FACULTY CURRICULUM VITAE

Name: Dr. Wisam Al Saad
Rank: Associate Professor - Mechanical Engineering

Personal Information

Nationality:	Australian
AU Joining Date:	28 Aug 2016
E-Mail Address:	w.alsaadi@au.edu.kw

Professional Information

Education:	**Qualification:** Doctorate **Major:** Mechanical engineering **College/University:** Monash University, Australia **Year:** 2012 **Qualification:** Masters **Major:** Mechanical engineering **College/University:** Al-Mustanceryia University **Year:** 2001 **Qualification:** Bachelor **Major:** Mechanical engineering **College/University:** Baghdad University **Year:** 1992
Specialization:	Computational Fluid Dynamics and Heat Transfer
Current Academic Position:	Associate Professor - Mechanical Engineering
Current Professional Positions:	Research Associate/ Monash University/ Australia
Previous Administrative Position Held:	NA

Previous Academic Positions Held:	Lecturer/ Electromechanical Engineering/ University of Technology Teaching Associate/ Mech. & Aerospace Eng/ Monash University Research Associate/ Mech. & Aerospace Eng/ Monash University
Fellowships And Honors:	- Awarded a highly competitive full scholarship to study PhD degree at Monash University 2007
Teaching Experience:	- Associate Professor/ Mechanical Eng. Dept./AU 2021 – Present - Assistant Professor/ Mechanical Eng. Dept./AU 2016 – 2021 - PhD research Students supervision- HDR supervision, Monash University, Australia - Teaching Associate/ Mechanical & Aerospace Eng./ Monash University/2008-2016 - Lecturer/ Electromechanical Eng./ University of Technology/ Iraq/ 2001-2008
Industrial And Technical Experience:	Giving consultations and guidance to local companies and institutions, mainly in the design of heating and air-conditioning systems, solar energy heating system, heat exchangers and evaporative cooling towers. **Key Responsibilities** - Design & analysis the performance of closed-type evaporative cooling tower for Baghdad International Airport - Enhance the performance of heat exchangers in steam power stations - Design of HVAC systems **Consulting record** - HVAC – Baghdad International Airport - Glass Industry - Al Anbar Ministry of Industry
Research Interest:	- Hybrid Renewable Energy Systems Modelling and optimization - Heat Transfer Enhancement with Nanofluids - Renewable Energy and Energy Saving - Magneto-Hydrodynamics (MHD) - Computational Fluid Dynamics (CFD) - Natural Convection Driven Flow

Research Grants:	**KFAS Grant: Project Code (CRI-45EM-01)** Dr. Wisam Al Saadi and Dr. Md Nurun Nabi, " Assessment of exhaust emissions, engine performance and comparative toxicology of waste (biomass) derived fuels", 2023, (**$100,000**) - **KFAS Grant: Project Code (PN19-35EM-02)** Dr. Wisam Al Saadi, "Design of a Small-Scale Hybrid Photovoltaic/Solar Chimney Power Plant for Electricity Generation in Kuwait," 2019-2021, (**$20,000**) - **KFAS Grant: Project Code (CRI-45EM-01)** Dr. Wisam Al Saadi and Dr. Md Nurun Nabi, " Development of the engine simulation model and experimental investigation of engine performance, combustion and exhaust emissions with waste-tire derived fuels.," 2019-2021, **($41,000**) - **AU internal Fund: Project code (IRC-2017-18-COE-ME-PR11)** Dr. Wisam Al Saadi and Dr. Khalil Khanafer, "Effect of Nanoparticles on Heat Transfer Characteristics of Concentric Tube Heat Exchanger,", 2017-2018, ($7,000) - Succeeded in application for time allocations on the National Facility of the Australian Partnership for Advanced Computing (APAC) and the National Computational Infrastructure (NCI) organization – round 2015, Role: Chief Investigator, Title of Project: Rotating horizontal convection at high Rayleigh number. This grant carries a total dollar value of over $50,000, and supports the research activities of the group as well as postgraduate students under my supervision
Research and Publications including Journal and Books:	- **Hussam, W.K.**, El Manaa, B., Abdul-Niby, M., Sheard, G.J. 2024 Techno-economic analysis and optimization of hydrogen production from renewable hybrid energy systems: Shagaya renewable power plant-Kuwait. *International Journal of Hydrogen Energy* 58 (2024) 56-68 ***Impact* Factor *7.567*** - A. Sedaghat, R. Kalbasi, R. Narayanan, A. Mehdizadeh, S. M. Soleimani, M. A. Malayer, M. I. Al-Khiami, H. Salem, **W. K. Hussam**, M. Sabati, M. Rasul, and M. M. K. Khan, "Integrating solar PV systems for energy efficiency in portable cabins: A case study in Kuwait," Solar Energy, vol. 277, p. 112715, 2024. ***Impact* Factor *7.465*** - A. Sedaghat, S. M. Soleimani, M. I. Al-Khiami, M. Sabati, **W. K. Hussam**, H. J. Salem, M. Rasul, R. Narayanan, M. M. K. Khan, M. A. Malayer, and A. Mehdizadeh, "Case studies on energy performance of walling materials in

