1/2023

CURRICULUM VITAE

Assistant Prof. Dr.-Ing. Omar Rafae Alomar

Vice-Chancellor of President University of Scientific affairs

Northern Technical University (NTU)

PERSONAL DATA

Name: Omar Rafae Mahmood Alomar

Date and Place of Birth: 07.09.1979 at Mosul, Iraq

Nationality: Iraqi

Privet Email: sedrarasha@yahoo.com

University Email: Omar.alomar@ntu.edu.iq

Mobile Number: +9647517678865

ACADEMIC DEGREES

PhD, Mechanical Engineering and Thermal Engineering **(10/2011 to 09/2016)**

Institute of Thermal Engineering, TU Bergakademie Freiberg, Germany

- **Thesis Topic:** *Modeling and simulation of complete liquid-vapor phase change process inside porous media*
- **Classification:** 90-95% (magna cum laude)
- **Area of Specialization:** Mechanical Engineering and Thermal Engineering
- **Adviser:** Prof. Dr.-Ing. Dimosthenis Trimis (TU Freiberg and KIT, Germany)
- **Co-Adviser:** Prof. Dr. Subhashis Ray (TU Freiberg, Germany)

M.Sc., Mechanical Engineering **(10/2001 to 1/2004)**

Mechanical Engineering department, University of Mosul, Iraq

- **Thesis Topic:** *Numerical Study of Inertia Effect on Natural Convection in a Horizontal Porous Cavity*
- **Classification:** Very good
- **Area of Specialization:** Thermal Engineering
- **Advisor:** Assistant Prof. Dr. Amir Sultan Dawood (University of Mosul, Iraq)

B.Sc., Mechanical Engineering **(10/1997 to 7/2001)**

Mechanical Engineering department, University of Mosul, Iraq

- **Classification:** Good
- **Area of Specialization: General Mechanical Engineering**

HONORS / AWARDS

- Collaborative Research Center (SFB920) Scholarship, October 2015
- DAAD Scholarship, October 2011 – September 2015
- Elsevier Ltd Certificates for reviewing papers, 2014 – 2021
- Thanks and appreciation certificates from the Dean of Engineering Technical College of Mosul (ETCM), 2006 – 2011
- Merit of Bachelor UOM (ranked 2nd in Mech. Eng. Graduation courses), 2001

- Editorial Board for six International Journals, 2018
- Thanks and appreciation certificates from the President of Northern Technical University (NTU), 2018, 2019 and 2020
- Thanks and appreciation certificates from the President of Northern Technical University (NTU), 2021
- Thanks and appreciation certificates from the President of Northern Technical University (NTU), 2022
- Thanks and appreciation certificates from the Minster of Higher Education and Scientific Affairs, 2021 and 2022.

RESEARCH INTERESTS

- Modeling and simulation of energy conversion systems
- Reactive flows and phase change process in porous and heterogeneous media
- Renewable and sustainable energy sources
- System optimization and uncertainty analysis
- Multi-mode heat and mass transfer in porous and heterogeneous media
- Algorithms and computational fluid dynamics (CFD) for simulation of complex multi-physical systems
- Nanofluids inside porous media
- Internal combustion engine and refrigeration and air-conditioning systems

Positions and Committees

- A member of several scientific and administrative committees at the university
- Head of Refrigeration and Air Conditioning Technology Engineering Department, 2018
- Member of the Government Program Secretariat Committee, 2019
- Director of the government program at the Technical College of Engineering, Mosul, 2019
- Director of Quality Assurance Division Office, 2020
- A member of several scientific and preparatory committees in the conferences held by the Northern Technical University, from 2020 to 2022
- Member of the Government Program Secretariat Committee, 2020
- Member of the Teaching Qualification Examination Committee, 2020
- Director of the Department of Quality Assurance and University Performance, 2020
- Chairman of the Accreditation Committee for Scientific Journals, 2020
- Director of the government program at the Northern Technical University, Mosul, 2021
- Editor-in-chief of the NTU Journal of Technology and Engineering Sciences at the Northern Technical University, 2021
- Director of the Department of Studies and Planning, 2021
- **Vice-Chancellor of President University for Scientific affairs, 2021 up to Now**

