

ORGANIZING FOR THE FUTURE

THINK BIGGER

2015/2016
Annual Report



Computing
Accreditation
Commission



Senior College and
University Commission

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LETTER FROM THE DEAN



It is with great pleasure that I share with you this 2015-16 Annual Report of the college of Information Technology (CIT), United Arab Emirates University (UAEU). It is a showcase and a celebration of some of our key accomplishments, developments, and initiatives. As my freshman year as dean of this remarkable college, I had the opportunity to work with a great team of faculty, students, staff, alumni, and advisory board members to further the mission of the college.

The hallmark of this year are initiatives aimed at positioning the college for the future. Most notably is the development of college-wide strategic plan and a supporting annual action plan. In developing the plans, we had a series of meetings with various college stakeholders (students, faculty, staff, and advisory board). The objective was to solicit input regarding the strategic direction and priorities

for the college. Aligning with our strategic plan we embarked on a major re-structuring initiative, the first of its kind since the college's inception in 2001. We have also emphasized our commitment to academic excellence and student success through a portfolio of initiatives including enhancing the experience of first-year students, revamping the advising process, and instituting a mentoring and a tutoring program. Emphasizing our commitment to program quality and continuous program improvement we have concluded preparation for the upcoming ABET review visit for the BS in Information Technology program and have received very favorable reviews during the mock ABET review visit in January 2016.

We are very proud of our students' achievements. To name a few, a team of CIT students won the first place in Lockheed Martin's UAE Cyber Security Challenge during Dubai Airshow. Three teams won the 2015 Chancellor's Innovation Award in the transportation category, the information technology category, and the students in information technology categories. The report further elaborates on these as well as other student awards highlighting the college preeminence in educating the next generation leaders in information technology.

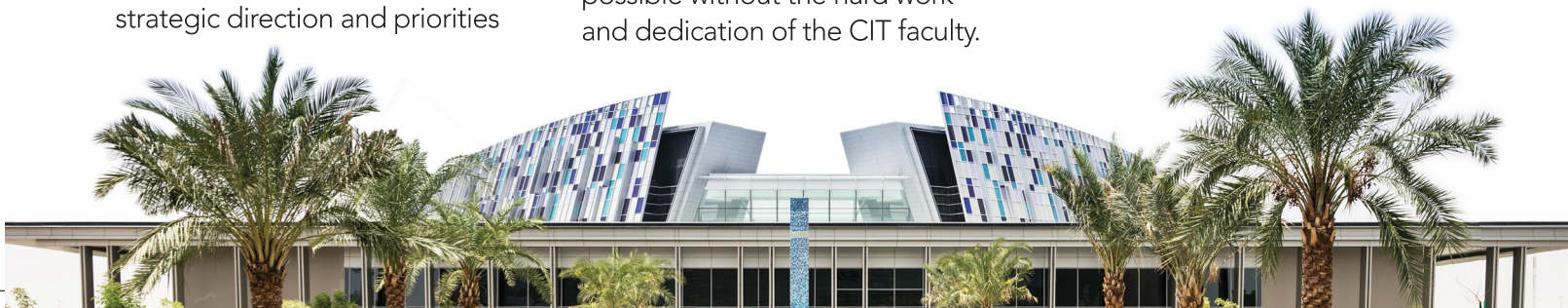
These accomplishments are not possible without the hard work and dedication of the CIT faculty.

Indeed, three CIT faculty have been recognized by the university for publishing in top tier (1, 5, and 10%) journals in their disciplines. Emphasizing CIT's leadership and role in the dissemination of knowledge, the college successfully hosted its 11th International Conference on Innovations in Information Technology (IIT). The event served as a forum for the exchange of research ideas from around the globe. The conference included four keynote speakers, five tutorials, an invited talk, numerous research presentations, and participation of many of our undergraduate students.

Meeting our obligations to the community, the college hosted its 9th IT Marathon. The event aims at fostering strong relationships between the college and schools in the UAE to encourages school students to pursue an IT-related discipline. We have also hosted the IT Industry Awareness day to raise students' awareness about the crucial role of IT in the development of the knowledge economy in UAE.