various regions," International Journal of Environmental Science and Technology, pp. 1-28, 2024
Impact* Factor *3.944

- M. Al Sarheed, A. Sedaghat, M. A. Malayer, H. Salem, S. A. A. Oloomi, **W. K. Hussam**, and A. A. Al Anazi, "Experimental and computational study on thermal performance of wood-plastic composites in building envelope," Special Topics & Reviews in Porous Media - An International Journal, vol. 15, no. 1, pp. 1-24, 2024.

Impact* Factor *1.6

- Sedaghat, A.; Mahdizadeh, A.; Narayanan, R.; Salem, H.; **W.K. Hussam,** Al-Khiami, M.I.; Malayer, M.A.; Soleimani, S.M.; Sabati, M.; Rasul, M.; et al. Implementing Cool Roof and Bio-PCM in Portable Cabins to Create Low-Energy Buildings Suitable for Different Climates. Sustainability 2023, 15, 14700.

Impact* Factor *4.364

- Sedaghat, Ahmad, Hayder Salem, **Wisam K. Hussam**, Arash Mahdizadeh, Mohamad Iyad Al-Khiami, Mahdi Ashtian Malayer, Sayed M. Soleimani et al 2023 Exploring energy-efficient building solutions in hot regions: A study on bio-phase change materials and cool roof coatings." Journal of Building Engineering 76 (2023): 107258.

Impact* Factor *7.452

- **Hussam, W.K**., Salem, H.J., Khlefat, A. M., Redha, A.M., & Al Khatib, F. 2022 Experimental and numerical investigation on a hybrid solar chimney-photovoltaic system for power generation in Kuwait. *Energy Conversion and Management: X* 15 (2022)100249

Impact* Factor *6.506

Saleem, K.B., Marafie, A., Al-Farhany, K., **Hussam, W.K.**, & Sheard, G.J. 2023 Natural convection heat transfer in a nanofluid filled L-shaped enclosure with time-periodic temperature boundary and magnetic field. Alexandria Engineering Journal 69, 177-191.

Impact Factor 8.0

- *Saleem, K.B., Marafie, A., Al-Farhany, K., Hussam, W.K., & Sheard, G.J. 2023 Natural convection heat transfer in a nanofluid filled L-shaped enclosure with time-periodic temperature boundary and magnetic field. Alexandria Engineering Journal 69, 177-191.*
  Impact Factor 8.0
- Nabi, Md Nurun, **Hussam, W.K.**, Afroz, Hasan Mohammad Mostofa, Rashid, Adib Bin, Islam, Jahidul & Mukut, ANM Mominul Islam 2022 Investigation of engine performance, combustion, and emissions using waste tire Oil-Diesel-Glycine max biodiesel blends in a diesel engine. *Case Studies in Thermal Engineering* 39 (2022)102435.

