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Administration Post

Director
Centre for Quality Assurance
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BRIEF DESCRIPTION ABOUT MYSELF

My academic strength lies in the field of Fluid Mechanics with a specialisation in the area of Computational Fluid Dynamics (CFD). My main contribution is in producing hybrid CFD solvers which embed mechanism of mesh/grid updating as well as introduce optimisation tool within the CFD solvers. As a result, I was invited by the Ministry of Science, Technology and Environment in 2002 to lead a project to develop a new monofuel direct injection engine using natural gas (referred to as CNGDI engine) in which the team also comprises other universities such as UPM, UM, UTP, UTM and UiTM as well as industrial collaborations, namely PROTON (the national automaker) and PETRONAS (the national oil producer). The prototypes of the engines are completed in 2006.

Based on this success, I was then invited to lead another top down project in 2008 to establish a grid computing facility for local automotive industries (referred to as AutomotiveGRID). The team comprises other local universities such as UPM, UM, UTM and UniKL and the industrial collaborators for this project are PROTON, MIMOS (national provider for networking and grid computing facility) and MyREN (owner of research connectivity among Malaysian public universities).

In addition, I also contribute my expertise to the development of new terminologies in the Malay language for Automotive Engineering discipline coordinated by Dewan Bahasa & Pustaka (the national authority for the Malay language) as well as to the development of some Malaysian Standards for engineering components coordinated by SIRIM (the national body for quality and standard).

Based on my skills in managing projects of multi-institutional and large-scale in nature, I was appointed as the Deputy Director (Quality Assurance) at the Centre for Corporate Planning and Communications in 2008 and then the founding Director for the Centre for Quality Assurance, where I am in charge on matters pertaining to Quality Assurance within the University as well as academic programme accreditation by Malaysian Qualification Agency and professional bodies. At the same time, I am give task to lead several university funded quality related research projects under the University's Transformation Plan on the establishment of several key systems for continual quality improvement within the University.

RESEARCH & INNOVATIONS

Has secured and managed more than RM 14 million worth research funding as project leaders. Among those are:

- Computationally Optimised Fuel Efficient Concept Car (MOSTI/TechnoFund), 2009-2011, RM 4,999,600.
- Development of the UKM Executive Information System (Research University Grant), 2009-2010, RM 1,150,000.
- Design of CNG-DI Piston for Extreme Temperatures and Pressures (Research University Grant), 2007-2010, RM 300,000.
- Development of Microexchanger for Liquid-Based Thermal Management in High-Performance Semiconductor Package (MOSTI/ScienceFund), 2007-2009, RM 218,000.
- Combustion and Ignition Studies of CNG/DI Automotive Engine (MOSTI/IRPA-PR), 2003-2006, RM 7,123,450.

Has four patent application filed and has won awards and medals in national and international exposition on inventions:

- Eureka Brussels 2006 (2 Gold Medals with Mentions)
- ITEX Malaysia 2007 (1 Gold Medal)
- ITEX Malaysia 2006 (1 Gold Medal)
- Seoul International Invention Fair 2004 (1 Silver Medal)
- Science & Technology Expo 2003 (1 Bronze Medal)

TEACHING & SUPERVISION

Masters Level

- Engineering Numerical Methods, Computational Fluid Dynamics, Advanced Fluid Mechanics, Manufacturing Process, Project Management, Applied Statistics for Industry, Professional & Personal Development.

Undergraduate Level

- Engine Design, Computational Fluid Dynamics, Tribology, Numerical Computations, Mathematical Methods, Basic Fluid Mechanics, Fluid Mechanics, Gas Dynamics, Statics, Dynamics, Design of Machine Components, Engineering Graphics.

Postgraduate Supervision

- 10 PhD students completed (3 as main supervisor)
- 25 MSc/MEng students completed (16 as main supervisor)
- Currently supervising 8 PhD students (6 as main supervisor) and 1 MSc students (as co-supervisor)

Final Year Undergraduate Level

- Has supervised more than 50 final year projects.

PROFESSIONAL QUALIFICATION/MEMBERSHIP

- Professional Engineer (Mechanical), Board of Engineers, Malaysia, no. 13935
- Corporate Member, Institute of Engineers, Malaysia, no. M18622
- EIA Consultant & Subject Consultant (Noise & Vibration), Department of Environment Malaysia, no. CS0543/SS0543
- Member of Society of Automotive Engineers (SAE), no. 6122244049
- Certified ISO 9001:2008 Auditor/Lead Auditor and MQA Assessor for Programme Accreditation

PUBLICATIONS & CONFERENCES

- 12 books (4 original books, 1 technical dictionary, 7 proceedings as editor/chief editor) and 3 chapters in books,
- 70 refereed journal articles (50 ISI WOS/SCOPUS Indexed) and more than 180 proceeding/technical papers (12 keynotes/invited papers, 81 international/regional conferences, 81 national/local conferences/seminars, 7 SAE Technical Papers).
- Has involved in 25 workshops and courses as speaker, moderator or facilitator.

