

### DEPARTMENT OF COMPUTER SCIENCE AND SOFTWARE ENGINEERING

JINNAH UNIVERSITY FOR WOMEN



The Department of Computer Science and Software Engineering, JUW has the aim to equip female students with the technologies that shape the world. The institution has made utmost effort to turn this aim into reality. And now there are hundreds of students across Pakistan and beyond, leading others in their own sphere, who identify this place as their prestigious alma mater.







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# Launch of PhD CS Program

The department of Computer Science and Software Engineering, JUW has recently acquired NOC from the Higher Education Commission (HEC) of Pakistan that has placed the Department among one of the recognized universities that offer PhD in Computer Science. Now along with undergraduate and postgraduate programs, the department strive to facilitate the students in pursuing and obtaining a doctoral degree in Computer science.



Once the authorization was granted, the department arranged and conducted GAT subject test as a pre-requisite for admissions. The successful candidates are now being enrolled for the first batch of PhD in Computer Science. The department considers this an opportunity to strengthen the research work that has already acquired a good form in recent years. Also, a number of significant measures are under consideration to enhance the quality of the program for excellent experience of our students.

# **PAKISTAN DAY-2021**

National days are celebrated in the campus with full zeal to make their significance clear to students who are going to hold the nation tomorrow. An event was organized on 22nd March which included the cultural show where the students from different Departments represented the shades of diverse Pakistan. The Chancellor Mr. Wajeeh-ud-din Ahmed and VC Dr. Naeem Farooqi addressed the audience along with Chief Guest, DG Rangers Rizwan Akhtar on how Pakistan, in the current scenario, is fighting with invisible enemies on multiple grounds and what role a common Pakistani plays by his contriution.

# FYP-2017

Every year, the students from graduating batch begin their entrepreneurial journey with the help of Final Year Project (FYP). The department of Computer Science and Software Engineering takes pride in our students who work diligently on their projects to turn them into presentable products. These aren't limited to business ideas but majority are focused on solving every-day problems with the help of technology. Some of the projects that made to the top this year are Blockchain Degree Verification, Smart Plantation, Give2Share, Audible Sight and SignoTalk.

oftware Engineering

Presented to



From batch 2017, Anum Ilyas, Syeda
Namra Ali, Saheefa Ahmed were able
to secure top three positions in the
class of BS Computer Science while in
BS Software Engineering, Fareena
Imran, Jaweria Kamran, Hina Allauddin
earned the title of position holders.

POSITION
HOLDERS OF
BATCH
2017



# A TOUR TO JTECH 2021



The Department of Computer Science and Software Engineering organizes **JTECH** every year which is becoming an identity of it with the success and high regard it has received from the audience. The event is primarily focused on preparing the students to face professionals with different background and specialties that aren't reluctant in showing them the rough side of their work.

In the year 2021, The JTECH was planned to be physical at first but the situation and circumstances turned to be unfavorable for it. Then the on-going situation forced the organizing committee to go for hybrid format i.e. Virtual as well as physical event. Another major shift was that it got extended to two days which did not happen before. It started on the morning of 26th Feb and resumed till the evening of the next day. Because of the online format, many participants outside Pakistan were able to participate. Their participation as Judges and Evaluators in the event was honor for the department.

The event has at least two major parts every year including graduating batch's Final Year Project presentation and Final year's poster presentation for their FYP. Cubicles are assigned to all the groups where they showcase their work with the help of posters, infographics, etc. The professionals join the event and evaluate the projects which are counted while selecting the best project and poster among all.



### **REVIEW**

This is an absolute pleasure to look at our potential youth carries. I think this university is doing great job. it's good to see that the ideas I see today, are use cases which can solve real world problems. These are more than conventional e-commerce systems and library management system that everybody does these days.

