

PROGRAM OVERVIEW



APRIL 30 & MAY 1, 2014 | ZAYED UNIVERSITY | DUBAI CAMPUS

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6th Annual Undergraduate Research Conference on Applied Computing (URC 2014)

Welcome Message

Welcome to the 6th Annual Undergraduate Research Conference on Applied Computing (URC 2014). The objective of this conference is to promote undergraduate research activity at educational institutions across the Arab world, by providing a forum for undergraduate students to present their research projects and interact with other young researchers, faculty members, and technology leaders from the region.

This year we are pleased to have 150 undergraduate research projects to be presented in oral presentations and poster sessions. These projects, which represent 590 authors (primarily undergraduate students) and their faculty advisors, will be presented by undergraduate students from educational institutions in the UAE as well as many others in Egypt, Iraq, Jordan, Kuwait, Oman, Palestine, Qatar, and Saudi Arabia.

We would like to thank everyone involved in this conference. First and foremost, we thank the students and their faculty advisors for their submissions to this conference – without their research projects this conference wouldn't exist! We also thank the rest of our team, members of the organizing committee as well as the technical committee, who reviewed student submissions and provided valuable feedback. We would also like to extend our special thanks to the keynote speakers, and members of the panel discussion, for taking the time out of their busy schedules to participate in this conference.

We are grateful to our sponsors, Zayed University Office of Research and emaratech, for their continued commitment and generous contributions that helped make this conference a reality. Thank you! This year's conference is technically sponsored by the IEEE, thanks to Dr. Wathiq Mansoor and the IEEE UAE Section.

This conference would not have been possible without the great efforts made by the local arrangements and registration teams who work tirelessly to ensure everything is running smoothly, and for this we extend a heart-felt thank you to Hind AIDosari, Dr. Huwida Said, Nagaraj Chandrashekran, Mona Bader, and Izzeddin Asad. We would also like to thank all the student volunteers from Zayed University.

Finally, we take this opportunity to thank Zayed University for hosting this conference and providing the needed resources.

We hope you will enjoy the conference and the lovely city of Dubai.



Dr. Abdalla AlAmiri
Provost / Chief Operating Officer
Zayed University, UAE



Dr. Leon Jololian
Dean, College of Technological Innovation
Zayed University, UAE



Dr. Qusay H. Mahmoud
Conference Co-Chair
Univ. of Ontario Institute of Tech, Canada



Dr. May AlTaei
Conference Co-Chair
Zayed University, UAE

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Wednesday, April 30

8:00am – 9:00am	Registration Continental Breakfast and Poster Setup
9:00am – 9:15am	Welcome
9:15am – 10:00am	Keynote: Mr. Fahem Al Nuaimi CEO of Ankabut
10:00 – 11:00am	Panel: Opportunities and Challenges for Research and Innovation in the Arab World Moderator: Dr. Leon Jololian (Zayed University) Members: Dr. Bayan Sharif (Khalifa University) Dr. Boumediene Belkhouche (UAE University) Dr. Abir Benabid (King Saud University) Ms. Aamena Alshamsi (Masdar Institute of Science and Technology)
11:00 – 11:30am	Coffee Break
11:30 – 12:30pm	Poster and Oral Presentations I (4 Parallel Sessions), see the detailed program for room numbers (60 posters, and 12 oral presentations)
12:30 – 2:00pm	Lunch
2:00pm – 2:45pm	Keynote: Dr. Michael Allen Zayed University
2:45pm – 3:45pm	Poster and Oral Presentations II (4 Parallel Sessions), see the detailed program for room numbers (same 60 posters as above, and 12 different oral presentations)
3:45pm – 4:00pm	Coffee Break
4:00pm – 5:00pm	Oral Presentations III (2 Parallel Sessions), see the detailed program for room numbers (6 oral presentations)

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Thursday, May 1

8:00am – 9:00am	Registration Continental Breakfast and Poster Setup
9:00am – 9:45am	Keynote: Dr. May AlTaei Zayed University
9:45am – 10:30am	Open Forum
10:30am – 11:00am	Coffee Break
11:00am – 12:00pm	Poster Presentations , see the detailed program (59 posters)
12:00pm – 1:30pm	Lunch
1:30pm – 2:30pm	Poster Presentations , same posters as above
3:00pm – 4:00pm	Awards and Closing Remarks