CONSULTANCY PROJECTS

Has participated in more than 40 consultancy projects. The selected completed projects are:

- Preliminary Engineering, Economic and Environmental Studies on LRT3, Selangor, 2013-2014.
- EIA of Extension of Duta – Ulu Kelang Expressway (DUKE), Kuala Lumpur/Selangor, 2011-2013.
- EIA of Sungai Besi – Ulu Kelang Expressway (SUIKE), Kuala Lumpur/Selangor, 2011-2013.
- EIA of Damansara – Sungai Besi Highway (DASH), Kuala Lumpur/Selangor, 2011-2012.
- EIA on Epohydrochlorine (ECH) Plant at Kerteh, Terengganu, 2007.
- Macro EIA on Bandar Nusajaya, Johor, 2007.
- Finite Element Modelling and Reliability Studies of Wing Lugs in TUDM MIG-29 Aircrafts, 2003-2005.
- EIA on Double-Tracking Project with Electrification between Seremban-Johor Bahru, 2002.

INTERNATIONAL LEVEL ENGAGEMENTS

- ASEAN University Network Quality Assurance (AUN-QA) Lead Assessor for AUN Actual Programme Assessment, appointed by AUN (2013 onwards).
- Peer-Reviewer of Research Proposals for Qatar National Research Foundation (2012).
- Peer-Reviewer of Research Proposals for National Center of Science and Technology, Ministry of Education and Science, Kazakhtan (2011).
- Committee Member, 5th QS-APPLE Conference, QS/UM/UKM, 24-26 Nov 2009, Kuala Lumpur, Malaysia.
- Local Advisory Committee Members, 11th Asian Congress of Fluid Mechanics (ACFM 2006), Institution of Engineers, Malaysia.
- Committee Member, 2nd Asian Particle Technology Symposium (APT2003), Institute of Chemical Engineers Malaysia.

NATIONAL LEVEL ENGAGEMENTS

- Chairman of the Protem Committee of the Malaysian Quality Assurance Network (MyQAN) for Malaysian Institutes of Higher Learning (2013-2014).
- Chairman for the Expert Panel for the Cluster of Engineering Technology and Innovation, "Program Penerbitan Berpakej DBP, (2013-2015).
- Engineering Accreditation Council (EAC) Panel of Assessors for Engineering Programmes (2013-present).
- Chairman of the Council of Quality Management (MPQ) of Public Institutes of Higher Learning (2011-2013) appointed by JPT, Ministry of Education.
- Malaysian Qualifications Agency (MQA) Panel of Assessors for Mechanical Engineering & Thermofluids Programmes (2011-present).
- Evaluation Panel for MOSTI RD&C Funds (2010-2012).
- Committee Member of Society of Engineering Education Malaysia (SEEM) (2010/2011)
- Committee Member of Malaysian Tribology Society (MyTribos) (2010-present)
- Member of National Grid Technical Committee, MOSTI/KnowledgeGRID Malaysia (2009-present).
- Technical Committee on Machinery & Component Engineering, SIRIM & Standards M'sia (2006-present).
- Expert Panel for Automotive Engineering Discipline, Dewan Bahasa & Pustaka (2004-present).
- Working Committee for MS Standard on Plastic Pipes & Fittings, SIRIM (2000-2005).
- Member of Panel Interviewing Committee for HRD/NSF Fund, MOSTE (2002 – 2003)

ADMINISTRATION

- Director, Centre for Quality Assurance, UKM, 2011 – present.
- Member of Board of Directors, UKM Perunding Kejuruteraan dan Arkitek Sdn. Bhd., 2011 – 2013.
- Deputy Director (Quality Assurance), Centre for Corporate Planning & Quality, UKM, 2008 – 2011.
- Chairman, Committee for Development of UKM Quality Assurance Plan, 2009.
- Management Representative for MS ISO 9001:2000 Quality Documents for Management of Undergraduate Academic Programmes, UKM, 2008 – 2009.
- Internal Programme Assessor for MQA Code of Practice for Programme Accreditation for UKM, 2008 – present.
- Internal Auditor for MS ISO 9001:2000 Quality Management System for UKM, 2008 – present.
- Member, Taskforce Committee for Preparation of UKM Proposal for APEX University Bidding, 2008.
- Coordinator for ICT & Webmaster, Faculty of Engineering, UKM, 2007 – 2008.
- Coordinator for Industrial Training, Faculty of Engineering, UKM, 2003 – 2007.
- Committee Member, UKM Research and Innovation Exposition 2003 – 2005.
- Committee Member, 1st IPTA Research and Development Exposition 2001.

INDUSTRIAL COLLABORATION

Has performed numerous collaborative projects with Proton, Petronas, MIMOS, KnowledgeGRID Malaysia, MyREN, SIRIM, TUDM and Dewan Bahasa & Pustaka.