

# UNIVERSITY OF PRETORIA

## Department of Mechanical and Aeronautical Engineering

### Mohsen Sharifpur (CV)- Updated April 2019

C2 rated researcher by NRF

<https://scholar.google.co.za/citations?user=EUOr1pEAAAJ&hl=en>



#### 1. BIOGRAPHICAL SKETCH

##### 1.1 GENERAL INFORMATION

<b>Surname</b>	Sharifpur				<b>First names</b>	Mohsen		
<b>Citizenship</b>	Permanent Resident of South Africa, Iranian				<b>Title</b>	Prof.		
<b>Place of birth</b>	Iran							
<b>Population group</b>	African		Coloured		Indian		White	✓
<b>Marital status</b>	Married				<b>Fax No.</b>	012 420 6632		
<b>Direct Telephone</b>	012 4202448				<b>E-mail</b>	<a href="mailto:mohsen.sharifpur@up.ac.za">mohsen.sharifpur@up.ac.za</a>		
<b>Residential address</b>	Pretoria, South Africa				<b>Postal address</b>	Dep. of Mech. and Aeronautical Eng. University of Pretoria Lynnwood Road Hatfield, 0002 Pretoria South Africa		

##### 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

<b>1.3 PROFESSIONAL REGISTRATION</b>			
<b>Pr. Eng.</b>	Professional registration as professional engineer	<b>ECSA</b> (Engineering Council of South Africa)	2015

<b>1.4 WORK EXPERIENCE TO DATE</b>		
<b>Name of employer</b>	<b>Capacity and/or type of work</b>	<b>Period</b>
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
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

<b>2.1 UNDERGRADUATE</b>					
<b>2.1.1 Courses/modules presented:</b>					
<b>Course</b>	<b>Level (second year, etc.)</b>	<b>Academic Institution</b>	<b>Degree/ Diploma</b>	<b>Compilation of study guides (Yes or No)</b>	<b>Curriculum design (Yes or No)</b>
Computational Fluid Dynamics (MKM 411)	4 <sup>th</sup>	UP	BS	Yes	Yes
Computational Mechanics (MKM 420)	4 <sup>th</sup>	UP	BS	Yes	Yes
Continuum Mechanics (MKM 320)	3 <sup>rd</sup>	UP	BS	Yes	Yes
Porous Flow (MAN 420)	4 <sup>th</sup>	UP	BS	Yes	Yes
Introduction to Mechanical Eng.	1 <sup>st</sup>	EMU	BS	Yes	Yes
Solar Energy Eng. (assist)	4 <sup>th</sup>	EMU	BS	No	No

Fluid Mechanics (assist)	3 <sup>rd</sup>	EMU	BS	No	No
Heat Exchanger Design (assist)	4 <sup>th</sup>	EMU	BS	No	No
Thermodynamics II (assist)	3 <sup>rd</sup>	EMU	BS	No	No
Heat Transfer(assist)	3 <sup>th</sup>	EMU	BS	No	No
Capstone Team Project (assist)	4 <sup>th</sup>	EMU	BS	No	No

### 2.1.2 Study leader for design projects and research projects

The study leader for more than 160 final year undergraduate students for design project (MOX 410) and research project (MRN 412) 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 the Global Warming) Solar Energy Engineering CFD Nuclear Engineering	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)
<b>Dr. Nwosu Paul Nwachukwu</b>	Investigation into the models for effective viscosity of nanofluids.	Prof M. Sharifpur/ Prof JP Meyer	2010-2011
<b>Dr. Mehdi Mehrabi</b>	A new model for Nanofluids based on artificial intelligence	Prof M. Sharifpur/ Prof JP Meyer	2015-2016
<b>Dr. Brusly Solomon Arulanandam</b>	Investigation into magnetic nanofluids for natural convection	Prof M. Sharifpur/ Prof JP Meyer	October 2015- Mach 2017
<b>Dr. Mostafa Mahdavi</b>	Mathematical modeling and CFD simulation of nano-scale heat transfer	Prof M. Sharifpur/ Prof JP Meyer	January 2017- January 2018

