



# Annual Report 2021

**ORIC**

Office of Research Innovation & Commercialization

Lahore College For Women University





## ORIC Annual Report 2021

LCWU



**Office of Research, Innovation and Commercialization**  
**Lahore College for Women University, Lahore**  
**Annual Report**  
**2021**



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<https://www.facebook.com/lcwu.oric>



## Message from the Vice Chancellor

### Lahore College for Women University, Lahore

Lahore College for Women University (LCWU) is a hub of academic excellence and has been contributing towards the socio-economic development of the country by providing quality education and promoting women empowerment. With the aim to transform LCWU into comprehensive research led University, LCWU has devoted significant attention to R&D and commercialization. The University is now keenly focusing on providing facilities to its students for advanced research. Our dedicated faculty and hardworking students are now fully engaged in producing quality research work which has been recognized at national as well as international level.



The office of research, innovation and commercialization (ORIC) has been dynamically working at LCWU for providing strategic and operational support to the University's research activities/programs. It provides services related to research and development, innovation, industrialization, commercialization, collaborations, seminars, workshops, submission, and approval of research project. ORIC helps the faculty and students to translate their innovative ideas and research into viable and profitable projects through commercialization and business plans to generate funds.

ORIC has established an entrepreneurship hub under its umbrella to transform today's young women into future businesswomen leaders. It provides a platform where representatives from corporate sector, agricultural and industrial sector, national and international donors interact with LCWU researchers and evolve innovative strategies to bridge the gap in national economy existing in energy, industrial quality and production, better crop yields, healthcare, education and human resource development through viable research projects.

**Prof. Dr. Bushra Mirza (T.I.)**

**Vice Chancellor**



## ORIC Annual Report 2021

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### ORIC Team



#### Director ORIC

Dr. Engr. Aqsa Shabbir  
PhD (UGent, Belgium & LMU Munich, Germany), MSc. (UET Lahore),  
BSc. (UET Lahore)  
Associate Professor, Department of Electrical Engineering,  
aqsa.shabbir@lcwu.edu.pk; aqsa\_shabbir@outlook.com

Dr. Aqsa Shabbir received her PhD jointly from Ghent University Belgium & LMU Munich, Germany in 2016 on an Erasmus Mundus Fellowship. Prior to that she received her MSc. and BSc. in Electrical Engineering from UET Lahore. She has been a visiting researcher at CCFE, Oxfordshire and Max Planck Institute for Plasma Physics, Germany. She has to her credit several high impact journal publications (cumulative impact factor of 50+), a book chapter, numerous prestigious conference presentations across Europe, Asia and North America and 3 research grants worth PKR 90 million funded by HEC and the British Council.

#### Head Innovation & Commercialization Wing Senior Manager (Linkages & Technology Transfer)

Dr. Muhammad Zia-ul-Haq  
PhD (University of Karachi), LLB, LLM-Turin  
✉ ahirzia@gmail.com

Dr. Muhammad Zia ul Haq is one of the pioneer members and has 7+ years of work experience with ORIC LCWU which is preceded by an extensive work experience with IPO Pakistan. He also holds a LLB from Punjab University Pakistan and LLM-IP from Turin University Italy.



#### Head Research Excellence Wing Senior Manager (Research Operations)

Dr. Sahar Zia  
PhD (University of the Punjab)  
Lecturer, Geography Department,  
sahar.zia@lcwu.edu.pk

Dr. Sahar Zia is working as Senior Manager (Research Operations) since June 21. Her research interest include localized climate change and exploitation of urban environment by human encroachment.



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### Head Capacity Building Wing

#### Assistant Director

Ms. Tayaba Moeen

MS Psychology(LCWU)

[tayabaharis2@gmail.com](mailto:tayabaharis2@gmail.com)

Ms. Tayaba Moeen, is one of the pioneer members and has 7+ years of work experience with ORIC LCWU. She has completed her MS in Health Psychology from LCWU in 2011.

### Head Entrepreneurship & Incubation

#### Assistant Director

Ms. Shabila Fayyaz

MS (University of Western Ontario, Canada)

✉ [shabilafayyaz@gmail.com](mailto:shabilafayyaz@gmail.com)

Ms. Shabila Fayyaz, is one of the pioneer members and has 7+ years of work experience with ORIC LCWU. She has completed her MS in Chemistry from University of Western Ontario (UWO), Canada in 2012.



### Head Social Outreach Wing

#### Assistant Director

Ms. Um-ul-Baneen Safdar

MS TESOL (LCWU)

[umalbaneensafdar@gmail.com](mailto:umalbaneensafdar@gmail.com)

Ms. Um-ul-Baneen Safdar has a work experience of several years with the Directorate of Faculty Development and Internationalization (DFDI). She has completed her MS in TESOL from LCWU in 2018.

### Accountant

Mr. Rao Kamran

MBA (UET Lahore)

✉ [kamranadil30@gmail.com](mailto:kamranadil30@gmail.com)

Mr. Rao Kamran Adil is an accountant with the ORIC team. He has completed his MBA from UET Lahore.



**Office Assistants:** Mr. Fahad Nisar, Mr. Abdul Majid & Mr. Shakeel



## ORIC Annual Report 2021

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### Directors of ORIC-LCWU



### Overview

Office of Research, Innovation & Commercialization at Lahore College for Women University (ORIC-LCWU) is responsible for assuring that the quality of research reflects the highest international standards and advances the stature of the university among the world's best research institutions. ORIC- LCWU has been by HEC notified since March 2015 after its inception since June 2012 with the intention to provide strategic and operational support to the university's research activities and programs. ORIC seeks to enhance the environment for all research activities by promoting entrepreneurship, technology transfer and commercialization of research activities that support the local and national economy. It aims to create awareness about intellectual property rights, encourage consultancies, make business plans, and create links with industries and corporate sector and national and international donors. It helps in formulation and submission of viable research projects to funding agencies and introduces a culture of entrepreneurship in students and faculty. It provides a platform where representatives from corporate sector, agricultural and industrial concerns, national and international donors can interact with LCWU researchers and evolve innovative strategies to develop economically viable research projects. ORIC - LCWU comprises of following sections:



## ORIC Annual Report 2021

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- Research Excellence Wing
- Capacity Building Wing
- Innovation & Commercialization Wing
- Social Outreach Wing
- Centre for Continuing Professional Development (CCPD)
- Khadija-Tul- Kubra Business Incubation Center (BIC)
- Center for Entrepreneurship and Social Development (CESD)
- Research Ethics Institutional Review Board (IRB)
- University Research & Innovation Board (RIB)
- Intellectual Property Committee (IPC)
- Technology and Innovation Support Center (TISC)

### Vision

Promotion and commercialization of innovative research at LCWU

### Mission

To promote, expand and strengthen the process of knowledge transfer, research, innovation and commercialization and to bridge gap between academia and industry

### Objectives

- a. Enhancing research quality, relevance, and competitiveness, and promote innovation and commercialization at HEIs.
- b. Supporting university-based research through strategic planning, streamlining of internal process, establishing and monitoring of standards, mobilizing resources for research, publicizing research achievements, identification of synergies, and development of relationships with key external partner.
- c. Providing support to the researchers to access relevant research data about their district
- d. Strengthening institutional collaboration between university researchers and potential users of research in government, industry, and communities.



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RESEARCH



# Research Excellence







## Identification of Research Grant Opportunities and Facilitation of Faculty



Call for Grant Proposals, Issue 2



Office of Research, Innovation and Commercialization  
Lahore College for Women University, Lahore  
Call for Grant Proposals  
Issue 2, August 2021



Office: G30-G32 & G34, New Social Sciences Block, LCWU, Jail Road, Lahore  
Ph: +92 42 99203801-9 Ext: 343  
Email: [oric@lcwu.edu.pk](mailto:oric@lcwu.edu.pk)  
[www.oriclcwu.com](http://www.oriclcwu.com)  
<https://www.facebook.com/lcwu.oric>  
[https://www.youtube.com/channel/UC2b11C\\_u54We3G7Qdlu1ZAA](https://www.youtube.com/channel/UC2b11C_u54We3G7Qdlu1ZAA)

There is a wide range of funding opportunities for researchers at National and International level. ORIC-LCWU regularly shared grant calls with LCWU faculty and students. Further, it compiled two grant call issues (May 2021 and August 2021) with each consisting of several research grant opportunities.

Furthermore, ORIC website and Facebook page are updated regularly with research grant calls and faculty members' facilitation.

## Projects/Grants Awarded in 2021

**PI:** Dr. Sumaira Noreen, Assistant Professor & In-Charge History Department

**Title:** 75 years of Scouting/Guiding Activities in Pakistan: Celebrating the Shared British Heritage of Active Citizenship (SCOGPABH)

**Funding Agency:** British Council (Pak-UK Education Gateway, Going Global Partnership)

**Award Date:** December 2021

**Amount:** PKR 2 Million



In December 2021, under the ambit of the Pakistan-UK Higher Education Links, Dr. Sumaira Noreen's project was selected after a highly competitive evaluation by the British Council - Pakistan. Focused mainly on the theme heritage, the project aims at providing a historical account of carrying on of the scouting/guiding British legacies in Pakistan. This shall be done with a view to identifying the two-way linkages between educational institutions and the Boy Scout and the Girl Guide associations for training students into useful active citizens in achieving UN's SDGs. The first British partner in the project, i.e., Coventry University, through its Centre for Global Learning have proven their commitment to the issues of inclusivity, and education without borders. The second collaborator from the UK, the SOMP, is a promising institution in upholding the cause of heritage through creative expression coupled with a sense of community. LCWU's lead involvement in the selected project is also significant because university's centennial celebrations in 2022 coincide with the Pak/UK Season 2022 celebrations. Dr. Sumaira Noreen of History Department at LCWU shall be the Principal Investigator of the awarded project working with Dr. Luca Morini (Coventry University) and Dr Fatima Zahra Hassan (SOMP) as Co-PIs.

**PI:** Dr. Engr. Aqsa Shabbir, Associate Professor Electrical Engineering & Director Office of Research, Innovation and Commercialization

**Title:** Undergraduate STEM Education in Pakistan

**Funding Agency:** British Council (Pak-UK Education Gateway, Going Global Partnership)

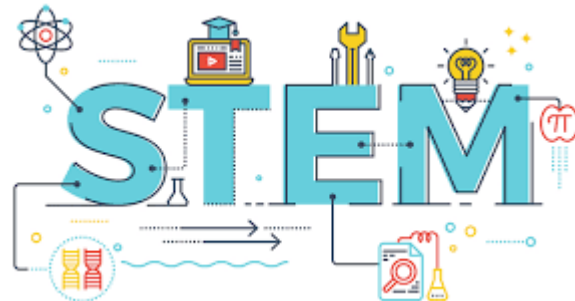
**Award Date:** November 2021

**Amount:** PKR 5 Million

Undergraduate STEM Education in Pakistan is a project awarded by the British Council under Pak-UK Education Gateway, Going Global Partnerships with an objective of promoting an instructional change in the teaching/deliverance of undergraduate STEM subjects. The project will also aim to popularize and promote STEM subjects in aspiring university students and society while striving for Equity, Diversity and Inclusion of STEM students and faculty by providing equal opportunities for access and success.

While the project is led by Dr. Aqsa Shabbir, from LCWU, the UK partners include University of Glasgow, Cambridge University, Queen Mary University of London, Middlesex University of London, University of Westminster, Liverpool Hope University and University of Plymouth.

In addition, the collaborating partners from Pakistan also include Virtual University of Pakistan, University of Peshawar, Bahauddin Zakaria University, Multan and Khawarizmi Science Society.





