support students to pursue a Ph.D. degree in areas of Health Informatics. More information about this GAANN program can be found at http://cse.uta.edu/gaann/.

Professors Wei-jen Lee (PI, EE) and Heng Huang (Co-PI)’s project “Enhance Customer Demand Load Profile estimation Algorithms for Field Application” has been funded by Consolidated Edison Company of New York, Inc. This project is to analyze large-scale smart meter data to forecast the demand profiles of customers. The research results will provide accurate customer daily load profiling for load estimation and network demand reconciliation to improve the efficiency and security of the underground network of Con Edison systems. The total amount is about $142K.

Associate Professor Dr. Jeff Lei (PI) has received an award from the National Institute of Standards and Technology (NIST) for his work titled, "Combinatorial Testing for Complex Systems". This project addresses the problem of how to effectively model the input space of complex systems. In particular, the research team will develop techniques to derive input space models by analyzing the specification, design, and source code of a complex system, as they become available. Prof. Jeff Lei has also received a second award from NIST for his project entitled, "Combinatorial Testing for Healthcare Systems". The goal of this project is to explore the use of combinatorial testing for conformance and interoperability testing of healthcare systems. The total amount of these two awards is about $400K.

Professors Fillia Makedon, Heng Huang, Vassilis Athitsos, Vangelis Metsis and Gian-Luca Mariottini have received a $27K NSF award, to support the travel of student authors to PETRA 2013. PETRA, which stands for Pervasive Technologies Related to Assistive Environments (www.petrae.org), is an annual international conference sponsored by UTA. In May 2013, 18 student authors from USA were able to attend the Doctoral Consortium Program, present their results and get feedback from conference participants.

Professors Fillia Makedon, Heng Huang and Vangelis Metsis received $138K from NSF for their proposal titled “EAGER: An Exploratory Pilot Project to Build Human-Centric Physical Activity Monitoring Tools for Enhancing Rehabilitation Therapy Engagement and Assessment”. The aim is develop motion capture and data integration tools for RPLAY, a system which will enable patients with Rheumatoid Arthritis to perform physical therapy at home while the system accurately monitors their joint motions, motor performance and other physiological indicators.
Assistant Professor Junzhou Huang received a grant from Samsung Communications for his proposal titled "Machine Learning Algorithm Development for Non-intrusive Load Monitoring". This project aims at discovering discriminant features from the low-sample-rate power measurements to characterize appliance functional modes and to develop new hierarchical probabilistic models to make energy usage at home more efficient. The total amount is about $150K.

A UT Arlington multidisciplinary team will lead a three-year, $1 million National Science Foundation grant project to develop iRehab, a smart rehabilitation system that can adapt and personalize therapy programs based on a patient’s needs and constraints. Fillia Makedon, a Jenkins-Garrett distinguished professor and chair of the Computer Science and Engineering Department, will lead the research effort “MRI (Major Research Instrumentation) Collaborative: Development of iRehab, an Intelligent Closed-Loop Instrument for Adaptive Rehabilitation.” Makedon also is director of the UT Arlington Heracleia Human Centered Computing Lab, where the primary research will take place. The highly competitive NSF award only allows each university three applicants each year. The project team includes UT Arlington, Boston University and Harvard’s Massachusetts General Hospital. About $800K will fund UT Arlington’s portion of the project, with the remaining $200K awarded to Boston University.

Dr. Heng Huang’s proposal “III: Medium: Collaborative Research: Robust Large-Scale Electronic Medical Record Data Mining Framework to Conduct Risk Stratification for Personalized Intervention” has been awarded by NSF CISE IIS Core program. Dr. Heng Huang is leading this four-year project and collaborating with UTSW and SMU, total $893K. In this project, Dr. Heng Huang’s team will design new BIG DATA mining and machine learning algorithms to solve critical challenges for systematically and integratively mining massive Electronic Medical Records (EMRs).

Professors Fillia Makedon, David Kung, Christoph Csaller, Jeff Lei and Vangelis Metsis, have received a planning grant to build an Industry-University Cooperative Research Center (I/UCRC) on Assistive Technologies to Enhance Human Performance. The center is called iPerform. The iPerform center will be a joint center with University of Texas at Dallas, where the PIs are Professors Ovidiu Daescu, Gopal Gupta and Dinesh Bhatia. The team will be planning a fall meeting with companies that have expressed interest in joining as members and also invite faculty to participate by showcasing commercially mature projects. All funds will go towards the support of graduate students who will be involved in industrially related projects.
Dr. Wei-jen Lee (PI, EE) and Dr. Heng Huang (Co-PI)’s project “Development of PC and Mac Companion CD Product for Arc Flash Awareness, Education and Reference” has been funded by IEEE, total $81K, 2012-2014. This project provides computational methods and software for the calculation of arc-flash incident energy and arc-flash boundaries in three-phase ac systems to which workers may be exposed. The focus of industry on electrical safety and recognition of arc-flash burns as having great significance highlighted the need for protecting employees from all arc-flash hazards. This project derived new models based on statistical analysis and curve fitting of the overall recent test data available.

