UNIVERSITY OF PRETORIA

Department of Mechanical and Aeronautical Engineering

Mohsen Sharifpur (CV)- Updated August 2020

Associate Professor

C2 rated researcher by NRF

https://scholar.google.co.za/citations?user=Ws1wL5MAAAAJ&hl=en&authuser=1

Inventor of "Source and Sink Theory"

https://dx.doi.org/10.22606/tp.2020.51001

1. BIOGRAPHICAL SKETCH

1.1 GENERAL INFORMATION

Surname	Sharifpur	**First names**	Mohsen
Citizenship	Permanent Resident of South Africa, Iranian	**Title**	Prof.
Population group	Asian	**Marital status**	**Married**
E-mail	mohsen.sharifpur@up.ac.za	**Fax No.**	0027 (0)12 420 6632
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1.2 ACADEMIC QUALIFICATIONS

Degree/ Diploma	Field of study	Higher education institution	Period	Year of registration	Distinctions
PhD	Mechanical Engineering (Thermal-Fluid)	EMU	4.5	2004	Yes (The only 4 out of 4)
MEng	Nuclear Engineering	Research and Science University	3	1998	Yes
MEng	Nuclear Engineering	Sharif University of Technology	1.5 (not completed)	1992	No
BEng	Mechanical Engineering	Shiraz University	5	1986	No

1.3 PROFESSIONAL REGISTRATION

Pr. Eng.	Professional registration as professional engineer	**ECSA** (Engineering Council of South Africa)	2015

1.4 WORK EXPERIENCE TO DATE

Name of employer	Capacity and/or type of work	Period
University of Pretoria	Associate Professor	January 2017- Present
University of Pretoria	Senior Lecturer	Dec. 2009-Dec. 2016
EMU University	Research and Teaching assistant	2004-2009
Tire & Machine Industrial Co.	Project Manager and Engineer	2001 – 2004 (part-time)
Jahesh Sanat Co. (Innovation in industries Co.)	Member of board of directors	1999 - 2002
Academic Institute for Research and Education	Project Manager and Researcher	1996 - 2004
Airplane Maintenance	Researcher and Design Engineer	1994 - 1996

2. TEACHING AND LECTURING DUTIES

2.1 UNDERGRADUATE

2.1.1 Courses/modules presented:

Course	Level (second year, etc.)	Academic Institution	Degree/ Diploma	Compilation of study guides (Yes or No)	Curriculum design (Yes or No)
Computational Fluid Dynamics (MKM 411)	4th	UP	BS	Yes	Yes
Computational Mechanics (MKM 420)	4th	UP	BS	Yes	Yes
Continuum Mechanics (MKM 320)	3rd	UP	BS	Yes	Yes
Porous Flow (MAN 420)	4th	UP	BS	Yes	Yes
Introduction to Mechanical Eng.	1st	EMU	BS	Yes	Yes
Solar Energy Eng. (assist)	4th	EMU	BS	No	No
Fluid Mechanics (assist)	3rd	EMU	BS	No	No

Heat Exchanger Design (assist)	4th	EMU	BS	No	No
Thermodynamics II (assist)	3rd	EMU	BS	No	No
Heat Transfer(assist)	3th	EMU	BS	No	No
Capstone Team Project (assist)	4th	EMU	BS	No	No

2.1.2 Study leader for design projects and research projects

The study leader for more than 150 design projects and research projects of final year undergraduate students in the department of mechanical and aeronautical engineering at UP since Dec. 2009.

2.1.3 External Examiner for Course

Course	**University**	**Year**
Numerical Methods in Heat & Fluid Flow (MEC4045F)	University of Cape Town (UCT)	2013 & 2014

2.2 Courses/modules presented: POSTGRADUATE

Course	Level	Academic Institution	Degree/ Diploma	Compilation of study guides (Yes or No)	Curriculum design (Yes or No)
THERMOFLOW (MTV 732)	MS	UP	MS	Yes	Yes
POROUS FLOW (MAN 780)	MS	UP	MS	Yes	Yes
ADVANCED FLUID MECHANICS (MSX 781)	MS	UP	MS	Yes	Yes

2.3 Educational courses attended	Education Induction workshop (2010) Occupational Health and Safety workshop (2012) First Aid Level 1 & 2 (2016)

3. RESEARCH

RESEARCH FIELD:	SPECIALITY
Convective Multiphase Flow Nanofluids Porous Media Waste Heat to Work (and the effect on Global Warming) Solar Energy Engineering CFD Nuclear Heat Transport	Heat transfer Convective Nanofluids Boiling Heat Transfer Computational Heat Transfer Convective in Porous Media Thermal-Fluid Analyses of Nuclear Reactors

3.1 RESEARCH DUTIES

3.1.1 Former Post-doc supervision or co-supervision (completed)

Name of researcher	Post-doc research title	Supervisor/ Co-supervisor(s)	Duration of studies (years)
Dr. Nwosu Paul Nwachukwu	Investigation into the models for effective viscosity of nanofluids.	Prof M. Sharifpur/ Prof JP Meyer	2010-2011
Dr. Mehdi Mehrabi	A new model for Nanofluids based on artificial intelligence	Prof M. Sharifpur/ Prof JP Meyer	2015-2016
Dr. Brusly Solomon Arulanandam	Investigation into magnetic nanofluids for natural convection	Prof M. Sharifpur/ Prof JP Meyer	October 2015-Mach 2017
Dr. Mostafa Mahdavi	Mathematical modeling and CFD simulation of nanoscale heat transfer	Prof M. Sharifpur/ Prof JP Meyer	January 2017-January 2018

3.1.2 Current Post-doc supervision or co-supervision

Name of researcher	Post-doc research title	Supervisor(s)	Duration of studies (years)
Dr. Mostafa Mahdavi	**CFD simulation of transient nanofluid heat transfer**	**Prof JP Meyer & Prof M. Sharifpur**	**2020 - 2021**
Dr. Suseel Jaikrishnan	**A novel Modeling for Hybrid nanofluid**	**Prof M. Sharifpur**	**October 2020 - October 2022**