RESEARCH EXPERIENCE

Scientific Researcher **(11/2005 to present)**

Engineering Technical College of Mosul, Northern Technical University (NTU), Iraq

- **Topics:** *Engineering and Numerical Analysis; Heat and Mass Transfer; Air-conditioning Systems; Engineering Control Systems*
- **Main research activities:**
  - Give scientific courses for Undergraduate student
  - Proposal writing for creation of new projects
  - Measurement the discharge coefficient of orifice meter
  - Measurement the diesel performance and emissions analysis
  - Simulation of phase change problems in porous media
  - Performance analysis of a hybrid (photovoltaic/thermal) solar collector system for residential applications in Iraq
  - supervision of Master students
  - Scientific committee member for International conferences

Scientific Researcher (SFB **920 Project)** **(07/2016 to 10/2016)**

Institute of Ceramic, Glass and Construction Materials, TU Bergakademie Freiberg, Germany

- **Topic:** *Numerical simulations in 2-phase and 3-phase systems using metal melt/ ceramic filter material*
- **Main research activities**: Detialed simulation of metal melt filtration in ceramic fomas
- **Adviser:** Prof. Dr.-Ing. habil. Aneziris Christos G. (TU Freiberg, Germany)

PhD Researcher (SFB **920 Scholarship)** **(10/2015 to 09/2016)**

Institute of Thermal Engineering, TU Bergakademie Freiberg, Germany

- **Topic**: *Modeling and simulation of two-phase flow and phase change process inside porous media*
- **Advisor:** Prof. Dr.-Ing. Dimosthenis Trimis (TU Freiberg and KIT, Germany)
- **Co-Advisor:** Prof. Dr. Subhashis Ray (TU Freiberg, Germany)
- **Note:** SFB 920 Scholarship is the international scholarship for PhD-Students in terms of the Integrated Research Training Group of the Collaborative Research Center SFB920 (CRC 920) at the Faculty of Mechanical, Process and Energy Engineering, TU Freiberg, Germany

PhD Researcher (DAAD Scholarship) **(10/2011 to 09/2015)**

Institute of Thermal Engineering, TU Bergakademie Freiberg, Germany

- **Topic**: *Phase change problems inside porous media*
- **Advisor:** Prof. Dr.-Ing. Dimosthenis Trimis (TU Freiberg and KIT, Germany)
- **Co-Advisor:** Prof. Dr. Subhashis Ray (TU Freiberg, Germany)
- **Note:** Exchange DAAD Scholarship is one of the best international scholarship for PhD-Students in the world

Graduate Researcher **(10/2001 to 1/2004)**

Mechanical Engineering department, University of Mosul, Iraq

- **Topic:** *Non-Darcian flow inside porous media*
- **Adviser:** Assistant Prof. Dr. Amir Sultan Dawood (Mosul University, Iraq)

Undergraduate Researcher **(10/2000 to 7/2001)**

Mechanical Engineering department, University of Mosul, Iraq

- **Topic:** *Types of nuclear reactors*
- **Adviser:** Assistant Prof. Ahmed Alsabha (Mosul University, Iraq)

TEACHING EXPERIENCE

Teaching Courses

Bachelor

- **Heat and mass Transfer**, Bachelor, NTU (coordinator) **(2017 to present)**
- **Engineering and Numerical Analysis**, Bachelor, NTU (coordinator) **(2005 to present)**
- **Engineering Control Systems**, Bachelor, NTU (coordinator) **(2008 to 2010)**
- **Refrigeration and Air Conditioning Systems**, Bachelor, NTU (coordinator) **(2006 to 2009)**
- **Transport Phenomena Using CFD**, Master, TU Freiberg (assistant) **(2015 to 2016)**
- **Process Modeling**, Bachelor, TU Freiberg (assistant) **(2015 to 2016)**

Higher Diploma

- **Advanced Numerical Analysis**, Higher Diploma, NTU (coordinator) **(2020 to present)**
- **Thermal System Design**, Higher Diploma, NTU (coordinator) **(2020 to present)**

Student Supervision

Bachelor

- Supervisor for more than 30 students within different topics in the field of Thermal engineering, Engineering Technical College of Mosul, NTU **(2005 to present)**