This has been an exciting year for all of us. I sincerely thank our faculty, students, alumni, advisory board members who continue to support our teaching, research, and service mission of the college.

Omar El-Gayar, Ph.D.
*Dean, College of Information
Technology*



ORGANIZING FOR THE FUTURE

Since its inception in 2001, the college of Information Technology has been organized along seven tracks. These tracks correspond to the seven tracks in the B.S. in Information Technology (IT). While there were some changes to the tracks, mostly renaming of some of the tracks in 2007, the seven tracks still exist to date.

To better position the college for future growth, we consolidated the tracks along three departments as shown in Figure. The name for each of the departments has been recommended by the faculty in these groups, namely:

1. The Information Security, E-Commerce, and Enterprise System group/tracks became 'Information Systems and Security'.
2. The Computer System Design and Networking group/tracks became 'Computer and Network Engineering'.
3. The Intelligent Systems and Software Development group/tracks became 'Computer Science and Software Engineering'

The new organization effectively allows the college to:

- 1- De-couple the organization of the college from the curriculum. The current curriculum is organized in track that are part of the BS in IT program. Changing the curriculum will inevitably imply changing the organization of the college. Moreover, the IT program is no longer the only program offered in the college.
- 2- Ensure leadership at the programmatic level. The introduction of new programs has created ambiguity regarding program leadership and ownership. Nevertheless, recommended best practices at the graduate and undergraduate levels emphasize the importance for such leadership.
- 3- Minimize the impact on faculty and the overall operation of the college. Organization efforts can consume significant time and energy and is usually associated with an environment of uncertainty. The college recognizes that it is best to focus its effort on what it does best educating the next generation of IT professionals, conducting leading edge research, and servicing the community and the nation.

College of Information Technology





STUDENTS ACHIEVEMENTS AWARDS & COMPETITION



CIT student Omar Abdullah and his international team members participated in the NYUAD 2016 HACKATHON INTERNATIONAL and won the second place for their personal assistant application for refugees "Sadiki".



A team of four CIT students (Nasser Saeed Saleh Khalfan Al Mazrouei, Mohammed Mubarak Sarhan Altamimi, Saif Mohammed Aryani and Vasiqullah Molvizadah) advised by Dr. Khaled won the first place in lockheed martin's UAE Cyber Security Challenge during Duabi Airshow November 10, 2015



The Skills Acquisition project by CIT students Fatimah Bin Harib, Shaima Al Ameri and Asma Al Marzooqi and their supervisor Dr. Fady Al Najjar was semi-finalist during UAE AI & robotics Award for Good 2015.



Abdel Rahman AlHarahsheh, Abdullah AlAlwadhi and Khaled Alnuaimi won the 4th place among 31 teams from 11 universities from across the Gulf Region teams who participated in the 2016 Gulf Programming Contest (GPC). The team was mentored by Dr. Saad Harous and Dr. Mohamed Masud.



"Virtual Reality Educational Game", a project by CIT student Shamsa Abdulla Al Mazrouei under the supervision of Prof. Boumediene Belkhouche won the third place amongst participating universities in the at Think Science 2016 national competition.



CIT students Shamma Jamal Mohammed Sultan Saeed Al Kaabi and Mohammed Mubarak Sarhan Altamimi received the 2015 UAE Students Information Technology Excellence Awards from BCS - The Chartered Institute for IT Middle East Section.



The security tracking system project that uses mobile phone networks by students Safeyya Abdulla Khamis Al Shehhi, Asma Kamel Yousif Mohammed Al Marzooqi, Fatmah Mohamed Hassan Al Yammahi, Shaima Suliman Hamad Al Ameri under the supervision of Dr. Nazar Zaki won the 2015 Chancellor's Innovation Award for Students in the Information Technology Category.



The smart warning system project to protect children from being left alone in closed cars by students Amnah Rashed Homoud, Jamila Salam Al Kaabi, Khawla Yousif Al Marzouqi and Maryam Mohammed Alkhateri under the supervision of Dr. Fekri Kharbash won the 2015 Chancellor's Innovation Award for Students in the Information Technology Category.