Impact Factor ***6.38***

- Nabi, Md Nurun, **Hussam, W.K.**, Islam, M.T. & Muyeen, S.M. 2022 Assessment of the Influence of hydrogen share on performance,

combustion, and emissions in a four-stroke gasoline engine. *IEEE Access (2022).*
Impact Factor 4.66

- Nabi, Md Nurun, Ahmed, S.E. and Abderrahmane, A. and Alotaibi, S. and Younis, O. and Almasri, R.A and Hussam, **W.K.** 2022 Enhanced Heat Transfer for NePCM-Melting-Based Thermal Energy of Finned Heat Pipe. *Nanomaterials 12 (2022) 129.*

Impact Factor 5.075

- **Hussam, W.K.**, Khlefat, A. M., & Sheard, G.J. 2021 Energy Saving and Performance analysis of Air-cooled Photovoltaic Panels. *International Journal of Energy Research* 46 (2021)4825–4834.

Impact Factor 4.506

- **Hussam, W.K.**, Nabi, Md Nurun, Chowdhury, Md Wahid, Hoque, Md Emdadul, Rashid, Adib Bin, & Islam, M.T. 2021 Fuel property improvement and exhaust emission reduction, including noise emissions, using an oxygenated additive to waste plastic oil in a diesel engine. Biofuels, Bioproducts and Biorefining (2021).

Impact Factor 4.528

- Murali, S., **Hussam, W.K.** & Sheard, G.J. 2020 Heat transfer enhancement in quasi-two-dimensional magnetohydrodynamic duct flows using repeated flow-facing wedge-shaped protrusions. International Journal of Heat and Mass Transfer 171 (2021) 121066. ***Impact Factor 4.947***

- **Hussam, W.K.**, Rahbari, H. R., & Arabkoohsar, A. 2020 Off-design operation analysis of air-based high-temperature heat and power storage. Energy 196, 117149.

Impact Factor 5.537

- Tsai, T. K., **Hussam, W.K.** & Sheard, G.J. 2020 Transitions and scaling in horizontal convection driven by different temperature profiles. International Journal of Thermal Sciences 148, 106166.

Impact Factor 3.361

- **Hussam, W.K.**, Khanafer, K., Salem, H.J. & Sheard, G.J. 2019 Natural convection heat transfer utilizing nanofluid in a cavity with a periodic side-wall temperature in the presence of a magnetic field. International Communications in Heat and Mass Transfer 104, 127-135.

Impact Factor 4.113

- **Hussam, W.K.**, Hamid, A.H.A, Ng, Z. H. & Sheard, G.J. 2018 Effect of vortex promoter shape on heat transfer in MHD duct flow with axial magnetic field. International Journal of Thermal Science 134, 453-464.

Impact Factor 3.361

- Sapardi, A.M., **Hussam, W.K.**, Potherat, A. & Sheard, G.J. 2017 Linear stability of confined flow around a 180-degree sharp bend. FluidMechanics 822, 813-847.

Impact Factor 2.294

- Hamid, A.H.A, **Hussam, W.K.** &Sheard, G.J. 2016 Heat transfer augmentation of a quasi-two-dimensional MHD duct flow via electrically driven vortices. Numerical Heat Transfer Part A-Applications 70 (8), 847-869.

Impact Factor 1.975

- Tsai, T. K., **Hussam, W.K.** & Sheard, G.J. 2016 The effect of the forcing temperature profile on horizontal convection flows. Under consideration for publication in International Journal of Heat and

Mass Transfer.

Impact Factor 2.522

- Tsai, T. K., **Hussam, W.K.** & Sheard, G.J. 2016 The source of instability in horizontal convection. International Journal of Heat and Mass Transfer 94, 509-515.

Impact Factor 2.522

- Oliver G W. Cassells, **Hussam, W.K.** & Sheard, G.J. 2016 Heat transfer enhancement using rectangular vortex promoters in confined quasi-two-dimensional magnetohydrodynamic flows. International Journal of Heat andMass Transfer 93, 186-199.

Impact Factor 2.522

- Hamid, A.H.A, **Hussam, W.K.** & Sheard, G.J. 2016 Combining an obstacle and electrically driven vortices to enhance heat transfer in a quasi-two-dimensional MHD duct flow. Journal of Fluid Mechanics 792, 364-396.

Impact Factor 2.294

- Hamid, A.H.A, **Hussam, W.K.** & Sheard, G.J. 2015 Spatial evolution of a quasi-two-dimensional Karman vortex street subjected to a strong magnetic field. Physics of Fluids 27 (5), 053602.