3.1.3 Former supervision or co-supervision of postgraduate students (graduated)

Name of student	Degree/Title of dissertation/ thesis and date	Supervisor/ Co-supervisor(s)	Year of graduation
Roozbeh Vaziri	**MSc /** Experimental Study on Pressure Drops in Particle-Liquid Two-Phase Flow and Porous Media	Prof. Hikmet S Aybar/ Prof M. Sharifpur	2008
Mehdi Mehrabi	**PhD /** Modelling and Optimization of Thermophysical Properties and Convective Heat Transfer of Nanofluids by Using Artificial Intelligence Methods.	Prof M. Sharifpur/ Prof JP Meyer	2014
Tshimanga Ntumba	**MSc** / Experimental Investigation and Model Development for Thermal Conductivity of Glycerol-MgO Nanofluids	Prof M. Sharifpur/ Prof JP Meyer	2015
Saheed Adio	**PhD /** Mathematical modeling and experimental investigation into effective viscosity of nanofluids	Prof M. Sharifpur/ Prof JP Meyer	2015
Ibrahim Garbadeen	**MEng** / The experimental study of natural convection heat transfer of water/graphite nanofluids	Prof M. Sharifpur/ Prof JFM Slabber and Prof JP Meyer	2015
Kyoung Lee	**MEng /** Experimental investigation into cavity flow natural convection for ZnO nanofluids	Prof M. Sharifpur/ Prof JP Meyer	2016
Saboura Yousefi	**MEng /** Mathematical modeling and experimental investigation into Nanolayer of Nanofluids	Prof M. Sharifpur/ Prof JP Meyer	2016

Hadi Ghodsinezhad	**MEng /** CFD simulation and experimental investigation into cavity flow natural convection of Al_2O_3- Water Nanofluids	Prof M. Sharifpur/ Prof JP Meyer	2016
Gaettan K Katamba	**MSc /** Investigation into waste heat to work in thermal systems in order to gain more efficiency and less environmental defect	Prof M. Sharifpur/ Prof JP Meyer	2017
Mostafa Mahdavi	**PhD /** Study of flow and heat transfer features of nanofluids by CFD models: Eulerian multiphase and discrete Lagrangian approaches	Prof M. Sharifpur/ Prof JP Meyer	2017
Elmi Grove	**MEng /** A feasibility study on modification of one of the steam power plants of South Africa by using boiling condenser	Prof M. Sharifpur/ Prof JP Meyer	2017
Tanja Ottermann	**MEng /** CFD simulation and experimental investigation into cavity flow natural convection of TiO_2-water nanofluids	Prof M. Sharifpur/ Prof JP Meyer	2017
Johannes Joubert	**MEng /** Influence of a magnetic field on magnetic nanofluids for the purpose of enhancing natural convection heat transfer	Prof M. Sharifpur/ Prof JP Meyer	2017
Conrad Sanama	**MSc /** Mathematical modelling of flow downstream of an orifice under flow-accelerated corrosion	Prof M. Sharifpur/ Prof JP Meyer	2018
Vishal Ramnath	**MEng /** Mathematical Modelling of Nanofluid Thermophysical Properties Using Copulas	Prof M. Sharifpur/ Prof JP Meyer	2018
Nicolas Wilken	**MEng /** Experimental investigation of free-surface jet-impingement cooling by means of TiO_2-water nanofluid	Prof M. Sharifpur/ Prof JP Meyer	2020
Giwa Solomon Olanrewaju	**PhD /** Investigation into thermal-fluid properties of hybrid ferrofluids as heat transfer fluids	Prof M. Sharifpur/ Prof JP Meyer	2020
Sohaib Mustafa Mohammad Osman	**PhD /** Experimental investigation into convection heat transfer in the transition flow regime by using nanofluids in a rectangular channel	Prof M. Sharifpur/ Prof JP Meyer	2020

3.1.4 Current postgraduate students

Name of student	Degree	Project title	Supervisor	Co-supervisor(s)	Year of registration	Expected completion
Cornelius Siakachoma	PhD/ Part time	Efficiency Improvement of Solar Heaters	Prof. M. Sharifpur	Prof. J.P. Meyer	2016	Dec. 2020
Saboura Yousefi	PhD/ Part time	Modeling and multi-objective optimization of heat transfer characteristics and pressure drop of nanofluids in microtubes.	Dr Mehdi Mehrabi	Prof. M. Sharifpur & Prof. J.P. Meyer	2017	Feb. 2021
Hassan Bazai	PhD/ Full time	Mathematica modeling and CFD simulation of convective nanofluids for jet cooling	Prof. M. Sharifpur	Prof. J.P. Meyer	2019	Dec. 2021
Collins Nwaokoch	PhD/ Full time	Heat transfer Enhancement by Convective Magnetic Nanofluids	Prof. M. Sharifpur	Prof. J.P. Meyer	2019	Dec. 2021
Modaser Hamid Morahed	PhD/ Full time	Heat transfer Enhancement by Convective Hybrid Nanofluids	Prof. M. Sharifpur	Prof. J.P. Meyer	2019	Dec. 2021
Neill Jansen van	MEng/ Full time	Mathematica modeling nanoscale heat transfer for convective nanofluids	Prof. M. Sharifpur	Prof. J.P. Meyer	2019	Dec. 2020
Vishal Ramnath	PhD/ Part time	Investigation of Optimal Thermophysical and Optical Characteristics for Nanofluid Based Solar Collecting Systems	Prof. M. Sharifpur	Prof. J.P. Meyer	2020	Dec. 2023

3.1.6 Examiner for Postgraduates Thesis

Year	Degree, candidate & Supervisor	Title of the Thesis	University
2012	MEng. M Hallquist, Prof. J.P. Meyer	Heat transfer and pressure drop characteristics of smooth tubes at a constant heat flux in the transitional flow regime	University of Pretoria
2013	MEng. PJ Yekoladio Prof T Bello-Ochende	Thermodynamic optimization of sustainable energy system: Application to the optimal design of heat exchangers for geothermal power systems	University of Pretoria
2016	MEng. S. Leith, Prof. JFM Slabber	An investigation into the external flow boiling phenomena on the surface of water cooled Zircaloy-4 and silicon carbide nuclear fuel cladding	University of Pretoria
2016	MEng. P. A. Prinsloo, Prof. J. Dirker	Investigation on turbulent heat transfer and pressure drop characteristics in the annuli of tube-in-tube heat exchangers	University of Pretoria
2016	MEng. J. Otto, Prof. JFM Slabber	Nuclear fusion of Li-6 H-2 crystals	University of Pretoria
2017	PhD M. K. Rashid, Prof. M. A. M. Salleh	Improving petroleum liquids flow in a rotating disk apparatus using structured inner surfaces and polymeric additives	University of Putra Malaysia
2019	PhD D. R. E. Ewim, Prof. J.P. Meyer	Condensation inside horizontal and inclined smooth tubes at low mass fluxes	University of Pretoria
2019	MEng A. M. Ndimande, Prof P. Tabakov	Heat Recovery in a Milk Powder Spray-Drying Process	Durban University of Technology

2020	MEng M Meyer, Dr M. Mehrabi	Modelling and multi-objective optimisation of heat transfer characteristics and pressure drop of nanofluids in microtubes	University of Pretoria
2020	PhD Deepti Charitar, Dr. Amos Madhlopa	Exploring the potential of nanofluids to enhance the productivity of solar stills	University of Cape Town