### 3.1.2 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
<b>Roozbeh Vaziri</b>	<b>MSc /</b> Experimental Study on Pressure Drops in Particle-Liquid Two-Phase Flow and Porous Media	Prof. Hikmet S Aybar/ Prof M. Sharifpur	2008
<b>Mehdi Mehrabi</b>	<b>PhD /</b> Modelling and Optimization of Thermophysical Properties and Convective Heat Transfer of Nanofluids by Using Artificial Intelligence Methods.	Prof M. Sharifpur/ Prof JP Meyer	2014
<b>Tshimanga Ntumba</b>	<b>MSc /</b> Experimental Investigation and Model Development for Thermal Conductivity of Glycerol-MgO Nanofluids	Prof M. Sharifpur/ Prof JP Meyer	2015
<b>Saheed Adio</b>	<b>PhD /</b> Mathematical modeling and experimental investigation into effective viscosity of nanofluids	Prof M. Sharifpur/ Prof JP Meyer	2015
<b>Ibrahim Garbadeen</b>	<b>MEng /</b> The experimental study of natural convection heat transfer of water/graphite nanofluids	Prof M. Sharifpur/ Prof JFM Slabber and Prof JP Meyer	2015
<b>Kyoung Lee</b>	<b>MEng /</b> Experimental investigation into cavity flow natural convection for ZnO nanofluids	Prof M. Sharifpur/ Prof JP Meyer	2016
<b>Saboura Yousefi</b>	<b>MEng /</b> Mathematical modeling and experimental investigation into Nanolayer of Nanofluids	Prof M. Sharifpur/ Prof JP Meyer	2016
<b>Hadi Ghodsinezhad</b>	<b>MEng /</b> CFD simulation and experimental investigation into cavity flow natural convection of Al <sub>2</sub> O <sub>3</sub> - Water Nanofluids	Prof M. Sharifpur/ Prof JP Meyer	2016
<b>Gaettan K Katamba</b>	<b>MSc /</b> 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

<b>Mostafa Mahdavi</b>	<b>PhD /</b> 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
<b>Elmi Grove</b>	<b>MEng /</b> 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
<b>Tanja Ottermann</b>	<b>MEng /</b> CFD simulation and experimental investigation into cavity flow natural convection of TiO <sub>2</sub> -water nanofluids	Prof M. Sharifpur/ Prof JP Meyer	2017
<b>Johannes Joubert</b>	<b>MEng /</b> Influence of a magnetic field on magnetic nanofluids for the purpose of enhancing natural convection heat transfer	Prof M. Sharifpur/ Prof JP Meyer	2017
<b>Conrad Sanama</b>	<b>MSc /</b> Mathematical modelling of flow downstream of an orifice under flow-accelerated corrosion	Prof M. Sharifpur/ Prof JP Meyer	2018
<b>Vishal Ramnath</b>	<b>MEng /</b> Mathematical Modelling of Nanofluid Thermophysical Properties Using Copulas	Prof M. Sharifpur/ Prof JP Meyer	2018

### 3.1.3 Current postgraduate students

<b>Name of student</b>	<b>Degree</b>	<b>Project title</b>	<b>Supervisor</b>	<b>Co-supervisor</b>	<b>Year of registration</b>	<b>Expected completion</b>
Sohaib Mustafa Mohammad Osman	PhD/ Full time	Investigation into Convective Nanofluids in Transient Regime	Prof. J.P. Meyer	Prof. M. Sharifpur	2015	Dec. 2019
Cornelius Siakachoma	PhD/ Part time	Efficiency Improvement of Solar Heaters	Prof. M. Sharifpur	Dr M. Moghimi & Prof. J.P. Meyer	2016	Feb. 2020
Giwa Solomon Olanrewaju	PhD/ Full time	Heat Transfer Enhancement by Hybrid Magnetic Nanofluids	Prof. M. Sharifpur	Prof. J.P. Meyer	2017	Dec. 2019

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
Nicolas Wilken	MEng/ Full time	Heat transfer Enhancement by Nanofluids Jet Cooling	Prof. M. Sharifpur	Prof. J.P. Meyer	2018	Dec. 2019
Daniël Rudolph Jansen van Vuuren	MEng/ Full time	Mathematical Modeling for Nanoscale Heat Transfer	Prof. M. Sharifpur	Prof. J.P. Meyer	2019	Feb. 2020

### 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

<b>Origin of research funds</b>	<b>Title of research project</b>	<b>Duration</b>
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

