COMPUTER SCIENCE DEPARTMENT

NEWS LETTER
SPRING
2020

COMSATS
UNIVERSITY ISLAMABAD
LAHORE CAMPUS

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MESSAGE FROM
DEAN

"I welcome you all on behalf of the Computer Science Department. In comparison to other disciplines, our students are getting more skillful in modern technology. We see our students as excellent programmers, researchers and analysts in the future. We are well aware of everyday breakthroughs in modern technology and thus are committed to equip them with advanced competencies to manage the growing needs of sciences and technologies. Our highly qualifed faculty members ensure that you have a solid technical grasp on different subjects to apply this. "

DR. ASAD HUSSAIN

I humbly request faculty of computer science department to devote their full synergy for preparing our students as successful citizens and computer science professionals that can face all challenges of life. The future of youth is in our hands and we should play our role to the best of our capacity. I also request my dear students to work hard and focus on your study. The field of computer science is very demanding but you require skills to compete with your fellows across the globe. Good luck to faculty and students for the next semester.

DR. GHULAM RASOOL

MESSAGE FROM
H.O.D.

Events

All Pakistan DICE- Information and Enabling Technologies (IET) Innovation Event 2020

This year, two-day All Pakistan DICE IET innovation event 2020, was organized by COMSATS University Islamabad (CUI), Lahore Campus. The event took place on March 6-7, 2020 at CUI, Lahore Campus. The theme of the event was "Future of Innovation: A smart world". Event was inaugurated by honorable chief guest Dr. Muhammad Akhtar Malik, Minister of Energy, Government of Punjab.

DICE Foundation is a non-profit USA based organization whose main objective is to provide a common platform for both academia and industry. Therefore, the idea behind this event is to motivate academia, industry, government, entrepreneurs and expatriates to come to a common platform to showcase innovations and technologies, share knowledge and further collaborate for the rapid development of innovative products for the economic development of the country.

Media Coverage

Media coverage was provided by Major leading news channels and print media including: Express News, Ewaqt, Daily Pakistan, Daily42, Daily 92, Jang, The Nation, Jahan Pakistan, Hum TV, Channel 92, PTV, Samma, Dunya TV, Neo TV, BOL TV.

Activities in DICE-IET

The following activities lined up during All Pakistan DICE-IET 2020 included:

- Students Projects and Industrial Exhibition
- Symposium
- DICE Shark
- National innovation basket (NIB)
- Panel Discussion

Dr. Tahir Naeem, Director, COMSATS University Islamabad, Lahore Campus in his welcome address appreciated the efforts of government of Pakistan and DICE foundation on promoting Science and Technology, in encouraging the Innovation and Entrepreneurship culture in the country.

Students Projects and Industrial Exhibition2020

One of the most important events under the umbrella of DICE-IET 2020 is an exhibition of projects from computer science and engineering disciplines. This event is aimed at bringing together projects that represent innovation and collaboration with the industry on competitive basis.

Symposium

This symposium will benefit researchers from the industry as well as academia to showcase their contributions in making our world a smart place by enhancing the efficiency, productivity and competitiveness against the critical issues via widespread use of cutting-edge technologies that include mobile communication, big data, AI/machine learning, signal processing, wireless communication, wearable technology, game sensing, pervasive and mobile computing.

The Symposium included Invited talks by renowned scholars, successful entrepreneurs and CEOs of IT companies. The session strongly indicated that research and innovation culture in our academic institutions and industry is on upward pace. A total of 08 invited talks were delivered on the latest trends in the area of Information Enabling Technologies. All these talks were thought provoking and source of inspiration for the audience. The venue of the Symposium was Seminar Hall of Block-A of CUI Lahore Campus. The Symposium was divided into two Sessions. The first session was held on Day 1 of DICE IET Event i.e. Friday, March 6, 2020. The Session was chaired by Professor Dr. Zulfiqar Habib and moderated by Dr. Atifa Athar. Second Session of the Symposium was held on Saturday, March 7, 2020. The Session started at 10:00 AM in the Seminar Hall of Block-A of CUI Lahore Campus. The Session was chaired by Dr. Sobia Baig from Department of Electrical Engineering CUI Lahore Campus and moderated by Dr. Atifa Athar.