Origin of research funds	**Title of the research project**	**Duration**
RESEARCH DEVELOPMENT PROGRAMME (RDP)	Investigation into Thermal–Fluid Behavior of Nanofluids	2010-2012
Fluxion-CSIR	Final year projects of my undergraduate students concerning CFD simulation	2014
IRT seed-funding	Investigation into Thermal–Fluid Behavior of Nanofluids	2014-2016
NRF-Intensive funding	Thermal–Fluid Behavior of Nanofluids	2017-2022
European Research Council (ERC)--Horizon 2020 A part of an international collaboration (Grant No. 778104)	Phase-change application for thermal management of high-power microprocessors	2017-2021

Funds for building the prototype of an innovative idea	**Title of the funded project**	**Duration**
Funder: Technology Innovation Agency of South Africa	Emergency cooling	2016-2018

3.2 RESEARCH OUTPUT

3.2.1 Articles published in refereed accredited journals/chapter books

2020 (To date)

1 **Mohsen Sharifpur**, Source and Sink Theory, Journal of Theoretical Physics, Vol. 5, No. 1, March 2020.
https://dx.doi.org/10.22606/tp.2020.51001

2 S.O. Giwa, **M. Sharifpur** and J.P. Meyer, Experimental investigation into heat transfer performance of water-based magnetic hybrid nanofluids in a rectangular cavity exposed to magnetic excitation, International Communications in Heat and Mass Transfer, Vol. 116, 2020, 104698.
https://doi.org/10.1016/j.icheatmasstransfer.2020.104698

3 S.O. Giwa, **M. Sharifpur** and J.P. Meyer, Effects of uniform magnetic induction on heat transfer performance of aqueous hybrid ferrofluid in a rectangular cavity, Applied Thermal Engineering, Vol. 170, 2020, 115004.
https://doi.org/10.1016/j.applthermaleng.2020.115004

4 S.O. Giwa, **M. Sharifpur** and J.P. Meyer, Experimental study of thermo-convection performance of hybrid nanofluids of Al_2O_3-MWCNT/water in a differentially heated square cavity, International Journal of Heat and Mass Transfer, Vol. 148, February 2020, 119072.
https://doi.org/10.1016/j.ijheatmasstransfer.2019.119072

5 Dariush Mansoury, Faramarz Ilami Doshmanziari, Abolfazl Kiani, Ali J. Chamkha and **Mohsen Sharifpur**, Heat transfer and flow characteristics of Al2O3/water nanofluid in various heat exchangers: Experiments on counter flow, Heat Transfer Engineering, Vol. 41(3), 2020 pp. 220-234.
https://www.tandfonline.com/doi/abs/10.1080/01457632.2018.1528051

6 Mohammad Javad Zarei, Hassan Bazai, **Mohsen Sharifpur**, Omid Mahian, Bahman Shabani, The effects of fin parameters on the solidification of PCMs in a fin-enhanced thermal energy storage system, Energies 2020, 13, 198; doi:10.3390/en13010198
https://www.mdpi.com/1996-1073/13/1/198

7 Masoud Afrand, Saeed Aghakhani, Ahmad Hajatzadeh Pordanjani, **Mohsen Sharifpur**, Josua Meyer, Natural convective heat transfer and entropy-generation of alumina/water nanofluid in a tilted enclosure with an elliptic constant temperature: Applying magnetic field and radiation effects, International Journal of Mechanical Sciences, Volume 174, 15 May 2020, 105470.
https://doi.org/10.1016/j.ijmecsci.2020.105470

8 Allen Varughese, A. Brusly Solomon, Benny Raj, **Mohsen Sharifpur**, Josua P. Meyer, Heat transfer characteristics and flow visualization of anodized flat thermosiphon, Journal of Process Mechanical Engineering, 2020, 0954408920905400.
https://doi.org/10.1177/0954408920905400

9 S.O. Giwa, **M. Sharifpur**, M. Goodarzi, Hamed Alsulami, J.P. Meyer, Influence of base fluid, temperature, and concentration on the thermophysical properties of hybrid nanofluids of alumina–ferrofluid: experimental data, modelling through enhanced ANN, ANFIS, and curve fitting, Journal of Thermal Analysis and Calorimetry, 2020, pp. 1-19.
https://doi.org/10.1007/s10973-020-09372-w

10 Y Li, R Kalbasi, A Karimipour, **M Sharifpur**, J Meyer, Using of artificial neural networks (ANNs) to predict the rheological behavior of magnesium oxide-water nanofluid in a different volume fraction of nanoparticles, temperatures and shear rates, Mathematical Methods in the Applied Sciences. https://doi.org/10.1002/mma.6418

11 S.O. Giwa, **M. Sharifpur**, M. H. Ahmadi and J.P. Meyer, Magnetohydrodynamic convection behaviours of nanofluids in non-square enclosures: A comprehensive review, Mathematical Methods in the Applied Sciences, 2020; pp. 1– 59. https://onlinelibrary.wiley.com/doi/abs/10.1002/mma.6424

12 Sara Rostami, Alireza Aghaei, Ali Hassani Joshaghani, Hossein Mahdavi Hezaveh, **Mohsen Sharifpur**, Josua P Meyer, Thermal-hydraulic efficiency management of spiral heat exchanger filled with Cu-ZnO/water hybrid nanofluid, accepted in Journal of Thermal Analysis and Calorimetry (2020). https://doi.org/10.1007/s10973-020-09721-9

13 S.O. Giwa, **M. Sharifpur**, M. H. Ahmadi and J.P. Meyer, A review of magnetic field influence on natural convection heat transfer performance of nanofluids in square cavities, Journal of Thermal Analysis and Calorimetry, 2020. https://doi.org/10.1007/s10973-020-09832-3

14 Shu-Rong Yan, Ali Golzar, **Mohsen Sharifpur**, Josua Meyer, De-Hua Liu, Masoud Afrand, Effect of U-shaped absorber tube on thermal-hydraulic performance and efficiency of two-fluid parabolic solar collector containing two-phase hybrid non-Newtonian nanofluids, International Journal of Mechanical Sciences, May 2020, 105832. https://doi.org/10.1016/j.ijmecsci.2020.105832

15 S.O. Giwa, Modaser Momin, Collins N. Nwaokocha, **M. Sharifpur**, J.P. Meyer, Influence of nanoparticles size, percent weight ratio, and temperature on the thermal properties of water-based MgO-ZnO nanofluid: An experimental approach, Journal of Thermal Analysis and Calorimetry, 2020. https://doi.org/10.1007/s10973-020-09870-x

16 Mostafa Mahdavi, **M. Sharifpur** and J.P. Meyer, L. Chen, Thermal analysis of a nanofluid free jet impingement on a rotating disk using volume of fluid in combination with discrete modelling, International Journal of Thermal Sciences, Vol. 158, 2020, 106532. https://doi.org/10.1016/j.ijthermalsci.2020.106532