Professor Roger Walker has been awarded $201K by TX Department of Transportation for his proposal “Implementation of New Profiling Technology and Its Impact on the Pavement Management Information System (PMIS) with TxDOT”. Research at the Transportation Instrumentation Laboratory has resulted in several technological developments in real-time pavement surface measurements. This project provides support for implementing this technology. This support will include helping TxDOT construct a portable profiler bar for the UTA Roline profiler module, investigation of the LMI Gocator sensor, investigation in the use of field-programmable gate array (FPGA) technology for real-time acquisition, synchronization and filtering of sensor signals in the Texas Profilers, and further investigations of the UTA slow speed profile algorithm.

Associate Prof. Jeff Lei has been selected by the National Institute of Standards and Technology (NIST) of the US Department of Commerce, to receive the 2013 Outstanding Associate Award from the Information Technology Laboratory (ITL) to recognize his outstanding achievements in the area of combinatorial testing (CT). Prof. Lei's work is instrumental in making high strength combinatorial testing practical, publicly available and with the ability to test difficult cases of heterogeneous and constrained parameter values. More than 1400 companies and individuals and over 10 universities have used and are using this tool.

Associate Professor Vassilis Athitsos has been awarded an Outstanding Early Career Award from the College of Engineering at the University of Texas at Arlington, this past February. The award is given each year to a UT Arlington engineering faculty member in recognition of outstanding performance in the areas of teaching, research and service. The nominees should be no more than 6 years in a tenured or tenure-track appointment, at least 3 years of which should be at UT Arlington.

Associate Professor Matthew Wright’s recent research was featured in http://www.technologyreview.com/view/429091/social-networks-make-anonymous-online/. His research was also featured in a blog on the MIT Technology Review site. http://www.newscientist.com/blogs/onepercent/2012/09/how-facebook-can-help-hide-you.html.

Dr. Wright is awarded Faculty Development leave (FDL). During his leave, he will work with the world’s leading research groups in anonymity systems to develop a software instrument for measuring anonymity. He will work with researchers at University College London and KU Leuven in Belgium.

Professor Gautam Das is listed in the SIGMOD top 50 most prolific people who have published in SIGMOD. (http://people.csail.mit.edu/stephentu/figures/sigmod-top50.pdf). SIGMOD is the Association for Computing Machinery's Special Interest Group on Management of Data, which specializes in large-scale data management problems and databases. The annual ACM SIGMOD Conference, which began in 1975, is considered one of the most important in the field (http://en.wikipedia.org/wiki/SIGMOD). Dr. Das is ranked 43.

Professor Fillia Makedon was invited speaker for the first UTARI (University of Texas Arlington Research Institute) Assistive Robotics symposium, which took place on February 19, 2013. Her talk is “Towards a Smart Patient Centered System to Promote Rehabilitation”.

Professor Fillia Makedon will deliver a keynote speech at ICCSIT 2013 (www.iccsit.org), which will be held during December 20-21, 2013, Paris, France. The keynote is titled “Smart Rehabilitation Technologies”.

Dr. Vassilis Athitsos

Dr. Matthew Wright

Dr. Roger Walker

Dr. Jeff Lei

Dr. Gautam Das
CSE Faculty Have Combinatorial Testing Book Published

Associate Professor Jeff Lei is coauthor of a new book on “Introduction to Combinatorial Testing”, By D. Richard Kuhn, Raghu N. Kacker, and Yu Lei), published by Chapman and Hall/CRC in June 2013. The book introduces key concepts and procedures of combinatorial testing, explains how to use software tools for generating combinatorial tests, and shows how this approach can be integrated with existing practices. Accessible to undergraduate students and researchers in computer science and engineering, this book illustrates the practical application of combinatorial methods in software testing. For more information, please go to http://www.crcpress.com/product/isbn/9781466552296

CSE International Programs and Joint Degrees

Joint PhD Program of UTA-CSE Dept. and the National Center for Scientific Research - DEMOKRITOS

Demokritos, the largest research center in Greece and among the largest in Europe. It is also called National Center of Scientific Research (NCSR, http://www.demokritos.gr/default.aspx?lang=en). Located about 20 minutes east of Athens Center, on a pine-tree covered hill, NCSR has 9 research Institutes and over 1000 research scientists working full time in areas ranging from Nuclear Energy to sensors, Bioinformatics, Bioengineering, Mechanical Engineering, Chemistry, Physics, and others.

The CSE Department has a joint Ph.D. Degree with NCSR, established 5 years ago. In August, the second batch of Ph.D. students in this program arrived. They are Konstantinos Tsiakas and Alexandros Lioulemes. They jointed the Heracleia Human Centered Computing Laboratory (heracleia.uta.edu).

Konstantinos Tsiakas graduated from the Technical University of Crete, Greece. His research interests include Image and Sound Processing, Pattern Recognition and Natural Language Processing. Tsiakas said, “I believe that UTA’s CSE Department has an excellent research program and I am very excited to be here”.

Alexandros Lioulemes graduated from the Department of Computer Science and Engineering at the U. of Ioannina, Greece. His research interests include Image Processing, Computer Vision and Robot Navigation. “My first impression of UTA is very positive and want to start doing research as soon as possible”.