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**PI:** Dr. Sofia Nosheen, Assistant Professor Environmental Science Department

**Title:** Multiple occurrences of mycotoxins and its biochemical detoxification

**Funding Agency:** HEC (NRPU)

**Award Date:** November 2021

**Amount:** PKR 6.6 Million

**Collaborating University:** UVAS

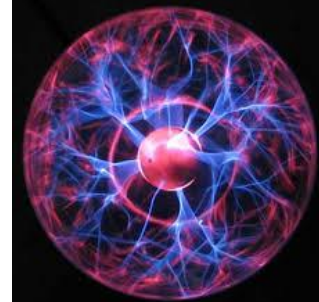


**PI:** Dr. Rozina Chaudhry, (Former) Associate Professor Physics Department  
**Title:** To Investigate the Various Instabilities as Energy Source in Quantum and Classical Plasma

**Funding Agency:** Pakistan Science Foundation

**Award Date:** June 2021

**Amount:** PKR 1 Million



**PI:** Dr. Engr. Aqsa Shabbir, Associate Professor Electrical Engineering & Director Office of Research, Innovation and Commercialization

**Title:** Combating Deforestation Using Wireless Sensor Networks (DePWiseN)

**Funding Agency:** HEC and British Council (Innovative and Collaborative Research Grant)

**Award Date:** February 2021

**Amount:** Total = PKR 84 Million

**Collaborating Partners:** BUIITEMS, Quetta, NED, Karachi, University of Glasgow, UK and Middlesex University of London

DePWiseN

Deforestation causes immeasurable environmental damage, releasing billions of tons of carbon dioxide into the atmosphere and driving thousands of species of life to extinction each year. It also inflicts long-term economic losses due to limited natural resources, soil erosion, increased flooding, drought and a domino of unfavorable effects in terms of ecosystem and public health. Pakistan is identified as



having one of the fastest deforestation rates and has one of the lowest forests covers in the world (less than 3% compared to Asian countries like India's 20% and Bhutan's 70%). Urgent countermeasures are



necessary to avoid a fast-coming calamity. Billion Tree Tsunami and Clean Green Pakistan are the two major initiatives the Government of Pakistan took to slow down deforestation in Pakistan.

We aim to design a wireless sensor network (WSN) based solution to combat deforestation in Pakistan. Balochistan province, where Juniper and Pine Nut forests, which have an economic share of 2-4% towards the provincial GDP through the timber and dry fruit industry, are officially declared under threat. The proposed work will be low-cost, autonomous, real-time monitoring and response system. It would be a true implementation of modern technologies. This system will ensure continuous monitoring of the forests and timely response to counter an unauthorized human activity, fire, and tree health degradation.

### Ongoing Projects in 2021

Sr. No.	PI & Department	Title of Project	Funding Body	Award Date	Grant Amount (In PKR)
1.	Dr. Azmat Rubab Urdu	Urdu literary research: use of digital resources, methodology and terminology	NRPU (HEC)	Nov 2020	4.5 million
2.	Dr. Khajista Jabeen Botany	Ochratoxigenic fungi management by phytochemicals of common weeds	NRPU (HEC)	Aug 2020	4.8 million
3.	Prof. Dr. Faleeha Kazmi Persian	Comparative studies of George Namah & Shahnameh Firdowsi	NRPU (HEC)	Jan 2020	5.9 million
4.	Dr. Shafaq Fatima Zoology	Introduction of innovative in-pond raceway system technology to improve aquaculture production in sustainable and economical way in Pakistan	TDF (HEC)	May 2019	14 million
5.	Dr. Sobia Ilyas Botany	Ectomycorrhizal community structure of himalayan moist temperate forests of Pakistan and screening of compatible strains for myco-forestry	NRPU (HEC)	March 2019	3.4 million
6.	Prof. Dr. Tahira Aziz Mughal & Prof. Dr. Zubaida Yousaf Environmental Science & Botany	Ethno pharmacological exploration of medicinal plants and its pharmacological aspects of Dera Ghazi Khan	NRPU (HEC)	March 2019	3.9 million



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7.	Dr. Numrah Nisar Environmental Science	Expression and characterization of azoreductase from the novel staphylococcus ku898286 immobilized onto the solid surface	NRPU (HEC)	Feb 2019	1.9 million
8.	Dr. Farzana Rashid Zoology	Antimicrobial properties of nanoparticles (nps) against beta lactamases producing bacteria and their cytotoxic potential in prokaryotic and eukaryotic mammalian systems	NRPU (HEC)	Aug 2018	12 million
9.	Dr. Ghazala Jabeen Zoology	Characterization of industrial effluents using whole effluent toxicity testing (wet) and evaluation of cyto-genotoxicity biomarkers in the fish due to industrial effluents	NRPU (HEC)	July 2018	4.8 million
10.	Dr. Nadia Ghani Environmental Science	Antidote potential of indigenous plant oils against orally induced acrylamide intoxication in animal model (albino mice)	NRPU (HEC)	July 2018	1.4 million

## Projects Applied in 2021

With endless efforts by ORIC-LCWU for promoting the research environment and encouraging the faculty to apply for research grants, many faculty members from different faculties of LCWU submitted competitive research proposals.

Sr.No.	Project Name	Project applied (above Rs. 1 million)
1.	National Research Programme for Universities (NRPU)	45
2.	China-Pakistan Economic Corridor (CPEC) collaborative research grant	5
3.	Local Challenge Fund (LCF)	3 submitted out of 10 proposals
4.	National Center of GIS and Space Applications (NCGSA)	1
5.	Pakistan Science Foundation (PSF)	3
6.	UAF-US Collaboration for Strengthening of Agriculture Academia	4



7.	Pak UK Education Gateway, Going Global Partnership	2
8.	iSPPARC	1

## Grant Selection for HEC's Local Challenge (LCF)

HEC's Local Challenge Fund (LCF) is supported by World Bank and implemented by HEC and is anticipated to support research projects that address locally relevant socio-economic issues and also address Sustainable Development Goals (SDGs). Grant



Evaluation Committee Meeting for LCF was arranged for the selection of most suitable projects for onward submission to HEC. Grant Evaluation Committee comprised of the following members:

- Prof. Dr. Engr. Intesar Ahmed, Dean Faculty of Engineering and Technology
- Prof. Dr. Shagufta Naz, Dean Faculty of Science and Technology
- Prof. Dr. Muhammad Afzal, Dean Faculty of Arts and Social Sciences
- Prof. Dr. Faleeha Kazmi, Senior Professor from Faculty of Islamic and Oriental Learning
- Prof. Dr. Humaira Majeed, Senior Professor from Faculty of Pharmaceutical and Allied Health Sciences
- Prof. Dr. Amina Mauzzam, Director Research
- Dr. Engr. Aqsa Shabbir, Director ORIC





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### LCWU



- Senior Manager, ORIC (Secretary)

10 proposals were received from various departments of LCWU; 3 most suitable projects (highlighted in the table below) were shortlisted and forwarded to HEC for further processing. Details are given below:

Sr. No	PI Name & Department	Title
1.	Dr. Adeel Nasir, Management Sciences	Industrial Innovation and Resource Allocation, Sustainable Economic Growth
2.	Dr. Engr. Aqsa Shabbir, Electrical Engineering	Development of Portable Low-Cost Ventilation for Emergency Care Home Use
3.	Dr. Madeeha Riaz, Physics	Biocompatible, Ferromagnetic, intermetallic biodegradable alloys for hyperthermia cancer treatment
4.	Dr. Mahnoor Pervez, Zoology	Synthesis of slow acting termiticide loaded silica nano capsule baits to control subterranean termites in field
5.	Dr. Mohsin Mirza, Software Engineering	Intrusion detection systems (IDSs)
6.	Dr. Saira Taj, STEM Education	Child Abuse and Neglect Awareness, Prevention and Treatment Project
7.	Dr. Zaira Ahmed, Environmental Science	Comprehensive conservation genetic analysis of freshwater turtles (Key stone species) in Punjab, Pakistan
8.	Dr. Zohra Kiyani, Physics	Investigation of transition metal doped semiconductors nanostructures to tackle shortfall of energy resources in Pakistan
9.	Dr. Talat Zeeshan, Physics	A novel solution to energy crises based on magnetic materials
10.	Dr. Zeba Israr, Physics	Modelling, simulation, and computational study of advanced perovskite materials for optoelectronics and solar cell devices



## Promotion of Research

### Training for PERIDOT Research Program

ORIC LCWU organized a training session on Peridot Research Program 2021-2022 on 7<sup>th</sup> December 2021. The event was moderated by Dr. Sahar Zia, Senior Manager Research Wing, ORIC.

Following resource persons joined from Pakistan France Alumni Network (PFAN)

- Dr. Imran Rashid (UVAS), Member of board of Directors, PFAN
- Dr. Mubashar Mushtaq (FCU), member PFAN
- Dr. Zohaid Iqbal (UCP), Member PFAN



Director ORIC, Dr. Aqsa Shabbir welcomed the participants and stressed on the importance of research grants. Registrar, Mr. Babar Ali presented souvenirs to the esteemed resource persons. Large number of faculty members from different faculties of LCWU joined the training.



### Workshop on Mentoring and Essay Writing Strategies for PhD Scholars

One-Day Workshop on Mentoring and Essay Writing Strategies for PhD Scholars in Social Sciences was organized by Department of Psychology in collaboration ORIC and Directorate of Research on 5<sup>th</sup>, August 2021. Dr. Tazvin Ijaz, Consultant Clinical Psychologist, York University Canada was the resource person for this workshop.

COME & JOIN US FOR One Day Workshop on

**Writing Strategies for Dissertation in Social Sciences: Mentoring the PhD scholars**

Thursday **August 5, 2021**

10:30 AM - AT G-35, Social Science Building, LCWU

Organized by Department of Psychology in collaboration with ORIC & Directorate of Research, LCWU

**Dr. Tazvin Ijaz**  
Consultant Clinical Psychologist,  
Department of Psychology  
Lamarsh Center for Child and Adolescent Studies  
York University, Canada

**Prof. Dr. Bushra Mirza**  
Vice Chancellor

**Dr. Amina Muazzam**  
Chairperson Department of Psychology & Director Research

**Dr. Aqsa Shabbir**  
Director ORIC





## ORIC Annual Report 2021

### LCWU



She talked about thesis writing in detail and also discussed the effective mentoring techniques for the supervisor. Dr. Bisma Ejaz, Assistant Professor, Psychology Department, moderated the workshop. Prof. Dr. Amina Muazzam, Chairperson Department of Psychology and Director



Research emphasized on developing communication skills essential for producing a quality dissertation.

## Research Methodology & Required Abilities

The Department of Persian in collaboration with ORIC-LCWU organized a one-day seminar on Research Methodology and Required Abilities on 12<sup>th</sup> July 2021. Prof. Dr. Akhtar Sindhu, Vice Principal, Govt. Islamia College was the resource person for this workshop. Prof. Dr. Syeda Faleeha Zahra Kazmi, Chairperson Persian Department, welcomed the guest

Persian Department in collaboration with ORIC-LCWU is organizing a Seminar on:

### Research Methodology & Required Abilities

by Prof. Dr. Akhtar Sindhu

12th July 2021  
**MONDAY**  
11:00 AM  
at Persian Department, LCWU

Vice Principal  
Govt. Islamia College  
Civil Lines Lahore

Prof. Dr. Bushra Mirza  
Vice Chancellor  
LCWU

Prof. Dr. Faleeha Kazmi  
Head of Persian  
Department, LCWU

Dr. Aqsa Shabbir  
Director ORIC  
LCWU



speaker and all the attendees of this seminar. She also distributed certificates among the attendees. This seminar was attended by more than 60 participants from various departments.

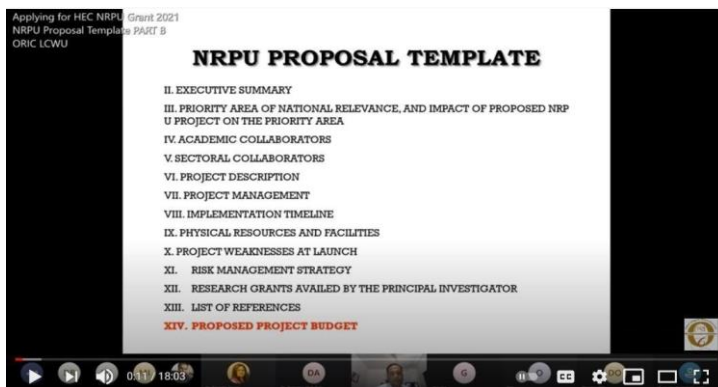
## Training on Preparing a successful NRPU Grant

ORIC-LCWU organized training on writing a successful NRPU grant proposal in order to encourage the faculty to apply. The resource person was Dr. Hassan Ali, Associate Professor Mechanical Engineering, RCET, UET Lahore. The training took place physically with all Covid-19 SOPs observed in April, 2021. More than 50 participants from various



departments attended this session. The resource persons and guests were welcomed by the Worthy Vice Chancellor, Prof. Dr. Bushra Mirza and Dr. Engr. Aqsa Shabbir, Director ORIC.

## Online Training on Budgeting for NRPU Grant



An online training session was conducted in April 2021 on budgeting for NRPU Grant. The resource person for the training was Dr. Muhammad Salman Abbasi, Associate Professor, Mechanical Engineering Department, RCET UET, Lahore. This training was attended by 60 participants and as a result of this training session 45 NRPU

proposals were submitted to HEC this year. Complete training can be accessed at: [https://www.youtube.com/watch?v=BQDMzmJ-3cM&t=8s&ab\\_channel=ORICLCWU](https://www.youtube.com/watch?v=BQDMzmJ-3cM&t=8s&ab_channel=ORICLCWU)



## Cracking the NRP Grant Proposal

A training session on cracking the NRP grant proposal was organized by the Department of Pharmacy in collaboration with ORIC. Director ORIC, Dr. Aqsa Shabbir talked about the role of ORIC and the facilitation it can provide. Dr. Saira Hafeez and Dr. Ali Shareef, Pharmacy Department were the resource person. The session ended with a vote of thanks from Prof. Dr. Humaira Majeed Khan.