17 S.O. Giwa, **M. Sharifpur**, J.P. Meyer, Somchai Wongwises, and Omid Mahian, Experimental measurement of viscosity and electrical conductivity of water-based γ-Al2O3/MWCNT hybrid nanofluids with various particle mass ratios, Journal of Thermal Analysis and Calorimetry, 2020. https://doi.org/10.1007/s10973-020-10041-1

18 M. Hashemi-Tilehnoee, A.S. Dogonchi, S. M. Seyyedi, **M. Sharifpur**, Magneto-fluid dynamic and second law analysis in a hot porous cavity filled by nanofluid and nano-encapsulated phase change material suspension with different layout of cooling channels, Journal of Energy Storage, Journal of Energy Storage, Vol. 31, 2020, 101720. https://doi.org/10.1016/j.est.2020.101720

Accepted paper/chapter book

19 Mahdavi M., **Sharifpur M.,** Meyer J.P. (**2020**) Solid-Liquid Two-Component Flow: Discrete Phase and Mixture Approaches for Nanoscale Heat Transfer. In: Yeoh G., Joshi J. (eds) Handbook of Multiphase Flow Science and Technology. Springer, Singapore. https://doi.org/10.1007/978-981-4585-86-6_25-1

20 S M Sohel Murshed, **Mohsen Sharifpur**, S.O. Giwa and Josua P. Meyer, Stability evaluation, measurements and presentations of convective heat transfer characteristics of nanofluids. Chapter

book of: The art of measuring in thermal science, by CRC Press (Taylor and Francis, Series: Heat Transfer, Series Editor: Prof Afshin Ghajar), manuscript number: 1570481883.

21 **M Sharifpur**, S.O. Giwa, H Ghodsinezhad, Kyoung Lee, and JP Meyer, Experimental investigation into cavity flow natural convection of zinc oxide-water nanofluids, accepted in the ICNF2019 Special Issue on Heat Transfer Engineering.

22 Mohammadreza Kadivar, **M. Sharifpur** and J. P. Meyer, Declaration of interests: none Convection heat transfer, entropy generation analysis and thermodynamic optimization of nanofluid flow in spiral coil tube, accepted in Heat Transfer Engineering, manuscript number: HTE 8119.
Doi:10.1080/01457632.2020.1807103

2019

23 Sohaib Osman, **Mohsen Sharifpur**, Josua P Meyer, Experimental Investigation of Convection Heat Transfer in the Transition Flow Regime of Aluminium Oxide-Water Nanofluids in a Rectangular Channel, International Journal of Heat and Mass Transfer, Vol. 133, 2019, pp. 895-902.
https://doi.org/10.1016/j.ijheatmasstransfer.2018.12.169

24 Mostafa Mahdavi, I Garbadeen, **M. Sharifpur**, M.H. Ahmadi and J.P. Meyer, Study of Particle Migration and Deposition in Mixed Convective Pipe Flow of Nanofluids at Different Inclination Angles, Journal of Thermal Analysis and Calorimetry, January 2019, Vol. 135(2), pp. 1563–1575.
https://doi.org/10.1007/s10973-018-7720-y

25 M. Afra, M. Nazari, M.H. Kayhani, **M. Sharifpur**, J.P. Meyer, 3D Experimental Visualization of Water Flooding in Proton Exchange Membrane Fuel Cells, Energy, Vol. 175, 15 May 2019, pp. 967-977.
https://doi.org/10.1016/j.energy.2019.03.128

26 M. Neyestani, M. Nazari, M. M. Shahmardan, **M. Sharifpur**, M. Ashouri, J.P. Meyer, Thermal Characteristics of CPU Cooling by using a Novel Porous Heat Sink: Comparative Experimental Study, Journal of Thermal Analysis and Calorimetry, October 2019, Volume 138, Issue 1, pp 805–817. https://doi.org/10.1007/s10973-019-08256-y

27 G A Adewumi, F L Inambao, **M Sharifpur**, J P Meyer, Thermal Conductivity of Nanofluids Prepared from Biobased Nanomaterials Dispersed in 60: 40 Ethylene Glycol/Water Base Fluid, International Journal of Mechanical Engineering and Technology, 2019, 10 (6), pp. 151-159.
http://www.iaeme.com/ijmet/issues.asp?JType=IJMET&VType=10&IType=6

28 Mostafa Mahdavi, **M. Sharifpur**, Mohammadhosein Ahmadi and J.P. Meyer, Aggregation study of Brownian nanoparticles in convective phenomena, Thermal Analysis and Calorimetry, January 2019, Volume 135, Issue 1, pp. 111–121.
https://link.springer.com/article/10.1007%2Fs10973-018-7283-y

29 Mohammad H. Ahmadi, Mohammad Alhuyi Nazari, Milad Sadeghzadeh, Fathollah Pourfayaz, Mahyar Ghazvini, Tingzhen Ming, **Mohsen Sharifpur**, Josua P. Meyer, Thermodynamic and economic analysis of performance evaluation of all the thermal power plants: A review. Energy Science & Engineering, Vol. 7, Issue1, February 2019, pp. 30-65.
https://doi.org/10.1002/ese3.223

30 Gloria Adedayo Adewumi, Freddie Inambao, Andrew Eloka-Eboka, **Mohsen Sharifpur** and Josua Meyer, Investigation into the Electrical Conductivity of Carbon Nanosphere Based Green Nanofluids, chapter 6 of “Transactions on Engineering Technologies”, Springer Nature Singapore Pte Ltd. 2019, pp. 71-82. ISBN 978-981-13-2190-0
https://link.springer.com/chapter/10.1007/978-981-13-2191-7_6

31 M. Mehrabi, **M. Sharifpur** and J.P. Meyer, Electrical conductivity and pH modeling of Magnesium oxide-ethylene glycol nanofluids, Bulletin of Materials Science, 2019, 42:108. https://link.springer.com/content/pdf/10.1007%2Fs12034-019-1808-2.pdf

2018

32 **M. Sharifpur**, A.B. Solomon, Tanja Ottermann, and J.P. Meyer, Optimum concentration of nanofluids for heat transfer enhancement under cavity flow natural convection with TiO2 – Water, International communications in Heat and Mass Transfer, Vol. 98, November 2018, pp. 297-303.

33 Mohammad H. Ahmadi, Mohammad Alhuyi Nazari, Milad Sadeghzadeh, Fathollah Pourfayaz, Mahyar Ghazvini, Tingzhen Ming, **Mohsen Sharifpur**, Josua P. Meyer, Thermodynamic and economic analysis of performance evaluation of all the thermal power plants: A review. Energy Science & Engineering, 2018;00:1–36. https://doi.org/10.1002/ese3.223

34 Mostafa Mahdavi, **M. Sharifpur** and J.P. Meyer, Discrete modelling of nanoparticles in mixed convection flows, Powder Technology, Vol. 338, October 2018, pp. 243-252.

