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INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA
يونيفرسيتي إسلام انتارابغسا ملسيا
Garden of Knowledge and Virtue

LEADING THE WAY
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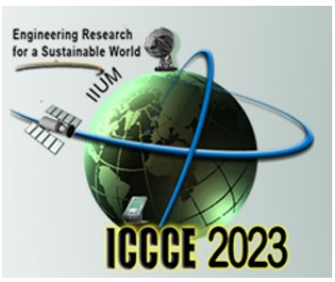

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MESSAGE FROM THE CHAIRMAN

Prof. Dr. Md Rafiqul Islam

Assalamualaikum warahmatullahi wabarakatuh,

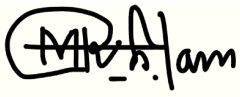
I would like to extend my warmest welcome to the participants of the 9th International Conference on Computer and Communication Engineering 2023 (ICCCE 2023) organized by the Department of Electrical and Computer Engineering (ECE), Faculty of Engineering, International Islamic University Malaysia (IIUM). The Department and the Faculty have been encouraged to organize bi-yearly ICCCE conferences by the enthusiasm and participation in the previous conferences which drawn from around the world. Our aim in establishing ICCCE series of IEEE supported and Scopus indexed conferences is to make it a landmark in the field of Computer and Communication Engineering, which provides a healthy atmosphere for intellectual exchange of thoughts and sharing of research findings among fellow colleagues, researchers, policy makers and students. The theme of the present conference is "Engineering Research for a Sustainable World".

The past ICCCE conferences, as well as the current one, has followed a strict regime of IEEE guidelines of blind-review process seconded by the experienced technical committee scrutiny to update the papers based on reviewers' comments and to comply with the template guidelines. The ICCCE2023 conference has achieved acceptance rates of around 71% out of 110 full paper submissions through EDAS from around 20 countries.

I would like to express my sincere gratitude to the organizing committee and everybody who has worked very hard to make this conference a reality and a success. I would like to express my deepest gratitude to the distinguished keynote speakers, International Advisory Board members and sponsors. I am also grateful to all the reviewers, as without their effort the high-quality standard for the conference could not have been maintained.

I wish all of you a pleasant hybrid experience and we hope that ICCCE 2023 will be a successful and enjoyable event for all participants. I would like to express my gratitude to the participants, members of the organizing committee, secretarial staff, and everyone who have worked hard to make this conference into reality. Finally, I hope that ICCCE 2023 will be successful and enjoyable to all participants.

Wassalam.



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KEYNOTE 1

HARMONIZING COMPUTER TECHNOLOGY, AI, AND ETHICAL ENGINEERING FOR A SUSTAINABLE FUTURES

Mr. Rafeek Ibrahim

Abstract: This keynote speech explores the intersection of computer technology, AI, and ethical engineering, emphasizing the need to address the ethical considerations that arise alongside technological advancements. It highlights the potential risks and benefits of these technologies and emphasizes the importance of ethical decision-making in their design and implementation. The speech emphasizes key principles of ethical engineering, interdisciplinary collaboration, and the role of education in nurturing a culture of ethical engineering. By harmonizing computer technology, AI, and ethical engineering, we can shape a sustainable future that aligns with our shared values and respects fundamental human rights.

Rafeek Ibrahim is a distinguished professional known for his remarkable contributions to the fields of engineering and management. With a diverse educational background and extensive experience in various leadership roles, he has made a significant impact on the global stage.

Rafeek's journey began with a solid academic foundation. He completed his undergraduate studies in Engineering, specializing in solid state physics. Driven by his passion for knowledge, he pursued a master's degree in the same field, delving deeper into the intricacies of solid state physics. However, he didn't limit himself to technical expertise alone. Recognizing the importance of business acumen in today's fast-paced world, Rafeek enrolled in an executive education program at Harvard Business School, focusing on data analytics, a crucial skill in the digital age.

Rafeek's professional career commenced in the field of IP Validation Engineering, where he honed his skills in ensuring the integrity and functionality of intellectual property. His expertise soon expanded to encompass Power Management, an area vital for optimizing energy usage and efficiency. With his extensive knowledge and experience in Power and Performance, Rafeek emerged as a subject matter expert in these domains.

Demonstrating his adaptability and leadership prowess, Rafeek held leadership positions in large engineering organizations across different countries. His expertise was sought after in the United States, Singapore, and Malaysia, where he led diverse teams of engineers and researchers. Through his strategic vision and effective management, Rafeek successfully steered these organizations towards groundbreaking achievements in research and development, as well as operational excellence.