Impact Factor 1.94

- Sheard, G.J., **Hussam, W.K.** & Tsai, T. K. 2016 Non-axisymmetric linear stability of rotating radial horizontal convection. Journal of FluidMechanics 795, 1-35.

Impact Factor 2.294

- Ng, Zhi Y., Vo, T., **Hussam,W.K.** & Sheard, G.J. 2016 Two-dimensional wake dynamics behind cylinders withtriangular cross-section under incidence angle variation. Journal of Fluids and Structures 63, 302-324.

Impact Factor 2.021

	- **Hussam,W.K.**, Tsai, T. K. & Sheard, G.J. 2014 Radial horizontal convection in a rotating cylindrical container. International Journal of Heat andMass Transfer 77, 46-59. ***Impact Factor 2.522*** - **Hussam,W.K.** & Sheard, G.J. 2013Heat transfer in a high Hartmann numberMHDduct flow with a circular cylinder placed near the heated side-wall. International Journal ofHeat andMass Transfer 67, 944-954. ***Impact Factor 2.522*** - **Hussam, W.K.**, Thompson, M.C. & Sheard, G.J. 2012 Enhancing heat transfer in a high Hartmann number magnetohydrodynamic channel flow via torsional oscillation of a cylindrical obstacle. Physics of Fluids 24 (3), 113601. ***Impact Factor 1.94*** - **Hussam, W.K.**, Thompson, M.C. & Sheard, G.J. 2012 Optimal transient disturbances behind a circular cylinder in a quasi-two-dimensional magnetohydrodynamic duct flow. Physics of Fluids 24 (2), 024150. ***Impact Factor 1.94*** - **Hussam, W.K.**, Thompson, M.C. & Sheard, G.J. 2011 Dynamics and heat transfer in a quasi-twodimensional MHD flow past a circular cylinder in a duct at high Hartmann number. International Journal of Heat andMass Transfer 54 (5), 1091-1100. ***Impact Factor 2.522*** - **Hussam,W.K.** 2006 Effect of Air flow on Heat transfer within Dynamic BuildingWalls. Engineering and Development 10 (4), 181-195. Sharif, N. S., **Hussam,W. K**. & Makki,W. A. 2005 Prediction the Thermal Performance of Mechanical Draft Counter Flow Cooling Tower of Closed Type. Engineering and Development 9 (4), 67-77.
Paper Presentations at Professional Conferences:	- Ahmad Sedaghat, Arash Mahdizadeh, Hayder Salem, **Wisam K. Hussam**, Mohamad Iyad Al-Khiami, Aiyad Gannan, Development of Novel Portable Cabins for Low Energy Buildings Research in Kuwait, the first GCC Engineering Symposium (*GCCENG23*), 29-31 October 2023, Kuwait University, Kuwait. - Ahmad Sedaghat, Hayder Salem, Wisam K. Hussam, Arash Mahdizadeh, Mohamad Iyad Al-Khiami, Mahdi Ashtian Malayer, Experimental Study on Cool Roof Methods for Two Identical Portable Cabins in the State of Kuwait, Proc. International Conference on Mechanical, Automotive and Mechatronics Engineering **(ICMAME 2023)**, 29-30 April 2023, Dubai, UAE. - Ahmad Sedaghat, Hayder Salem, **Wisam K. Hussam**, Arash Mahdizadeh, Mohamad Iyad Al-Khiami, Sayed Mohamad Soleimani, Mohammad Sabati, Mohammad Rasul, Ramadas Narayanan, Masud M. K. Khan, Mahdi Ashtian Malayer, Development of a Novel Low-Energy Building: Effects of Climates and PCM Materials, 11th International Conference on Indoor Air Quality,

Ventilation & Energy Conservation in Buildings (*IAQVEC2023*), 20–23 May 2023, Tokyo, Japan.

- Sedaghat, Salem, H., **Hussam, W.K.**, Al-Khiami, M., A., M., Mehdizadeh, Soleimani, S.M., Sabati, M., Rasul, M.,Narayanan, R., Khan, A., & Malayer, M.A. 2022 Development of a Novel Low-Energy Building: Effects of Room Orientation and Wall Materials. *ICMSET 2022*: 11th International Conference on Material Science and Engineering Technology, November 26-28, 2022.

