Brief CV

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Research Area	Control System, Battery Energy Storage System, Automotive Electronic			
The member of IEEE or not	Senior Member IEEE 80260879			
The editor of some journal or not, and which journal.	Guest Editor of Special Issue, Processes, MDPI “Intelligent Algorithms and Control for Battery Management System"-			

Brief introduction of your research experience:

Mohd Khair Hassan was born in Melaka, Malaysia in Nov 1974. He received his BEng (Hons) degree in Electrical and Electronics from University of Portsmouth, United Kingdom in 1998 and MEng degree in Electrical Engineering from University of Technology Malaysia (UTM). He later completed his Ph.D. degree specializing in Automotive Engineering from University Putra Malaysia (UPM) in 2010. Currently, he is the Deputy Dean of Research and Innovation, Faculty of Engineering, University Putra Malaysia and a registered Professional Engineer in the field of Electronic under the Board of Engineers Malaysia (BEM). Additionally, he is a Malaysian Board of Technology (MBOT) -certified Professional Technologist. He is currently serving as vice-president of the Malaysian Society for Automatic and Control Engineers (MACE), also known as IFAC-MACE Malaysia, and is an IEEE senior member.

Control systems, battery system and AI applications, are among his areas of interest. His research team focuses on RUL prediction, energy management, battery balancing, and battery modelling. In journals, he has authored over 78 publications and authored 5 book chapters. Currently mentoring 16 PhD and 5 MSc students, he has graduated 12 PhD and 15 MSc students.

He also serves on the Engineering Accreditation Council (EAC) and Engineering Technology Accreditation Council (ETAC) panels that accredit Electrical and Electronic (EE) programmes appointed by the Malaysian Board of Engineers. He also serves as an external examiner for PhD and MSc students from Malaysian and international universities. Additionally, he serves as an evaluator and expert panel member for a variety of grant applications.

Speech Title: Circular Economy and Battery Ageing

Abstract:

Batteries play a crucial role in various industries, from electronics to electric vehicles and renewable energy storage. However, battery ageing, which refers to the gradual deterioration of a battery's capacity and performance over time, presents challenges in terms of sustainability and resource management. Embracing a circular economy approach can offer solutions to mitigate the environmental impact of battery ageing while maximizing the value extracted from used batteries.

Key Aspects:

1. Design for Longevity and Reparability:
2. Battery Health Monitoring and Maintenance:
3. Second-Life Applications:
4. Battery Recycling and Material Recovery:
5. Regulatory and Policy Frameworks:

Conclusion: The circular economy approach offers a comprehensive strategy to address the challenges posed by battery ageing. By designing batteries for longevity, implementing effective maintenance practices, exploring second-life applications, and establishing robust recycling systems, society can minimize the environmental impact of battery ageing while maximizing resource efficiency and sustainability in a world increasingly dependent on battery-powered technologies.

*******All the columns need to be filled in.**