Higher Diploma

- Supervisor of 2 student in the field of Mechanical engineering, engineering Technical College Mosul, NTU **(2021 to present)**

Master

- Supervisor of 7 student in the field of Thermal engineering, Technical College Kurkuk, NTU **(2019 to present)**

Doctoral

- Supervisor of 1 student in the field of Thermal engineering, USM, Malaysia **(2022 to present)**

PROJECT EXPERIENCE

Collaborative Research Center 920 **(10/2015 to 10/2016)**

Title: Multi-Functional Filters for Metal Melt Filtration – A contribution towards Zero Defect Materials

Supported by: German Research Foundation (DFG)

Partners: 9 **Duration:** 36months **Budget:** 3.8 million euro

MANAGEMENT EXPERIENCE

Projects

- **Proposal writing:**
  - Prediction of complete liquid-vapour phase change process inside real porous media (DFG) **(2016)**
- **Courses/workshops:** (All the courses with certificates) **(2011 to 2015)**
  - Quality Management, TU Freiberg, Germany
  - Assessment Center, TU Freiberg, Germany
  - Leading and Working in Teams , TU Freiberg, Germany
  - Managing Academic Presentations, TU Freiberg, Germany
  - Time and Stress Management, TU Freiberg, Germany
  - Project Management Focusing on the own doctoral studies, TU Freiberg, Germany
  - Basics of Team Development, TU Freiberg, Germany

PUBLICATIONS

Complete list of journal and conference publications (provided at the end of this document)

Citation Report from Scopus and Google Scholar (on 1/03/2021)

Subject areas: Physics, Engineering, Energy, Chemical Engineering

Documents	45
Sum of Times cited	588
Co-authors	35
h-index	16
RI Score	374

SCIENTIFIC COMMUNITY

Reviewer for international journals:

- International Journal of Thermal Sciences, Elsevier
- International Journal of Multiphase Flow, Elsevier
- Case Studies in Thermal Engineering, Elsevier
- Applied Thermal Engineering, Elsevier
- Solar Energy, Elsevier
- International Journal of Heat and Mass Transfer, Elsevier
- Flow Measurement and Instrumentation, Elsevier
- International Journal of Mechanical Sciences, Elsevier
- Aerospace Science and Technology, Elsevier
- Energy Research & Social Science, Elsevier
- Applied Energy, Elsevier
- Chemical Engineering and Processing: Process Intensification, Elsevier
- Sustainable Energy, Grids and Networks, Elsevier
- Transport in Porous Media, Springer
- Journal of Mechanical Science and Technology, Springer
- Iranian Journal of Science and Technology, Transactions of Mechanical Engineering, Springer

- Journal of Heat and Mass Transfer, Springer
- Enviroment, Development and sustainability, Springer
- Environmental Science and Pollution Research, Springer
- Heat Transfer Engineering, Taylor and Francis Ltd.
- International Journal of Ambient Energy, Taylor and Francis Ltd
- International Journal of Energy Research, Wiley
- IEEE Conferences
- International Journal of Research and Scientific Innovation
- Journal of Environmental science and Management
- Journal of Solar Energy and Sustainable Development
- Journal of Advanced Research in Fluid Mechanics and Thermal Sciences
- International Journal of Mechanical Engineering and Robotics Research

Editorial board for international journals:

- SCIREA Journal of Mechanical Engineering
- SCIREA Journal of Energy
- International Journal of Mechanical Engineering and Applications
- International Journal of Research and Engineering
- International Journal of Research in Advanced Engineering and Technology
- International Journal of Latest Technology in Engineering, Management & Applied Science

Manger Editor:

- NTU Journal of Engineering and Technology

KEY SKILLS

Research

- Extensive knowledge of **applied mathematics** (integral-differential equations, numerical methods, uncertainty quantification analysis, linear stability analysis, optimization)
- Extensive knowledge of **system modeling and simulation** (CFD, parallel computation, dynamic modeling and control)
- Extensive knowledge of **energy conservation systems** (phase change process in porous media, multi-mode heat transfer, biodiesel and solar energy)
- Knowledge of **combustion experiments** (characteristics of engine performance and emissions analysis)
-

Social and Scientific Activities

- Member of the Iraqi Engineers Union
- Member of the Iraqi Association of University Lecturers
- Member of the online CFD group
- Membership in International Association for Mathematical Geosciences (IAMG) – Houston, USA from 2013 up till now
- Membership in Science and Engineering Institute (SCIEI), 2018.
- International Solar Energy Society, 2019
-

Academic Courses

I have attended many academic courses at TU Freiberg from 2011 to 2016 (All the courses with certificates).