As a testament to his contributions to the scientific community, Rafeek has published technical papers in prestigious journals such as IEEE and Springer. His research and findings have been shared and recognized in international conferences, further solidifying his reputation as an authority in his field. Moreover, Rafeek's commitment to innovation has resulted in the granting of two patents in the United States, highlighting his inventiveness and ability to translate ideas into tangible solutions.

Rafeek's dedication to fostering growth and knowledge extends beyond his own accomplishments. He actively participates as a mentor in the Intel Global Mentor Circle mentorship program, where he imparts his wisdom and guidance to senior leaders. Recognizing the importance of diversity and inclusion, Rafeek represents Malaysia in a global forum aimed at advocating for these values. As a member of the Intel Disability Leadership Council, he strives to create an inclusive environment that celebrates the unique contributions of individuals with disabilities.

In addition to his impressive professional achievements, Rafeek also serves as a consultant to the government, providing expertise on the Nation Robotics Roadmap. His valuable insights contribute to

shaping policies and strategies in the field of robotics, furthering the nation's technological advancements. Moreover, Rafeek holds an advisory role at the Economic Planning Unit, where he helps shape R&D policies that drive innovation and economic growth.

Recognized for his expertise and leadership, Rafeek sits on the University Advisory Board for multiple universities globally. His involvement in these esteemed institutions allows him to contribute to educational and research initiatives, providing guidance and insight to shape the future workforce in engineering and technology.

Throughout his career, Rafeek Ibrahim has seamlessly blended his technical expertise with his management skills, making him a trailblazer who bridges the gap between engineering and business. His commitment to research and development, combined with his strategic leadership, has paved the way for innovation and growth in the organizations he has led..

KEYNOTE 2

THE TREND AND IMPACT OF COMPUTER TECHNOLOGIES TO TELECOMMUNICATION

Mr. Tan Cheng Peng

Abstract: With the advancement of computer technologies, we see the increasing capabilities of telecommunication to connect, serve and impact lives of individuals and businesses. We will take a quick look on how we got here, and what impact has it made. Also looking forward, what we would be expecting computer technologies to have impact on how we deliver and use telecommunication.

Tan Cheng Peng, the Acting Chief Technology Strategy Officer, Maxis, is accountable for our technology strategy roadmap to ensure technology and network leadership in anticipation of industry trends and direction, with the right and optimum technologies, network features, capabilities, architecture to meet our current and future needs. He leads a team of technologists to develop technology strategy and long range network plan along the vectors of innovation, service quality, business objectives and customer experience by ensuring right technology & investment at the right time and right place with the view to increase network efficiency and performance while minimise cost, rework and single point of failure.

KEYNOTE 3

MALAYSIA RENEWABLE ENERGY ROADMAP

Mr. Saiful Hakim bin Abdul Rahman

Abstract: Moving forward, Malaysia aims to achieve a higher RE growth, from the existing 23% or 8.45 GW RE in its power installed capacity. Malaysia Renewable Energy Roadmap (MyRER) projected to increase the share of RE to 31% or 12.9 GW in 2025, and 40% or 18.0 GW in 2035. The RE Initiatives under this roadmap are expected to support Malaysia's commitment to greenhouse gas (GHG) emission reduction under the Paris Agreement led by the United Nations Framework Convention on Climate Change (UNFCCC). Malaysia's global climate commitment is to reduce its economy-wide carbon intensity (against GDP) of 45% in 2030 compared to 2005 level. Realization of the Government's vision is crucial in supporting the nation to achieve its Nationally Determined Contributions (NDC) targets. This talk will describe the identified resource potential, strategies, key actions, opportunities, current and future scenarios.

Mr. Saiful Hakim bin Abdul Rahman, has been in the utility and energy related business for over 28 years. He started his career with Distribution TNB scholar and served the distribution division for 17 years which provides him with vast experience in Distribution Network business. He then moved to United Kingdom and worked with Scottish and Southern Energy (SSE), one of the big 6 utilities in the UK based in Glasgow. Whilst in SSE, he was involved in Business Planning, Regulatory Reporting and Compliance, Asset Management and supporting the grid connections for Renewable Energy under the Transmission business. He worked closely with OFGEM, the Regulator for the UK utilities during that period in developing the Regulatory Reporting for the RIIO-T1 Regulatory Period. He developed his interest and enthusiasm on Renewable Energy whilst working there. Later he joined Landis+Gys AG, a Swiss based energy management company developing business on energy management solution such as smart metering and smart grid. Mr. Saiful Hakim obtained his Bachelor of Engineering in Electrical & Electronic Engineering from University of Brighton, United Kingdom in 1993 and MBA (Strategic Management) from Aston University, United Kingdom in 2011. During his MBA time he also attended Audencia Business School, Nantes in France for lectures.

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