35 Sanama C, **Sharifpur M** and Meyer JP, Mathematical modeling of flow downstream of an orifice under flow-accelerated corrosion, Nuclear Engineering and Design, Vol. 326, January 2018, pp. 285–289.

36 Mostafa Mahdavi, **M. Sharifpur**, H. Ghodsinezhad and J.P. Meyer, Experimental and numerical investigation on a water-filled cavity natural convection to find proper thermal boundary conditions for simulation, Journal of Heat Transfer Engineering, Vol. 39, pp. 359-373, 2018.

37 M.H. Jahangir, M. Ghazvini, F. Pourfayaz, M.H. Ahmadi, **M. Sharifpur**, J.P. Meyer, A Numerical Investigation into Mutual Effects of Soil Thermal and Isothermal Properties on Heat and Moisture Transfer in Unsaturated Soil Applied as Thermal Storage Systems, An International Journal of Computation and Methodology, Vol. 73, pp. 466-481, 2018. https://doi.org/10.1080/10407782.2018.1449518

38 Justin Awua, Jacob Ibrahim, SA Adio, M Mehrabi, **M Sharifpur** and JP Meyer, Experimental investigation into viscosity, pH and electrical conductivity of nanofluid prepared from palm kernel fibre and mixture of water and ethylene glycol, Bulletin of Materials Science, (2018) 41:156.

39 Mostafa Mahdavi, **M. Sharifpur**, and J.P. Meyer, Exploration of nanofluid pool boiling and deposition on a horizontal cylinder in Eulerian and Lagrangian frames, International Journal Heat and Mass Transfer, Vol. 125, pp 959–971, 2018.

40 Gloria A Adewumi, Freddie Inambao, **Mohsen Sharifpur**, and Josua P Meyer, Investigation of the Viscosity and Stability of Green Nanofluids from Coconut Fibre Carbon Nanoparticles: Effect of Temperature and Mass Fraction, International Journal of Applied Engineering Research, Vol. 13, Number 10, 2018 pp. 8336-8342.

2017

41 **Mohsen Sharifpur**, Ntumba Tshimanga, Josua P. Meyer, O. Manca, Experimental Investigation and Model Development for Thermal Conductivity of α-Al2O3-Glycerol Nanofluids, International Communications in Heat and Mass Transfer, Vol. 85, pp. 12-22, 2017.

42 Mostafa Mahdavi, **M. Sharifpur** and J.P. Meyer, A novel combined model of discrete and mixture phases for nanoparticles in convective turbulent flow, Physics of Fluids, Vol. 29, 082005, 2017; doi: http://dx.doi.org/10.1063/1.4998181

43 Johannes Joubert, **M. Sharifpur**, A. Brusly Solomon and J.P. Meyer, Enhancement in heat transfer of a ferrofluid in a differentially heated square cavity through the use of permanent magnets, Journal of Magnetism and Magnetic Materials, Vol. 443, pp. 149–158, 2017.

44 Mostafa Mahdavi, **M. Sharifpur** and J.P. Meyer, Implementation of diffusion and electrostatic forces to produce a new slip velocity in multiphase approach of nanofluids, Powder Technology, Vol. 307, pp. 153-162, 2017.

45 Mostafa Mahdavi, **M. Sharifpur** and J.P. Meyer, A new combination of nanoparticles mass diffusion flux and slip mechanism approaches with electrostatic forces in a natural convective cavity flow, International Journal of Heat and Mass Transfer, Vol. 106, pp. 980–988, 2017.

46 A.B. Solomon, **M. Sharifpur**, Tanja Ottermann, Carla Grobler, Michael Joubert and J.P. Meyer, Natural convection enhancement in a porous cavity with Al_2O_3-Ethylene glycol/water nanofluids, International Journal of Heat and Mass Transfer, Vol. 108, Part B, pp. 1324–1334, 2017.

47 A.B. Solomon, V A Daniel, K Ramachandran, B C Pillai, R R Singh, **M Sharifpur** and J P Meyer. Performance enhancement of a two-phase closed thermosiphon with a thin porous copper coating, International Communications in Heat and Mass Transfer, Vol. 82, pp. 9-19, 2017.

48 A.B. Solomon, M. Ram Kumarc, K. Ramachandrand, B.C. Pillaia, C. S. Kumare, **M. Sharifpur**, J. P Meyer, Characterization of grooved heat pipe with anodized surface, Heat and Mass Transfer, Vol. 53, pp. 753–763, 2017.

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56 Mostafa Mahdavi, **M. Sharifpur**, H. Ghodsinezhad and J.P. Meyer, Experimental and numerical study on thermal and hydro-dynamic characteristics of laminar natural convective flow inside a rectangular cavity with water, EG-water and air, Experimental Thermal and Fluid Science, Vol. 78, pp. 50–64, 2016.

57 SA Adio, **M Sharifpur** and JP Meyer, Influence of ultrasonication energy on the dispersion consistency of Al_2O_3-glycerol nanofluid based on viscosity data, and model development for the required ultrasonication energy density, Journal of Experimental Nanoscience, Vol. 11, Issue 8, 630-649, 2016.

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3.2.2 Articles published in the international conference proceedings:

2019:

76 **M. Sharifpur**, Kyoung-Yeoll Lee and J. P. Meyer, Experimental Investigation into Cavity Flow Natural Convection of Zinc Oxide-Water Nanofluids, 1st International Conference on Nanofluids (ICNf2019) & 2ndEuropean Symposium on Nanofluids (ESNf2019) 26-28 June 2019, Castelló, Spain.

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78 Sohaib Osman, **Mohsen Sharifpur**, Josua P Meyer, The Effect of Chopping the Boundary Layer at the Inlet on the Transition Heat Transfer and Pressure Drop Characteristics in Smooth Horizontal Tube, 14th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT 2019), 22 -24 July 2019, Wicklow, Ireland.

79 A.L. Sriram Sudhan, A. Brusly Solomon, **Mohsen Sharifpur**, Josua P. Meyer, Design and testing of anodised grooved heat pipe using refrigerants, 14th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT 2019), 22 -24 July 2019, Wicklow, Ireland.

80 J.T. Awua, J.S. Ibrahim, **M. Sharifpur** and J.P.Meyer, Particle Characterization and Stability of Nanofluid Prepared from Palm Kernel Fibre with Mixture of Water and Ethylene Glycol as Base Fluid, 14th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT 2019), 22 -24 July 2019, Wicklow, Ireland.

2018

81 C. Siakachoma, M. A. Moghimi, **M. Sharifpur**, J. P. Meyer, Direct Normal Irradiance Prediction for South Africa using Clearness Number Contour Maps, The 5th Southern African Solar Energy Conference (SASEC 2018) 25 to 27 June 2018, Durban, South Africa.

82 Sohaib M. Osman, **M. Sharifpur** and J.P. Meyer, Nanofluids; Experimental Analysis of Transiant Heat transfer by a Nanofluid, International Heat Transfer Conference (IHTC-16), Beijing, China, August 10-15, 2018.