## 4<sup>th</sup> International Punjabi Conference:

### Punjabi Fun Ta Saqafat

ORIC LCWU collaborated with the Department of Punjabi in organizing the 4<sup>th</sup> International Punjabi Conference: Punjabi Fun Ta Saqafat from 22<sup>nd</sup> to 24<sup>th</sup> November 2021 in which more than one hundred articles were read by well-known Punjabi intellectuals from all over the world. An of the conference for some of international speakers. Special guests at the online session was arranged on the last day inaugural ceremony of the conference were Mr. Ejaz Alam Augustin, Provincial Minister for Human Rights and Minority Affairs, Mr. Fayyaz ul Hassan Chauhan, Provincial Minister for Prisons and Mr. Hafiz Mumtaz Sobhani, Provincial Minister for Excise and Taxation. Prof. Dr. Bushra Mirza inaugurated the conference and she appreciated speakers and efforts of ORIC-LCWU.





## Statistics Poster Competition 2021

The Statistics Poster Competition 2021, titled “Let the Data Speak” was organized by the Department of Statistics, LCWU in collaboration with ORIC for the 100 years celebrations of LCWU. The purpose of the competition was to bring together young researchers and practitioners. The event had provided a forum to showcase research, share and discuss ways to improve the access to knowledge, and promote interdisciplinary collaborations. Prof. Dr. Bushra Mirza, the Worthy Vice

**LISA-LCWU**  
 Department of Statistics in collaboration with  
 Office of Research, Innovation & Commercialization is  
 organizing a  
**Statistics Poster Competition**  
**Let the Data Speak**  
 Under the patronage of Worthy Vice Chancellor

100th Anniversary of  
 COLLEGE FOR  
 WOMEN UNIVERSITY  
 LAHORE

Prof. Dr. Bushra Mirza  
 Vice Chancellor LCWU

Prof. Dr. Muhammad Afzal  
 Dean, Faculty of Arts &  
 Social Sciences LCWU

Dr. Asifa Kamal  
 CoD Statistics  
 Department LCWU

Dr. Aqsa Shabbir  
 Director ORIC  
 LCWU

October 27th, 2021  
 Wednesday  
 10:00 AM - 2:00 PM  
 Venue: G-35, Social Science Block, LCWU

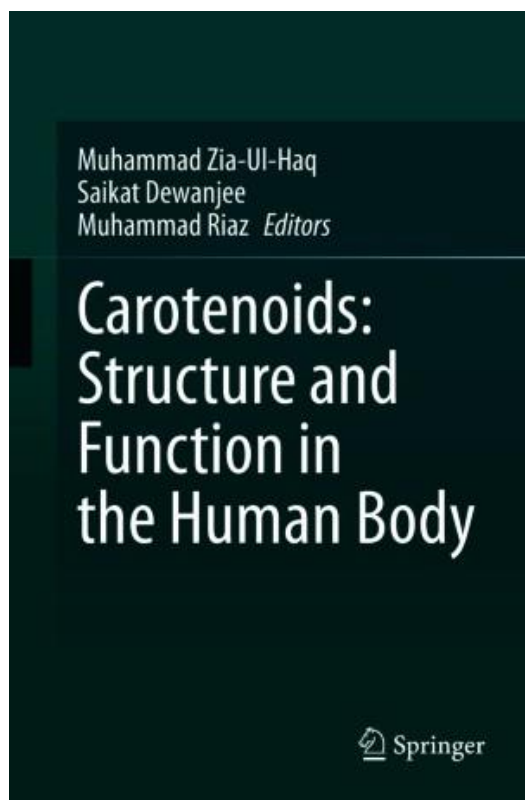
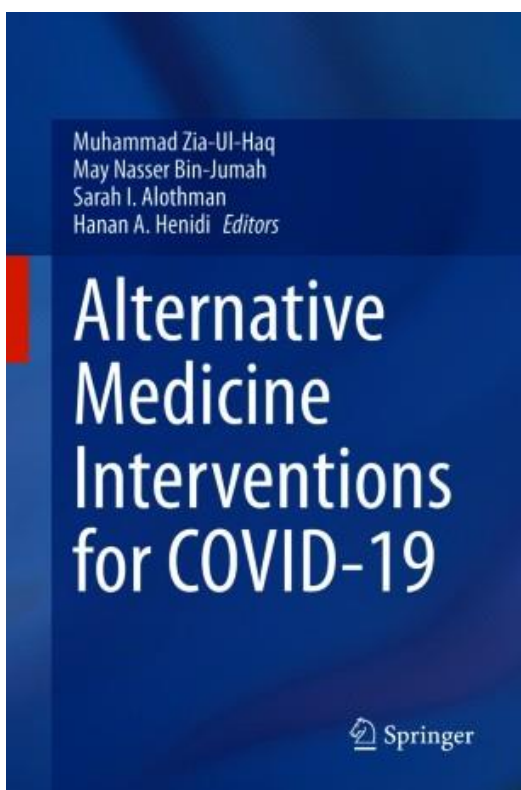
Chancellor, Prof. Dr. Muhammad Afzal, Dean Faculty of Arts and Social Sciences, Dr. Asifa Kamal, Chairperson Statistics Department, Prof. Dr. Amina Moazzam, Director Research, judges and guests graced the event with their kind presence. Total 53 posters were presented in this competition under the categories BS, MS and Ph.D. The other departments also participated in the competition. Prof. Dr. Bushra Mirza, the Worthy Vice Chancellor, addressed the gathering and appreciated the participants. Souvenirs were distributed among posters achieving 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> positions in this competition. Dr. Engr. Aqsa Shabbir, Director ORIC and her team was thanked for their support and guidance in organizing the event.





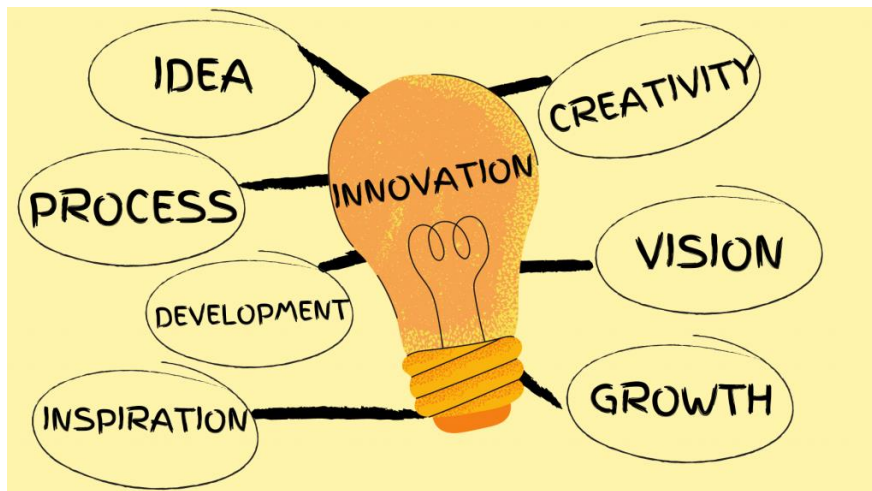
## Books Edited by Dr. Muhammad Zia ul Haq, Senior Manager ORIC

Alternative Medicine Interventions for COVID-19 examines the available alternative, complementary, pharmaceutical and vaccine methods for treating, mitigating, or preventing COVID-19. Coverage includes traditional Chinese medicine, herbal remedies, nutraceutical/dietary options, and drug/vaccine therapies. This book endeavors to provide readers with a comprehensive summary of current research on alternative and mainstream treatment and prevention methods. Full text of book can be accessed on <https://link.springer.com/book/10.1007/978-3-030-67989-7#toc>



*Carotenoids: Structure and Function in the Human Body* presents comprehensive coverage of carotenoids. The text covers the scientific literature and clinical significance of this organic pigment, with an emphasis on its therapeutic potential. The authors approach carotenoids from a range of perspectives, from their structural and physicochemical properties to their distribution in nature, interaction with the human metabolism, and use as a coloring agent in various products. This book provides a solid background in carotenoids for researchers and professionals in food science, food technology, nutrition, biology, chemistry and medical sciences. Comprising of 28 chapters (863 pages),

Full text of book can be accessed [https://link.springer.com/book/10.1007/978-3-030-46459-2?utm\\_medium=referral&utm\\_source=google\\_books&utm\\_campaign=3\\_pier05\\_buy\\_print&utm\\_content=en\\_08082017](https://link.springer.com/book/10.1007/978-3-030-46459-2?utm_medium=referral&utm_source=google_books&utm_campaign=3_pier05_buy_print&utm_content=en_08082017)



# Innovation and Commercialization



## Technology and Innovation Support Centre (TISC)

Technology and Innovation Support Centre (TISC) was established in ORIC-LCWU under the MoU signed with World Intellectual Property Organization (WIPO), Intellectual Property Organization Pakistan (Ministry of Commerce, Government of Pakistan) and HEC in 2017. WIPO is a subsidiary organization of United Nations aimed at promotion of Intellectual Property Rights (IPR) protection. TISC-LCWU is registered with WIPO and can be accessed online at <https://www.wipo.int/tisc/en/search/details.jsp?id=10812>

TISC-LCWU provides support to faculty and students in the following domains

1. Access to online patent database systems and science and technology resources
2. Access to intellectual property related publications
3. Assistance in searching and retrieving technology information
4. Training on searching databases
5. On-demand searching (novelty, state-of-the-art and infringement)
6. Basic information on intellectual property (IP) laws, IP management and strategy
7. Basic information on technology commercialization and marketing

WIPO released a promotional “TISCs worldwide” video on 22<sup>nd</sup> December 2021 featuring TISCs of 100+ universities across the globe. TISC-LCWU along with only 3 other TISCs of Pakistani universities was included in this global TISCs video compilation available online [https://www.wipo.int/meetings/en/doc\\_details.jsp?doc\\_id=558708](https://www.wipo.int/meetings/en/doc_details.jsp?doc_id=558708)

### TISC-LCWU focal person, Dr. M. Zia ul Haq, in WIPO promotional video



## Webinar on IPRs Importance and Best Practices of Commercialization for Arts and Visual Industry

ORIC-LCWU in collaboration with Institute of Visual Arts and Design (IVAD) organized a webinar to highlight the importance of Intellectual Property Rights (IPRs) and understand best practices of products commercialization for Arts and Design Industry on 18<sup>th</sup> June 2021.



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A well-known IP lawyer from India, Mr. Vijay Kumar Maykam (Erstwhile IPAB) was the guest speaker. Dr. Aqsa Shabbir, Director ORIC introduced the guest speaker and welcomed the chairpersons, faculty and students from IVAD. Mr. Vijay Kumar Maykam explained various types of IPRs and strategies being used by Indian Arts and Visual Industry for commercialization and monetization of their products. While closing the event, Prof. Dr. Masooma Abbas, Chairperson Research Center for Arts & Design thanked the guest speaker and appreciated ORIC for arranging such a wonderful session.

**A Webinar on**  
**IP RIGHTS**  
Importance & Best Practices of commercialization for Arts And Visual Industry

On Friday 18 June  
10:00 AM- 11:45 AM

Organized by  
**ORIC**  
in collaboration with  
Institute of Design and Visual Arts,  
LCWU

**Guest Speaker**  
  
**Vijay Kumar Maykam**  
TECHNICAL MANAGER (TRADEMARKS)  
Guest Faculty- NI MSME, Hyderabad, India  
Guest Faculty- NIPR, Hyderabad, India

**Patron-in-Chief**  
  
**Prof. Dr. Bushra Mirza**  
Worthy Vice Chancellor  
LCWU

**Dr. Aqsa Shabbir**  
Director ORIC

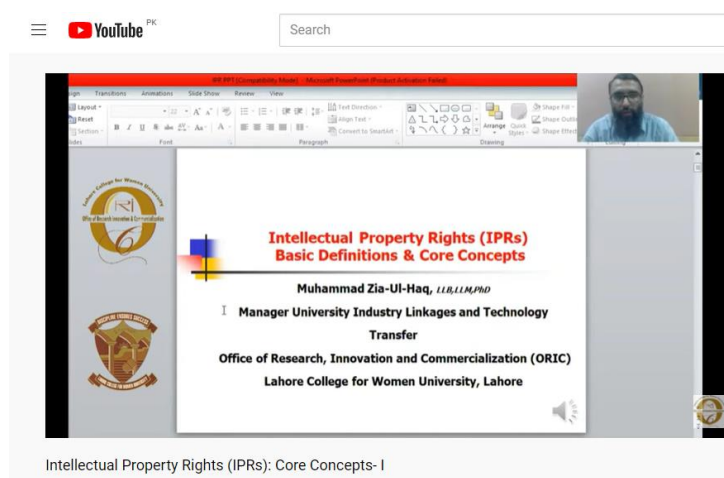
**Dr. Bifal Saif Dar**  
Chairperson  
Institute of Design and Visual Arts

**Dr. Masooma Abbas**  
Chairperson  
Research Centre for Art & Design

**Dr. Zia-ul-Haq**  
Moderator & Senior Manager  
ORIC

## Creation of Effective Intellectual Property Resource Material

There is always a risk that valuable ideas remain on the shelf or, even worse, within the heads of the faculty and students, due to lack of awareness of the IP protection options that are available for the innovation. IP awareness material like IP videos in this case aims at establishing a first level of IP awareness amongst the viewers, such that the chances of obtaining well-protected inventions of the researchers, staff and students are increased.