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



## 3.2 RESEARCH OUTPUT

### 3.2.1 Articles published in refereed accredited journals/chapter books

#### 2019 (To date)

- 1 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>
- 2 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, Issue 2, pp. 1563–1575.  
<https://doi.org/10.1007/s10973-018-7720-y>
- 3 M Mehrabi, M. Sharifpur and J.P. Meyer, Electrical conductivity and pH modeling of Magnesium oxide-ethylene glycol nanofluids, accepted for publication in Bulletin of Materials Science, Bulletin of Materials Science, Vol. 42 (3), 2019, p.108.  
<https://link.springer.com/article/10.1007/s12034-019-1808-2>
- 4 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>
- 5 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>
- 6 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>
- 7 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](https://link.springer.com/chapter/10.1007/978-981-13-2191-7_6)

#### Accepted paper(s)

- 8 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, submitted to Journal of Thermal Analysis and Calorimetry, manuscript number: JTAC-D-18-02248.
- 9 Dariush Mansoury, Faramarz Ilami Doshmanziari, Abolfazl Kiani, Ali J. Chamkha and **Mohsen Sharifpur**, Heat transfer and flow characteristics of Al<sub>2</sub>O<sub>3</sub>/water nanofluid in various heat exchangers:

Experiments on counter flow, accepted for publication in Heat Transfer Engineering, manuscript number: 0318 (tentatively scheduled for Vol. 41, Issue 3).  
<https://www.tandfonline.com/doi/abs/10.1080/01457632.2018.1528051>

## 2018

- 10 **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 TiO<sub>2</sub> – Water, International communications in Heat and Mass Transfer, Vol. 98, November 2018, pp. 297-303.
- 11 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.
- 12 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.
- 13 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.
- 14 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>
- 15 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.
- 16 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, 2018, pp. 959-971.
- 17 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

- 18 **Mohsen Sharifpur**, Ntumba Tshimanga, Josua P. Meyer, O. Manca, Experimental Investigation and Model Development for Thermal Conductivity of  $\alpha$ -Al<sub>2</sub>O<sub>3</sub>-Glycerol Nanofluids, International Communications in Heat and Mass Transfer, Vol. 85, pp. 12-22, 2017.
- 19 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>
- 20 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.

- 21 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.
- 22 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.
- 23 A.B. Solomon, **M. Sharifpur**, Tanja Ottermann, Carla Grobler, Michael Joubert and J.P. Meyer, Natural convection enhancement in a porous cavity with Al<sub>2</sub>O<sub>3</sub>-Ethylene glycol/water nanofluids, International Journal of Heat and Mass Transfer, Vol. 108, Part B, pp. 1324–1334, 2017.
- 24 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.
- 25 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.
- 26 Garbadeen I, **Sharifpur M**, Slabber JFM and Meyer JP, Experimental Study on Natural Convection of MWCNT-Water Nanofluids in a Square Enclosure, International Communications in Heat and Mass Transfer, Vol. 88, pp.1-8, 2017.
- 27 A. Brusly Solomon, Josh van Rooven, Martin Rencken, **M. Sharifpur** and Josua P. Meyer, Experimental study on the influence of the aspect ratio of square cavity on natural convection heat transfer with Al<sub>2</sub>O<sub>3</sub>/Water nanofluids, International Communications in Heat and Mass Transfer, Vol. 88, 254–261, 2017.
- 28 Mohammad Ali Jokar, Mohammad H. Ahmadi, **Mohsen Sharifpur**, Josua P. Meyer, Fathollah Pourfayaz, Tingzhen Ming, Thermodynamic evaluation and multi-objective optimization of molten carbonate fuel cell-supercritical CO<sub>2</sub> Brayton cycle hybrid system, Energy Conversion and Management, Vol. 153, pp. 538–556, 2017.