-SHEHZAD SHAHID, CEO OF TPS

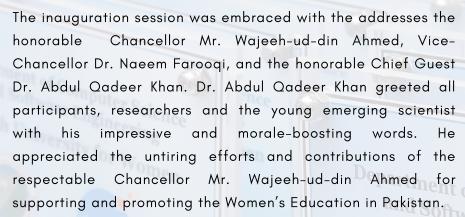
# **IBRAS**



#### INTERNATIONAL CONFERENCE ON BIOLOGICAL RESEARCH AND APPLIED SCIENCE

The International Conference on Biological Research and Applied Sciences was held on 20th and 21st January 2021 at Jinnah University for Women. IBRAS 2021 was the first virtual conference organized by the Faculty of Science with the aim to provide the opportunity to the global participants to share their ideas and experiences. We were honored to have Dr. Abdul Qadeer Khan who is a renowned nuclear scientist and pride of Pakistan.





After the inauguration, the day was extended with the wonderful talks organized by the Department of Bio-Chemistry, Botany, Chemistry and Bio-Technology. The second day started with another cluster of talks and presentations organized by the Department of Micro-Biology, Zoology, Food Science and Technology, Mathematics, Computer Science and Software Engineering. All the sessions were well attended and appreciated by the participants. Shields of appreciation were distributed in the closing ceremony conducted with the vote of thanks by the conference chair and Dean Faculty of Science Professor Dr. Narmeen Zakariya Bawany.









### WOMEN IN COMPUTING

The department of Computer Science and Software Engineering organizes another event 'Women in Computing' that has sole aim of encouraging females to give their part in the field of technology. They are already contributing but there is large potential that can be lined up to fulfill the gap we observe between Engineering and the women.

The event usually brings accomplished individuals of this field with the aspiring ones on a single table. Listening to the ups and downs and journey blows new spirit in newbies. This year, we saw some participation from different parts of globe that is quite promising as this gives diversified look to the discussion. The event hosted the series of sessions in which our Honorable Speakers gave insightful talks about applicability, demand and usefulness of Computer Science disciplines along with career building opportunities in them. Our guests this year were Ms Muazma Zahid, Principle Engineering Manager at Microsoft, USA, Dr Farah Lakhani, Assistant Professor, University of Leads, Ms Hooriyah Begg, IT Manager, GP Practice, NHS, UK, Ms Shamaila Rahman, Senior Software Engineer at CH Robinson, USA and Ms Nargis, Software Architect at Shinersoft (Pvt) Itd. Pakistan.

### **J-IDEAS 2020**

J-IDEAS was introduced in the year 2020 by the department. The competition was pivoted around design thinking and usability evaluation. Participants were asked to submit their ideas capable enough to introduce the concept of sustainability in technological products. Main idea behind organizing this event was to improve analytical skills in students as that's the key to development of high-quality software.

Sustainable Cities and Communities, No Poverty, Zero Hunger, Affordable and Clean Energy, Climate action, Life on Land, Good Health and Well-being and Quality Education were areas chosen for contest. More than 50 teams entered their idea and among them, 24 were shortlisted for judgment. Manahil Huda, UX/service design professional and faculty member of Habib University, spoke about the principles that are critical for good designs. We were honored to have Dr. Farah Lakhani from University of Leeds and Dr. Noman Javed (Postdoctoral Researcher at The London School of Economics and Political Science as Judges for the challenge. There were three categories in which Smart Plantation and Farm Fresh achieved first position in gold category, Fluencio in silver and Carewyse in bronze category.

### VISIT AT VR CENTER

Computer Science & Software Engineering department of Jinnah University for Women, recently visited Virtual Reality Center, NED University of Engineering Technology. Students along with faculty members visited VR center to experience Virtual Reality integration in various fields like education, research, medical sciences, etc. Dr. Farrukh Arif Director, NED University Virtual Reality Center, threw an ample light and enlightened the details through clear demonstration regarding program & resources including Projection VR experience (Virtual Construction Site Visit, 360 Walkthroughs), Walking VR experience space mission/Health VR/ Virtual Map Tour), Virtual Teaming System, Design and Modeling Software. This visit seems to be very fruitful as it enhanced the knowledge regarding various tools, technologies, skills & boost up the interest for solving real world problems by using VR technology.