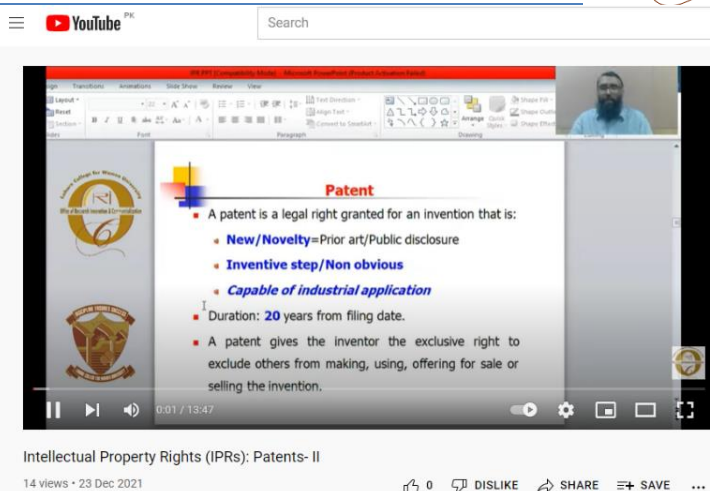
To create awareness on IP and stimulate innovation and creativity among faculty and students, TISC focal person Dr. M. Zia-Ul-Haq, has prepared video lectures on Intellectual Property Rights. The said video will help LCWU community in protection of their unique creations.





Part 1: Core Concepts

<https://youtu.be/M0NatNtsAe8>

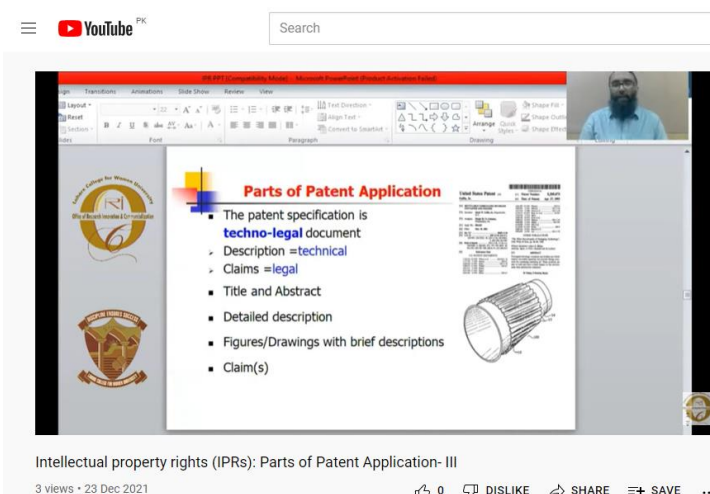


Part 2: Patents

[https://youtu.be/ir3Hg\\_BIsDg](https://youtu.be/ir3Hg_BIsDg)

Part 3: Parts of a Patent Application

<https://youtu.be/osOnwWtuXnQ>



Patents Filed/Granted

Till date, 40 national and 2 foreign patents have been filed. National patents have been filed at the Intellectual Property Organization (IPO) of Pakistan. Following are the details of patents filed/grants:

Type of Patents	Filed (till date)	Granted (till date)
Pakistani Patents	40	3
US Patents	2	2

The following patents were filed in 2021.

Filed Pakistani Patents in 2021

Sr. No	Title of Patent	Inventor	Date of Filing	Department
1	A process to Enhance Life-Span of Abelmoschus esculentus (L.) Moench. (Okra Pods)	Zainab Maqbool, Dr. Arusa Aftab, Prof Dr. Zubaida Yousaf, Muqaddes Noor, Dr. Muzammil Aftab	20-10-2021	Botany
2	Novel Nanosomal Formulation with Improved Drug Delivery Route to Target H. Pylori	Ms. Sadia Iftikhar, Prof. Dr. Mehwish Iqtedar, Dr. Roheena Abdullah, Dr. Afshan Kaleem	22-06-2021	Biotechnology



## Patents Granted in 2020-2021

**Patent Number**=143450

**Grant date**=24-02-2021

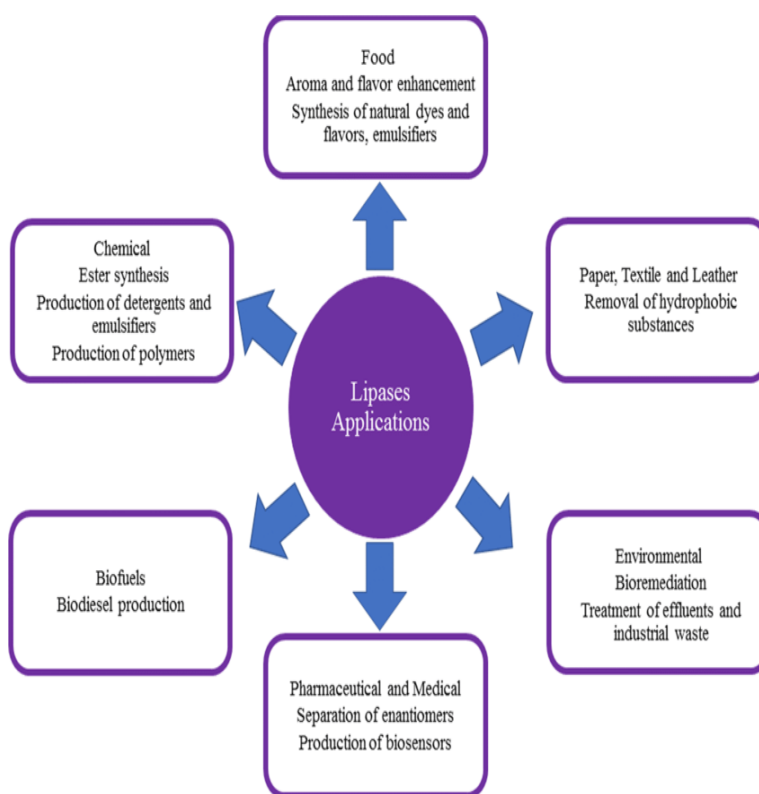
**Filing Date** = 10-04-2015

**Inventors**=Dr. Tehreema Iftikhar; Sidra; Dr. Mubashir Niaz; Dr. Farah Khan; Dr. Shazia Anwer Bukhari; Dr. Roheena Abdullah; Dr. Mehwish Iqtedar

**Department**=Botany & Biotechnology

**Title**=An improved process for enhanced biosynthesis of an acidic triglycerol acyl-hydrolases through a newly nitrous acid derived mutant of *Fusarium* sp. (MBL-579)

The inventors have developed a cost effective and easy-to-handle process for lipase enzyme biosynthesis by a newly derived mutant of *Fusarium*. The invention will lead to increased enzyme yields at reduced cost and bypassing the cumbersome traditional processes being used recently. Lipases as multipurpose biological catalyst has given a favorable vision in meeting the needs for several industries such as biodiesel, foods and drinks, leather, textile, detergents, pharmaceuticals and medicals. The current invention relates to the development of an isolate of *Fusarium* sp. (MBL-579) through chemical mutagenesis and its subsequent utilization to enhance the triglycerol acyl-hydrolases potential. The cells of the fungal strain were subjected to nitrous acid treatment and M-49 mutant was found to be the best producer of triglycerol acyl-hydrolases with an enzyme activity of  $34.83 \pm 2.46^a$  U/mL.



**Patent Number**=143346

**Grant date**=22-07-2020

**Filing Date** = 10-04-2015

**Inventors**= Zoya Tariq, Dr Zubaida Yousaf

**Department**=Botany

**Title**= A process for shelf-life extension of *Capsicum frutescens* L. (chilli peppers) by application of salicylic acid and calcium chloride in cardboard packing



The inventors have developed a unique process which increases shelf life of chilli pepper, a common kitchen item. The prevention of deterioration of fruit, production of aflatoxin and maintenance of stringent quality is of prime importance to make sure the availability of chilli pepper for a longer time in the market. The invention will lead to a better quality produce, and decreased food loss and waste leading

towards a sustainable food chain.

The shelf life of chilli peppers can be enhanced up to 55 days by treating with SA4mM and CaCl<sub>2</sub> 2% in cardboard packing at 10°C, for efficient usage of the fruit and its components retention for a longer time period.



**Patent Number**=143217

**Grant date**=17-03-2020

**Filing Date**= 10-04-2015

**Inventors**= Dr. Neelma Munir, Ms.Hijab Khatoon, Ms. Rukhama Haq, Dr. Faiza Saleem, Prof. Dr. Shagufta Naz

**Department**=Biotechnology

**Title**=A process for preservation of Kinnow without affecting its functional and nutritional components

Kinnow fruit is famous among consumers due to its tasty and delicious juice and medicinal properties. This multipurpose fruit could be utilized as an important source of nutrients for humans as well as animals. A plentiful amount of harvested fruit is wasted depending on the environmental conditions and age of kinnow fruit. The biotechnology researchers of LCWU have developed a process to increase shelf life of this cash crop of Pakistan by irradiating the Kinnow and storing the irradiated biological material at



room temperature. The process involves irradiating the kinnow samples by subjecting the sample to radiation in an amount effective to sterilize the samples. The gamma irradiated kinnow samples can be stored at room temperature and their nutritional value is maintained.



The present process is helpful for packaging industry and export of commercial fruits as it enhances the shelf life of perishable fruits.

## External Linkages (National/International)

Partnerships and linkages strengthen and promote efficiency, productivity, capabilities and competitiveness of departments and institutes. Collaboration with other institutions & industry helps practical research, employment, and social engagement. The collaborations promote a cooperative relationship by staff and student exchanges, submission of joint collaborative research projects, joint PhD supervision and academic publications. LCWU ensures continuous growth of its people and departments and transcends the conventional paradoxes. The university believes in building a strong network and connections in the academic and corporate world to facilitate the LCWU community. In this regard, ORIC helps establish national and international linkages by signing Memorandum of Understanding (MoU) and Letter of Intent (LoI) respectively with other institutes/ organizations. Following LoIs / MoUs have been signed in the year 2021:

<b>National Linkages</b>			
<b>Sr.No</b>	<b>Focal Department</b>	<b>Organization</b>	<b>Month, Year</b>
1.	ORIC	Habib Bank Limited (HBL)	Dec, 21
2.	ORIC	National Curriculum Council (NCC)	Nov, 21
3.	ORIC	Government College for Women University Sialkot & Fatima Jinnah Women University Rawalpindi Launch of All Pakistan Women University Consortium (APWUC)	Oct, 21
4.	Elementary & Teacher Education	Pakistan Alliance for Early Childhood	Oct, 21
5.	ORIC	Extreme Commerce	Sept, 21
6.	Economics	Federation of Pakistan Chambers of Commerce & Industry (FPCCI)	Aug, 21
7.	Directorate Student Affairs & Directorate Sports	Youth Affairs & Sports Department	Aug, 21
8.	ORIC	Virtual University of Pakistan	Aug, 21
9.	Gender & Development Studies	Women Development Department, Government of the Punjab	July, 21



## ORIC Annual Report 2021

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10.	ORIC	Innovators Garage	June, 21
11.	Persian	Diyal Singh Research & Cultural Forum	June, 21
12.	Central Library	Punjab Sports Board- E Library	May, 21
13.	Zoology	Punjab Institute of Cardiology	May, 21
14.	Physics	National Center of Physics, Quaid-e-Azam University, Islamabad	Mar,21

### International Linkages

Sr. No.	Focal Department	Organization	Month, Year
1	Elementary & Teacher Education	Alif Laila Book Bus Society	Nov, 21
2	Physics	Durhum University, UK	Nov, 21
3	Persian	Imam Khumani International University, Iran	Apr, 21
4	Elementary & Teacher Education	EGB4 Technologies, US	Apr, 21

## Habib Bank Limited

LCWU penned down a MoU with HBL for availing entrepreneurship and mentoring opportunities. Ms. Maya Inayat Ismail, Chief of Staff and Mr. Adil Saleh, Head of Talent Acquisition, represented HBL along with other officials. Prof. Dr. Bushra Mirza, the worthy Vice

Chancellor, welcoming the move called upon bankers to go for student friendly packages for their financial discipline and understanding future needs. She hoped that this collaboration will



Office of Research Innovation  
&  
Commercialization

Cordially Invites You on  
MoU Signing Ceremony  
between

Lahore College for Women University  
&  
Habib Bank Limited, Pakistan

Date: 8-12-21  
Time: 12:00pm  
Venue: Syndicate Hall





## ORIC Annual Report 2021

### LCWU



allow LCWU to gain valuable insights from HBL to align its academic and career development programs. Ms Maya Inayat Ismail assured that HBL is looking to hold a campus wide event for hiring and facilitating by conducting career counseling sessions, presentations, tests and interviews for recruitment. She stated that HBL will offer students an opportunity to experience real-life industry challenges through structured internships, projects, workshops, and regular interaction with HBL professionals.