## 2016

- 29 **M Sharifpur**, Saboura Yousefi and JP Meyer, A New Model for Density of Nanofluids Including Nanolayer, International Communications in Heat and Mass Transfer, Vol. 78, 2016, 168-174.
- 30 Josua P Meyer, Saheed A Adio, **Mohsen Sharifpur** and Paul N Nwosu, The viscosity of nanofluids: a review of the theoretical, empirical and numerical models, Heat Transfer Engineering, Vol. 37, Issue 5, pages 387-421, 2016.
- 31 Saheed A Adio, Mehdi Mehrabi, **Mohsen Sharifpur** and JP Meyer, Experimental investigation and model development of the effective viscosity of MgO-ethylene glycol nanofluids using dimensional analysis, FCM-ANFIS and GA-PNN techniques, International Communications in Heat and Mass Transfer, Vol. 72, pp. 71–83, 2016.
- 32 Ntumba Tshimanga, **Mohsen Sharifpur**, Josua P. Meyer, Experimental Investigation and Model Development for Thermal Conductivity of Glycerol-MgO Nanofluids, Heat Transfer Engineering, Vol. 37, Issue 12, pp. 1-16, 2016.
- 33 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.
- 34 SA Adio, **M Sharifpur** and JP Meyer, Influence of ultrasonication energy on the dispersion consistency of Al<sub>2</sub>O<sub>3</sub>-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.

- 35 Hadi Ghodsinezhad, **M. Sharifpur**, and J.P. Meyer, Experimental Investigation on Cavity Flow Natural Convection of  $\text{Al}_2\text{O}_3$  – Water Nanofluids, *International Communications in Heat and Mass Transfer*, *International Communications in Heat and Mass Transfer*, Vol. 76, 2016, pp. 316-324.
- 36 Mostafa Mahdavi, **M. Sharifpur**, J.P. Meyer, Simulation study of convective and hydrodynamic turbulent nanofluids by turbulence models, *International Journal of Thermal Sciences*, Vol. 110, 2016, pp. 36-51.

## 2015 and before

- 37 **Mohsen Sharifpur**, Saheed Adewale Adio and Josua Petrus Meyer, Experimental Investigation and Model Development for Effective Viscosity of  $\text{Al}_2\text{O}_3$ -Glycerol Nanofluids by Using Dimensional Analysis and GMDH-NH Methods, *International Communications in Heat and Mass Transfer*, Vol. 68, pp. 208-219, 2015.
- 38 SA Adio, **M Sharifpur** and JP Meyer, Factors affecting the pH and electrical conductivity of MgO-ethylene glycol nanofluid, *Bulletin of Materials Science, microfluidics and nanofluidics*, *Bull. Mater. Sci.*, Vol. 38, No. 5, pp. 1345–1357, 2015.
- 39 Mostafa Mahdavi, **M. Sharifpur** and J.P. Meyer, CFD modelling of heat transfer and pressure drops for nanofluids through vertical tubes in laminar flow by DPM and Mixture model, *International Journal of Heat and Mass Transfer*, Vol. 88, 803-813, 2015.
- 40 Hikmet Ş. Aybar, **Mohsen Sharifpur**, M. Reza Azizian, Mehdi Mehrabi, and Josua P. Meyer, A Review of Thermal Conductivity Models of Nanofluids, *Heat Transfer Engineering*, Vol. 36 (13) pp. 1085-1110, 2015.
- 41 SA Adio, **M Sharifpur** and JP Meyer, Investigation into Effective Viscosity, Electrical Conductivity and pH of  $\gamma\text{-Al}_2\text{O}_3$  – Glycerol Nanofluids in Einstein Concentration Regime, *Heat Transfer Engineering*, Vol. 36, No. 14-15, pp. 1241-1251, 2015.
- 42 Paul N. Nwosua, Josua Meyer, **Mohsen Sharifpur**, Nanofluid Viscosity: A Simple Model Selection Algorithm and Parametric Evaluation, *Computers & Fluids*, Volume 101, pp. 241-249 2014.
- 43 Paul N. Nwosua, Josua Meyer, **Mohsen Sharifpur**, 2014, A Review and Parametric Investigation into Nanofluid Viscosity Models, *ASME Journal of Nanotechnology in Engineering and Medicine*, Volume 5, Issue 3, 031008-1, 2014.
- 44 Mehrabi M, **Sharifpur M**, Meyer JP, 2013, Viscosity of Nanofluids based on an Artificial Intelligence Model, *International Communications in Heat and Mass Transfer*, 43, April 2013, 16–21.
- 45 Mehrabi M, **Sharifpur M**, Meyer JP, 2013, Modelling and multi-objective optimisation of the convective heat transfer characteristics and pressure drop of low concentration  $\text{TiO}_2$ -water nanofluids under turbulent regime, *International Journal of Heat and Mass Transfer*. 67, 646–653.
- 46 Mehrabi M, **Sharifpur M**, Meyer JP, 2012, Application of the FCM-based Neuro-fuzzy Inference System and genetic algorithm-polynomial neural network approaches for modeling of the thermal conductivity of Alumina-water nanofluids, *International Communications in Heat and Mass Transfer*, 39, 971–977.
- 47 Hikmet S. Aybar and **Mohsen Sharifpur**, 2009, Modelling of Two-Phase Flow in Boiling Water Reactors Using Phase-Weighted Ensemble Average Method, *Iranian Journal of Science & Technology*, Transaction B-Engineering (International English Edition), 33-B5: 355-370.