The first batch of NCSR students, Paul Doliotis, Alexandros Papangelis and George Galatas, are expected to receive their Ph.D. degree in December. Paul is co-advised by Dr. Vassilis Athitsos from UTA and Stavros Perantonis (http://users.iit.demokritos.gr/~sper/) from NCSR. His thesis is “Similarity Measures and Exemplar Based Methods for Gesture Recognition and 3D Hand Pose Estimation”. Alexandros is co-advised by Dr. Fillia Makedon from UTA and Dr. Vangelis Karkaletsis (http://users.iit.demokritos.gr/~vangelis/). His thesis is “Adaptive Dialogue Systems for Assistive Living Environments”. George is co-advised by Dr. Fillia Makedon and Dr. Makis Potamianos (http://users.iit.demokritos.gr/~gpotam/). His thesis is "Multimodal Interaction in Ambient Intelligence Environments using Speech, Localization and Robotics".
CSE Study Abroad in Greece Program

The CSE department ran a Study Abroad in Greece program in the years 2011 and 2012 for 6 weeks in the Summer. UTA students worked with researchers from the University of the Aegean on the island of Samos (http://www.aegean.gr/), the Archipelagos Marine Research Institute (http://archipelago.gr/en/kentriki-selida-archipelagos/) and Demokritos-NCSR (http://www.iit.demokritos.gr/). Professors Eric Becker, Vangelis Metsis and Vassilis Athitsos led the student teams. Students participated in field trips in the majestic island environment of the island of Samos, worked together with marine biologists, learned about the environmental issues first hand, collaborated with students from other universities and countries, and experienced working and living in one of the world's oldest cultures. Their results were published in UTA's international online journal for CSE undergraduates, CSURJ, an all-online journal. Photos and more study abroad details can be found in http://studyabroad.cse.uta.edu.

Study Abroad Program for 2014

The Computer Science and Engineering Department is pleased to announce the Third Study Abroad (SA) Program for summer 2014. This SA focuses on Assistive Technologies that apply computer science principles and methods to solving real world problems. The program will take place during May 26 - June 11, 2014 on the Island of Rhodes and in Athens. Details can be found in http://studyabroad.cse.uta.edu or send email to Mrs. Rong Zhang (rongz@uta.edu)

CSE is building a new Health Informatics Master’s degree

CSE is preparing yet a new program, a new MS degree in health informatics. Currently, CSE already has three separate programs: Computer science, Computer Engineering and Software Engineering. Health Informatics will be a fourth program. Starting with a Masters degree, CSE faculty are building courses towards a 10-course MS degree with the support of Provost Elsenbaumer who provided funding to bring an expert scientist from Europe to help in achieving this task. During the academic year 2012-13, Dr. Dimitrios Zikos introduced to the CSE students two new health informatics courses, with a broad coverage of the multidisciplinary health informatics area. Students explored the major applications, scope, methods and evaluation of health science and health engineering systems as well as the principles of the data management for decision making using novel machine learning and data retrieval techniques. Dr. Zikos is working together with interdisciplinary team on a health information engineering project, analyzing enormous hospital datasets to ultimately model and build smart software modules for smarter, predictive healthcare information systems. CSE is also considering extending this effort to a Ph.D. degree.
In Fall of 2012, a dual Masters Degree Program was established between the CSE Dept. at UTA and the software engineering school at Beijing University of Posts and Telecommunications (BUPT). Professors Fillia Makedon, Yonghe Liu and Bahram Khalili, worked with the UTA graduate dean, Dr. Cohen and Dr. Dan Himarios, Provost for Global Affairs, to establish this exciting program. Former President Spaniolo signed an MOU agreement with BUPT, a key national university distinguished for its teaching and research. This is the first such international MS degree in the College of Engineering. BUPT is one of the first 61 universities of Project "211" in 1995, a project aiming at strengthening 100 National Key Universities as a national priority for the 21st century. It is the most famous and renowned universities in the field of telecommunications in China. Student coordinator is Ms. Rong Zhang at UTA. BUPT adjunct professor, Otmar Foelsche serves as their advisor.

This Fall 2013, 13 new students arrived to UTA. They are Shuang Guo, Bo Zhang, Hao Geng, Hui Zhou, Yang Sun, shaosong Li, Ang Li, Jiayan Guo, Yuanhang Wang, Long Li, Yi Yang, Yu Zhang, Jinhui Wang (see photo above). When asked about their impression about this program and UT Arlington, the students said, “we are honored to join UT Arlington through this great program. We meet students and make friends from all over the world. Professors and stuff are very nice, they provide a lot of help to enable us to adapt quickly.” “We are impressed by the beautiful campus, great facilities and diversity culture on campus. Professors are easy-going, fun and knowledgeable. We get motivated to learn more, both in theory and in application perspective.”

TO CSE ALUMNI

Dear CSE Alumni,

Please send us your news! We want to hear from you, how you are doing, your latest accomplishments, family news, travel and events you are organizing so that we can add it into our next newsletter issue. We also want to help you connect with other alumni and become part of our extended CSE family. For this reason, we will create a website for you, called ALUM.CSE.UTA. where you can go and update your information and include a photo. Other CSE alumni can find out where you are and connect with you. Tell us how we can improve and what department activities you might wish to participate in.