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Keynote
Speakers



Fahem Al Nuaimi, MBA

Fahem Al Nuaimi is Chief Executive Officer of Ankabut and assumed his duties in December 2011. Fahem is responsible for the overall direction and vision of the network. Under his dynamic leadership Ankabut has increased services and connectivity to over 70 campuses and non-profit organizations throughout the United Arab Emirates. For twenty one year's Fahem while at Etisalat served in various roles within the UAE telecommunications industry including network, program management and budgeting. He led the introduction of fiber-to-the-home networking in Etisalat and was the launch director for the latest version of IPTV. He also established the first PMO office for engineering and IT within Etisalat. He most recently served as Vice President of Technology Strategy Planning. Fahem graduated with a Bachelors of Engineering from United Arab Emirates University, and an MBA from Southern New Hampshire University in the USA.

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May AlTaei, Ph.D.

May Al-Taei is a faculty member in the College of Technological Innovation at Zayed University, Abu Dhabi. She received her PhD in Knowledge Management from the University of Birmingham, in the UK. May has also successfully completed her Masters degree in Management Sciences from the University of Bath, in the UK. May's research interests include knowledge management, entrepreneurship, service management, IT-Business alignment, innovation management, technical project management, and web service technologies. Prior to starting her PhD, Dr. Al-Taei served as the Director of the Institute for Technological Innovation (ITI), Abu-Dhabi office. Under her leadership, the ITI has emerged as one of the most visible institutions at the university, launching ambitious projects – such as the e-government initiatives and the Graduate Certificate in Cyber Security and Crime. She has received the Sheikh Rashed Award for Scientific Outstanding and two of Zayed University's highest honors; membership in the Sheikha Fatima Honor Society and the ATHENA leadership award. Dr. Al-Taei was selected for the "Young Ambassadors Study in the United States" Institute and participated in the "Gateway to Business" program at Georgetown University in the U.S. in which she won two awards.

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Michael Allen, Ph.D.

Dr. Michael Allen is Assistant Provost for Faculty Affairs and Research at Zayed University, having previously served for five years as Dean of the College of Arts and Sciences. He has also held positions at the University of Auckland (New Zealand), the University of California at Berkeley, Brigham Young University, and the University of Victoria (British Columbia, Canada). He has extensive experience in international education, and has traveled widely both for his own research and to build programs and partnerships between universities. Trained as a historian, Dr. Allen received his Ph.D. degree from the University of Washington and his Master's degree from the University of California at Berkeley. He holds undergraduate degrees in both History and Asian Studies from Brigham Young University. Dr. Allen is a specialist on East Asian history in the 19th and early 20th centuries, and has traveled numerous times to China, Japan, and Korea (both North and South). Most of his research has focused on Korea in the 19th and 20th centuries. He also has a deep interest in world history, and his publications include books and articles on nationalism in East Asia, intellectual history, historiography, and the history of the world since 1500.

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Panel

Members

Panel Discussion

Opportunities and Challenges for Research and Innovation in the Arab World

The region is emerging as a hub for education, research and innovation. Universities are striving to enhance their applied research portfolios, and establish rewarding industry-academia collaborations. This panel will address and discuss the challenges faced by academics interested in establishing applied research programs, the opportunities seen by industry, and explore possible solutions and successful research strategies and models. Distinguished members of this panel will explore answers to questions, such as: (1) why research and innovate, and what incentives exist for doing that? (2) what does it take to transform a teaching university into a centre of excellence for research? (3) what are some of the available sources for research funding in the region? (4) how to foster collaboration between industry and academia? plus other related questions from the audience.

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Leon Jololian, Ph.D.

