3rd International Conference on Innovations in Computer Science and Software Engineering (ICONICS'22)

Description

The Department of Computer Science and Information Technology and the Department of Software Engineering, NED University of Engineering & Technology successfully organised the 3rd International Conference on Innovations in Computer Science & Software Engineering (ICONICS'22) on December 14-15, 2022. ICONICS'22 was technically co-sponsored by IEEE. The conference was in line with the aims and objective of UNESCO Chair Sustainable Urban Regions established at the university. The speakers of the conference shed the light about the role of technology on the sustainability of the cities and communities.

In the conference quality research work from national and international research community was presented having direct or indirect impact on the following SDG's;

SDG-3- Good Health and Well Being
SDG-4 – Quality Education
SDG-9 – Industry Innovation and Infrastructure
SDG-11- Sustainable Cities and Communities

Information Technology is being used in almost all domains of life and innovation in the field is integral for development of society. The Conference aims to provide a forum for researchers from academia and industry to meet and share cutting-edge development in the field of Computer Science and Software Engineering. It seeks to bring together a wide spectrum of international experts to help create a conducive environment for promoting collaboration and knowledge transfer. Researchers have presented their research work related to AI in healthcare, focusing on development of a game to improve mental health (SDG-3). Another research group worked on classification of diabetes dataset (SDG-3) and provided promising results. Researchers also presented their work on the use of crops for monitoring health of crops (SDG-9 & SDG-11), and developed tools for text processing (SDG-4), analysis of sentiments to improve businesses using data mining techniques (SDG-9). Best research was presented on the classification of real and fake news which was directly related to the well -being of our society and the reputation of industries. It is anticipated that the research scholars attending the conference will also address the issues pertaining to the development of sustainable cities and communities while also looking at the latest innovations in the industry and infrastructure.

Summary of Highlights of Conference

The two-day conference included seven keynote speeches, delivered by the delegates from five international and two national experts, from USA, Germany, UK, Malaysia and Pakistan. 110 research papers were submitted and only 28 research papers were accepted after each research paper was reviewed by at least two reviewers. The acceptance rate of 3rd ICONICS is therefore only 25%. Members of the technical programme committee who reviewed the research papers were carefully selected based on their area of research and expertise which includes reviewers from the United States of America, the United Kingdom, Malaysia, Jordan, Germany, Pakistan, Canada, Kingdom of Saudi Arabia and Iraq. Apart from the participation of many researchers from Pakistan, ICONICS'22 was also participated by numbers of international researchers including Germany, Canada, Iran, UK and USA. The conference comprised of seven technical sessions and the inaugural and closing ceremonies. Each session was moderated by a session panel comprising on international and national experts. Hundreds of attendees, paper presenters, keynote and students have benefited in many ways from this conference. The inaugural ceremony took place on 14th December at the Syed Mahmood Alam Auditorium, Main Campus NED University of Engineering & Technology was graced by the presence of worthy Vice Chancellor, Dr. Sarosh Hashmat Lodi, Prof. Dr. Muhammad Tufail, Pro-Vice Chancellor, Prof. Dr. Noman Ahmed, Dean (ISH). The Chief Guest for the conference inaugural ceremony was Mr. Asif Ikram (Honorable Secretary Information Science & Technology, Govt. of Sindh). The welcome address was delivered by Prof. Dr. Noman Ahmed, Dean (ISH). Followed by a keynote speech titled "Hoax News Validation Technique Using Similarity Algorithms" delivered by Prof. Datuk Ts. Dr. Shahrin Sahib, UTM Malaysia. Mr. Muhammad Umair Sheikh, Director Sales - Pakistan & Afghanistan, Trend Micro talked on Industrial OT security challenges and guidelines in which he mentioned adopting common IT technologies by OT for digitalization like Industry 4.0, IIoT, AI and 5G have brought new security challenges. Greeting address was delivered by Engr. Prof. Dr. Shehnila Zardari, IEEE Computer Society representative and Chairperson SE. At the end the vote of thanks in the inaugural ceremony was given by Prof. Dr. Muhammad Mubashir Khan. The ICONICS'22 was generously sponsored by the Higher Education Commission Pakistan, TrendMicro, TELEC Electronics & Machinery (Pvt) Ltd, Octdaily and Mazik Global.

The closing session was held on 15th December which started with recitation of Holy Quran by Dr. Bilal Usmani. Dr. S. M. Tariq Rafi, Chairman Sind HEC was the Chief Guest of the closing ceremony. Two keynote speeches were delivered in the closing ceremony. First keynote speech titled "Disruptive Technologies in Education: Challenges and Future Prospects" was delivered by Prof. Dr. Jawwad Ahmed Shamsi, Professor and Dean (Computing) FAST NUCES. Second keynote speech titled "Pakistan the Next Frontier in Cyber Security '' was delivered by Prof. Dr. Kashif Kifayat, Director National Centre of Cyber Security. Finally, the concluding remarks and vote of thanks was presented by Prof. Dr. Shariq Mahmood Khan, Professor, Department of Computer Science & IT , NEDUET and Conference Secretary, ICONICS'22.

1. **Keynote Speakers**
   i. Prof. Datuk Ts. Dr. Shahrin Sahib, UTM, Malaysia
   ii. Prof. Dr. Agathe Merceron, Berlin University of Applied Sciences, Germany
   iii. Mr. Rehan Jalil, President & CEO Securiti, USA
   iv. Dr. Javaid Butt, Ruskin University, UK
   v. Dr. Gregoire Ribordy, CEO, idQuantique
   vi. Prof. Dr. Jawwad Ahmed Shamsi, Dean (Computing) , FAST NUCES, Pakistan
   vii. Prof. Dr. Kashif Kifayat, Director National Centre of Cyber Security, Pakistan

2. Conference in Pictures