

# Name Asst. Prof. Dr Khaled A. J. AL-FARHANY

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CV

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## websites:

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### Qualifications

- B.Sc. Of Mechanical engineering, university of Mosul, Mosul, Iraq, 1999.

- M.Sc. (Mechanical engineering/ Refrigeration and Air Conditioning), university of Mosul, Mosul, Iraq, 2002.

- Ph.D. (Mechanical engineering/ Heat and mass transfer), The University of Manchester, Manchester, UK, 2012.

### Language:

-Arabic (mother language) Excellent -English Excellent

### Membership of Professional Associations:

- Member of the Iraqi Engineering Association, No. 88 653, year 1999
- Member of scientific and engineering services bureau of The University of Al-Qadisiyah from 2003-2006
- Member of Manchester Alumni, year 2012

## **Current Positions:**

- Head of Mechanical Engineering since 2014.
- Chief of editorial board of Al-Qadisiyah Journal of Engineering Sciences.
- HVAC Designer of scientific and engineering services beauru of The University of Al-Qadisiyah

### **Research Group and Group Membership**

- Energy & Multiphysics.
- Computational Fluid Dynamics (CFD) Group.
- Thermal Mechanical Engineers.
- Porous Materials Inc.
- Refrigeration & Air-conditioning Professionals.

#### Specific research interests

- Flow, heat and mass transfer in porous medium.
- CFD studies of MHD convection heat and mass transfer in porous medium.
- Nano-fluid heat transfer.
- Soret and Dufour effects in porous medium.
- Refrigeration and air conditions system.
- Renewable Energy.
- Energy Simulation, Green Buildings.
- Solar energy.

#### Experience

- Lecturer in University of Al-Qadisiyah since 2002.
- Teaching Assistant in School of MACE, University of Manchester, UK from 2009-2012.

#### Teaching

- Advance Heat Transfer (MSc.)
- Heat Transfer
- Mechanical Engineering
- Mechanical Drawing by using SolidWorks
- Engineering Drawing
- Refrigeration and Air condition
- FORTRAN language
- MatLab

#### **Skills & Endorsements**

- CFD
- FORTRAN language
- MatLab
- COMSOL
- SolidWorks
- ANSYS
- FLUENT
- Grapher and TecPlots
- AutoCAD
- Revit MEP

### Published articles and conference papers:

### **Journal Papers**

## <u>2019</u>

- 15. Al-Farhany K., Turan A. (2019). Double-Diffusive of Natural Convection in an Inclined Porous Square Domain Generalized Model. Al-Qadisiyah Journal for Engineering Sciences. 12(3): p. 151-160 <u>https://doi.org/10.30772/qjes.v12i3.612</u>
- Barik A.-M., Al-Farhany K. (2019). Numerical Investigation of the Effect of Baffle Inclination Angle on Nanofluid Natural Convection Heat Transfer in A Square Enclosure. Al-Qadisiyah Journal for Engineering Sciences. 12(2): p. 61-71. <u>https://doi.org/10.30772/qjes.v12i2.589</u>
- Hamzah, D.A., Al-Farhany, K. (2019). Effect of twisted tape ratio on the solar generator half-length pipe. International Journal of Heat and Technology, Vol. 37, No. 2, pp. 407-412. <u>https://doi.org/10.18280/ijht.370205</u>