- 48 Hikmet S. Aybar and **Mohsen Sharifpur**, 2009, Simulation of boiling in a vertical channel using ensemble average model, Iranian Journal of Chemical & Chemical, Engineering-International English Edition, 28-3: 77-86.
- 49 **Mohsen Sharifpur** and Sholeh Rostamirad, 2009, Experimental Investigation of Conditions of Water Diffusion before Cooking within Production Line of Red Beans. Defect and Diffusion Forum- Diffusion in Solids and Liquids, 285: 220-224.
- 50 Hikmet S. Aybar , **Mohsen Sharifpur**, Roozbeh Vaziri, 2009, Experimental Investigation of Pressure Drop in one Phase Flow, Particle-Liquid Two-Phase Flow, and Porous Media Consisting of the Same Particle Size, Defect and Diffusion Forum - Diffusion in Solids and Liquids, 285: 599-603.
- 51 L. B. Y. Aldabbagh, **Mohsen Sharifpur**, Mahdi Zamani, 2008, Experimental Study of Free convection about a Vertical flat plate in Porous Media, Defect and Diffusion Forum- Diffusion in Solids and Liquids, 274: 796-801.
- 52 Hikmet S. Aybar, **Mohsen Sharifpur**, 2008, Simplification of Ensemble Averaged Two - Phase Flow with Heat and Mass Transfer for Boiling Inside channels, Defect and Diffusion Forum- Diffusion in Solids and Liquids, 274: 616-621.

**Submitted** papers to referee accredited journals/Chapter books:

- 53 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.
- 54 S.O. Giwa, **M. Sharifpur** and J.P. Meyer, Influence of base fluid, temperature, and concentration on the thermo-physical properties of hybrid nanofluids of alumina-ferrofluid, Journal of Current Applied Physics, manuscript number: CAP-D-19-00175.
- 55 Mostafa Mahdavi, **M. Sharifpur** and J.P. Meyer, Solid-liquid Two-Component Flow: Discrete Phase and Mixture Approaches for Nanoscale Heat Transfer, **Invited chapter for Handbook of Multiphase Flow Science and Technology, by Springer.**  
<https://meteor.springer.com/project/dashboard.jsf?id=1&tab=About>
- 56 S.O. Giwa, **M. Sharifpur** and J.P. Meyer, Experimental determination of viscosity and electrical conductivity of water-based hybrid ferrofluids, Journal of Experimental Nanoscience, manuscript number: TJEN-2018-0083.
- 57 Allen Varughese, A. Brusly Solomon, Benny Raj, **Mohsen Sharifpur**, Josua P. Meyer, Heat transfer characteristics and flow visualization of anodized flat thermosiphon, Experimental Heat Transfer, manuscript number: UEHT-2018-0112.
- 58 R.S.Anand, C.P.Jawahar, A.Brusly Solomon, **M. Sharifpur**, J.P. Meyer, Experimental Study and Comparison Correlations for Heat Transfer Coefficient of Thermosiphon, International Communications in Heat and Mass Transfer, NHT18/8227.
- 59 Mohammadreza Behi, Reza Azizian, Giwa Solomon Olanrewaju, **Mohsen Sharifpur**, Josua Petrus Meyer, Masud Behnia, Review of recent developments on colloidal nano-engineering fluid (nanofluids), submitted to Renewable & Sustainable Energy Reviews, manuscript number: RSER-D-19-00876.
- 60 Sohaib Osman, M. Sharifpur and J.P. Meyer, Experimental Study on the Convection Heat Transfer Enhancement in Transition Flow Regime of Aqueous Titanium Oxide Nanofluids Flowing in a Rectangular Channel, submitted to International Communications in Heat and Mass Transfer, manuscript number: ICHMT-S-19-00424.