For example, you might be interested in mentoring a CSE student or a class or a student association. You may want to visit a class and give a talk, be part of a CSE event or advise a group of students. Many of you work in America's leading corporations or in small enterprises advancing the field of computer science and engineering and are looking for good employees or interns. We can help you find them. Please send email to Rong Zhang (rongz@uta.edu) and tell us your needs by going to this website. Finally, we need your help in raising scholarship funds for talented Undergraduate Students. Please contact us if you are interested in finding more about this.
CSE Conferences

The CSE Department and its faculty organize or play a major role in several internationally acclaimed conferences. Below we list these conferences that have taken place or will take place in the near future:

PrivacyEnhancing Technologies Symposium (PETS 2013)

Associate Professor Matthew Wright was the PC co-chair for Privacy Enhancing Technologies Symposium (PETS) 2013 (http://petsymposium.org/2013/). PETS 2013 took place in Bloomington, Indians, USA, July 10–12. It addresses the design and realization of privacy services for the Internet and other data systems and communication networks by bringing together anonymity and privacy experts from around the world to discuss recent advances and new perspectives.

DIMACS Working Group on Measuring Anonymity

Dr. Wright was also the co-organizer for a DIMACS working group on measuring anonymity, which took place in Rutgers University, May 30-31, 2013. This invitation-only event brought together 35 privacy experts (http://dimacs.rutgers.edu/Workshops/Anonymous/announcement.html). The goal of the workshop is to bring together researchers from diverse fields of expertise in order to jumpstart the development of new rigorous mathematical and computational tools for analyzing anonymity systems.

CVPR 2012 Gesture Recognition and Kinect Demonstration Competition Workshop

Dr. Vassilis Athitsos served as the Co-organizer of the CVPR 2012 Workshop on Gesture recognition and Kinect Demonstration Competition (http://gesture.chalearn.org/dissemination/cvpr2012), The focus of this workshop was gesture and sign language recognition from 2D and 3D video data and still images. It is coupled with a gesture recognition challenge (http://gesture.chalearn.org), offering the opportunity to work on a large database of videos of hand gestures recorded with KinectTM.

IEEE Conference on Automatic Face and Gesture Recognition (FG)

Dr. Vassilis Athitsos also served as area chair of the 10th IEEE Conference on Automatic Face and Gesture Recognition (FG 2013, http://fg2013.cse.sc.edu/index.html). FG is the premier international forum for research in image and video-based face, gesture, and body movement recognition. Its broad scope includes: advances in fundamental computer vision, pattern recognition, computer graphics; machine learning techniques relevant to face, gesture and body motion; new algorithms and applications.

The 1st International Workshop on Surgical Vision (SurVis)

Dr. Gian-Luca Mariottini organized the 1st International Workshop on Surgical Vision (SurVis) at the IEEE Intern. Conference on Robotics and Automation (ICRA) in Karlsruhe, Germany, on May 7th, 2013 (http://ranger.uta.edu/~gianluca/survis/). This whole-day workshop hosted many talks and demos from some of the most important labs in the world and provided a unique opportunity to share research findings, ideas, and future directions in this exciting multi-disciplinary field of research.

International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM)

Associate Professor Yonghe Liu served as the co TPC chair of the 14th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM 2013, http://wowmom2013.tmit.bme.hu/), which took place in Madrid, Spain 4-7 June 2013 at Getafe campus of Carlos III University of Madrid (UC3M). WoWMoM provides researchers and students a friendly and interactive forum for exchanging results and visions that shape the future of wireless, mobile and multimedia systems. CSE department is sponsor of this conference.
International Conference on PErvasive Technologies Related to Assistive Environments (PETRA 2013)

The 6th International Conference on PErvasive Technologies Related to Assistive Environments (www.petra.org), chaired by Prof. Fillia Makedon, was held in Rhodes Island, Greece, May 29-31, 2013. The conference attracted over 100 participants from 15 countries and brought together experts in sensor networks, robotics, imaging, pervasive computing, and other areas. With NSF funding, PETRA’13 also supported 18 Doctoral Consortium student authors.

Conference on Decision and Game Theory for Security (GameSec 2013)

GameSec 2013, the conference on decision and game theory for security, will be held in Fort Worth on Nov. 11-12 (http://gamesec-conf.org/). The conference focuses on analytical models based on game, information, communication, optimization, decision, and control theories that are applied to diverse security topics. Dr. Matthew Wright is local chair and Dr. Donggang Liu is financial chair.

PETRA 2014 Announcement

PETRA 2014 will take place May 28-31, 2014, on the Island of Rhodes, Greece, May 27-30, 2014. Dr. Fillia Makedon will serve as General Chair. Dr. Mark Clements (Georgia Institute of Technology) and Dr. Catherine Pelachaud (TELECOM ParisTech, FRANCE) will serve as Program Committee Chairs. Detail information can be found at www.petrae.org. SEE POSTER AT THE END OF THE NEWSLETTER

CSE Department Events

CSE Freshman Welcome Bash

The CSE Freshman Welcome Bash was held on Sep. 20 in Nedderman Hall with a great success. 32 students attended this event. Students had the opportunity to visit several research labs in CSE department, including the Senior Design lab, the Heracleia Human Centered Computing Lab and Learn lab. Many thanks to Mrs. Pam Mcbride, Dr. Linda Barasch, Dr. Eric Becker, Dr. Bob Weems, Dr. Ramez Elmasri, Dr. Mike O’Dell, Dr. Darin Brezeale, Dr. Alexandra Stefan, and Dr. Dimitrios Zikos for organizing the event.