- Nabi, Md. Nurin, **Hussam, W.K.** & Muyeen S. M. 2022 Improved engine performance and significantly reduced greenhouse gas emissions by fumigating hydrogen in a diesel engine. *ICACER 2022*: 7th International Conference on Advances on Clean Energy Research (Pub: Energy Reports), Virtual Conference, April 20-22, 2022, Barcelona, Spain

- Nabi, Md Nurun,**Hussam, W.K.**, Rashid, Adib Bin, Islam, Jahidul, Islam, Shamiul & Afroz, Hasan Mohammad Mostofa 2022 Notable improvement of fuel properties of waste tire pyrolysis oil by blending a novel pumpkin seed oil biodiesel. *ICACER 2022*: 7th International Conference on Advances on Clean Energy Research (Pub: Energy Reports), Virtual Conference, April 20-22, 2022, Barcelona, Spain.

- **Hussam, W.K.**, Hayder, S.J., Khanafer, K., Mohammed Redha, A., Khlefat, A.M. & Hayder, A.R. 2021 Performance Evaluation of a Hybrid Solar Chimney-Photovoltaic Power Plant for Electricity Generation. ASTEF 2021: 5th-6th Thermal and Fluids Engineering Conference (TFEC) (Pub: ASTFE Digital Library, Begel House Inc),
  Virtual Conference, May 26-28, 2021.

- **Hussam, W.K.**, Feeli, A. & Sheard, G.J. 2020 Efficiency Enhancement of Photovoltaic Panels using an Optimised Air-Cooled Heat Sink. *ICPSEPT 2020:* 22th International Conference on Photovoltaic Solar Energy and Power Technology, United Kingdom during Apr 23-24, 2020.

- Tsai, T., **Hussam, W.K.** & Sheard, G.J. 2018 Dynamics of rotating horizontal convection with a moving heated surface. In *Proceedings of the 21st Australasian Fluid Mechanics Conference* (Eds: T.C.W. Lau & R.M. Kelso, Pub: Australasian Fluid Mechanics Society, ISBN: 978-0-646-59784-3), 509. Conference: 21st Australasian Fluid Mechanics Conference, Adelaide Convention Centre, Adelaide, South Australia, Australia, 10-13 December 2018
- Ahmad H. A. Hamid, **Hussam, W.K.** & Sheard, G.J. 2016 Current injection vortex promoter for heat transfer enhancement in a magnetohydrodynamic duct flow. In *Proceedings 5th International Conference on Advances in Civil, Structural and Mechanical Engineering (ACSM)* (Pub: The Institute of

Research Engineers and Doctors, ISBN: 978-1-63248-105-4), ACSM-16-218. Conference: The Fifth International Conference on Advances in Civil, Structural and Mechanical Engineering - ACSM, Bankok, Thailand, 25-26 September 2016.

- Ng, Z., Vo, T., **Hussam, W.K.** & Sheard, G.J. 2016 Linear instabilities in the wakes of cylinders with triangular cross-sections. In *The 20th Australasian Fluid Mechanics Conference Proceedings* (Eds: G. Ivey, T. Zhou, N. Jones & S. Draper, Pub: Australasian Fluid Mechanics Society), paper 630. Conference: The 20th Australasian Fluid Mechanics Conference, The University of Western Australia, Perth, WA, Australia, 5-8 December 2016.

- Ahmad H. A. Hamid, **Hussam, W.K.** & Sheard, G.J. 2015 Heat transfer augmentation of MHD duct flow via current injection. In *Proceedings of the 13th International Symposium on Fluid Control, Measurements and Visualization* (Eds: Y. Haik, Pub: Qatar University) 277-286. Conference: The 13th International Symposium on Fluid Control, Measurements and Visualization (FLUCOME2015), Qatar University, Doha-Qatar, 15-18 November 2015.