- Introduction to Computer Programming with MATLAB
- Scientific Working and Writing for International Doctoral Student
- Compiling Academic Papers
- Improved Reading

Scientific Courses

I have attended three intensive scientific courses at TU Freiberg (All the courses with certificates).

- Transport Phenomena using CFD
- Phase Change Heat Transfer
- Process Modeling

Information and Technology

- Operating systems: WINDOWS, LINUX
- Software: Microsoft office packages, LaTex, TECPLOT, GUN packages, CAD, Statistic analysis and CFD softwares
- Programming: FORTRAN, MATLAB

Languages

- Arabic (Mother tongue)
- English (Very good)
- German (Good; finished level B1)

Problem Solving

- Working across distinct areas of phase change problems in porous media, demonstrated independent thought in analyzing problems, adopting suitable strategies and developing new techniques to deal with high discontinuity in the diffusion coefficient

LIST OF PUBLICATIONS

Journal Publications

- **O. R. Alomar**, I. A. Mohamed, Numerical investigation of boundary surface effects on natural convection in a horizontal porous cavity by using non-Darcian flow, *Al-TAQANI Journal*, 26 (5) (2013) 9-30.
- **O. R. Alomar**, M.A.A. Mendes, D. Trimis, S. Ray, Simulation of complete liquid-vapor phase change inside divergent porous evaporator, *Int. J. of Materials, Mechanics and Manufacturing*, 2 (3) (2014) 223-229.
- **O. R. Alomar**, M.A.A. Mendes, D. Trimis, S. Ray, Numerical simulation of complete liquid-vapour phase change process inside porous media using smoothing of diffusion coefficient, *Int. J. of Thermal Sciences*, 86 (2014) 408-420.
- **O. R. Alomar**, M.A.A. Mendes, D. Trimis, S. Ray, Simulation of complete liquid-vapour phase change process inside porous evaporator using local thermal non-

equilibrium model, *Int. J. of Thermal Sciences*, 94 (2015) 228-241.