### Papers in progress for publication in refereed accredited journals/or chapter books:

- 61 Vishal Ramnath, **Mohsen Sharifpur**, Josua P Meyer, Mathematical Quantification of Predicted Nanofluid Thermophysical Uncertainties Utilizing Models with PDF's of Parameters
- 62 SA Adio, **M Sharifpur** and JP Meyer, Experimental Investigation on Characterization and Influence of Ultrasonic Energy Density on Dispersion Consistency of MgO-EG Nanofluids by using Viscometry Approach.
- 63 Vishal Ramnath, **Mohsen Sharifpur**, Josua P Meyer, Mathematical Analysis of Nanofluid Thermophysical Statistical Models Utilizing Multivariate Copulas.
- 64 Kyoung Lee, Sharifpur M and Meyer JP, Experimental investigation into cavity flow natural convection of zinc oxide-water nanofluids
- 65 SA Adio, **M Sharifpur** and JP Meyer, Experimental investigation of the influence of nanoparticle type and base fluid type on the effective viscosity of nanofluids,
- 66 Elmi Grove, **M. Sharifpur** and J.P. Meyer, Modification of South Africa Power Plants Using Boiling Condenser; more efficiency and less environment defect.

### 3.2.2 Articles published in the international conference proceedings:

#### 2018

- 67 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.
- 68 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 (accepted for oral presentation).
- 69 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 (accepted for oral presentation).
- 70 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 (accepted for oral presentation).

#### 2017

- 71 **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.
- 72 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.

- 73 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.

## 2016

- 74 **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.
- 75 **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.
- 76 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.
- 77 **M. Sharifpur**, De Marillac Arnaud, J.P. Meyer and Hikmet S. Aybar, Effect of Using Viscosity and Thermal Conductivity Models on Experimental Cavity Flow Natural Convection of CuO-Water Nanofluids, 12th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT 2016), July 11-13, 2016, Costa del Sol, Malaga, Spain.
- 78 U. Kallamu, J. Ibrahim, **M. Sharifpur** and J.P. Meyer, Experimental Investigation of the Viscosity of Nanofluid Prepared From Banana-fiber Nanoparticles, 12th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT 2016), July 11-13, 2016, Costa del Sol, Malaga, Spain.
- 79 J.T. Awua, J.S. Ibrahim, A. Kwagheger, **M. Sharifpur** and J.P. Meyer, Investigation into Thermal Conductivity of Palm Kernel Fibre Nanofluids with Mixture of Ethylene Glycol/Water as Base Fluid. 12th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT 2016), July 11-13, 2016, Costa del Sol, Malaga, Spain.
- 80 Mostafa Mahdavi, **M. Sharifpur** and J.P. Meyer, Development of a novel method for slip velocity of fluid structure interactions by employing effects of electrostatic attraction on the surface of nano-scale particles, The Sixth International Conference on Structural Engineering, Mechanics and Computation (SEMC 2016), 5 - 7 September 2016, Cape Town, South Africa.

## 2015

- 81 **M. Sharifpur**, S.A. Adio and J.P. Meyer, Experimental Investigation on the Viscosity, Electrical Conductivity and pH of SiO<sub>2</sub>-Ethylene Glycol Nanofluids, 11th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT 2015), July 20-23, 2015, Kruger National Park, South Africa.
- 82 Mostafa Mahdavi, Hadi Ghodsinezhad, **M. Sharifpur** and J.P. Meyer, Boundary Condition Investigation for Cavity Flow Natural Convection, 11th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT 2015), July 20-23, 2015, Kruger National Park, South Africa.
- 83 Hadi Ghodsinezhad, **M. Sharifpur**, J.P. Meyer, and Heidi Rolfes., Investigation on Ultrasonic Energy Density Effect on Size Distribution of Zinc Oxide (ZnO) Nanoparticles by Using Zeta-Sizer, 11th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT 2015), July 20-23, 2015, Kruger National Park, South Africa.
- 84 Carla Grobler, **M. Sharifpur**, Hadi Ghodsinezhad, Ryan Capitani and J.P. Meyer, Experimental Study on Cavity Flow Natural Convection in Porous Medium, Saturated with Al<sub>2</sub>O<sub>3</sub> 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.