DICE Shark

The idea was to have top 10 or so project teams, with commercial potential projects. They were to pitch their projects in front of businessmen, investors, venture capitalist (VC), and industry, to generate funds required to turn their projects into commercial ready products. Experts from the local industry and venture capitalists from Silicon Valley, U.S were invited for evaluation of the projects.

Events

Following is the list of the local investors who participated in DICE Shark:

S.N.	NAME	ORGANIZATION
1	Fauzaan Hafeez	Angel Investor
2	Muhammad Sufian Nasir	Techsols International
3	Mariam Khan	Hashmakersol
4	Rameesha Fatima	ORIC, Minhaj University Lahore
5	Muhammad Maaz Khan	Angel Investor
6	Saad Bin Saulat	Entrepreneur
7	Dawood Shahid	ONSETS
8	Farhan Shahid	Angel Investor
9	Atif Javed	Softpers Interactive (PVT.) LTD.

Following is the summary of investments promised in DICE sharks.

S.N.	PROJECT TITLE	AMOUNT OF FUNDING
1	Development of Smart Wheelchair using IoT	300,000
2	Digital Book Repository	200,000
3	ASH Braille	600,000
	TOTAL AMOUNT	**1,100,000**

National innovation basket (NIB)

Panel Discussion

The major objective of this platform is to foster the culture of innovation and to promote commercialization of those innovative processes or products, both indigenous and internationally.

• Dr. Jawad has completed his Doctoral Degree Defense in February 2020 under the supervision of Dr. Rao Muhammad Adeel Nawab.

• Dr. Sharjeel has completed his doctorate defense in July 2020 under the supervision of Dr. Rao Muhammad Adeel Nawab. His supervisor appreciated how he made him succesful in achieving his goal despite of all the unfavorable conditions.

Awarded Ph.D.

*E*vents

Orientation Ceremony for Graduates

The Orientation ceremony for Graduate Program Spring 2020 of the Department of Computer Science was held on February 04, 2020. The department gave a brief introductory presentation and shared details of research groups.

HEC Ehsaas need based scholarships

The Department of Computer Science organized and conducted interviews of applicant students for HEC Ehsaas need based scholarships program. Under supervision of Head of Department and concerned committee, Total 241 candidates were interviewed, and it was held on 17th February 2020.

Orientation Ceremony for Undergraduates

The Department of Computer Science organized Orientation ceremony for Under Graduate Program Spring 2020. The Head of Department supervised and managed all day activities. The ceremony provided an insight into the semester system pursued at the University. Students received timetable, course outlines, and a visit of the campus facilities (labs, library and allied services). It was held on 3rd February, 2020.

Visit PITB

The Head of Department Dr. Ghulam Rasool along with senior faculty member visited PITB for official invitation of DICE IET 2020 event. It was held on 21st February 2020.

Talks

Dr. Farooq Ahmad was invited as speaker in an International online conference on future trends in E-learning and collaborative working, held on June 16-17, 2020 organized by Virtual University, Pakistan.

Online Admissions FALL 2020 in BSCS and BSSE

In this tough COVID-19 pandemic situation COMSATS University CS Department is active for online admissions for BSCS, BSSE, MSCS and Phd. Students are submitting online forms in a smart strength. Head of Department, faculty and admission staff is continuously working and providing facilities through online portal. All relevant information is given on website, forms are available and call center for student facilitation is active in SSC.

NCEAC Visit Preparation program

Computer Science Department is preparing for virtual visit of NCEAC for BSSE in the 1st week of August 2020. Energetic committees worked speedily to complete the online requirements for the visit. . Dr. Ghulam Rasool and Dr. Usama Bajwa shared and made their efforts for consulting dean and chairman computer science with faculty and staff to make their visit successful.