- **O. R. Alomar**, D. Trimis, S. Ray, Numerical simulation of complete liquid-vapour phase change process inside an annular porous evaporator, International University of Resources, Scientific Reports on Resource Issues, 1 (2015) 128 – 133.
- S. Ray, **O. R. Alomar**, Simulation of liquid-vapour phase change process inside porous media using modified enthalpy formulation, *Int. J. of Thermal Sciences*, 105 (2016) 123-136
- **O. R. Alomar**, M.A.A. Mendes, D. Trimis, S. Ray, Numerical simulation of complete liquid-vapour phase change process inside porous Media: A comparison between local thermal equilibrium and non-equilibrium models, *Int. J. of Thermal Sciences*, 112 (2017) 222 – 241.
- **O. R. Alomar**, M.A.A. Mendes, S. Ray, D. Trimis, Numerical investigation of complete evaporation process inside porous evaporator using staggered and non-staggered grid arrangements, *Int. J. of Thermal Sciences*, 129 (2018) 56 – 72.
- **O. R. Alomar**, R. R. Mohammed, M.A.A. Mendes, S. Ray, D. Trimis, Numerical Investigation of Two-Phase Flow in Anisotropic Porous Evaporator, *Int. J. of Thermal Sciences*, 135 (2019) 1 – 16.
- **O. R. Alomar**, R. R. Mohammed, K. H. Mohammed, Numerical Investigation of Boiling and Forced Convection Heat Transfer in Inclined Porous Enclosure using Modified Enthalpy Formulation, MATEC Web of Conferences, 240 (2018) 01001.
- K. H. Mohammed, **O. R. Alomar**, R. R. Mohammed, Effects of Different Biodiesel on Diesel-Engine Performance and Emissions, IEEE Xplore, (2018) 468 – 473.
- H. M. Abd, **O. R. Alomar**, I. A. Mohamed, Effects of Varying Orifice Diameter and Reynolds Number on Discharge Coefficient and Wall Pressure, Flow Measurements and Instrumentation, 65 (2019) 219-226.
- **O. R. Alomar**, Analysis of Variable Porosity, Thermal Dispersion, and Local Thermal Non-Equilibrium on Two-Phase Flow inside Porous Media, *Applied Thermal Engineering*, 154 (2019) 263 – 283.
- O. M. Hamdoon, **O. R. Alomar**, B. M. Salim, Performance Analysis of Hybrid Photovoltaic Thermal Solar System in Iraq Climate Condition, *Thermal Science and Engineering Progress*, 17 (2020), 100359.
- M. M. Salih**, O. R. Alomar**, F. A. Ali, H. M. Abd, An Experimental Investigation of a Double Pass Solar Air Heater Performance: A Comparison between Natural and Forced Air Circulation Processes, *Solar Energy*, 193 (2019) 184-194.
- H. M. Abd, **O. R. Alomar**, F. A. Ali, M. M. Salih, Experimental Study of Compound Parabolic Concentrator with Flat Plate Receiver, *Applied Thermal Engineering*, 166 (2020) 114678.
- **O. R. Alomar**, B. M. Salim, O. M. Hamdoon, Analysis of Two-Phase Flow in a Double-Pipe Heat Exchanger Filled with Porous Media, *Int. J. of Heat and Mass Transfer*, 156 (2020) 119799.
- **O. R. Alomar**, Numerical Investigation of Two-Phase Flow in a Horizontal Porous Evaporator with Localised Heating using Non-Darcian Flow and Two Equations Model, *J. of Heat and Mass Transfer*, 56 (4) (2020) 1203-1221.

- **O. R. Alomar**, N. M. Basheer, A. A. Yousif, Analysis of effects of Thermal Non-Equilibrium and Non-Darcy Flow on Natural Convection in a Square Porous Enclosure Provided with a Heated L Shape Plate, *Int. J. of Mechanical Sciences*, 181 (2020) 105704.
- H. N. S. Yassien, **O. R. Alomar**, H. M. Abd, Performance analysis of triple-pass solar air heater system: Effects of adding a net of tubes below absorber surface, *Solar Energy*, 207 (2020) 813-824.
- **O. R. Alomar**, N. M. Basheer, A. A. Yousif, Natural Convection Heat Transfer from a Bank of Orthogonal Heated Plates Embedded in a Porous Medium using LTNE model: A Comparison between In-line and Staggered Arrangements, *Int. J. of Thermal Sciences*, 160 (2021) 106692.
- **O. R. Alomar**, Transient Behaviour of Heat transfer with Complete Evaporation Process in Porous Channel with Localised Heating using Non-Darcian Flow and LTNE model, *J. of Heat and Mass Transfer*, (2021).
- **O. R. Alomar**, I. A. Mohamed, Q. A. Yousif, H. M. Abd, A Thermal Non-Equilibrium Model to Natural Convection inside non-Darcy Porous Layer Surrounded by Horizontal Heated Plates with Periodic Boundary Temperatures, Journal of Heat Transfer, 50 (6) (2021) 6068-6098.
- Mohammed Hadi Ali, Haitham M. Wadallah, Mohsen Abaid Ibrahim, **O. R. Alomar**, Improving the Microstructure and Mechanical Properties of Aluminium Alloys Joints by adding SiC Particles during Friction Stir Welding Process, *Metallography, Microstructure, and Analysis*, 10(3) (2021) 302-313.
- M. M. Salih, **O. R. Alomar**, N. S. Yassien, Impacts of Adding Porous Media on Performance of Double-Pass Solar Air Heater under Natural and Forced Air Circulation Processes, International Journal of Mechanical sciences, 210 (2021) 106738.
- O. M. Ali, **O. R. Alomar**, Mixed Convection Heat Transfer from Two Aligned Horizontal Heated Cylinders in a Vented Square Enclosure, Thermal Science and Engineering Progress 25 (2021) 101041.
- **O. R. Alomar**, O. M. Ali, Energy and exergy analysis of hybrid photovoltaic thermal solar system under climatic condition of North Iraq, Case Studies in Thermal Engineering, 28 (2021) 101429.
- O. M. Ali, **O. R. Alomar**, O. M. Ali, A. Naseer T., Y. Salam J., A. Nayyar, S. Askar, M. Abouhawwash, Operating of Gasoline Engine Using Naphtha and Octane Boosters from Waste as Fuel Additives, Sustainability, 13 (23) (2021) 13019.
- A. A. Yousif, **O. R. Alomar**, A. T. Hussien, Impact of using triple adiabatic obstacles on natural convection inside porous cavity under non-darcy flow and local thermal non-equilibrium model, *Int. Communications in Heat and Mass Transfer*, (2021).
- Sabhan H. Ali, **O. R. Alomar**, O. M. Ali, Energetic and exegetic performance analysis of flat plate solar collector under variables heat transfer coefficient and inlet water temperature, Case Studies in Thermal Engineering, 28 (2021) 101700.
- N. M. Basher, **O. R. Alomar**, I. A. Mohmed, Impact of using single heated obstacle on natural convection inside porous cavity under non-Darcy flow and thermal non-equilibrium model: A comparison between horizontal and vertical heated obstacle arrangements, *Int. Communications in Heat and Mass Transfer*, 133 (2022) 105925.