CSE Department Colloquia, Fall 2013

Department colloquium talks will start at 11:30AM in ERB 103. (talk on Oct. 11 will start at 1pm)

**Sept. 6, 2013**
Title: Leveraging Social Networks for Improved Anonymity and P2P Systems
Speaker: Matthew Wright, University of Texas at Arlington

**Sept. 20, 2013**
Title: Decision-Making in Large-Scale Dynamical Networks: Modeling, Evaluation, Estimation and Control
Speaker: Yan Wan, University of North Texas

**Sept. 27, 2013**
Title: A Guide to Reducing Energy Consumption in Data Centers
Speaker: Pradeep Shenoy, Texas Instrument

**Oct. 11, 2013**
Speaker: Gregory Hager, John Hopkins University

**Oct. 25, 2013**
Speaker: Paolo Valdastri, Vanderbilt University

**Nov. 1, 2013**
Speaker: Balakrishnan Prabhakaran, University of Texas at Dallas

**Nov. 8, 2013**
Speaker: Ovidiu Daescu, University of Texas at Dallas

**Nov. 15, 2013**
Speaker: Chengkai Li, University of Texas at Arlington

**Nov. 22, 2013**
Speaker: Taylor Johnson, University of Texas at Arlington

**Dec. 11-12, 2013: iPERFORM I/UCRC Center Planning Meeting**
CSE STUDENT ORGANIZATIONS

There are many great student organizations in CSE department. These organizations connect students with a stronger sense of community and provide opportunities for students to engage in organizational and leadership development. CSE department and faculty provide comprehensive advising and resources for all student organizations. Below lists some of these organizations:

Computer Security Club https://www.facebook.com/UTACSEC

The UT Arlington Computer Security Club (CSEC) provides a venue to learn about the basics of practical computer security, try out security tools in a safe environment, and represent the university in cybersecurity competitions against teams from other universities around the world. Matthew Wright is the faculty advisor.

Association for Computing Machinery http://mavorgs.collegiatelink.net/organization/acm/

The University of Texas at Arlington chapter of ACM provides professional development and networking to our student members. Students who join ACM gain access to the national networking and professional name of the organization. For companies, ACM represents an opportunity to interface with the newest talent in engineering in an informal setting. For students, it represents a wealth of growth potential and activities to build resumes and help find your passions in the field. Gian-Luca Mariottini is the faculty advisor and Yusuf Suleman is the President. The ACM Programming Club, led by UTA undergraduate student Yusuf Suleman, aims to prepare students for participating in programming contests. The club plans to send two teams to the ACM ICPC regional programming contest, that will take place at Baylor University on November 2, 2013.

RoboBoat http://learnlab.uta.edu/RoboBoat

The RoboBoat team at UTA is a student group dedicated to the development of an autonomous maritime vehicle aimed at competing in the international AUVSI RoboBoat competition held in Virginia Beach, VA. For this contest, the team, which is comprised of students form all different engineering disciplines (and is open to - and invites - all interested UTA students), is developing and building hardware as well as software for a boat, a deployable mobile rover, a dart gun, a heat camera system, and a boat-mounted manipulator to perform different autonomous challenges ranging from channel navigation to landing and object retrieval, and to autonomous rock-paper-scissor-spock playing. 2013 was the first year in which the UTA team participated in the actual competition with a newly developed boat. Learning from this experience, the team is now working on improving the hardware capabilities and augmenting the software to allow for more robust operation and a shot at winning the 2014 contest (http://www.auvsifoundation.org/foundation/competitions/roboboat/). Manfred Huber serves as faculty advisor.

Graduate Student Association (Faculty Advisor: Matthew Wright, Chengkai Li and David Levine)

The goals of Graduate Student Association (GSA) are to increase student activities and ties to the department and each other in various ways, from movie nights to student talks and more. Jacob McClenny is the president of the organization and Akshay Mattoo is the vice president. GSA is organizing a department picnic which will take place on Oct. 26 from 11am. All faculty, staff, and grad students and families are welcome to attend. Detailed information will be announced later.

Mobile Devices https://mavorgs.collegiatelink.net/organization/mobi/ (Advisor: Gergely Zaruba)

Mobi is a student organization that aims to engage its members in an active learning environment for mobile development as well as team work in a state of the art lab for iPhone and Android development with the latest electronic gadgets. Its first pillar is entrepreneurial thinking; the students will be able to apply their knowledge in Java, Algorithms, Database, OS, Networks, Robotics, AI, and Embedded Systems to their own projects that involves mobile development. Gergely Zaruba serves as faculty advisor.
Mahashweta Das will Join HP Labs as a Research Scientist

Mahashweta Das was awarded the Graduate School Dissertation Fellowship and is joining the prestigious Analytics Lab at HP, Palo Alto, as a Research Scientist, starting in January 2014.