BEST Teacher Award Nominee Computer Science

Campus is awarding "BEST TEACHER AWARD" for online teaching faculty members, for that teachers have to submit their online lecture to HOD in July 2020. A committee was formulated to evaluate the best teacher, criteria was given by the campus. The committee chaired by Dr. Usama Bajwa included members were Dr. Adnan Ahmad, Dr. Rao Adeel and Ms. Sana Rizwan worked to evaluate the submitted lectures according to criteria. Three nominees were selected and forwarded to campus selection committee.

MS Online Synopsis Presentation

MS Synopsis Committee of CS Department successfully conducted online presentations due to COVID-19 pandemic from March 2020 to July 2020 in the presence of MS Synopsis committee members (Dr. Farooq Ahmad, Dr. Muhammad Waqas Anwar, Mr. Zaheer A. Gondal, Dr. Farrukh Zeeshan), supervisors and Head of department Dr. Ghulam Rasool. Total 23 students appeared in online presentations and successfully defended their synopsis in the areas of Machine Learning, Image Processing, NLP, Formal Modeling, Networks, Business process modeling and Robotics. Different mediums were used for the conduction of these presentations prominently Zoom, Microsoft Teams and Google Hangouts.

Online Teaching Methodologies for Spring 2020

COVID-19 pandemic situation semester Spring 2020 was shifted to online classes from March 2020, faculty needs for high appreciation to move quickly on challenging online system, the day and night efforts were merited. Semester was divided in 2 phases to decrease burden of students. DARC CS selected some courses in phase I and rest of other in phase II. Phase I ended in 1st week of June and phase II ended in August 2020. Prerecorded lectures were provided to students, CDs were provided to those who are unable to connect internet (remote areas). Terminal examinations were also conducted successfully in June, whereas result and online course folder was handed over to examination and department by phase I teachers. Online sessions were conducted on Google meet/ zoom/ MS Teams, whereas, Terminal examination were taken by using Google Forms/ MS Teams/ Cuonline/ Moodle etc.

Publications

Following are the publications from the faculty of computer science that are available online.

1. Leyi Xiao, Honglin Ouyang, Chaodong Fan, Tariq Umer, Ramesh Chandra Poonia & Shaohua Wan, "Gesture image segmentation with Otsu's method based on noise adaptive angle threshold", Multimedia Tools and Applications dated January 14,2020.

2. Mahrukh Saleem, Muhammad Shahid Farid, Saqib Saleem & Muhammad Hassan Khan`s , "X-ray image analysis for automated knee osteoarthritis detection", Signal, Image and Video Processing dated February 3, 2020.

3. Ansif Arooj, Muhammad Shoaib Farooq, Tariq Umer, Ghulam rasool and Bo Wang`s , "Cyber Physical and Social Networks in IoV (CPSN-IoV): A Multimodal Architecture in Edge-Based Networks for Optimal Route Selection Using 5G Technologies", IEEE Access dated February 12,2020.

4. Muhammad Shoaib Farooq , Shamyla Riaz , Adnan Abid, Tariq Umer and Yousaf Bin Zikria`s, "Role of IoT Technology in Agriculture: A Systematic Literature Review" Electronics dated February 12,2020.

5. Saima Rathore, Tamim Niazi, Muhammad Aksam Iftikhar and Ahmad Chaddad`s, " Rathore, S., Niazi, T., Iftikhar, M. A., & Chaddad, A. (2020). Glioma Grading via Analysis of Digital Pathology Images Using Machine Learning", in Cancers dated March 2,2020.

6. Iqra Obaid, Muhammad Shoaib Farooq and Adnan Abid`s, "Gamification for Recruitment and Job Training: Model, Taxonomy, and Challenges", IEEE Access dated March 3, 2020.

7. Shahan Yamin Siddiqui, Muhammad Adnan Khan, Sagheer Abbas, Yousaf Saeed and Muhammad Farrukh Khan, Muhammad Hussain`s, " Modelling, Simulation and Optimization of Diagnosis Cardiovascular Disease Using Computational Intelligence Approaches", Journal of Medical Imaging and Health Informatics dated May 5,2020.