83 Giwa Solomon, **M. Sharifpur** and J.P. Meyer, Experimental Analysis of Hybrid a Nanofluid in a Cavity, International Heat Transfer Conference (IHTC-16), Beijing, China, August 10-15, 2018.

84 Gloria Adewumi, Freddie Inambao, **Mohsen Sharifpur** and Josua Meyer, Thermal Conductivity of Nanofluids Prepared from Biobased Nanomaterials Dispersed in 60:40 Ethylene Glycol/Water Base Fluid, Commercial Use of Energy conference, Cape Town, South Africa,13 to 15 August 2018.

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85 **M. Sharifpur,** A. Brusly Solomon, Josua P. Meyer, J.S. Ibrahim and Barki Immanuel, Thermal conductivity and viscosity of Mango bark/water nanofluids, 13th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics, 17 -19 July 2017, Portorož, Slovenia.

86 Mostafa Mahdavi, **M. Sharifpur** and J.P. Meyer, Nanofluid pool boiling and deposition on a cylinder, 13th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics, 17 -19 July 2017, Portorož, Slovenia.

87 A. Brusly Solomon, **M. Sharifpur**, Josua P. Meyer, J.S. Ibrahim and Barki Immanuel, Natural convection heat transfer with water based mango bark nanofluids, 13th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics, 17 -19 July 2017, Portorož, Slovenia.

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88 **Sharifpur, M**., Mahdavi M. and Meyer, J.P., Computational Fluids Dynamics Simulation to Predict Vacuum Infusion Process, the 5th International Conference on Composites: Characterization, Fabrication and Application (CCFA-5), Dec. 20-21, 2016, Tehran, Iran.

89 **M. Sharifpur**, Nanofluids and the Research Opportunities, **Invited speaker** at "7th World Nano Conference", at Track of: Nano Applications, June 20-21, 2016, Cape Town, South Africa.

90 Mostafa Mahdavi, **M. Sharifpur** and J.P. Meyer, Natural Convection Study of Brownian Nano-Size Particles Inside a Water-Filled Cavity by Lagrangian Tracking Approach, 12th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT 2016), July 11-13, 2016, Costa del Sol, Malaga, Spain.

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98 Carla Grobler, **M. Sharifpur**, Hadi Ghodsinezhad, Ryan Capitani and J.P. Meyer, Experimental Study on Cavity Flow Natural Convection in Porous Medium, Saturated with Al203 60% EG-40% Water Nanofluid, 11th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT 2015), July 20-23, 2015, Kruger National Park, South Africa.

99 Ibrahim Garbadeen, **M. Sharifpur**, Johan Slabber and J.P. Meyer, Numerical Study on Natural Convection Flow in MWCNT Nanofluid-filled Square Enclosure Based on Experimental Conductivity and Viscosity Model, **(Best Paper** in the session**)** 11th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT 2015), July 20-23, 2015, Kruger National Park, South Africa.

100 **M. Sharifpur**, J.P. Meyer and Hikmet S. Aybar, Nanofluids; Opportunities and Challenges, 11th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT 2015), July 20-23, 2015, Kruger National Park, South Africa.

101 S. Mentz, M. Mehrabi, **M. Sharifpur**, J.P. Meyer, Humidification-dehumidification desalination processes: advantages and disadvantages, ASME 2015 International Mechanical Engineering Congress & Exposition- IMECE2015,13-19 November, Houston, Texas, USA.

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102 Ridwaan Ebrahim, Marilize Everts, Johannes P. Kruger, Elizna Miles, **Mohsen Sharifpur** and Josua P. Meyer, TURBULENT FLOW ACROSS A ROTATING CYLINDER WITH SURFACE ROUGHNESS, 10th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT2014), July 14-16, 2014, Orlando, Florida, USA.

103 Andre Maripia, **M. Sharifpur** and J.P. Meyer, The effect of uncertainty of available correlations for effective properties of distilled water- Al2O3 nanofluid on Natural Convection Cavity Flow Simulation, 10th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT2014), July 14-16, 2014, Orlando, Florida, USA.

104 Saboura Yousefi A., **M. Sharifpur** and J.P. Meyer, The Effects of Uncertainly of Nanolayer Thickness on the Heat Transfer through Nanofluids, 10th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT2014), July 14-16, 2014, Orlando, Florida, USA.

105 M. Mehrabi, **M. Sharifpur**, J.P. Meyer, Convective heat transfer characteristics of low concentration CuO-water nanofluids in the turbulent flow regime based on an artificial intelligence models, The 15th International Heat Transfer Conference (IHTC-15), August 10-15, 2014, Kyoto, Japan.

106 Tshimanga Ntumba, **M. Sharifpur** and J.P. Meyer, The effective of sonication energy and time on thermal conductivity of Glycerol base nanofluids, The 15th International Heat Transfer Conference (IHTC-15), August 10-15, 2014, Kyoto, Japan.

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110 **Sharifpur, M.,** Adio, S.A. and Meyer, J.P., Nanofluid Composites: Preparation and Rheology behaviour for Vacuum Infusion Process, the 4th International Conference on Composites: Characterization, Fabrication and Application (CCFA-4), Dec. 16-17, 2014, Tehran, Iran.

111 **Sharifpur, M.**, Mahdavi M. and Meyer, J.P., CFD Simulation to find Porous Multilayer Limitation of the Vacuum Infusion Process, The 4th International Conference on Composites: Characterization, Fabrication and Application (CCFA-4), Dec. 16-17 , 2014, Tehran, Iran.

112 Mehdi Mehrabi, Tuhid Pashaee, **Mohsen Sharifpur**, Josua P. Meyer, Application of genetic algorithm-polynomial neural network for modelling heat transfer and fluid flow characteristics of a double-pipe heat exchanger, ASME 2013 Summer Heat Transfer Conference HT2013, July 14-19, 2013, Minneapolis, MN, USA.

113 SA Adio, **M Sharifpur** and JP Meyer, Investigation into Effective Viscosity and Electrical Conductivity of γ-Al_2O_3 – Glycerol Nanofluids in Einstein Concentration Regime, 13th UK Heat Transfer Conference, UKHTC2013, 2 - 3 September 2013, Imperial College London, UK.

114 **Sharifpur M** and Meyer JP, 2012, The effect of uncertainty of conductivity and viscosity of nanofluids on heat transfer, 1st International Conference on Nanostructures and Nanomaterial: Science and Application Nanotech2012, February 7-9, 2012, Masjed-Soleyman, Iran.

115 **Sharifpur M** and Meyer JP, 2012, Cavity Flow Natural Convection of Nanofluids; Experimental Set-up, Preparation of Nanofluids and Health issues. 1st International Conference on Nanostructures and Nanomaterial: Science and Application Nanotech2012, February 7-9, 2012, Masjed-Soleyman, Iran.