Mahashweta is a PhD candidate under Dr. Gautam Das in DBXLAB in CSE. She received her Bachelor's and Master's degree in Computer Science and Engineering from Jadavpur University, India in 2007 and the Ohio State U. in 2009 respectively. Her research interests include data mining, databases, algorithms, and machine learning. She was research intern in IBM Research Lab (summer 2009), Technicolor Research Lab (summer 2011) and in the Web Mining Group at Yahoo! Research (summer 2012). She has published refereed articles in SIGKDD and VLDB among others, and her paper titled “Who Tags What? An Analysis Framework” was among those selected for a Best Paper 2012-VLDB award. She was a finalist of Google 2012 Anita Borg Memorial Scholarship and received the 2013 John S. Schuchman Outstanding Ph.D. student award. She says, “When I started my doctoral studies in UTA in Spring 2010, I was skeptical. Four years later, as I stand between completing this journey and starting another, I admit that pursuing my Ph.D. in CS at UTA under Dr. Gautam Das, was the best decision of my life. It has not only contributed to my intellectual growth, but has also prepared me to take on the world – as I did while interviewing with the smartest people at the finest industrial labs in the US. I owe a lot to UTA.”. Her advice to new students and graduating students: (1) If you ever get an opportunity to pursue a Ph.D., do it – you will never regret it; (2) Choose a job that would allow you to grow intellectually, even if the offer is not lucrative enough. The benefits of both (1) and (2) are in the long run.”

Dr. Hua Wang Joined Colorado School of Mines as an Assistant Professor

Dr. Hua Wang (Ph.D., '12) [http://inside.mines.edu/~huawang/] joined the Department of Computer Science and Electrical Engineering at the Colorado School of Mines as tenure-track Assistant Professor. Colorado School of Mines is ranked as 77th in all national university by U.S. News. Dr. Wang’s dissertation is titled, “From Phenotype to Genotype: A Structured Sparse Learning Framework for Imaging Genetics Studies”. He was advised by Associate Professor Heng Huang. At UTA, Dr. Hua Wang has done excellent research work on bioinformatics, machine learning, data mining, and computer vision. He published more than 30 research papers in top-tier computer science conferences, such as NIPS, ICML, RECOMB, ISMB, ICCV, CVPR, IJCAI, AAAI, etc. His paper “High-Order Multi-Task Feature Learning to Identify Longitudinal Phenotypic Markers for Alzheimer Disease Progression Prediction” was selected as platinum presentation in NIPS’2012, which is highly selective with acceptance rate 20/1467=1.36%.

CSE Students Participated in the DARPA Robotics Challenge

Aaron Staranowicz (left) and Garrett Brown (right), research assistants at the ASTRA Robotics Lab (Director: Dr. Mariotti) have participated in the DARPA Robotics Challenge, an international competition funded by DARPA aimed at developing technology to allow humanoid robots to execute complex tasks in dangerous, degraded, human-engineered environments. Aaron and Garrett were responsible for the robot perception part, namely for indoor localization, object recognition, and autonomous driving of a vehicle.
CSE Students Won UTARI Research Fellowships

Three students have been awarded UTARI fellowships. These students are Christopher McMurrough (2012 Fall-2013 Summer), Alexandros Papangelis, (2012 Fall-2013 Spring, 2013 Fall) and Shawn Gieser. (2013 Summer).

Christopher McMurrough is a fourth year PhD student in Computer Science and Engineering department. He is a native of Arlington and received both his BS and MS degrees in Computer Science and Engineering from UTA. He is a member of Heracleia Human-Centered Computing Laboratory working with Professor Fillia Makedon. His research interests focus on various aspects of robotics, unmanned systems and technology related to assistive environments.

Alexandros Papangelis is a fourth year Ph.D student and he is also a fellow of CSE-NCSR “DEMOKRITOS” program. He is supervised by Professor Fillia Makedon. He got his BS degree from National and Kapodistrian University of Athens and MS degree from University College London. His research interest focuses in Dialog system and its application in rehabilitation and assistive living environments. He worked as intern in the Natural Dialogue Group at the Institute for Creative Technologies at the University of Southern California on the application of reinforcement learning in multi-issue negotiation dialogue policy learning.

Shawn Gieser is a second year Ph.D student in Computer Science and Engineering department. He is a longtime Dallas / Fort Worth resident. He received his BS degree in Computer Science and Engineering department from UTA. He is a member of Heracleia Human Centered Computing laboratory working with Professor Fillia Makedon. He is working on technology related to assistive living environments, including motion tracking.

Scholarship and Award Recipients

Congratulations to Jesus Parra, Jorge Zavala, Alex Salazar, Osvaldo Ramos and Daniel Lain for receiving 2012-2013 Crossvale Scholarship. Awarded students will receive $1000 this fall semester.

Harris Enotiades received Competitive Scholarships in Autonomous Systems from UTA Research Institute. He will receive $500 this Fall semester and $500 in Spring. Harris is a senior in Mechanical Engineering department. He has been a student intern in Heracleia Human Centered Computing Lab since 2010 under supervision of Professor Fillia Makedon.

Chris McMurrough has received Doctoral Consortium Award from International Conference on Multimodal User Interfaces (ICMI) in Santa Barbara, CA for his paper titled "Multi-Modal Interfaces for Control of Assistive Robotic Devices". Chris is a forth year Ph.D student supervised by Dr. Fillia Makedon.

Congratulations to Chris McMurrough and Vikram Simth for receiving Lockheed martin scholarship.

Congratulations to Peter Olson for receiving Stephen Underwood Foundation scholarship and Karan Harbison scholarship.

Congratulations to Jason Jennings for receiving Bill and Marsha Carroll scholarship.