The smart mobile bus project by students Reem Saeed Mohammed Saeed Rashed Al Kaabi, Fatima Mohammed Saeed Mohammed Al Shamsi, Aysha Ali Obaid Rashash Al Baloushi and Ousha Juma Mohammed Sulaiman Al Shamsi won the 2015 Chancellor's Innovation Award for Students in the Transportation Category.

IT MARATHON



Students Aysha Matar Al Neyadi, Eiman Saif Al Hassani, Shaikha Saeed Al Nuaimi and Wadha Rashed Al Ketbi under the supervision Prof. Boumediene Belkhouche won the fourth place in the 11th Mobile Application Contest April 19, 2016.



Students Abdulla Meshal Juma Shelaia Al Dhaeni, Saif Awad Salem Ali Al Hassani and Saeedan Ibrahim Hamed M. Ahbabi advised by Dr. Ahmed Al Faresi won third place in the innovation Camp competition conducted by the Ministry of Environment and Water during 2015 innovation week.



Two CIT female students were among the UAEU team that won the first place of Dubai Customs Award of Intellectual Property Rights Contest during World IP Day 2016.



The college of Information Technology at UAEU in collaboration with the Abu Dhabi Education Council (ADEC) organized and hosted the 9th IT Marathon to expand young minds' and their enthusiasm for information technology and to encourage IT innovation. Nearly 350 students, from throughout the UAE, took part in the competition with special efforts being made to involve students with special needs. This year event included the following competitions: IT Contest; IT Showcase; IT4Kids; IT4kids "Smart World" and IT 4 Special Needs.

In preparation for the IT marathon, several seminars on various information technology topics were given by faculty members to high school students as part of their visits to schools around the UAE. Furthermore, two workshops on Flipped Classroom Technologies and Internet of Things, were organized for all high school teachers who participated in the IT Marathon event.

Furthermore, two workshops on the Marshmallow Challenge and CodeJam, sponsored by SAP, were organized for all high school teachers who participated in the IT Marathon event.

350
STUDENTS FROM
THROUGHOUT THE UAE TOOK
PART IN THE COMPETITION



STUDENT PARTICIPATIONS IN EVENTS

Four CIT students projects were showcased during GITEX 2015.

Several students and teams from the CIT participated in other activities such as M-Government Service Award, Hackathon, project showcase, undergraduate and graduate research conferences and cultures exhibition held at the UAEU.



H.E. Maryam Al Roumi listen to a CIT student explain her project during GITEX 2015



Farhan Al Naqbi, Mohamed Khalfan Al Rawahi, Mohammed AL Dhaheer and Abdulla Al Kaabi showcase their UAV Project during GITEX 2015

IT INDUSTRY DAY



On February 17, 2016, CIT organized the IT Industry Awareness day to raise students' awareness about the crucial role of IT in the development of the

knowledge economy in the UAE, and give students an opportunity to meet government and private IT operators in order to build ties that lead to mutual awareness,

interest, and various opportunities for collaboration such as internship or academic sponsorship. Overall twelve organizations participated in this event, including private, semi-government, and government organizations. These organizations are:

- Thuraya
- Etisalat BT Innovation Centre (EBTIC)
- Dubai Electricity and Water Authority (DEWA)
- Masdar Institute
- Abu Dhabi National Oil Company (ADNOC)
- ADIA (Abu Dhabi Investment Authority)
- SAP
- Ministry of Climate Change & Environment
- Federal Customs Authority
- Abu Dhabi Investment Council (ADIC)
- HR Government of Fujairah
- Abu Dhabi Airports (ADAC)

INTERNSHIPS

CIT enables a broad range of internship opportunities that provides significant hiring advantages to students in their areas of specializations. During the academic year 2015/2016, CIT secured internship placement for 67 student in leading domestics private, semi-government, and government organizations such as Dubai Economic Development Department, Dubai Smart-Government, Al Fujairah e-Government, Al Rowad IT Solutions, National Center of Meteorology & Seismology (NCMS), Injazat , Emirates Nuclear Energy Corporation (ENEC) - Abu Dhabi, TRANSCO, STRATA , ADNOC and Tecom Group – Dubai.