## National Curriculum Council (NCC)

One of the major difference between developed and underdeveloped countries is their higher education system. In this regard, for providing a better education system, National Curriculum Council (NCC), Ministry of Federal Education and Professional Training, Islamabad has joined hands with LCWU. Dr Mariam Chughtai, Director NCC pledged to provide teachers with online and offline professional development opportunity and to encourage collaborative teaching and learning through digital platforms. Prof. Dr. Bushra Mirza, the Worthy Vice Chancellor, LCWU hoped that this MoU will build relationships and work with education policy makers, encouraging LCWU faculty to develop best practice in education and national priorities.





## All Pakistan Women Universities Consortium (APWUC)

A MoU was signed with 2 premier women universities namely Government College Women University Sialkot (GCWUS) and Fatima Jinnah Women University (FJWU) Rawalpindi. The MoU laid the foundation of All Pakistan Women Universities Consortium (APWUC) for the promotion of collaborative research, entrepreneurship and collaborations among faculty and students of women universities.

In a historic moment, the MoU was concurrently signed by three eminent women vice chancellors: Prof. Dr. Saima Hamid, VC-FJWU, Prof. Dr. Rehana Kausar, VC-GCWUS and Prof. Dr. Bushra Mirza VC-LCWU which laid the foundation of APWUC with the following aims and objectives:

- Improve the effectiveness of female higher education institutions through inter-university cooperation and make best use of limited resources whereby institutions can share expensive equipment, library resources, technical expertise, student exchange





## ORIC Annual Report 2021

### LCWU



and other resources through mutually beneficial arrangements.



- Establish the fact that women universities have specific requirements and tend to operate in a specific socio-cultural framework therefore in higher education system women universities should be dealt accordingly.
- Secure government funding and other funding sources for the development of consortia members.
- Jointly put forth issues and challenges of women universities to policy makers and government officials for better participation.





LCWU

- To facilitate in policy making regarding women participation in societal development.
- To identify the new opportunities of cooperation for skill and capacity development of human resources.
- To explore joint research projects and area of collaborations.
- To promote joint seminars/ workshops/ training and development plan /conferences.

The MoU sets out the scope of the APWUC support and involvement in structuring and management of new initiatives and projects aimed at improving the women empowerment in Pakistan. Speaking on the occasion, Prof. Dr. Bushra Mirza hoped that this consortium

will serve faculty members hailing from member universities through interactive workshops, seminars, and research initiatives on specific sectors with a focus on women empowerment. This will create a hybrid pool of resources for knowledge sharing and prove a mutually rewarding and long-lasting collaboration that will enhance the state-of-the-art research, strengthen and promote the state-of-the-practice and ultimately benefit the female youth.



## Pakistan Alliance for Early Childhood

Department of Elementary and Teacher Education signed a MoU with Pakistan Alliance for Early Childhood on 7<sup>th</sup> October 2021. The purpose of the MoU is to disseminate essential practices of Early Childhood Development and Education amongst practitioners, academia, and all other related stakeholders. It aims to align the courses offered in Early Childhood Care and Education (ECCE) with the Single National Curriculum and bridge the gap between theory and practice. It also aims to build the capacity of LCWU faculty in reviewing and conducting ECCE courses using latest global research and pedagogical concepts. Dr. Aqsa Shabbir, Director ORIC, welcomed the guests and Dr. Asma Shahid Kazi, Chairperson Department of Elementary & Teacher Education,



Dr. Asma Shahid Kazi, Chairperson Department of Elementary & Teacher Education,



explained that this MoU will enable faculty members to improve and develop accredited certificate, diploma, MS, and PhD courses. Prof. Dr. Bushra Mirza, stressed that such a linkage is need of the hour.

## Extreme Commerce

LCWU builds corporate linkages with forthcoming and entrepreneurial organizations to enhance the strategic relationships, which ultimately helps in improving growth and economic development of country. In this scenario, a MoU was signed between ORIC-LCWU and Extreme Commerce. Specifically, this



partnership aims to support aspirant and existing female entrepreneurs of LCWU, share knowledge, learning and innovation related to business support and employability activities, and promote decent work and quality jobs as well as advocacy in removing barriers to doing business. Prof. Dr. Bushra Mirza, anticipated that this MoU will encourage creativity, innovation, critical and entrepreneurial thinking in university students. This will help our younger generation to develop entrepreneurial mindset for what they want to be.



## Federation of Pakistan Chambers of Commerce & Industry (FPCCI)

LCWU and FPCCI entered into a MoU to work together and seek research-based and scientific solutions to the problems and challenges faced by



the local industry. Addressing the signing ceremony, Prof Dr Bushra Mirza said that as a higher education institution, LCWU is not only providing quality education to the students but also trying to give input on policy making and facilitating industry through productive research. She believed universities and chambers are the

premier contributor of policy advocacy, trade investment, productivity and sustainable economic development in the knowledge-based economy therefore, FPCCI and LCWU should mutually develop a strategy.



## Youth Affairs & Sports Department

Youth Affairs & Sports Department, Government of the Punjab inked a MoU with LCWU to empower the female youth. According to the MOU, both LCWU and Youth Affairs and Sports Department will work together for the welfare of the youth by empowering them through top notch trainings in sports. Prof Dr Bushra Mirza stated that we can build a healthy society by promoting sports culture among the young generation. LCWU is providing modern sports facilities to female players belonging to all sports disciplines. It is important that the government provides opportunities to youth for their upbringing. The MoU is seen as a significant step towards reaping the sports atmosphere created through recent success in various sports events where LCWU players finished with the best medal tally.





## Women Development Center Punjab

A MoU was signed between LCWU and Women Development Center, Government of the Punjab. According to the signed MoU, Women Development Department, Government of Punjab shall provide



financial grant, furniture, equipment and essential machinery for the establishment of Women Development Center. The Provincial Department will also prepare plan for improvement of the Center and develop mechanism for future collaboration. LCWU will provide a suitable place for establishment of the Center. The center will raise awareness among women and facilitate them for career development, entrepreneurship, online education and leadership.

## Virtual University of Pakistan (VU)



To promote education and academic exchanges between the two institutions, a MoU was signed between LCWU and Virtual University of Pakistan (VU). Under the MoU, VU will provide technical services to students who could not continue their education due to COVID-19 and other social issues. Hence LCWU students will be able to continue their education from the platform of Virtual University. Prof. Dr. Bushra Mirza, Vice Chancellor LCWU



termed this agreement a very concrete step towards development of mutually beneficial academic and training programs, exchange of faculty and staff for purposes of teaching and research, reciprocal assistance for visiting academic faculty, staff and students, coordination of joint research activities, exchange of information and research materials in fields of mutual interests.

## Innovators Garage (IG)

LCWU signed MoU with Innovators Garage (IG) to collaborate and extend cooperation & expertise for the promotion and development of young entrepreneurs, particularly women entrepreneurship with an understanding to work towards the development of a positive entrepreneurial culture in Pakistan. Prof. Dr. Bushra Mirza hoped that MoU will enhance domestic as well as international competitiveness, dissemination of information and training as well as capacity building of upcoming female entrepreneurs.



## Dyal Singh Research and Cultural Forum (DSRCF)

A MoU was signed with Dyal Singh Research and Cultural Forum (DSRCF) on 15th June 2021 to carry out research in Persian language, history, literature and culture and to collaborate and extend cooperation/ expertise for the promotion of Sikh tourism. Prof.



Dr. Syeda Faleeha Zahra Kazmi, Chairperson, Persian Department and focal person of this MoU told that both institutes will inculcate and promote research approach in the society particularly in the youth by arranging, organizing and promoting cultural functions and visits/tours of students and scholars. The MoU will help both parties in submission of joint research projects. While exchanging commemorative plaques at the end of the ceremony, the vice chancellor Prof Dr Bushra Mirza hoped that this MoU will support the aspiring female researchers by providing them access to the research environment and resources of DSCRf for carrying out meaningful research for the betterment of society.

## E-Library Punjab

A MoU was penned down between LCWU and E-Library Punjab. The MoU was signed by Prof. Dr. Bushra Mirza, Vice Chancellor LCWU and Mr. Fuad Hashim Rabbani, Secretary Youth Affairs and Sports Department, Government of the Punjab under the supervision of the Honorable First Lady of Pakistan, Bushra Bibi. The said E-Library will provide access to an impressive range of high-quality international journals, databases and e-books to LCWU and will raise awareness about the changing landscape of scholarly communication. Prof. Dr. Bushra Mirza lauded Bushra Bibi's efforts for this mega project and presented her the souvenir. Prof. Dr. Bushra Mirza reflected on the life of Sheikh Abu ul Hassan Shazli as the first lady inaugurated the Sheikh Abu ul Hassan Research Center of Science and Technology.



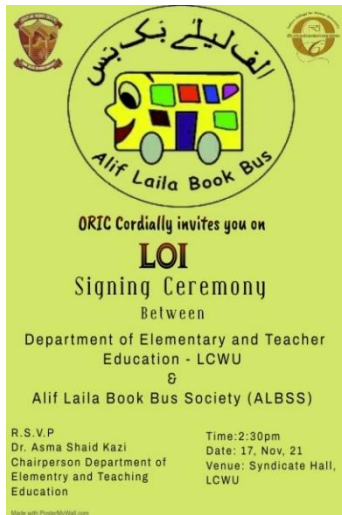


## Punjab Institute of Cardiology

A MoU was signed between LCWU and Punjab Institute of Cardiology (PIC) which will enable the students from LCWU to obtain internship at PIC. It will further provide for several research and collaborative initiatives between the two institutions. Prof. Dr. Bushra Mirza welcomed the establishment of this linkage between LCWU and a prestigious cardiac hospital. The MoU was facilitated by Prof. Dr. Saima Sharif from Zoology Department.

## Alif Laila Book Bus Society

A Letter of Intent (LoI) was signed between LCWU and Alif Laila Book Bus Society (ALBSS) which is a representative of Creativity, Culture and Education Newcastle, (UK). Prof Dr Bushra Mirza while addressing the ceremony stated that LCWU is trying to offer solutions to Pakistan's educational problems within the given socio-economic constraints, by finding strategically effective paths for 100 per cent literacy and educational modernization. Ms. Basarat Kazim from ALBSS started their mobile vocational training centre, which visits various government girls' schools, encouraging them to innovate and invent, to dream big and master the skills for either setting up their own business or expanding the frontiers of knowledge. The linkage was facilitated by Dr. Asma Shahid Kazi from the Department of Elementary and Teacher Education.





## Durham University

A LOI was inked with Durham University UK aiming to establish research links between the institutions for mutual benefit and in a spirit of friendship and co-operation. Both institutions will collaborate with each other on training, research work, joint seminars and workshops. The signing ceremony ended with a strong sense of trust and consensus established between the two institutions, which is an important milestone for further collaboration and development in future. The agreement will open pathways for further research collaboration and on-ground impact in LCWU. Prof. Dr. Bushra Mirza appreciated the efforts of Physics department and in particular Prof. Dr. Zohra Kiyani for the establishment of this linkage.