- A. N. Mustafa, O. M. Ali, **O. R. Alomar**, Effect of Heavy Fuel Combustion in a Gas Power Plant on Turbine Performance: A Review, International Journal of Design & Nature and Ecodynami, 17 (1) (2022) 105-111.
- **O. R. Alomar**, H. M. Abd, M. M. Salih,, Firas A. Ali, Performance Analysis of Pelton Turbine under Different Operating Conditions: An Experimental Study, Ain Shams Engineering Journal, 13 (4) (2022) 101684.
- **O. R. Alomar**, Sami R. Aslan, Farah G. Zaki, Modelling and simulation of two-phase flow inside porous pipe evaporator using Cu-Water nano-fluid, *Int. J. of Thermal Sciences*, 175 (2022) 107462.
- H. M. Abd, **O. R. Alomar**, M. M. Salih, Improving the performance of solar air heater using a new model of V-corrugated absorber plate having perforations jets, International Journal of Energy Research, 46 (6) (2022) 8130-8144.
- O. M. Ali, **O. R. Alomar**, S. I. Mohamed, Technical, Economical and Environmental Feasibility Study of a Photovoltaic System under Climatic Condition of North Ira, International Journal of Ambient Energy, (2022).
- A. A. Al-Attar, **O. R. Alomar**, M.K. Yousif, Importance of scientific research for Achieving Sustainable Development Goals during Covid19 Pandemic: Northern Technical University - A Case Study, Joural of Sustaiability Prespective, 2 (2022) 341 – 346.
- **O. R. Alomar**, M. M. Salih, H. M. Abd, Efficiency enhancement of solar air heater collector by modifying jet impingement with v-corrugated absorber plate, Journal of Energy Storage, 55 (2022) 105535.
- **A. A. Badr, O. K. Ahmed, O. R. Alomar**, A review of Atmospheric Vortex Engine Generated by Solar Air collector, NeuroQuantology. 20 (6) (2022) 5912 – 5935.
- O. M. Ali, **O. R. Alomar**, Technical and Economic Feasibility Analysis of a PV Grid-Connected System Installed on a University Campus in Iraq, Environmental Science and Pollution Research, (2022)
- **O. R. Alomar**, R. H. Saaeed, O. M. Ali,, Impact of size and location of outflow opening vent on mixed convective heat transfer induced by two aligned heated cylinders immersed in a partially open channel, Heat Transfer, (2023).
- **O. R. Alomar**, M. M. Salih, H. M. Abd, Performance Analysis of Single-Pass Solar Air Heater Thermal Collector with Adding Porous Media and Finned Plate, Energy Storage (2023).