### **BUSINESS SNAPSHOTS**

On March 18, 2021 Computer Science & Software Engineering department of JUW organized a departmental event under the supervision of Dramatic society. The venue of this informative event was Muhammad Uzair Auditorium, JUW. Participants of the event have to present their communication skills through various skits based on different interesting topics including marketing of an organization, conflict management and others. The basic purpose of this communicative event is to educate the students and let them be familiarized with the culture of professional organizations. It would be helpful for them as per marketing and business perspective or may be helping them to settle and manage various organizational conflicts.

# WEBINARS & WORKSHOPS

Workshops, seminars, and webinars play a key role in students' life while acquiring professional education. Department organizes such activities to let the students explore their areas of interest. They also help them in interacting with professionals and trade ideas, thoughts, and views about different topics. The year gave us the freedom to get more and more involved in these types of activities. More than 25 webinars and workshops were arranged for students this year out of which the majority were held online.

<b>OCT</b> 31, 2020	SAP INSIGHT  by Dr. Abdulwajed Farooqi , Assist <mark>ant Professor in CS &amp; Al at Benazir Bhutto Shaheed Universi</mark>
NOV	GROWTH MINDSET FOR SUCCESS
21, 2020	by Ms. Mariam Arsanios, Communicator Head, Siemens Energy
<b>DEC</b> 05, 2020	UNDERSTANDING THE ROLE OF TECHNOLOGY IN MANAGING SUPPLY CHAIN OPERATIONS by Ms. Sehrish Huma, Supply Chain Specialist
<b>DEC</b> 12, 2020	ESSENTIALS FOR CAMPUS TO CORPORATE FOR SUCCESS by Nishi Shetty, CEO Niche Consulting, UAE
<b>MAY</b> 18, 2021	CYBERSECURITY & BLOCKCHAIN WORKSHOP  by Dr. Abdul Lakhan, Assistant Professor in CS & Al at Benazir Bhutto Shaheed University
MAY 19, 2021	STUDIO SKILL DEVELOPMENT WORKSHOP by Ms. Soomaiya Hameed, Lecturer at Jinnah University
<b>MAY</b> 25, 2021	DEVOPS WORKSHOP  by Mr. Junaid Rahman, Application Architect at HBL University
<b>MAY</b> 27, 2021	SCORE YOUR FIRST FREELANCING JOB by Asra Rizwan, Fouder of OpenMicPk
MAY 28, 2021	INTRODUCTION TO USER STORIES by Sehrish Pervaiz, Project Manager/Scrum Master at System Limited
JUNE 03, 2021	WEB DESIGNING WITH BOOTSTRAP by Rabiya Amin, Head of IT Department at EEIT

### PUBLICATIONS 2020-2021

#### JOURNAL PUBLICATIONS

### CaPBug-Framework for Automatic Bug Categorization & Prioritization

Hafiza Anisa Ahmad, Narmeen Zakaria Bawany, and Jawwad Ahmed Shamsi. "CaPBug-A Framework for Automatic Bug Categorization and Prioritization Using NLP and ML Algorithms." IEEE Access (2021).

### AWECURE VR: A solution for phobia disorder using Virtual Reality Therapy

Kainat, Narmeen Bawany, Kainat, Habiba, Maryam and Rida, "AWECURE VR: A solution for phobia disorder using Virtual Reality Therapy", Suranaree Journal of Science and Technology

#### A Cybersecurity Ontology for Smart City

Tehreem Qamar and Narmeen Zakaria Bawany. "A Cybersecurity Ontology for Smart City." International Journal on Information Technologies & Security

#### Smart Learning Companion (SLAC)

Syeda Hamna, Rumsha M. Munaf, Narmeen Zakaria Bawany, Arifa Shamim, and Zara Saleem. "Smart Learning Companion (SLAC)." International Journal of Emerging Technologies in Learning 15, no. 16 (2020).

### Usability Evaluation of Islamic Learning Mobile Applications

Hamna, Rumsha, Narmeen Bawany, Arifa and Zara Saleem. "Usability Evaluation of Islamic Learning Mobile Applications." Elkawnie 6, no. 1 (2020): 1-12.