116 Mehdi Mehrabi, **Sharifpur M**, Meyer JP, 2012, Adaptive neuro-fuzzy modeling of The thermal conductivity of alumina-water nanofluids, ASME 2012 3rd Micro/Nanoscale Heat & Mass Transfer International Conference, MNHMT2012, March 3-6, 2012, Atlanta, Georgia, USA.

117 Mehdi Mehrabi, Sajad Rezazadeh, **Mohsen Sharifpur**, Josua P. Meyer, Modelling of proton exchange membrane fuel cell performance by using genetic algorithm-polynomial neural network (GA-PNN) hybrid system, ASME 2012 6th International Conference on Energy Sustainability & 10th Fuel Cell Science Engineering and Technology Conference, ESFuelCell2012, July23-26, 2012, San Diego, California, USA.

118 Meyer JP, Nwosu PN, **Sharifpur M**, Ntumba Tshimanga, Parametric Analysis of Effective Viscosity Models for Nanofluids, ASME 2012 International Mechanical Engineering Congress & Exposition, IMECE 2012, November 9-15, 2012, Houston, Texas, USA.

119 **Sharifpur M**, Ntumba Tshimanga, Meyer JP, Parametric Analysis of Effective Thermal Conductivity Models for Nanofluids, ASME 2012 International Mechanical Engineering Congress & Exposition, IMECE 2012, November 9-15, 2012, Houston, Texas, USA.

120 **Sharifpur M** and Meyer JP, Opportunities in Nanofluid Composites, The 3rd International Conference on Composites: Characterization, Fabrication and Application (CCFA-3) December 18-19, 2012. Tehran, Iran.

121 Meyer JP, Nwosu PN and **Sharifpur M**, 2011, A Critical Review and Algorithm-based Approach for Selection of Appropriate Nanofluid Viscosity Models, ASME 2011 Mechanical Engineering Congress and Exposition, November 11-17, 2011, Denver, Colorado, USA.

122 Hikmet S. Aybar, **Mohsen Sharifpur**, Roozbeh Vaziri, 2008, Pressure Gradient Prediction in Particle-Liquid Two-Phase Flow, IMECE2008-68632, Vol. 10: Heat Transfer, Fluid Flows, and Thermal Systems, Parts A, B, and C pp. 1901-1905, USA.

123 Hikmet S. Aybar, **Mohsen Sharifpur**, Roozbeh Vaziri, 2008, Experimental Investigation of Pressure Drop in one Phase Flow, Particle-Liquid Two-Phase Flow, and Porous Media Consisting of the Same Particle Size, DSL2008 Conference, Spain.

124 **Mohsen Sharifpur**, Sholeh Rostamirad, 2008, Experimental Investigation of Conditions of Water Diffusion in Quality of Legumes. 4th International Conference on Diffusion in Solids and Liquids (DSL2008), Barcelona, Spain,11 July 2008.

125 **Mohsen Sharifpur**, 2008, Waste to Energy in power plants; Increasing Thermal Efficiency and Decreasing Environment Defects, International Multi-Conference on Engineering and Technological Innovation: IMETI 2008, USA.

126 **Mohsen Sharifpur**, 2008, Designing New Cooling System for Automobiles to Get more Fuel Efficiency and Less Environment Defects, ASME -IMECE2008-68413, Vol. 17: Transportation Systems, pp. 355-359, USA.

127 **Mohsen Sharifpur**, 2007a, Designing Boiling Condenser for more Efficiency in Power Plants and less Environment Defects, ASME -POWER2007-22201, pp. 55-59, USA.

128 B. Y. Aldabbagh, **Mohsen Sharifpur**, Mahdi Zamani, 2007, Experimental Study of Free convection about a Vertical flat plate in Porous Media, DSL 2007 Conference, Portugal.

129 Hikmet S. Aybar, **Mohsen Sharifpur**, 2007, Simplification of Ensemble Averaged Two - Phase Flow with Heat and Mass Transfer for Boiling Inside channels, DSL2007 Conference, Portugal.

130 **Mohsen Sharifpur**, 2006, Overall Review of Modelling in Convective Two-Phase Flow, ASME International Conference, Yeditepe University, Istanbul, Turkey.

131 **Mohsen Sharifpur,** Mahmoud Salehi, Ali Nouri Brojerdi and Ali Arefmanesh, 2003, Ensemble Averaged Bubbly Two-Phase Flow Numerical Simulation in Vertical Ducts for the Void-Studying Behavior in BWRs, 11th International Conference on Nuclear Engineering ASME -ICONE 11, p.290, Japan.

4 OTHER SCHOLARLY RESEARCH-BASED CONTRIBUTIONS

4.1 Editorial board and editorial duty

Guest editor for Journal of **Sustainability** (ISSN 2071-1050), **IF=2.576**
Special Issue "Applications of Artificial Intelligence Model of Heat and Mass Transfer"
https://www.mdpi.com/journal/sustainability/special_issues/Model_Transfer\

4.2 Referee duties and collaboration with conferences

- Reviewer for refereed accredited journals **including** International Journal of Heat and Mass Transfer, Experimental Thermal and Fluid Science, Energy, International Communications in Heat and Mass Transfer, International Journal of Thermal Sciences, Renewable Energy, Journal of Thermal Analysis and Calorimetry, Heat Transfer Engineering, Journal of the Taiwan Institute of Chemical Engineers, Journal of Magnetism and Magnetic Materials, Computer Methods and Programs in Biomedicine, RSC Advances Journals, Engineering Science and Technology: an International Journal, Journal of Applied Physics, Alexandria Engineering Journal, Journal of Porous Media, International Journal of Applied and Computational Mathematics, Journal of Advanced Research, American Society of Mechanical Engineers (ASME) journals including Heat transfer, and Nuclear Engineering and Design.

- Reviewer for IHTC14, the 14th ASME International Heat Transfer Conference to be held in Washington DC in August, 2010.

- Reviewer for IMETI 2010, The 3rd International Multi-Conference on Engineering and Technological Innovation: June 29th - July 2nd, 2010 – Orlando, Florida, USA

- Reviewer for IHTC14-2010, The 14th International Heat Transfer Conference: August 8th -13th, 2010 – Washington D.C., USA.

- Reviewer for IMETI 2011, The 4th International Multi-Conference on. Engineering and Technological Innovation: *IMETI 2011*. July 19th - July 22nd, 2011 – Orlando, Florida, USA

- Reviewer for 1st International Conference on Nanostructures and Nanomaterial: Science and Application Nanotech2012, February 7-9, 2012

- **Invited Keynote Speaker** at the 1st International Conference on Nanostructures and Nanomaterial: Science and Application Nanotech2012, February 7-9, 2012, Masjed-Soleyman, Iran.