In addition, CIT secured an internship post for one student, during the Spring 2015/2016, at the Brain Science Institute (BSI) at RIKEN-Japan which is a leading international center for brain research with a reputation for discovery, innovation, training, and globalization of the scientific enterprise.

CIT Students Fatimah Bin Harib, Shaima Al Ameri and Asma Al Marzooqi benefited from the International internship opportunities supported by UAEU and completed their internship successfully at RIKEN BSI-TOYOTA Collaboration Center, Japan.



THANK YOU CIT PARTNERS



CAREER READINESS WORKSHOPS



The CIT organized three Career Readiness Workshops to help students get ready with their job-finding mission. The workshops cover three main areas:

- Writing an Effective Resume & Interview Skills
- Team Dynamics, Basic Work Skills and Leadership
- Written & Verbal Communication Skills and Effective

CIT has also organized a workshop on presentation skills to train students on delivering "Powerful" presentation with confidence. Moreover, as an extracurricular activity, students are currently being offered the opportunity to take training modules related to communication networks as part of the UAEU Cisco Academy hosted by the college. In addition, several technical workshops were organized for students.



INNOVATIONS TO ACHIEVE TANGIBLE BENEFITS



Two CIT alumni, Mohammed Al Matrooshi and Saeed Al Baira, with students at CIT developed and deployed an educational advanced firewall Android app for learning the basic of network packet filtering under the supervision of Dr. Zouheir Trabelsi. The tool has a valuable education value to learn about firewalls on mobile devices.

CIT developed a research partnership with the Abu Dhabi Music and Art Foundation to develop an artistic robot. In addition, The Robotic Lab is undergoing a significant upgrade to advance its capabilities to engage in the community with advanced robotics projects.

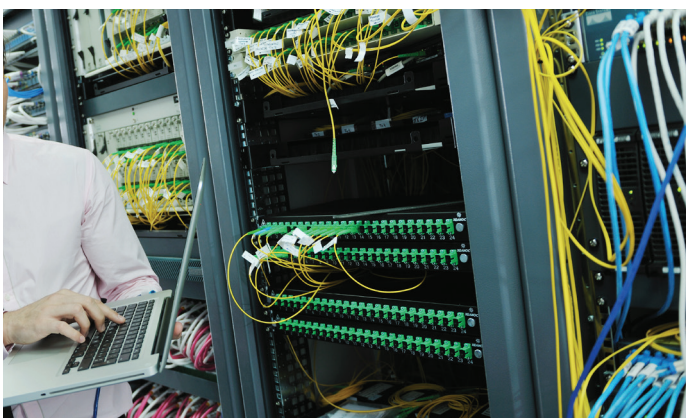
Faculty at CIT have produced over 90 publications in international journals and conferences since January 2016. Our faculty are heavily involved in research projects that pertain to the following themes:

- Data Analytics: Health Informatics and Bio informatics
- Unmanned Aerial Vehicles and traffic control
- CMOS technology
- Robotics
- Network Security
- 5G and Wireless Communications



On January, 25th, Mubadala honored Emirati creativity in design and science. Mubadala Design Commission winners celebrated alongside UAEU's 'The Robotic Artist' project in a ceremony highlighting the link between art, design and technology. Abu Dhabi Music & Arts Foundation (ADMAF) premiered 'The Robotic Artist' – a

robot with the capability to draw – designed by United Arab Emirates University IT students as part of a joint ADMAF and Mubadala initiative. As one of ADMAF's national learning partners, the UAEU worked with ADMAF to broaden the collaboration and explore the close links between design and innovation technology.



90+

PUBLICATIONS HAS BEEN PRODUCED IN INTERNATIONAL JOURNALS AND CONFERENCES SINCE JANUARY 2016.