- Oliver G W. Cassells, **Hussam, W.K.** & Sheard, G.J. 2015 Heat transfer enhancement using vortex promoters in magneto-hydro-dynamic flows. In *Proceedings of the Eleventh International Conference on Computational Fluid Dynamics in the Minerals and Process Industries* (Eds: C.B. Solnordal, P. Liovic, G.W. Delaney, S.J. Cummins, M.P. Schwarz & P.J.Witt, Pub: CSIRO, Australia, ISBN: 978-1- 4863-0620-6) ,159CAS. Conference: The Eleventh International Conference on CFD in the Minerals and Process Industries, Melbourne Convention and Exhibition Centre, Melbourne, Australia, 7-9 December 2015.

- Hamid, A.H.A., **Hussam,W.K.** & Sheard, G.J. 2015 Convective heat transfer enhancement via electrically driven vortices in an MHD duct flow. In *Proceedings of the Eleventh International Conference on Computational Fluid Dynamics in the Minerals and Process Industries* (Eds: C.B. Solnordal, P. Liovic, G.W. Delaney, S.J. Cummins, M.P. Schwarz & P.J. Witt, Pub: CSIRO, Australia, ISBN: 978-1-4863-0620-6), 163HAM. Conference: The Eleventh International Conference on CFD in the Minerals and Process Industries Melbourne Convention and Exhibition Centre, Melbourne, Australia, 7-9 December 2015.

- Oliver G W. Cassells, Hussam, W.K. & Sheard, G.J. 2015 Heat transfer enhancement using vortex promoters in magneto-hydro-dynamic flows. In Proceedings of the Eleventh International Conference on Computational Fluid Dynamics in the Minerals and Process Industries (Eds: C.B. Solnordal, P. Liovic, G.W. Delaney, S.J. Cummins, M.P. Schwarz & P.J.Witt, Pub: CSIRO,

Australia, ISBN: 978-1- 4863-0620-6) ,159CAS. Conference: The Eleventh International Conference on CFD in the Minerals and Process Industries, Melbourne Convention and Exhibition Centre, Melbourne, Australia, 7-9 December 2015. Duplicate.

- Hamid, A.H.A., Hussam,W.K. & Sheard, G.J. 2015 Convective heat transfer enhancement via electrically driven vortices in an MHD duct flow. In Proceedings of the Eleventh International Conference on Computational Fluid Dynamics in the Minerals and Process Industries (Eds: C.B. Solnordal, P. Liovic, G.W. Delaney, S.J. Cummins, M.P. Schwarz & P.J. Witt, Pub: CSIRO, Australia, ISBN: 978-1-4863-0620-6), 163HAM. Conference: The Eleventh International Conference on CFD in the Minerals and Process Industries, Melbourne Convention and Exhibition Centre, Melbourne, Australia, 7-9 December 2015. Duplicate

- Ng, Z.Y., **Hussam, W.K.** & Sheard, G.J. 2015 Wake structures of unsteady two-dimensional flows past cylinders with triangular cross-sections. In Proceedings of the Eleventh International Conference on Computational Fluid Dynamics in the Minerals and Process Industries (Eds: C.B. Solnordal, P. Liovic, G.W. Delaney, S.J. Cummins, M.P. Schwarz & P.J.Witt, Pub: CSIRO, Australia, ISBN: 978-1-4863-0620-6), 161NG. Conference: The Eleventh International Conference on CFD in the Minerals and Process Industries, Melbourne Convention and Exhibition Centre, Melbourne, Australia, 7-9 December 2015.

- Sapardi, A.M., **Hussam, W.K.** & Sheard, G.J. 2015 Influence of strong spanwise magnetic field on the quasi-two-dimensional MHD flow in a 180-degree sharp bend. In Proceedings of the Eleventh
- International Conference on Computational Fluid Dynamics in the Minerals and Process Industries (Eds: C.B. Solnordal, P. Liovic, G.W. Delaney, S.J. Cummins, M.P. Schwarz & P.J. Witt, Pub: CSIRO, Australia, ISBN: 978-1-4863-0620-6), 160SAP. Conference: The Eleventh International Conference on CFD in the Minerals and Process Industries, Melbourne Convention and Exhibition Centre, Melbourne, Australia, 7-9 December 2015.