- Section chair at 1st International Conference on Nanostructures and Nanomaterial: Science and Application Nanotech2012, February 7-9, 2012, Masjed-Soleyman, Iran.

- Reviewer for SASEC-2012, ASME 2012, The 2nd Southern African Solar Energy Conference, 21-23 May 2012, Stellenbosch, South Africa.

- Technical Program Committee Member for The International Workshop on Electromagnetism and Communication Engineering (ECE 2012), July 27th -29th, 2012, Baotou, China.

- Technical Program Committee Member at 2012 The 3rd International Conference on Mechanic Automation and Control Engineering (MACE 2012),July 27th -29th, 2012, Baotou, Inner Mongolia, China.

- Guest Editor for selected papers of the 3rd International Conference on Mechanic Automation and Control Engineering (MACE 2012) in order to publish as the special issues of international journals.

- Reviewer for IMETI 2012, The 5th International Multi-Conference on. Engineering and Technological Innovation: IMETI 2012. July 17th - July 20th, 2012 – Orlando, Florida, USA.

- Reviewer for IMECE2012, ASME 2012 International Mechanical Engineering Congress & Exposition, IMECE 2012, November 9-15, 2012, Houston, Texas, USA.

- Jury member for poster section of the 3rd International Conference on Composites: Characterization, Fabrication and Application (CCFA-3) December 18-19, 2012. Tehran, Iran.

- Reviewer for ICAE 2013, International Conference on Applied Energy ICAE 2013, Jul 1-4, 2013, Pretoria, South Africa.

- Technical program committee member for HEFAT2014 (10th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics) July 14-16, 2014, Orlando, Florida, USA.

- Reviewer for HEFAT2014 (10th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics) July 14-16, 2014, Orlando, Florida, USA.

- Reviewer for SASEC (3rd Southern African Solar Energy Conference) May 11-13, 2015, Kruger National Park, South Africa.

- Conference Organising Committee member for SASEC (3rd Southern African Solar Energy Conference) May 11-13, 2015, Kruger National Park, South Africa.

- Section chair at the 4th International Conference on Composites: Characterization, Fabrication and Application (CCFA-4) December 16-17, 2014. Tehran, Iran.

- Jury member for poster competition section of the 4th International Conference on Composites: Characterization, Fabrication and Application (CCFA-4) December 16-17, 2014. Tehran, Iran.

- Reviewer for an academic book entitled “Heat Transfer Enhancement with Nanofluids”, CRC press, by Taylor & Francis Group, 2015.

- Technical program committee member for HEFAT2015 (11th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics), July 20-23, 2015, Kruger National Park, South Africa.

- Session chair for HEFAT2015 (11th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics), July 20-23, 2015, Kruger National Park, South Africa.

- International technical program committee member for “Energy, Material & Nanotechnology International Meeting on Microfluidics and Nanofluidics”, April 05-08, 2016, Dubai, United Arab Emirates.

- **Invited speaker** at “7th World Nano Conference”, at Track of: Nano Applications, June 20-21, 2016, Cape Town, South Africa.

- International technical program committee member for “2nd International Conference on Environmental and Civil Engineering Technology (ENVICET 2016), October 4 – 6, 2016, Penang, Malaysia.

- Technical program committee member for HEFAT2016 (12th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics), July 11-13, 2016, Malaga, Spain.

- Reviewer and technical program committee member for “22nd Solar Power and Chemical Energy System Conference (SolarPACES 2016)”, 11 - 14 October 2016, Abu Dhabi, UAE.

- Designated Reviewer for AR4MET 2017, The 3rd Advanced Research in Material Sciences, Manufacturing, Mechanical and Mechatronic Engineering Technology International Conference, 7 – 9 November 2017,

Melaka, Malaysia.

- Technical program committee member for HEFAT2017 (13th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics), 17 -19 July 2017, Portorož, Slovenia.

- Chairperson of conference oral presentations session "Nano and Microscale Transport-2 (NMT2), 16th International Heat Transfer Conference, China National Convention Center, Beijing, China, August 10-15, 2018.

- Organizing Committee Member for symposium of "14th World Conference on Applied science, Engineering and Technology" (14th WCASET-18) on 21st-22nd November 2018, Kuala Lumpur, Malaysia.

- **Invited Keynote Speaker** for 1st International Conference on Nanofluids (ICNf) and the 2nd European Symposium on Nanofluids (ESNf), Castelo, Spain, June 26th-28th, 2019.
  http://icnf2019.com/index.php/program/confirmed-plenary-lectures

4.3 Workshop presented

- Mohsen Sharifpur (UP) and Reza Azizian (MIT), One-day Workshop on "Nanofluids and Applications", University of Science and Culture, Iran, 29 Dec. 2016.

- Mohsen Sharifpur, Two days Workshop on THERMAL FLUID SYSTEMS, Johannesburg, South Africa, May 10th and 11th, 2018.

4.4 Teamwork and collaboration with others

- Member of the research group entitled "Thermofluids Research Group" in the Department of Mechanical and Aeronautical Engineering at University of Pretoria, South Africa, since Dec. 2009.

- Member of the research group entitled "Evaluation of thermal properties of nanofluids" in the Mech. Eng. Dep. at EMU University 2007-2009.

- Speaker for postgraduate students, Nanofluids and the Opportunities, Tarbiyat Modares University, January 2013.

- Speaker for postgraduate students (Civil Engineering), Some Applications of Thermal Fluid Science to Civil Engineering, Science and Culture University, January 2013.

- Member of South Africa Solar Thermal Technology Platform (STTP), working Group 3: Solar Heat for Industrial Applications.

- Reviewer of applications for international scholarships for South Africans to study abroad in 2018, facilitated by The Department of Higher Education and Training (DHET) of South Africa.

4.4 Membership of national and international bodies

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- Member in the American Society of Mechanical Engineers (ASME) since 2004.

- Member in the International Institute of Informatics and Systemic (IIIS) since March 2008

- Registered as profession engineer at ECSA (Pr. Eng.)

5. MANAGEMENT AND ADMINISTRATIVE DUTIES (LEADERSHIP)

Involvement in departmental activities (e.g. administrative functions), faculty (e.g. faculty committees) or other university activities

- Organizer of the Fluid Mechanics Laboratory in the Mech. Eng. Dep. at EMU (2004-2009)
- Preparing the CFD division of Mech. Eng. Dep. (EMU) multi project for submitting in European Union (EU), March 2005.
- Head of the group of “Design of Experiment (DOE)” for all of the Laboratories of Mech. Eng. Dep. at EMU (2006-2007).
- Establisher and responsible for Nanofluids Research Laboratory in the Department of Mechanical and Aeronautical Engineering at University of Pretoria Since April 2010.
- Responsible for workshop/training of CFD software packages (ANSYS-FLUENT, STAR CCM+ and FLoEFD) in the Department of Mechanical and Aeronautical Engineering at University of Pretoria Since January 2012.