Congratulations to Dylan Elbert for receiving Jack R. Woolf scholarship for 2013-2014 academic year.

Congratulations to Tracy Oguni and Samir Shrestha for receiving Anritsu Scholarship.

Giacomo Ghidini received the Best Paper Award in IEEE International Conference on Smart Grid Communications 2012 for his paper "Improving Home Energy Efficiency with E2Home: A Web-based Application for Integrated Electricity Consumption and Contextual Information Visualization."

SmartGridComm is centered on all communications aspects that are relevant to the Smart Grid and aims at bringing together researchers from Academia, Industry, and National Labs to exchange novel ideas, explore enabling technologies, discuss innovative designs, and share field trial experiences and lessons learnt.
REU Student Highlights

REU stands for Research Experiences for Undergraduates and is a program funded by the US National Science Foundation. As every year, several CSE faculty received grants through this program and supported many students coming from different universities. In what follows, we highlight just a few of these students.

Matthew Smith is an undergraduate student of computer science at Brown University. He worked as intern in the Heracleia Human Centered Computing Lab (Heracleia.uta.edu) during the summer of 2012. He developed new methods for monitoring brain activity using fNIRS (Functional Near Infrared Spectroscopy), that could be applied to persons with Cerebral Palsy. “I like programming because I like to solve difficult and interesting problems. At my internship experience at Heracleia, I learned to cope with a project not going nearly as well as I had hoped.” Matthew said. During his internship in Heracleia, Matthew worked with Michael Gardner, another Heracleia intern, a bioengineering major, from Purdue University, to test and improve a new fNIRS system. Matthew said, “Because there were many setbacks in the process, I learned about many topics in signal processing, brain imaging, and became comfortable with Matlab”. Matthew also writes music in his free time and hopes to use it in a future project involving persons with disabilities.

David Paulk, another REU intern, is a sophomore in Computer Science at Princeton University. During the summer of 2013, he worked at the Heracleia Lab (heracleia.uta.edu). In his research, he used tools from machine learning, computer vision, and intelligent systems. With Ph.D. student Christopher McMurrough, and under the supervision of Dr. Vangelis Metsis and Makedon, he implemented an object recognition system that tested the performance of a boosted learning algorithm on a dataset containing 250,000 point cloud data files representing 52 categories. “My REU experience at Heracleia Lab gave me knowledge about computer science and an understanding of the research process that I doubt I could have acquired from any other summer experience.” Paul says. “I have come to understand that one of the most difficult tasks in research is setting incremental goals and rising to achieve each one of them. The work environment at Heracleia Lab allowed me focus on the tasks at hand so that I could achieve these goals on time. I have never felt more gratified than I did after building a state-of-the-art system as a Heracleia Lab REU Intern”.

REU Site Highlights

Over the summer, the joint CSE and Nursing departments’ NSF-funded REU site on Intelligent Environments for Healthy Living and Aging in Place (PI: Professor Manfred Huber) again hosted eight undergraduate students from all over the United States to perform research into sensor and intelligent software technologies for health monitoring and aging-in-place. The students developed technologies ranging from blood pressure sensing objects to memory training devices and sleep monitoring systems that will all be deployed and tested in the SmartCare apartment that is being built in collaboration with Lakewood Village in Fort Worth. More information can be found at http://ranger.uta.edu/~reu

Faculty and Staff Family News

Congratulations to Antonietta and Gian-Luca for the arrival of their second son Giuseppe Mariottini. Giuseppe was born on Sep. 20th, 8lbs 13oz, 19 inches.

Congratulations to Prof. Fillia Makedon for the arrival of her grandson Andrea (4th grandchild, he is turning one year old) and granddaughter Penelope (5th grandchild). Photo on right bottom is showing Theo, the 2.5 years brother, trying to introduce himself by sticking his little finger to touch her little hand.
We want to express our thanks to our absolutely wonderful staff who do so much every day to help this department run smoothly. We want to thank them for their excellent professionalism, their dedication, their talent and hard work.

Our excellent staff are Administrative Stuff Pam McBride, Sherri Gotcher, and Joyce Evans; CSE Office Staff Belinda Tarrant and Camille Costabile; CSE Technical Staff Bito Irie, Skipper Harris, and Todd McDaniel.

We also want to welcome our new front desk receptionist Stephanie Valentin and our photographer Sumanth Lakshminarayana. Stefany is a sophomore undergraduate student in the department of computer science and engineering majoring software engineering. Sumanth is a Graduate student in the Department of computer science and engineering. His research areas are software engineering and databases.

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Pam McBride, our chief administrative officer, just completed 20 years of dedicated service at UTA!

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Last year she was recognized with the Outstanding Maverick Award. Below is just a sample of comments made by CSE faculty and staff about her:

"Pam is one of the department's most "green" people and works to make sure that we are recycling and doing it correctly, including batteries and electronic waste. She has demonstrated her passion and commitment to sustainability by putting out boxes and signs to help us recycle and by policing resource use, such as printing, to make sure that waste is limited."

"Pam provides some of the best customer service I've ever received. She has great positive energy and can manage good humor and a smile despite pressure coming from the many tasks she has to deal with. Pam can often have requests from dozens of students, professors, and other staff members piling up on her desk due to the load placed on her, but she accepts the next one in line gracefully."