## EGB4 Technologies

LCWU inked a LOI with EGB4 Technologies (USA) which will enable the two organizations to work jointly for building the digital skills of the students and faculty. The EGB4



trainers will provide STEAM Education Professional Development to LCWU faculty members by live, online synchronous trainings, and asynchronous self-paced trainings. Hardware (robotics/electronics/hands-on activities) based courses, Virtual Robotics platform Coding, English language, Entrepreneurship will also be provided to LCWU faculty members by EGB4 Technologies. Prof. Dr. Bushra Mirza, Vice Chancellor LCWU said that research and applied projects related to robotics and artificial intelligence applications will benefit STEM and STEAM initiatives. Talking about industry-academic linkage, she added, "To achieve the desired result, we should not only consider distant horizons; if we want to make a change, it is better to take small and fruitful steps and this needs the cooperation of all experts involved." The linkage was established with the efforts of Dr. Asma Shahid Kazi, Chairperson Department of Elementary and Teacher Education.



## Imam Khomeini International University



LCWU: Lahore College for Women University (LCWU) has inked an MoU with Imam Khomeini International University (IKU), Qazvin, Iran. According to a press release, this MoU calls for collaboration in research, instruction and faculty exchange between the LCWU and IKU. By this MoU, the two universities desire to develop academic cooperation in various fields.

ایم او یوز پر دستخط  
سی ڈبلیو یو کے امام خمینی یونیورسٹی، ای، جی بی 4 سے

م او یوز اعلیٰ تعلیم کے فروغ کیلئے مفید ثابت ہوں گے وائس چانسلر بشری مرزا



لاہور (خبرنگار) لاہور کالج فار ویمن یونیورسٹی نے امام خمینی یونیورسٹی ایران اور امریکی فرم ای جی بی 4 سے الگ الگ ایم او یوز پر دستخط کر دیئے۔ سرگرمیاں پر مبنی کورسز، ورچوئل روبوٹکس پلیٹ فارم کوڈنگ، انگریزی زبان اور دیگر شعبے شامل ہیں۔ ایرانی یونیورسٹی کے ساتھ ایم او یوز میں دونوں اداروں کے مابین تحقیق، ٹیکنیٹی اور سٹوڈنٹس ایکس چینج اور دیگر تعلیمی سرگرمیوں میں مشترکہ پروگرام شروع کرنے پر اتفاق کیا گیا۔ وائس چانسلر پروفیسر ڈاکٹر بشری مرزا نے تقریب سے خطاب کرتے ہوئے کہا کہ ایم او یوز اعلیٰ تعلیم کے فروغ کیلئے مفید ثابت ہوں گے۔

LCWU inked LoI with Imam Khomeini International University Qazvin, Iran aimed at establishing a mutually beneficial relationship built on academic, scientific and cultural cooperation. Promotion of research programs, collaborative research, exchange of professors in pursuit of joint research activities and holding joint courses in different disciplines and levels are the focus of this scientific and educational agreement, said Prof. Dr. Bushra Mirza. Referring to deep historical and cultural relations between Pakistan and Iran, this cooperation between premier institutes of both countries will lead to sharing knowledge, academic resources and expertise, she added. Establishment of this linkage was led by Prof.

Dr. Syeda Faleeha Zahra Kazmi, Chairperson Persian Department who welcomed the participants and stressed that the established linkage will prove highly beneficial for research and development at Persian Department.

## Delegation from University of Glasgow, UK visits LCWU

ORIC develops initiatives according to department's needs, connecting them with their counterparts from other universities for the purpose of sharing experiences and information, as well as developing sustainable collaborative relationships. In this context, ORIC hosted an interactive session for faculty members of Departments of Electrical Engineering and Computer Science on 14<sup>th</sup> October 2021 with a delegation of professoriates from University of Glasgow, UK. The guests were briefed about LCWU's academic programmes, labs, research & development, and sports facilities. The visiting delegate encouraged and highly appreciated LCWU's performance and facilities provided for its faculty and students to ensure quality teaching, learning and research.



The UK delegation comprised of Prof. Dr. Qamar Abbasi and Prof. Dr. Muhammad Ali Imran, Dean University of Glasgow among others. They were hosted by Dr. Engr. Aqsa Shabbir, Director ORIC, Prof. Dr. Amina Muazzam, Director Research, Prof. Dr. Mehwish Iqtedar, Chairperson Biotechnology and Dr. Saima Farhan, Chairperson Computer Science Department.



## Visit of ORIC team from Government College for Women University Sialkot

ORIC team from Government College for Women University, Sialkot (GCWUS) comprising of Dr. Chaudhry Omer Javed, Director ORIC and Mr. Sohaib Saleem, Manager Research Operation & Development visited ORIC LCWU. In a detailed meeting held at ORIC LCWU office, plans for future collaboration, joint problems faced by ORICs and a road map for future cooperation was chalked out. Director ORIC LCWU, Dr. Engr. Aqsa Shabbir, welcomed the visiting delegation and stressed that women universities can gain a lot from each other.



## Visit of Director ORIC from Fatima Jinnah Women University, Rawalpindi

Director ORIC, Fatima Jinnah Women University (FJWU), Rawalpindi, Dr. Chaudhary Shoaib Akhtar, visited the office of ORIC LCWU to discuss avenues of collaboration and linkages. He was welcomed by Director ORIC LCWU, Dr. Engr. Aqsa Shabbir and it was mutually agreed that the two ORIC offices can develop several symbiotic partnerships.



## Collaboration with Habib Bank Limited

ORIC LCWU was pleased to host a courtesy visit of HBL on 8<sup>th</sup> October 2021. The agenda of meeting was to discuss various avenues of collaborations (structured internships, mentorships, research project, curriculum design, etc.) to bridge the gap between academia and industry and up-skill current understanding and knowledge of aspiring professionals, enabling us to create a talent pool of well-rounded fresh graduates.

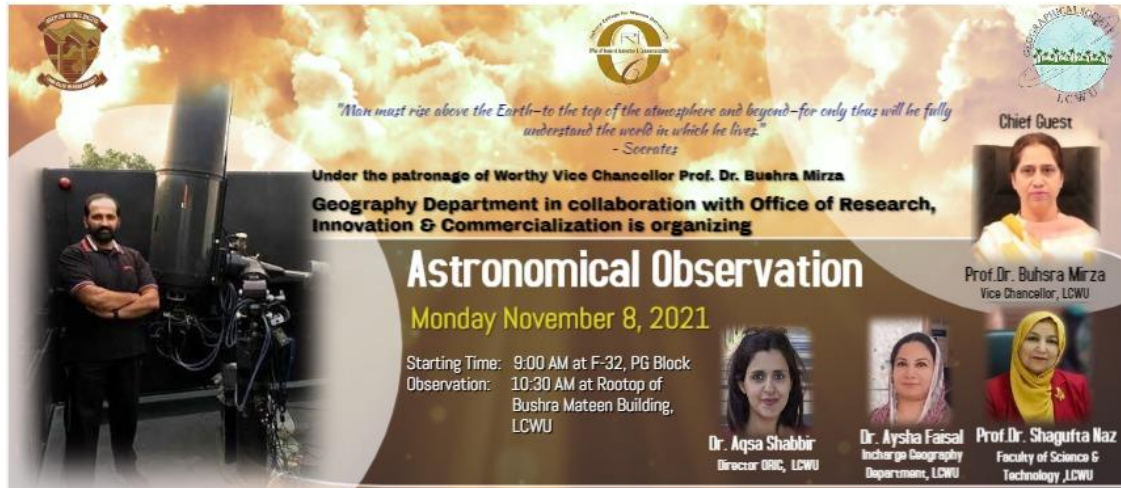




# Capacity Building and Sustainability



## Astronomical Observation



*"Man must rise above the Earth—to the top of the atmosphere and beyond—for only thus will he fully understand the world in which he lives."*  
- Socrates

Under the patronage of Worthy Vice Chancellor Prof. Dr. Bushra Mirza  
Geography Department in collaboration with Office of Research, Innovation & Commercialization is organizing

### Astronomical Observation

Monday November 8, 2021

Starting Time: 9:00 AM at F-32, PG Block  
Observation: 10:30 AM at Rooftop of Bushra Mateen Building, LCWU

**Chief Guest**  
Prof. Dr. Bushra Mirza  
Vice Chancellor, LCWU

**Faculty Members:**  
Dr. Aqsa Shabbir, Director ORIC, LCWU  
Dr. Aysha Faisal, Incharge Geography Department, LCWU  
Prof. Dr. Shagufta Naz, Faculty of Science & Technology, LCWU

Solar energy observation and a special lecture was organized by the Department of Geography in collaboration with ORIC-LCWU on 8<sup>th</sup> November 2021. President of Lahore Astronomical Society, Mr. Umair Asim, gave an introductory lecture on solar properties and encouraged research on solar related topics. After the lecture, faculty members and students observed solar features from Pakistan's largest telescope. Prof. Dr. Bushra Mirza, the Worthy Vice Chancellor, Dr. Aysha Hanif, Incharge Department of Geography, Prof. Dr. Amna Moazzam, Director Research, Dr. Sahar Zia, Incharge Geographical Society and various faculty members along with the ORIC team participated in the event. Prof. Dr. Bushra Mirza appreciated such initiatives as they boost research and innovation. She also said that solar energy needs to be utilized to mitigate the effects of climate change.



## Pakistan Diamond Jubilee Art Competition

Department of Interior Design in collaboration with ORIC-LCWU organized an undergraduate inter-university art competition under Pakistan Diamond Jubilee celebrations that concluded with a display which

was inaugurated by Prof. Dr. Bushra Mirza, the Worthy Vice Chancellor on 22<sup>nd</sup> September 2021. While appreciating the efforts of participants, she emphasized on the need of co-curricular activities along with studies especially during this time of pandemic. She added that such events boost up students' performance and creativity simultaneously while offering break from



monotonous routine. Students from different universities participated in the competition expressing art, architecture, and culture of Pakistan which was further explored through different styles and mediums to create extraordinary posters and art pieces. These pieces were critically analyzed and appreciated by the honorable jury members: Prof. Dr. Samina Nasim (Punjab University) and Prof. Umar Saeed (National College of Arts).

The Worthy Vice Chancellor distributed the shields and certificates amongst the winners.



## Advanced Time Series Handling Techniques Workshop

The Department of Economics, in collaboration with ORIC, organized a two-day workshop on Advanced Time Series Handling Techniques using Eviews and STATA on 16<sup>th</sup> and 17<sup>th</sup> August 2021. The speakers were Dr. M. Awais Anwar, Assistant Professor, University of Education and Dr. Nouman Arshad, Assistant Professor, University of Management and Technology. The participants included faculty members from various departments and MS



Economics students. Prof. Dr. Muhammad Afzal, Dean Faculty of Arts and Social Sciences, graced the event with his presence. He welcomed the participants and congratulated Dr. Samia Nasreen, Chairperson Economics Department, for organizing the workshop.

## Webinar on Animation in Design

The Graphic Design Department in collaboration with ORIC organized a seminar on Animation in Design on 12<sup>th</sup> July 2021. Ms. Iqra Mustaq, Digital Content Designer, was the resource person for this workshop. Ms. Ayesha Bilal from the Graphic Design Department was the moderator and Ms. Ayesha Siddiqa, Chairperson Graphic Design Department added that such initiatives are highly useful for the students and faculty of Graphic Design. More than 50 participants attended this workshop.



Graphic Design Department  
in Collaboration with ORIC  
Lahore College for Women University  
Presents

# Animation in Design

with Iqra Mushtaq  
Digital Content Designer

11 am  
Monday 12th July, 2021

Moderator & Organizer  
Aysha Bilal

Ms. Aisha Siddiqa  
Chairperson- Graphic Design IDVA

Dr. Aqsa Shabbir  
Director ORIC



## 5 Days Hand-On Training on Network Security

ORIC-LCWU in collaboration with Riphah International University and Pakistan Education and Research Network (PERN) organized a five days hands-on Network Security Training for the faculty, staff and students of Computer Science and Electrical Engineering. The training was hosted at Electrical Engineering Department from 5<sup>th</sup> - 9<sup>th</sup> July, 2021. Prof. Dr. Engr. Intesar Ahmed, Dean Faculty of Engineering and Technology, inaugurated the event with Dr. Engr. Aqsa Shabbir, Director ORIC, Dr. Muhammad Sajjad, Riphah International University, Dr. Engr. Saadia Murawwat, Chairperson Electrical Engineering Department and Dr. Saima Farhan, Chairperson Computer Science Department. Prof. Dr. Bushra Mirza, the Worthy Vice Chancellor, distributed certificates among the attendees of workshop. She also addressed the participant and she emphasized on the importance of conducting such workshops. More than 100 participants attended this workshop.