## <u>2018</u>

- 12. Abdulkadhim A., Al-Farhany K., Abed A.M. (2018). Effect of adiabatic circular cylinder on the natural convection heat transfer characterizes in a porous enclosure. Chemical Engineering Transactions. 71: p. 1309-1314. <u>http://DOI: 10.3303/CET1871219</u>
- 11. Abdulkadhim A., Abed A.M., Mohsen A.M., Al-Farhany K. (2018). Effect of partially thermally active wall on natural convection in porous enclosure. Mathematical Modelling of Engineering Problems. 5(4): p. 395-406 <u>http://DOI: 10.18280/mmep.050417</u>
- 10. Al-Farhany K.,Abdulkadhim A. (2018). Numerical simulation for conjugate natural convection in a partially heated rectangular porous cavity. Journal of Engineering and Applied Sciences. 13(16): p. 6823-6832 <u>http://DOI: 10.3923/jeasci.2018.6823.6832</u>
- Al-Chlaihawi K.K.I., Al-Farhany K., Al-Rubaye A.T. (2018). Experimental investigation of solar thermal collector on the open parabolic trough. Journal of Engineering and Applied Sciences. 13(16): p. 6873-6878. <u>http://DOI: http://dx.doi.org/10.3923/jeasci.2018.6873.6878</u>
- 8. Hamzah D.A., Hamza N.H., Al-Dawody M.F., Al-Farhany K. (2018). Enhancement of thermal and performance of multiple pass heat exchanger using nanoparticles. International Journal of Mechanical and Production Engineering Research and Development. 8(4): p. 969-980
- 7. Al-Rubaye A., Al-Farhany K., Al-Chlaihawi K. (2018). Performance of a portable thermoelectric water cooling system. International Journal of Mechanical Engineering and Technology. 9(8): p. 277-285
- 6. Abdulkadhim, A., Abed, A. and Al-Farhany, K., 2018. COMPUTATIONAL

INVESTIGATION OF CONJUGATE HEAT TRANSFER IN CAVITY FILLED WITH SATURATED POROUS MEDIA. Frontiers in Heat and Mass Transfer (FHMT), 11.12. http://dx.doi.org/10.5098/hmt.11.12

- Al-Farhany K., Abdulkadhim A. (2018). Numerical investigation of conjugate natural convection heat transfer in a square porous cavity heated partially from left sidewall. International Journal of Heat and Technology. 36(1): p. 237-244. <u>http://DOI: 10.18280/ijht.360132</u>
- 4. Al-dawody, M.F. and Al-Farhany, K., 2018. A Comparative Analysis of Diesel Engine Fuelled with Diesel Fuel and Methyl Ester of Waste Cooking Oil. *International Journal of Applied Engineering Research*, *13*(1), pp.14-20. https://www.ripublication.com/ijaer18/ijaerv13n1\_03.pdf

## <u>2012</u>

3. Al-Farhany K., Turan A. (2012). Numerical study of double diffusive natural convective heat and mass transfer in an inclined rectangular cavity filled with porous medium. International Communications in Heat and Mass Transfer. 39(2): p. 174-181.

https://doi.org/10.1016/j.icheatmasstransfer.2011.11.014

## 2011

- Al-Farhany K., Turan A. (2011). Unsteady conjugate natural convective heat transfer in a saturated porous square domain generalized model. Numerical Heat Transfer; Part A: Applications. 60(9): p. 746-765. https://doi.org/10.1080/10407782.2011.627793
- Al-Farhany K., Turan A. (2011). Non-Darcy effects on conjugate double-diffusive natural convection in a variable porous layer sandwiched by finite thickness walls. International Journal of Heat and Mass Transfer. 54(13-14): p. 2868-2879. <u>https://doi.org/10.1016/j.ijheatmasstransfer.2011.03.012</u>

## **Conference Papers**

- 4. H R Jasim, N Sanke, K Al-Farhany "Heat Transfer Simulation of Gas Turbine Blade with Film Cooling".2018. National Conference on Advances in Mechanical Engineering and Nanotechnology (AMENT2018). pp 73-82. 29-30 June, 2018, Hyderabad, TS, India.
- 3. Al-Farhany, K., A. Turan, and J. Ma. Non-Darcy Effects on Double Diffusive Natural Convection Heat and Mass Transfer in Inclined tall Porous Cavities. in 4th International Symposium on Heat Transfer and Energy Conservation (ISHTEC2012). PP TC02-003. 6-9th January 2012, Guangzhou, China.
- 2. Al-Farhany, K., Numerical Study of Double Diffusive Natural Convective Heat and Mass transfer in porous cavities. in 1st conference of engineering since. 1-2nd October 2011. Iraqi cultural attaché, London, UK.

1. Al-Farhany K, Turan A. "Non-Darcy Effects on Conjugate Natural Convection in Saturated Porous Layer". Tenth International Congress of Fluid Dynamics (ICFD10). pp ICFD10-EG-3018. 16-19 December 2010.