8. Lihua You, Xiaosong Yang, Junjun Pan, Tong-Yee Lee, Shaojun Bian, Kun Qian, Zulfiqar Habib, Allah Bux Sargano, Ismail Kazmi and Jian J. Zhan`s, " Fast character modeling with sketch-based PDE surfaces", Multimedia Tools and Applications dated May 8,2020

9. Farrukh Khan, Muhammad Adnan Khan , Sagheer Abbas ,Atifa Athar, Shahan Yamin Siddiqui, Abdul Hannan Khan, Muhammad Anwaar Saeed and Muhammad Hussain`s, " Cloud-Based Breast Cancer Prediction Empowered with Soft Computing Approaches", Journal of Healthcare Engineering dated May 19,2020.

10. Usman Ali , Sobia Baig , Tariq Umer and Zhiguo Ding`s, " Performance analysis of discrete wavelet transform for downlink non-orthogonal multiple access in 5G networks", IET Communications dated June 23rd, 2020.

11. Sagheer Abbas, Muhammad Adnan Khan, Atifa Athar, Syed Ali Shan, Anwar Saeed andTahir Alyas, " Enabling Smart City with Intelligent Congestion Control Using Hops with a Hybrid Computational Approach", The Computer Journal dated July 3, 2020.

12. Aqib Mumtaz, Allah Bux Sargano and Zulfiqar Habib, "Fast Learning Through Deep Multi-Net CNN Model For Violence Recognition In Video Surveillance", The Computer Journal dated July 6,2020.

Conference Papers

1.   Shahid Iqbal Rai, Muhammad U. S. Khan and Muhammad Waqas Anwar `s papee " English to Urdu: Optimizing Sequence Learning in Neural Machine Translation", 3rd International Conference on Computing, Mathematics and Engineering Technologies (iCoMET) dated April 23,2020

Following are the research paper from the computer science faculty that have been accepted and will be available online.

1.   Allah Bux Sargano, Xiawei Gu, Plamen Angelov and Zulfiqar Habib, "Human Action Recognition Using Deep Rule-Based Classifier" Multimedia Tools and Applications (2020). Impact factor of the paper is 2.313.
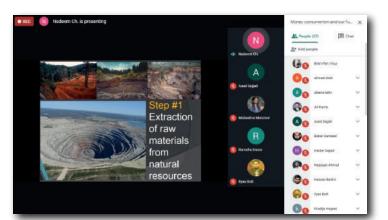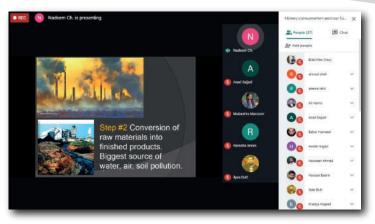
Accepted Papers

Workshop / Seminar

• Dr. Rao Adeel presented "Faiz Yafta Log" on Friday, 7 February, 2020 at Seminar Hall, A-Block.
• Dr. Rao Adeel presented "Smart Work + Hard Work = A Deadly Combination" on Friday, 13 March, 2020 at Seminar Hall, A-Block.
• Prof. Dr. Ahmed E. Kamal presented "Scholarship information session" on 19th February 2020 at IRCBM meeting room, focal person Dr Syed Asad Hussain.

Mr. Nadeem Ghafoor Chaudhry delivered a Webinar for University of South Asia on Tuesday, July 14, 2020. The topic of the talk was "Money, Consumerism and our Future". About 20-25 students and faculty members of the University of South Asia participated remotely using Google Meet.

Webinar

NEWSLETTER
TEAM

DR. ATIFA ATHAR **ASSISTANT PROFESSOR**	**MS. HUMAIRA FAISAL** **ASSISTANT PROFESSOR**	**MS. SANA RIZWAN** **ASSISTANT PROFESSOR**	**MS. MOMINA SHAHEEN** **LECTURER**	**MUHAMMAD FARHAN** **LECTURER**