## Search for the D to Design

The Graphic Design Department in collaboration with ORIC organized a seminar titled “Search for the D to Design” on 30<sup>th</sup> June 2021. The seminar was organized by Ms. Ayesha Bilal and Ms. Aisha Saddiqa





# ORIC Annual Report 2021

## LCWU



from Graphic Design Department. Mr. Ali Aslam was the resource person for the workshop. Dr. Engr. Aqsa Shabbir, Director ORIC, attended this seminar and also distributed certificates among 50 participants of this workshop.

### Webinar on Computational Wave Propagation



Under the patronage of Worthy Vice Chancellor  
 Department of Mathematics in collaboration with  
 Office of Research, Innovation & Commercialization  
 is organizing Webinar on

## Computational Wave Propagation

September 24, 2021  
 at  
 11:00 AM (PST)

**Guest Speaker**  
**Dr. Hafiz Abdul Wajid**  
 Associate Professor of Applied Mathematics,  
 Islamic University of Medina, Kingdom of Saudi Arabia

**Dr. Maria Hussain**  
 In-charge  
 Department of Mathematics  
 LCWU

**Dr. Aqsa Shabbir** **LIVE**  
 Director ORIC  
 LCWU

**Worthy Vice Chancellor**  
**Prof. Dr. Bushra Mirza**

**Organizers**

Department of Mathematics in collaboration with ORIC-LCWU organized a webinar on Computational Wave Propagation on Friday 24<sup>th</sup> September 2021 at 11:00 AM. The resource person was Dr. Hafiz Abdul Wajid, Associate Professor of Applied Mathematics, Islamic University of Medina, Kingdom of Saudi Arabia. Dr. Maria Hussain, Chairperson Mathematics Department, introduced the resource person and thanked the Worthy Vice Chancellor for gracing the virtual event. Prof. Dr. Bushra Mirza, the Worthy Vice Chancellor, appreciated the efforts of Mathematics Department and ORIC-LCWU in arranging such webinars. Dr. Engr. Aqsa Shabbir, Director ORIC, thanked the resource person and attendees of the webinar.

### Webinar on Academic Writing

Department of English in collaboration with ORIC-LCWU organized a webinar on Academic Writing by Dr. Mark Perkins, a renowned linguist, on 9<sup>th</sup> September 2021. Dr. Ammara Khan, Chairperson English Department, welcomed all the attendees and guest speaker of the seminar. Dr. Engr. Aqsa Shabbir, Director ORIC, emphasized

Join International Webinar on  
**Academic Writing**

at  
 14:00 PST  
 on September 9, 2021  
 (Thursday)

**Organized by**  
**English Department**  
 in collaboration with  
**ORIC-LCWU**

**Guest Speaker**  
**Dr Mark Perkins**

**Prof. Dr. Bushra Mirza**  
 Vice Chancellor  
 LCWU

**Dr. Amara Khan**  
 Chairperson  
 English Department & Moderator

**Dr. Aqsa Shabbir**  
 Director  
 ORIC-LCWU

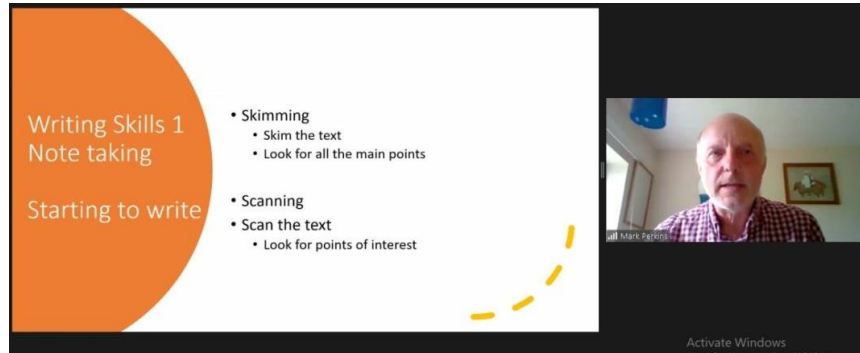


# ORIC Annual Report 2021

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on importance of writing effectively in academia and she also ended the session with vote of thanks.



### Webinar on Barycentric Coordinates

Department of Mathematics in collaboration with ORIC LCWU organized an International Webinar on Generalized Barycentric Coordinates on 26<sup>th</sup> August 2021. Dr. Maria Hussain, Chairperson Mathematics Department, introduced the resource person and welcomed all the attendees. Prof. Dr. Bushra Mirza, the Worthy Vice Chancellor, praised the efforts of ORIC-LCWU in facilitating faculty to conduct such activities which can prove fruitful by exchange of knowledge and establishment of a linkage for research and academic collaborations.

Dr. Engr. Aqsa Shabbir, Director ORIC, talked about the importance of collaborative research and she thanked the guest speaker for giving a highly informative talk on the subject.

Mathematics Department in collaboration with Office of Research, Innovation and Commercialization is organizing

**ORIC**

An International Webinar on

**GENERALIZED BARYCENTRIC COORDINATES**

Under patronage of the Worthy Vice Chancellor: Prof. Dr. Bushra Mirza

Prof. Dr. Kai Hormann  
University of Italian Switzerland  
Lugano, Switzerland

**ON 26th AUGUST | 1:00 pm PST**

Organizer  
**Dr. Maria Hussain**  
Chairperson of Mathematics  
Department, LCWU

Moderator: Dr. Aqsa Shabbir  
Director ORIC-LCWU

In 1827, August Ferdinand Möbius published his seminal work on the "Barycentric Calcul", which provides a novel approach to analytic geometry. One key element in his work is the idea of barycentric coordinates, which allow to write any point inside a triangle as a unique convex combination of the triangle's vertices. These triangular barycentric coordinates are linear and possess the Lagrange property, and are therefore commonly used to linearly interpolate values given at the vertices of a triangle. Möbius also noticed that this construction extends nicely to linear interpolation of data given at the vertices of a d-dimensional simplex, and by giving up positivity of the coordinates, we can even extrapolate the data to every point in d dimensions. While barycentric coordinates are unique for simplices, they can be generalized in several ways to arbitrary polygons and polytopes in higher dimensions, and over the past few years, a number of recipes for such generalized barycentric coordinates have been developed. As they are usually given in closed form and can be evaluated efficiently, they have many useful applications, e.g. in computer graphics, computer aided geometric design, and finite element computations.



## ORIC Annual Report 2021

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### Virtual Session on Full Bright Orientation by the United States Educational Foundation in Pakistan (USEFP)

ORIC-LCWU in collaboration with U.S. Educational Foundation Pakistan (USEFP) conducted a virtual Fulbright Orientation Session at LCWU in March 2021. The session initiated with the introduction of USEFP by Mr. Zeeshan Rahat Qureshi, Program Manager-Fulbright. It was attended by more than 500 students and faculty of LCWU. The session apprised the students and faculty about Fulbright Program, its application process, requirements, and benefits.

### Fulbright Orientation

- 1 To appraise eligible students of the Fulbright Degree Program application process, requirements and scholarship benefits
- 2 



 **Time:** 3:00 Pm

 **Date:** March 9th 2021

**Webinar Link** : [https://zoom.us/webinar/register/WN\\_uW6Vv-DNReekIKYIulx0eg](https://zoom.us/webinar/register/WN_uW6Vv-DNReekIKYIulx0eg)



# Social Outreach



## 16 Days of Activism Against Gender Based Violence

Dr. Engr. Aqsa Shabbir, Director ORIC, was invited as a distinguished panelist in Alhamra Arts Council on "Economic Justice Combats Violence Against Women" on 3<sup>rd</sup> December 2021 organized by UN Women. She stressed on the importance of economic empowerment as a pathway for ending violence against women. She added that young girls must utilize their potential to the full and contribute to their own, their families and the country's growth and development.



## Chaoon Foundation

ORIC-LCWU organized a tree plantation campaign in collaboration with The Chaoon Foundation under Prime Minister's Clean and Green Pakistan vision. The inaugural ceremony of tree plantation drive was held with plantation of 3 trees by the Worthy Vice

Under the patronage of Worthy Vice Chancellor Prof. Dr. Bushra Mirza  
**Office of Research, Innovation & Commercialization LCWU**  
&  
**Lahore College Alumni Association (LCA)**

**WELCOME**  
**CHAOON FOUNDATION For Tree Plantation Event**  
at Lahore College for Women University

**12th October, 2021**  
**Tuesday**  
**2:00 PM**  
**Venue: Syndicate HALL, LCWU**

**Guests**  
Ms. Shanaz Raof kiani  
Founder  
Chairperson of Chaoon Foundation  
Prof. Shireen Asad  
Senior Vice President, LCA  
Dr. Maryam kiani  
Director Special projects of Chaoon Foundation  
Dr. Azhar Masood  
Director Horticulture

  
درخت لگائیں، چھاؤں بڑھائیں







## ORIC Annual Report 2021



### LCWU



Chancellor LCWU, Prof. Dr. Bushra Mirza, Mrs. Shahnaz Roof, founder of The Chaaon Foundation, Prof. Shireen Asad, Senior Vice President LCA and the ORIC Team. Under this campaign, several trees will be planted at the LCWU. While planting the trees, the vice chancellor LCWU, Prof. Dr. Bushra Mirza hoped at that this drive will play its due role in developing pollution-free green Pakistan by reducing the adverse weather effects. Team from Chaaon Foundation and LCA members then visited the LCWU History Museum by the courtesy of Prof. Dr. Faleeha Kazmi.



### Pinktober





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ORIC-LCWU, in collaboration with Chughtai Lab and participation by Department of Geography, Biotechnology, Home Economics and Urdu, celebrated Pinktober on 14<sup>th</sup> October 2021.

Dr. Sabrina Baig, a gynecologic oncologist, delivered a talk on breast cancer awareness to the students and faculty of above departments. This was followed by an awareness session by Dr. Eima Shaheen, a consultant dermatologist working with Chughtai Medical Laboratories.

Further, Chughtai Lab set up an exhibit in the veranda of Biotechnology Dept, where they offered free blood sugar testing, discounts on various other tests and special blue cards.

OFFICE OF RESEARCH INNOVATION & COMMERCIALIZATION  
IN COLLABORATION WITH CHUGHTAI LAB

Department of Biotechnology  
Department of Geography  
Department of Urdu  
Department of Home Economics

**BREAST  
CANCER**  
Awareness Session

**PINKTOBER**

Protective behaviors of prevention and early detection play an important role in decreasing the incidence of, and mortality from, breast cancer.

**OCTOBER 14 2021**  
11:00AM - 1:00PM

Venue : Biotechnology Seminar Room , LCWU

LAHORE COLLEGE FOR WOMEN UNIVERISTY







## Participation in Tree Plantation Drive

ORIC-LCWU team participated in a tree plantation drive organized by the Department of Botany, City & Regional Planning and the Estate Office.





# Entrepreneurship & Incubation



## Strengthening of Khadija-Tul- Kubra Business Incubation Centre

LCWU encourages its students to run their own startups so the students become job creators instead of job seekers and they can improve Pakistan's economy. ORIC-LCWU conducted meetings with various universities and industry partners with regards to strengthening of its Business Incubation Center (BIC) which has been renamed as Khadija-Tul- Kubra Business Incubation Centre, after the first female Muslim, a successful business women and the 1<sup>st</sup> wife of the Holy Prophet (PBUH), Hazrat Khadija Bint Khuwayalid (R.A). ORIC-LCWU under the visionary leadership of the Worthy Vice Chancellor, Prof. Dr. Bushra Mirza initiated the naming of BIC as we consider her a role-model as a businesswoman and are humbled and honored to attribute our BIC with her name. During the month of November 2021, Director ORIC-LCWU Dr. Engr. Aqsa Shabbir and Senior Manager ORIC-LCWU Dr. Muhammad Zia ul Haq held meetings with their ORIC counterparts and Vice Chancellors from Fatima Jinnah Medical University, Lahore and Home Economics University, Lahore



Meeting with ORIC team and Vice Chancellor, Prof. Dr. Aamir Zaman Khan, Fatima Jinnah Medical University, Lahore



Meeting with Director ORIC, Dr. Arshad Hashmi and team from Virtual University of Pakistan



Meeting with ORIC team and Vice Chancellor, Prof. Dr. Kanwal Amin from Home Economics University, Lahore.

## Leadership Skills to Sustain Entrepreneurial Venture

Dr. Engr. Aqsa Shabbir, Director ORIC, participated as a moderator for a panel discussion on Leadership Skills to Sustain Entrepreneurial Venture at Superior University on 17<sup>th</sup> November 2021. She emphasized on the power of having a dream and then practicing persistence for achieving entrepreneurial success.