SPONSORED PROJECTS



- Predictive Big Data Analytics and Real-Time Monitoring and towards Energy Conservation, AED 400,000, UAEU UPAR, 2016 – 2017, (PI Dr. Salah Bouktif)
- Urban City Road Traffic Characterization and Predictable Estimation, AED 485, UAEU-RTTSRC, 2016-2018, (PI Dr. Hesham El-Sayed)
- Design and Fabrication of Novel Ultra-Low Power and Reliable CMOS Logic Cells, AED 359,550, ADEC Award for Research Excellence (A2RE), 2016 – 2017, (PI Dr. Azam Beg)



FACULTY ACHIEVEMENTS

- Dr. Najah Abu Ali was recognized by the VC for Excellence in Scholarship (publishing in top 1% journal)
- Dr. Nazar Zaki was recognized by the VC for Excellence in Scholarship (publishing in top 5% journal)
- Dr. Salah Bouktif was recognized by the VC for Excellence in Scholarship (publishing in top 10% journal)
- Dr. Zouheir Trabelsi was awarded the UAEU Teaching Excellence Award
- Dr. Nazar Zaki was awarded the College Research Excellence Award
- Dr. Adel Serhani was awarded the College Teaching Excellence Award
- Dr. Khaled Shuaib was awarded the College Service Excellence Award





CONFERENCES & WORKSHOPS

INNOVATIONS'15

To reinforce the national status and international reputation of the university, The college organized the 11th International Conference on Innovations in Information Technology (Innovations'15) which was held in Dubai, November 1-3, 2015. Innovations'15 brought together research scientists and industry professionals to discuss contemporary developments, which are at the forefront of information technology and its applications to better serve economies and societies.

Conference participants included academics and researchers from around the globe, as well students from UAE Universities and beyond who seized the opportunity to discuss their projects or learn from the rich conference programs. More information on all annual IIT conferences organized so far can be found at www.it-innovations.ae



THE 2nd WORKSHOP ON SMART AND CONNECTED HEALTH

The college hosted the 2nd Workshop on Smart and Connected Health funded by ICT with collaboration from Scientists in Saudi Arabia, NSF, Northeastern University, University of Minnesota, and University of Wisconsin Stout on February 21, 2016.

SYMPOSIUM ON SOCIAL ROBOTICS



The college co-sponsored the Symposium on Social Robotics held on November 22, 2015 at the UAEU.



SELECTED INITIATIVES

COLLEGE INVESTMENT

LAB DEVELOPMENTS

To maintain state-of-the-art lab facilities, two labs were reviewed and proposals for upgrades were submitted and approved by the Provost:

- Digital Circuits Labs (upgraded): – New Microprocessor Kits, ICs, and other consumable parts
- New digital forensic appliances were acquired to support the new information security program



INFORMATION RESOURCES

Developed a Share Point site to share department and college meeting minutes and other documents.

OTHER CONFERENCES AND EVENTS

VIDEO GAMES CONFERENCE



The college has Co-organized and hosted The Video Games Conference: Cognition, Education and Simulation, March 24, 2015,

THE IMPACT OF E-ECONOMY ON MENA REGION DEVELOPMENT



The college Co-organized the International Conference on The Impact of e-Economy on MENA Region Development: Global Competitiveness, International Regulations and Strategic Partnerships, March 14-16, 2015, Ras Al Khaimah.

CIT NEWS

- Eman Ahmed Ghanim a PhD candidates at CIT successfully defended her dissertation, Cognitive Big Data Analytics and Persuasive Social Influence Diffusion, supervised by Dr. Yacin Attif.
- Ahmed Ghulam Karam a PhD candidates at CIT successfully defended her dissertation, Development of An Efficient Broadcasting Scheme for Critical Networking Environments, supervised by Dr. Liren Zhang.



NEW FACULTY

It is with great pleasure that CIT welcomes three new faculty members:



Fady Al-Najjar,
Assistant
Professor,
Department of
Computer Science
& Software
Engineering



Marton Gergely,
Assistant Professor,
Department of
Information Systems
and Security.



Heng Yu, Assistant
Professor,
Department of Computer
and Network
Engineering



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