Dr. Leon Jololian is the Dean of the College Technological Innovation at Zayed University. Prior to his current position, he was the Acting Dean (2007-2008) and the Assistant Dean (2007-2007) of the College of IT at Zayed University. Dr. Jololian earned his Ph.D. (2000) in Computer Science from New Jersey Institute of Technology, in Newark, New Jersey, a Masters in Computer Science (1991) from Polytechnic University, in Brooklyn, New York, a masters degree in Electrical Engineering (1982) from Georgia Institute of Technology, in Atlanta, Georgia, and a Bachelors degree in Electrical Engineering (1980), from Manhattan College, in Riverdale, New York. Dr. Jololian has held faculty positions at William Paterson University, University of Alabama at Birmingham, and New Jersey City University (tenured faculty). He has also held the positions of Director of Computing at New Jersey Institute of Technology and Vice President for Research and Development at Thor Technologies in New York. Dr. Jololian's research interests include software component architecture and object-oriented technology.

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Bayan Sharif, Ph.D.

Professor Bayan Sharif received the BSc degree from Queen's University of Belfast in 1984, the PhD degree from Ulster University in 1988 and the DSc degree from Newcastle University in 2013. He is currently Dean of the College of Engineering at Khalifa University, UAE. Prior to this appointment in 2012, and since 1990 he was on the faculty at Newcastle University, UK, where he held a number of appointments including Professor of Digital Communications, Head of Communications and Signal Processing Research and Head of the School of Electrical, Electronic and Computer Engineering. His main research interests are in digital communications with a focus on wireless receiver structures and optimization of wireless networks. Throughout his academic career, Professor Sharif has supervised over 50 PhD students and published more than 300 journal and conference papers.



Boumediene Belkhouche, Ph.D.

Dr. Boumediene Belkhouche is Professor of Software Development in the College of Information Technology at the United Arab Emirates University. He is currently serving as Acting Dean. Prior to joining the UAE University, he assumed several research positions in industry and academia (Tektronix Research Laboratories, USA; Center for Advanced Computer Studies, USA; École Polytechnique de Paris, France). He was also Professor of Electrical Engineering and Computer Science as well as the Graduate Program Director at Tulane University (New Orleans, USA). He has been highly active with professional societies (ACM, IEEE). He was an IEEE Computer Society Distinguished Visitor and held several positions as chair and member of various committees and conferences at the national and international levels. His research encompasses the following areas: (1) formalization of the early stages of the software life cycle; (2) semantic modeling of programming languages; (3) design and implementation of software prototyping systems; (4) mathematical modeling and hybrid systems; (4) Game Development; and (6) Arabic Linguistics. His teaching covers the entire Computer Science spectrum at the undergraduate and graduate levels.



Abir Benabid, Ph.D.

Dr. Abir Benabid is an Assistant Professor in the Software Engineering Department, College of Computer and Information Sciences at King Saud University (KSU), Riyadh, Saudi Arabia. She graduated from the National School of Computer Science and Applied Mathematics of Grenoble (ENSIMAG) and received two M.Sc. degrees: the first one is in Telecommunications and the second is in Operational Research and Combinatorial Optimization, in Grenoble, France, 2007. She received her PhD in Computer Science with highest honors from Pierre and Marie Curie University (UPMC) in Paris, France, 2011. Dr. Benabid research interests focus on the design, implementation, and analysis of optimization algorithms for hard combinatorial problems.



Aamena Alshamsi, M.S.

Aamena Alshamsi is a research assistant and a PhD student (supervised by Dr. Iyad Rahwan) at Masdar Institute of Science and Technology in Abu Dhabi. She holds a Master of Science with distinction in Information Technology from the British University in Dubai. She is a member of the Social Computing & Artificial Intelligence Laboratory. In her research, she studies individual and collective human behaviors in different social sensing platforms: face to face social networks, call networks and crowdsourcing systems. She won the “Young Emirati Researcher” Award, which was convened by the National Research Foundation (NRF) in 2012. She was a member of the team who was among the top ten finalists in the Big Data Challenge that was organized by Telecom Italia in 2014 for the project “Misery Loves Company: Using Twitter & Call Data to Analyze Urban Happiness”.

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URC2014 Organizing Committee

Unless otherwise noted, organizers are from Zayed University.

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Leon Jololian

Conference Co-Chairs

Qusay H. Mahmoud, University of Ontario Institute of Technology (Canada)

May AlTaei

Program Co-Chairs

Zakaria Maamar

Mohamad Badra

Jim Morey

IEEE Publications Chair

Wathiq Mansoor, American University in Dubai (UAE)

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