### EDAMS: Efficient Data Anonymization Model Selector for Privacy-Preserving Data Publishing.

Tehreem, Narmeen Zakaria Bawany, and Najeed Ahmed Khan. "EDAMS: Efficient Data Anonymization Model Selector for Privacy-Preserving Data Publishing." (2020)

### Heat Stroke Shield: An IoT Based Solution for Detection Cure of Heat Stroke.

Sadia, Samia Ghazala, and Ummay Faseeha. "Heat Stroke Shield: An IoT Based Solution for Detection and Preliminary Cure of Heat Stroke." Engineering, Technology & Applied Science Research

### Blockchain-Based Security and Privacy in VANETs

Sana Iqbal, Narmeen Zakaria Bawany research paper title Blockchain-Based Security and Privacy in VANETs International Conference on Digital Technologies and Applications (ICDTA'21).

#### CONFERENCES

#### **Recent Trends in Green Computing**

Surayya Obaid, Bawany N., Tariq H.., Tahir A., Komal N. (2021) Recent Trends in Green Computing. In: Ben Ahmed M., Rakıp Karaş İ., Santos D., Sergeyeva O., Boudhir A.A. (eds) Innovations in Smart Cities Applications 2020.

### Usability and Accessibility Evaluation of Banking Websites

K. Fatima, N. Z. Bawany and M. Bukhari, "Usability and Accessibility Evaluation of Banking Websites," 2020 (ICACSIS)

#### House Price Prediction using Machine Learning Algorithm

Maida Ahtesham, Narmeen Bawany & Kiran Fatima. "House Price Prediction using Machine Learning Algorithm-The Case of Karachi City, Pakistan." 2020 21st (ACIT). IEEE, 2020.

#### Sentiment Analysis and Classification of Restaurant Reviews using Machine Learning

Kanwal Zahoor, Narmeen Bawany, and Soomaiya Hamid. "Sentiment Analysis and Classification of Restaurant Reviews using Machine Learning." 2020 21st International Arab Conference on Information Technology . IEEE, 2020.

# Assessing Ecommerce Websites: Usability and Accessibility Study

S. Hamid, N. Z. Bawany and K. Zahoor, "Assessing Ecommerce Websites: Usability and Accessibility Study," 2020 (ICACSIS), Depok, Indonesia, 2020

### Smart Grid and Cloud Integration: Issues and Challenges

S. Ghazala, U. Faseeha, S. Javed, S. Hamna Bibi, R. Muhammad Munaf, A. Shamim, Z. Saleem"Smart Grid and Cloud Integration: Issues & Challenges" in 1st International Conference on Business & Technological Trends

#### **IoTree: A Way Towards Smart Plantation**

Surayya & Hiba & Tehreem & Aimun & Namrah. (2021). IoTree: A Way Towards Smart Plantation. 10.1007/978-3-030-66840-2\_47.

### SDN Control Plane Security: Attacks and mitigation techniques

Kiran Fatima, Kanwal Zahoor and Narmeen Bawany for presenting their research paper titled 'SDN Control Plane Security: Attacks and mitigation techniques' in 4th International Conference on NISS2021 held in Morocco.

### **STUDENT SOCIETIES**



### **DRAMATIC SOCIETY**

The Dramatic Society is headed by Ms. Saba Rizwan who has blown a new spirit in it since the time she joined as a head. The most prominent achievement of this society is to organize an annual event named Business Snapshots that started in the year 2019. Management and field related skits are enacted in which real life scenarios and situations are portrayed splendidly that lets the audience dive into the depth of idea behind the plays.

#### **COMMUNITY WELFARE SOCIETY**

To hit the realization of true meaning of life to our Students, Department of Computer Science and Software Engineering is making an initiative of Community Services. And nothing would be better to initiate this with enthusiastic minds and Young Generation. A little donation of Love, time and concern to those who require. Department is observing students to lead this from front and make this initiative bigger and better.





### **ROBOTICS SOCIETY**

Technology has been taking continuous turns creating varoius advancements. And more of the amazing minds are keeping their eye to make their foot steps on this field. Considering the reasons. Robotics Society is making efforts to help students with correct guidance and resource and helping them to think, make and innovate.

#### **ENTREPRENEURSHIP SOCIETY**

Computer Science has deep roots of Entrepreneurship in it as it is all about the amalgamation of innovation with business. We believe that students, if shown the right path, can excel in the midst of their education with appropriate mentoring and facilities. The Entrepreneurship Society helps students in making their transformation from a student to a professional. JTECH is organized annually by the society under headship of Ms. Kanwal Zahoor.