- **Hussam, W.K.,**Tsai, T.K.& Sheard, G.J. 2014 Linear stability analysis of horizontal convection forced radially in a rotating cylindrical enclosure. In Proceedings of the Nineteenth Australasian Fluid Mechanics Conference (Eds: H. Chowdhury & F. Alam, Pub: Australasian Fluid Mechanics Society, ISBN: 978-0-646-59695-2), Paper 78. Conference: The 19th Australasian Fluid Mechanics Conference, RMIT University, Melbourne, Australia, 8-11 December 2014.

- Tsai, T.K., **Hussam,W.K.**, & Sheard, G.J. 2014 Global and convective stability of horizontal convection. In Proceedings of the Nineteenth Australasian Fluid Mechanics Conference (Eds: H. Chowdhury & F. Alam, Pub:

Australasian Fluid Mechanics Society, ISBN: 978-0-646-59695-2), Paper 108. Conference: The 19th Australasian Fluid Mechanics Conference, RMIT University, Melbourne, Australia, 8-11 December 2014.

- Tsai, T.K., **Hussam,W.K**., & Sheard, G.J. 2014 The effect of the forcing temperature profile on horizontal convection flows. In Proceedings of the Nineteenth Australasian Fluid Mechanics Conference (Eds: H. Chowdhury & F. Alam, Pub: Australasian Fluid Mechanics Society, ISBN: 978-0-646-59695-2), Paper 107. Conference: The 19th Australasian Fluid Mechanics Conference, RMIT University, Melbourne, Australia, 8-11 December 2014.

- Azan M. Sapardi, **Hussam,W.K**., Alban Pothérat & Sheard, G.J. 2014 Quasi-two-dimensional MHD
  duct flow around a 180-degree sharp bend in a strong magnetic field. In Proceedings of the Nineteenth Australasian Fluid Mechanics Conference (Eds: H. Chowdhury & F. Alam, Pub: Australasian Fluid Mechanics Society, ISBN: 978-0-646-59695-2), Paper 223. Conference: The 19th Australasian Fluid Mechanics Conference, RMIT University, Melbourne, Australia, 8-11 December 2014.

- Azan M. Sapardi, **Hussam,W.K**., Alban Pothérat & Sheard, G.J. 2014 Three-dimensional linear stability analysis of the flow around a sharp 180-degree bend. In Proceedings of the Nineteenth Australasian Fluid Mechanics Conference (Eds: H. Chowdhury & F. Alam, Pub: Australasian Fluid Mechanics Society, ISBN: 978-0-646-59695-2), Paper 222. Conference: The 19th Australasian Fluid
- Mechanics Conference, RMIT University, Melbourne, Australia, 8-11 December 2014.

- Ahmad H. A. Hamid, **Hussam,W.K.** & Sheard, G.J. 2014 Vortex decay in quasi-2D MHD ducts: Application to Kármán vortex streets behind turbulence promoters. In Proceedings of the Nineteenth Australasian Fluid Mechanics Conference (Eds: H. Chowdhury & F. Alam, Pub: Australasian Fluid Mechanics Society, ISBN: 978-0-646-59695-2), Paper 197. Conference: The 19th Australasian Fluid
- Mechanics Conference, RMIT University, Melbourne, Australia, 8-11 December 2014.

- Ahmad H. A. Hamid, **Hussam, W.K.** & Sheard, G.J. 2014 Dynamics of a quasi-two-dimensional wake behind a cylinder in an MHD duct flow with a strong transverse magnetic field. In Proceedings of the Nineteenth Australasian Fluid Mechanics Conference (Eds: H. Chowdhury & F. Alam, Pub: Australasian Fluid Mechanics Society, ISBN: 978-0-646-59695-2), Paper 198. Conference: The 19th Australasian Fluid Mechanics Conference, RMIT University, Melbourne, Australia, 8-11 December 2014.

- Oliver G W. Cassells**, Hussam, W.K.** & Sheard, G.J. 2014 Heat transfer augmentation using rectangular cross-section turbulence generators in confined quasi-two-dimensional magnetohydrodynamic flows. In Proceedings of the Nineteenth Australasian Fluid Mechanics Conference (Eds: H. Chowdhury & F. Alam, Pub: Australasian Fluid Mechanics Society, ISBN: 978-0-646-59695-2), Paper 120. Conference: The 19th Australasian Fluid Mechanics Conference, RMIT University, Melbourne, Australia, 8-11 December 2014.