## Unity Pathway into the Gaming Industry

Dr. Saima Farhan Chairperson Computer Science, in collaboration with ORIC-LCWU, organized a seminar on "Unity Employment Pathway into the Gaming Industry" on 3rd September 2021. This industry interaction with experts from Game Train provided an



SUPERIOR UNIVERSITY

## LEADERSHIP SKILLS TO SUSTAIN ENTREPRENEURIAL VENTURE



**DR. AQSA SHABBIR**

Director ORIC LCWU

As **Moderator** at Superior Entrepreneurial Forum on 17th November 2021



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overview of entrepreneurship in the field of Game Development and allied career opportunities in this field.

The session was well attended by more than 100 students and faculty members from the Computer Science Department. Dr. Saima Farhan, welcomed the participants and the team from Game Train. Dr. Aqsa Shabbir, Director ORIC, gave souvenirs to the visiting guests.





## Center for Entrepreneurship & Social Development

The Centre for Entrepreneurship and Social Development (CESD) was established after it was approved by the Syndicate in its 82<sup>nd</sup> meeting held on 5<sup>th</sup> October 2021. The center was conceived by Prof. Dr. Masooma Abbas Zaidi, Chairperson, Research Center of Arts & Design.

The center will enable the students to participate in the social and economic development of Pakistan. The trained interdisciplinary cohorts will prove to be future leaders of change in bringing practical solutions for socio-economic challenges and in bridging the gap between academia and Industry. Collaborations on national and international level projects will not only benefit the students but will be highly valuable for the Institution and its academic departments in terms of revenue and linkages. Crafting e-commerce business strategy for Start-ups and business models supported by technological knowledge will add great value to socio-economic development of Pakistan. Advance learning programs and market driven awareness will indoctrinate in women leaders the spirit of research, creativity, and innovation. It will also aid them in publishing their research and practical learning which will further support future businesses and social projects.

## How Academia Should Align with Leaders Expectations from Future of Workforce

Dr. Engr. Aqsa Shabbir, Director ORIC, LCWU participated as a panelist along with Mr. Imtiaz Rastgar, Chairman of the Board, Rastgar Group in a session: "How Academia Should Align with Leaders Expectations from Future of Workforce" at Work Re-Imagine Summit 2.0 organized by AIM Consulting on Saturday, 10<sup>th</sup> July 2021. The session was moderated by Mr. Imran Jattala, Co-Founder & CEO Innovators Garage.



## Meeting of Industrial Advisory Board

Electrical Engineering Department in collaboration with ORIC-LCWU organized a meeting of their Industrial Advisory Board which was held on 2<sup>nd</sup> July, 2021.



Prof. Dr. Engr. Intesar Ahmed, Dean Faculty of Engineering and Technology, Dr. Engr. Sadia Murawwat, Chairperson Electrical Engineering along with the faculty of Electrical Engineering Department attended this meeting. Discussion on courses related to Electrical Power, student internships, R&D and industry based final year projects was held.

## Entrepreneurship Sessions by TiE

ORIC-LCWU in collaboration with The Indus Entrepreneurs Islamabad (TiE) and S&P Global has initiated an entrepreneurship to promote entrepreneurship and innovation among students. This training provided guidance to students to bring their ideas to life. All female students were registered on Micromentor.

Micromentor is a platform where entrepreneurs can connect with mentors and have one on one conversations with them and get the maximum benefit of their knowledge. The registration was



free of cost. Following sessions were conducted:

- Investment and Pitching
- How to Make an Effective CV (Part 1)
- How to Make an Effective CV (Part 2)
- Digital Marketing (Part 1)
- Digital Marketing (Part 2)

## Meet and Greet Session with Industry Experts

ORIC organized a meet and greet session with industry experts for the students and faculty of Electrical Engineering in April 2021. The session was facilitated by the Chairperson, Dr. Engr. Sadia Murawwat, faculty and staff of Electrical Engineering Department.



Besides giving their valuable inputs to student in preparing a final year project that meet industrial demands the industry experts had a detailed discussion with students guided by the following question:

1. How can the cyclical, fast-paced timetable of academic semesters effectively engage meaningfully with industry? What is the best form and optimum length of a student-industry engagement experience?
2. At what stage are student-industry engagement projects most appropriate, and most beneficial?
3. How can industry be incentivized to engage with university students?



## Online Entrepreneurship Boot Camp

ORIC-LCWU in collaboration with Innovators Garage organized a five-days online Entrepreneurship Bootcamp from 1<sup>st</sup> to 5<sup>th</sup> February 2021 from 3:00 to 5:00 pm. Students from various Departments of LCWU attended this bootcamp. The theme of the bootcamp was leadership, productivity, design thinking, customer centric approach, social innovation, marketing and sales. Entrepreneurs from various organizations such as IBM, CEO, The Feel and Media person attended this boot camp. The boot camp ended with the vote of thanks from Ms. Shabila Fayyaz from ORIC team.





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# Boards, Committees & Policies





## University Research & Innovation Board (RIB)

As per HEC's revised ORIC policy no. 15-54/Coord/2019/HEC/(R&D)/211, dated March 11, 2021, LCWU established an **ORIC steering committee** which is named/referred to as University Research & Innovation Board (RIB). RIB is the governing body for ORIC and has the pivotal role of providing strategic leadership and governance oversight. It's intended for providing dedicated advice for enabling decisions and actions to be taken in accordance with the objectives, approach, and scope of the ORIC. Further, it would also review the performance of ORIC in line with the devised KPIs and strategic plan and guide the ORIC leadership by providing effective oversight and evaluations.

### Chair

**Prof. Dr. Bushra Mirza (T.I.)**

The Worthy Vice-Chancellor, LCWU

### Co-Chair (From Industry)

**Mrs. Tehmina Saeed Chaudhury**

The Data Group,

Executive Committee Member LCCI

Alumni of LCWU

## Industrial Members

**Mr. Abdul Basit**

Big Bird

Ex President LCCI

**Mr. Wasif Waseem Ashraf**

360 Degree Consulting

Chairman Taskforce for Employment & Job Data

Centers, Ministry of HRD and Labour Punjab

Renowned Recruitment Firm

**Mr. Qasim Ali Shah**

Qasim Ali Shah Foundation

Trainer, Author and Public

Speaker

**Mr. Shahrukh Jamal Butt**

Former Chairman Lahore Parking Company (LePark)

Managing Director Beco Lights

Member Governor Punjab Social Welfare Committee

**Prof. Dr. Engr. Suhail Aftab Qureshi**

South Asian Electrical Concern

Ex-Dean, Faculty of Electrical Engineering, UET Lahore



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### International Members

**Dr. Qammer Hussain Abbasi**

Professor, James Watt School of Engineering, University of Glasgow.  
An Eminent Scientist and Academic

**Mr. Danish Siddiqui**

Product Owner,  
Arriver, Michigan, USA

**Ms. Sara Ilyas**

Software Development Engineer  
Amazon, Seattle, USA

### University Members

**Dr. Engr. Aqsa Shabbir**

Director ORIC  
Permanent Member

**Dr. Muhammad Fiaz**

Chairperson Management Sciences

**Prof. Dr. Amina Moazzam**

Director Research  
Permanent Member

**Prof. Dr. Masooma Abbas Zaidi**

Chairperson Research Centre of Arts & Design

The inaugural meeting of RIB was held on 23<sup>rd</sup> June 2021 in the Syndicate Hall, Bushra Mateen Building. The Worthy Vice chancellor, Prof. Dr. Bushra Mirza welcomed everyone and talked about the importance of Research and Innovation for the progress of university. Director ORIC, Dr. Engr. Aqsa Shabbir briefly described the background, functions and achievements of ORIC office. She then presented the 5-year strategic plan in detail along with the future proposals of commercialization and consultancies such as providing translation service, psychological consultation, selling arts and crafts products on e-commerce website. Prof. Dr. Masooma Abbas then presented the agenda of formation of Center for Entrepreneurship





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& Social Development (CESD) for inculcating entrepreneurship in women. The board members unanimously approved the ORIC 5-year strategic plan and the formation of CESD.

Industry members and international members appreciated the efforts and endeavors of ORIC-LCWU while stressing that university-academic linkage should be strengthened.

## Research Ethics Institutional Review Board

Research Ethics Institutional Review Board (IRB) was established and notified on 21.04.2021. IRB, as a sub-committee of ORIC-LCWU operates with the following guiding principles:

- Operates procedures no less rigorous than those suggested or required by relevant statutory or professional bodies.
- Is impartial, supportive, developmental and dedicated to the promotion of ethical standards in research.



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- Ensures that proposals are scientifically sound without making judgements on quality as many projects are undertaken within a learning environment.
- Considers taking specialist advice where required on the insurance, liability and other legal implications of activities.

IRB is mandated with recommending and formulating policies and procedures for the ethical conduct of research. It advises university bodies, staff and students, as appropriate, on all matters pertaining to the ethics of research. Further, it can issue guidelines and codes of practice, where appropriate on any matter pertaining to research ethics. Further, it liaises with external research ethics committees and considers the ethical implications of all research involving human participants, the processing of personal data, or animal subjects carried out at LCWU or under the auspices of LCWU.

## Current Members

### Director ORIC

Convener

(Permanent Member)

Dr. Engr. Aqsa Shabbir

Expertise: Electrical Engineer & University Research, Innovation and Commercialization

### Director Research

(Permanent Member)

Prof. Dr. Amina Muazzam

Expertise: Psychologist & University  
Research and Advanced Studies & Research  
Board

### Director Academics

(Permanent Member)

Prof. Dr. Safia Anjum

Expertise: Physicist & University Academic  
Planning

### Dr. Roheena Abdullah

Expertise: Life Scientist (Biotechnologist)

### Dr. Samia Nasreen

Expertise: Economist

### Dr. Huma Tauseef

Expertise: Computer Scientist

### Dr. Ali Sharif

Expertise: Pharmacist  
Co-opted Member

### Dr. Muhmmad Zia ul Haq

Expertise: Law, Intellectual Property,  
Technology Transfer  
Co-opted Member

### Dr. Sahar Zia

Expertise: Earth Scientist & University  
Research Management  
Secretary

## Inaugural Meeting of IRB



The inaugural meeting of IRB was held on Monday, 26<sup>th</sup> April 2021. In the first meeting, 35 NRPU and 1 NCGSA project were cleared for issuance of research ethics certificate. The working on Institutional Research Ethics Policy was initiated.



## 2<sup>nd</sup> Meeting of IRB

2<sup>nd</sup> meeting of IRB was held on 21<sup>st</sup> June 2021. Dr. Huma Tauseef presented the first draft of Research Ethics Policy and Dr. Muhammad Zia ul Haq presented the first draft of Research Conflict of Interest Policy. After rigorous deliberation Research Ethics Policy, Research Conflict of Interest Policy and Research Conflict of Interest Disclosure Form were approved.





## 3<sup>rd</sup> Meeting of IRB

3<sup>rd</sup> meeting of IRB was held on 27<sup>th</sup> September 2021. Structure and formation of departmental research ethics committees was finalized, and the 3 projects shortlisted for submission to



HEC under the Local Challenge Fund were cleared for issuance of a research ethics certificate.

## Intellectual Property Committee (IPC)

Intellectual Property Committee was established and notified on 09.06.2021 as a sub-committee of ORIC LCWU. The purview of the committee will include IP generated by both staff/faculty and students (undergraduate and postgraduate). For the purposes of these terms of reference, IP will include, but not be limited to, Copyright, Trademark/Service mark, Patent, Industrial design, Prototype and Layout Design. Following are the members of this committee:

### Current Members

#### Director ORIC

Convener

(Permanent Member)

Dr. Engr. Aqsa Shabbir

**Prof. Dr. Erum Akbar Hussain**

Tenured Professor of Chemistry

**Dr. Shagufta Naz**

Tenured Associate Professor of Zoology

**Dr. Ali Sharif**

Assistant Professor Pharmacy

**Dr. Zia-ul-Haq**

Senior Manager ORIC

(Secretary)



## Inaugural Meeting of IPC

Inaugural meeting of Intellectual Property Committee was held on 10<sup>th</sup> June 2021. Dr. M. Zia-ul-Haq, Senior Manager ORIC, explained the patent filing process to all the members in detail. He then presented the draft of the Intellectual Property Policy. The draft was deliberated upon and then approved by the committee members.



## ORIC participates in Advanced Studies and Research Board (ASRB)

Director ORIC attended ASRB in June, 2021 and gave an overview of university's research achievements over the last year. Then as per HEC's guidelines she highlighted the Priority Areas of Research for MS/MPhil/PhD thesis. It was decided that in future, all the research and resulting thesis must focus on the 17 Sustainable Development Goals or attempt to solve an industrial problem.