"As a department, I'm confident that we'd be in real trouble without her. She's a central cog that has an important hand in most of our daily operations, from ordering coffee to managing million-dollar accounts. She handles it all."

"Pam is also one of the great sources of spirit -- from school spirit and CSE department spirit to Rangers and Mavericks spirit -- in the department. It's great to work with her!"

"Pam is very active in community outreach. She has volunteered regularly for College of Engineering activities like the RoPro robotic programming competitions. She brings her tremendous enthusiasm and energy to the tasks and represents UT Arlington well."
About CSE Department

Computer Science and Engineering is on the rise! It offers the dynamic combination of computing with engineering. It addresses vital social, technical, economic and other issues. Studying in CSE you will be able to find employment in practically every industry where computers are used and where data need to be processed or interpreted. You will be able to help engineers produce better systems and devices. Whether you’re considering a career as a software design engineer, systems engineer, technical advisor or some related field, the Department of Computer Science and Engineering at UTA can give you the education and degree you need to succeed.

Currently, the CSE department has 28 tenure track faculty and 11 teaching faculty covering over 50 course offerings. Many faculty have received NSF, NIH and other types of funding. As of Spring 2012, we have 505 undergraduate students, 201 Master students and 92 Ph.D students enrolled. We have 20% increase in class enrollment since Fall 2011.

A high percentage of our CSE students for to industry after graduation and many of them become leaders in their company. Our graduated students work at America’s leading companies and government agencies, including Microsoft, IBM, Raytheon, Nokia, NASA, Lockheed-Martin, Sabre-Holdings and others. In our department we offer mentoring and grooming you to indeed become a future leader in America’s innovation.

Computer Science and Engineering Department
University of Texas at Arlington
640 Engineering Research Building
500 UTA Blvd
Arlington, TX 76019-0015
Computer Science and Engineering

Undergraduate Study

The CSE department is noted for teaching and research excellence. We have been working closely with industry and the faculty have received many awards for innovative research. Undergraduates have the opportunity to perform exciting, cutting-edge research with the department's internationally recognized faculty in such areas as robotics, artificial intelligence, software engineering, databases, Security and networking. CSE students are highly sought after because of the excellent training and computer skills they have acquired while at UTA.

Three ABET Accredited Programs, Computer Science (CS), Computer Engineering (CpE), and Software Engineering (SE), are offered by our department.

Graduate Study

CSE graduate programs offer the following degrees for students in our Doctoral and Masters programs:

✦ PhD, Computer Science
✦ PhD, Computer Engineering
✦ MS, Computer Science
✦ MS, Computer Engineering
✦ MS, Software Engineering

Admitted doctoral students pursue research in a collegial atmosphere with faculty and other researchers. Generous financial aid is available to Ph.D. students, including research and teaching assistantships.

Master’s students also conduct research and are eligible for financial aid. Master's students can choose between a thesis or non-thesis track.

We also offer evening classes, so you also can earn a higher degree while working full time.

International Collaboration and Outreach

CSE department led the first College of Engineering Study Abroad Program on Marine Conservation and Computer technologies on the beautiful island of Samos in Greece since 2010. About twenty students had the opportunity to work closely with top research scientist and professors from University of the Aegean, Archipelagos Institute of Marine Conservation, and NCSR DEMOKRITOS on exciting terrestrial and marine sustainability projects. Working in mixed teams with Biologists, Chemists, Marine Experts from different schools (Princeton, Columbia, Tulane, Cardiff, Leeds Essex and other universities), they learned how to do interdisciplinary problem solving, interact with professors in Greece and then publish their work in an international journal.

**Call for Papers**

Topics and areas of interest include, but are not limited to:

- Wearable, ambient and wellness measurement and monitoring technologies
- Service and socially assistive robots for rehabilitation
- Computer Aided Rehabilitation
- Tools, and techniques for designing, implementing and deploying pervasive applications in assistive environments
- Machine learning and data mining tools for decision making
- Sensor networks for pervasive care, reliability and availability
- Robotics and automation in assistive living systems
- Natural language processing and automated dialogue systems
- Signal and image processing for ambient intelligence and pervasive computing
- User Interfaces, usability and flexibility
- Reasoning systems and machine learning for assistive environments
- Cognitive behavior analysis and monitoring
- Privacy, security and risk analysis of data sharing in assistive environments
- Computer-aided Physical therapy and occupational therapy systems
- Smart rehabilitation software
- Devices and orthotics for physical therapy and rehabilitation
- Human centered computing and the senior citizen
- Telemedicine and biotechnology applications using pervasive computing
- Social, ethical, legal and e-government issues in pervasive healthcare and aging
- Social impacts of the use of pervasive technologies, government policy & access global healthcare, citizen standards and interoperability
- Digital Cities of the future


**Important Dates:**

- **Full Paper Submission Deadline:** Dec. 15, 2013
- **Short Paper Submission Deadline:** Jan. 15, 2014
- **Poster Submission Deadline:** Feb. 15, 2014
- **Workshop Proposal Submission:** Dec. 15, 2013

**Call for Workshop proposals:**

In addition to the main technical program, the conference will include Special Sessions, and Workshops. Submit proposals to workshop chair Dimitrios Kosmopoulos through dkosmo@teicrete.gr