- **Hussam, W.K.**, Tsai, T.K. & Sheard, G.J. 2013 Horizontal convection in a rotating cylinder. The 8th Australian Natural Convection Workshop (8ANCW). University of Sydney, Sydney, Australia, 16-17 December 2013.

- Tsai, T.K., **Hussam,W.K**., & Sheard, G.J. 2013 Stability of horizontal convection with different temperature profile. The 8th Australian Natural ConvectionWorkshop (8ANCW). University of Sydney, Sydney, Australia, 16-17 December 2013.

- Sheard, G.J, Tsai, T.K., **Hussam, W.K**., Wong, K.Y. & King, M.P. 2013 Heat transfer and stability of horizontal convection with a moving forcing boundary. In Bulletin of the American Physical Society (Pub: American Physical Society) 58 (18), D2.00003. Conference: 66th Annual Meeting of the APS Division of Fluid Dynamics, Pittsburgh, Pennsylvania, USA, 24-26 November 2013.

- **Hussam, W.K**., King, M.P., Montabone, L. & Sheard, G.J. 2012 Nusselt-number scaling and azimuthal velocity profiles in a rotating cylindrical tank with a radial horizontal convection imposed to model atmospheric polar vortices. In Proceedings of the Eighteenth Australasian Fluid Mechanics Conference (Eds: P.A. Brandner & B.W. Pearce, Pub: Australasian FluidMechanics Society, ISBN: 978-0-646-58373-0 (USB)), Launceston, Tasmania, Australia, 3-7 December 2012, Paper 340.

- **Hussam, W.K.**, Thompson, M.C. & Sheard, G.J. 2011 Optimal transient disturbances preceding vortex shedding in magneto-hydrodynamic flow past a circular cylinder in a duct. In Mechanical, Industrial, and Manufacturing Engineering: Selected, peer reviewed paper from 2011 International Conference on Mechanical, Industrial, and Manufacturing Engineering (MIME 2011) (Eds: M. Ma, Pub: Information Engineering Research Institute, USA, ISBN: 978-0-9831693-1-4, ISSN: 2070A¸1918), Rydges Hotel, Melbourne, Australia, 15-16 January 2011, 134-137.

- H**ussam,W.K.**, Thompson, M.C. & Sheard, G.J. 2010 Quasi-2D simulation of liquid metal flow past a cylinder in a duct exposed to a magnetic field. In Proceedings of the 17th Australasian Fluid Mechanics Conference (Eds: G.D.Mallinson and J.E. Cater, Pub: The University of Auckland, ISBN: 978-0-

	86869-129-9), The University of Auckland, Auckland, New Zealand, 5-9 December. - **Hussam, W.K.**, Thompson, M.C. & Sheard, G.J. 2009 A quasi-two-dimensional investigation of unsteady transition in shallow flow past a circular cylinder in a channel. In Proceedings of the Seventh International Conference on Computational Fluid Dynamics in the Minerals & Process Industries (Eds: P.J.Witt & M.P. Schwarz, Pub: CSIRO Australia, ISBN: 978-0-643-09825-1), Rydges Hotel, Melbourne, Australia, 9-11 December 2009, 153ALS:1-6.
College Service including committee Membership:	- American Society of Thermal and Fluids Engineers (ASTFE) - International Solar Energy Society (ISES) - Engineer Austarlia, CPEng, MIEAust - Australian Fluid Mechanic Society (AFMS) - Monash Graduate School (Supervision & Exam Panel) - Organizing committee of 9th Australian Natural Convection Workshop (ANCW 2015), Monash University, Melbourne, Australia
National Service:	**Invited Session Chair** of Multiphase Flows session at 19th Australian Fluid Mechanics Conference 2014, RMIT University, Melbourne, Australia Reviewer for international journals
College Committees:	Research and Development Committee Mechanical Engineering Final Year Projects Exhibition Coordinator Validation and moderation committee Students appeal and compliant committee