- 85 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.
- 86 **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.
- 87 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.

## 2014 and before

- 88 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.
- 89 Andre Maripia, **M. Sharifpur** and J.P. Meyer, The effect of uncertainty of available correlations for effective properties of distilled water- Al<sub>2</sub>O<sub>3</sub> 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.
- 90 Saboura Yousefi A., **M. Sharifpur** and J.P. Meyer, The Effects of Uncertainty 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.
- 91 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.
- 92 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.
- 93 S.A. Adio, **M. Sharifpur** and J.P. Meyer, Investigation into the pH and Electrical Conductivity enhancement of ethylene glycol-based Nanofluids of MgO, The 15th International Heat Transfer Conference (IHTC-15), August 10-15, 2014, Kyoto, Japan.
- 94 S. A. Adio, **M. Sharifpur** and J.P. Meyer, Combined Influence of Size and Sonication Energy on Constant Shear viscosity of MgO–Ethylene Glycol Nanofluids, the 15th International Heat Transfer Conference (IHTC-15), August 10-15, 2014, Kyoto, Japan.
- 95 Mostafa Mahdavi, **M. Sharifpur** and J.P. Meyer, Comparative study on simulation of convective Al<sub>2</sub>O<sub>3</sub>-water nanofluid by using ANSYS-FLUENT, The 15th International Heat Transfer Conference (IHTC-15), August 10-15, 2014, Kyoto, Japan.
- 96 **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.



- 97 **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.
- 98 Mehdi Mehrabi, Tuhid Pashaei, **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.
- 99 SA Adio, **M Sharifpur** and JP Meyer, Investigation into Effective Viscosity and Electrical Conductivity of  $\gamma\text{-Al}_2\text{O}_3$  – Glycerol Nanofluids in Einstein Concentration Regime, 13<sup>th</sup> UK Heat Transfer Conference, UKHTC2013, 2 - 3 September 2013, Imperial College London, UK.
- 100 **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.
- 101 **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.
- 102 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.
- 103 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.
- 104 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.
- 105 **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.
- 106 **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.
- 107 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.
- 108 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.
- 109 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.
- 110 **Mohsen Sharifpur**, Sholeh Rostamirad, 2008, Experimental Investigation of Conditions of Water Diffusion in Quality of Legumes. DSL2008 Conference, Spain.

- 111 **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.
- 112 **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.
- 113 **Mohsen Sharifpur**, 2007a, Designing Boiling Condenser for more Efficiency in Power Plants and less Environment Defects, ASME -POWER2007-22201, pp. 55-59, USA.
- 114 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.
- 115 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.
- 116 **Mohsen Sharifpur**, 2006, Overall Review of Modelling in Convective Two-Phase Flow, ASME International Conference, Yeditepe University, Istanbul, Turkey.
- 117 **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 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, 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, 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 (3<sup>rd</sup> 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 “2<sup>nd</sup> International Conference on Environmental and Civil Engineering Technology (ENVICET 2016), October 4 – 6, 2016, Penang, Malaysia.
- Technical program committee member for HEFAT2016 (12<sup>th</sup> International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics), July 11-13, 2016, Malaga, Spain.
- Reviewer and technical program committee member for “22<sup>nd</sup> 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 (13<sup>th</sup> 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>

## 4.2 Workshop presented

- Mohsen Sharifpur (UP) and Reza Azizian (MIT), One-day Nanofluids Workshop, University of Science and Culture, Iran, 29 Dec. 2016.
- Mohsen Sharifpur, Two days Workshop on THERMAL FLUID SYSTEMS, Johannesburg, South Africa, May 10th and 11<sup>th</sup>, 2018.

## 4.3 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**

- Member in the American Society of Mechanical Engineers (ASME) since 2004.
- Member in the International Institute of Informatics and Systemic (IIS) 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 Head for Nanofluids Research Laboratory in the Department of Mechanical and Aeronautical Engineering at University of Pretoria Since July 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.