#### **DEBATING SOCIETY**

Public speaking and debates strengthen communication skills in students which are critical for growth in professional life. Students here, get the chance to practice freedom of speech that is in lined with ethics. Events are organized under the banner of society to polish interpersonal skills of students.

### **CHARACTER-BUILDING SOCIETY**

This platform is provided to students where they learn the core character-building concepts under mentorship of inspiring faculty members. It aims at equipping students key values that are critical in becoming responsible and high-minded individuals of society.



Jinnah University for Women has been imparting education in more than 25 disciplines including Pharmacy, Microbiology, Biotechnology, Food Science and Technology, Computer Science, Pharmacy, Social Sciences and others for more than two decades. The university has a strong alumni base of almost twenty thousand graduates who have been awarded Bachelors, Masters, MS/MPhil, and PhD degrees in various disciplines. More than 300 qualified and dedicated female faculty members are currently engaged in teaching and research activities with 6000 students.

# VISION 99

Department of Computer Science and Software Engineering aims to provide the best quality education to equip females with state-of-the-art technology and enable them to compete professionally in industry.

### MISSION

- Provide high quality academic programs for undergraduate and postgraduate level in the field of Computer Science, and Software Engineering.
- Provide an outstanding educational experience in the contented environment for females.
- Provide learning ambience to generate innovative and problem-solving skills with professionalism.
- Encourage students to avail opportunities of research and professional development.
- Promote research-based projects/activities in the emerging areas of technology convergence.
- Offer expertise, resources and services to the community to make them aware of the need, efficiency and proper use of technology.





# P H O T























JTECH-2021 | WIC | IBRAS-21









#### **ALUMNI MEETUP**

The department of Computer Science and Software Engineering's Alumni Meetup was another highlight of this year. For any institution, alumni are the ones who develop identity of their alma mater and bring prestige to its name. In this two-decade long journey, hundreds of students have taken graduation cap from this place and now many of them are serving in public and private sectors. This meetup was held on 5th of June, 2021 virtually to provide more alumni the opportunity to participate in it.

The department received an overwhelming response on this idea. As it was the first-ever virtual meetup, things were little different. Breakout rooms were created where students were able to have conversations with faculty. And along with that, the main session was taking place in which Alumni stated their thoughts about their professional journey and about their experience as students of Department of Computer Science and Software Engineering, JUW. Such activities increase the chances of making joint efforts for solving the issues that are common in the community.

The majority appreciated this endeavor of bringing back to the place where they all started. Many of them who are living abroad were happy to be able to interact with their Honorable teachers, especially Professor Dr. Narmeen Zakaria Bawany, Chairperson of the department who has been associated with the department since its beginning.

#### NOTABLE ALUMNI

- Ms. Shamaila Rehman, Principal Software Engineer, Old Republic Title Insurance, United States
- Ms. Faiza Ateea, Senior Product Owner, T-Mobile, Seattle, Washington, United States
- Ms. Ayman Haseen, Senior Security Engineer, Verizon, Belgium
- Ms. Raneem Rashid, Smart Chain Full Stack Developer, Riyadh, Saudi Arabia
- Ms. Ramsha Ali, Exam Invigilator, Trinity Academy, Inc., United States
- Ms. Naila Parveen, Research Assistant, University of Sharjah,UAE
- Ms. Humda Jafary, SQA Engineer, Liberty Tax, United States
- Ms. Ayesha Kaleem, Backend Developer, Infinite Devices GmbH, Germany
- Ms. Anum Kamran, CEO, Buyon.pk, Pakistan
- Ms. Tabussum Wajid, Senior SQA Engineer, Viabletree, Pakistan
- Ms. Nargis Anjaria, Senior Software Engineer, Shinersoft, Pakistan
- Ms. Amna Jalal, Software Developer, Veripark, Pakistan
- Ms. Maham Rahim Full Stack Developer Cygnis Media, Pakistan

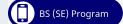








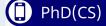
















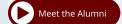






**IBRAS 2021** 









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