Journal Publications (Submitted/Awaiting/Accepted)

- **O. R. Alomar**, H. M. Abd, H. N. S. Yassien, Performance Analysis of Discharge Coefficient of Venturimeter under different Geometric Configurations and High Reynolds number, Ain Shams Engineering Journal, paper submitted for publication (2022)
- O. M. Ali, R. H. Daaeed, **O. R. Alomar**, Mixed Convective Heat Transfer Induced by Two Aligned Horizontal Cylinders in a Ventilated Enclosure under Various Location and Size of Upper Opening Vent, Thermal Science and Engineering Progress, paper submitted for publication (2022).
- **O. R. Alomar**, O. M. Ali, O. M. Ali, Numerical Investigation of Natural Convection Induced by Heated Circular Cylinder inside Square Duct Cooled from One Side at Different Temperatures, Case Studies in Thermal Engineering, paper submitted for publication (2022)

- **O. R. Alomar**, M. M. M. Salih, H. M. Abd, Performance Analysis of Single-Pass Solar Air Heater Thermal Collector with Adding Porous Media and Finned Plate, Solar Energy, paper submitted for publication (2022)
-

Conference Publications

- **O. R. Alomar**, Convective heat transfer investigation of non-Darcian flow structure in a rectangular porous cavity, *Proceedings of the 11th Scientific Conference for Foundation of Technical Education*, Technical College of Baghdad, Iraq, 2009.
- **O.R. Alomar**, M.A.A. Mendes, D. Trimis, S. Ray, Simulation of complete liquid-vapor phase change inside divergent porous evaporator, *3rd International Conference on Fluid Dynamics and Thermodynamics Technologies (FDTT 2014)*, Antalya, Turkey, April 21 - 23, 2014.
- **O.R. Alomar**, D. Trimis, S. Ray, Numerical simulation of complete liquid-vapour phase change process inside an annular porous evaporator, *10th International Conference on Freiberg-St. Petersburg Colloquium of Young Scientists*, Freiberg, Germany, June 17 – 19 , 2015 .
- **O. R. Alomar**, R. R. Mohammed, K. H. Mohammed, Numerical Investigation of Boiling and Forced Convection Heat Transfer in Inclined Porous Enclosure using Modified Enthalpy Formulation, *11th International Conference on Computational Heat, Mass and Momentum Transfer*, Poland , 2018.
- K. H. Mohammed, **O. R. Alomar**, R. R. Mohammed, Effects of Different Biodiesel on Diesel-Engine Performance and Emissions, *International Conference on Advanced Science and Engineering, Duhok, Iraq, October 2018.*
- **O. R. Alomar**, I. A. Mohamed, Q. A. Yousif, Numerical Simulation of Natural Convection and Radiation on Performance of uniform Fins Geometry, 2nd *International Conference on Advanced Science and Engineering, Duhok, Iraq, April 2019*.
- Q. A. Yousif, **O. R. Alomar**, I. A. Mohamed, M. K. Najim, Evaluation Optimal Friction Factor Correlation in Turbulent Pipe Flow by Genetic Algorithm, *2020 International Multi-Disciplinary Conference Theme: "Sustainable Development and Smart Planning", Antalya, Turkey, 28 – 30 June* (2020).
- **O. R. Alomar**, I. A. Mohamed, Q. A. Yousif, Analysis of Two-Phase Flow inside Porous Diffuser, *2020 International Multi-Disciplinary Conference Theme: "Sustainable Development and Smart Planning", Antalya, Turkey, 28 – 30 June* (2020).

Conference (Submitted/Awaiting/Accepted)

- M. A. Mahmood, **O. R. Alomar**, M. M. M. Salih, K. H. Mohammed, An Experimental Study on Performance Analysis of Solar Water Distiller System Using Extended Fins under Iraq Climatic Conditions, 1st International Conference on Sustainable Development Techniques, Mosul, Iraq, June 2022.
- S. M. Najm, **O. R. Alomar**, O. M. Ali, Simulation of a Gasoline Engine Performance and Thermal Efficiency at Variables Compression Ratio, 1st International Conference on Sustainable Development Techniques, Mosul, Iraq, June 2022.
- A. N. Mustafa, O. M. Ali, **O. R. Alomar**, Economic evaluation of the different fuel types utilization in Qayyarah gas power plant, 1st International Conference on Sustainable Development Techniques, Mosul, Iraq, June 2022.
- A. A. Bader, O. K. Ahmed, **O. R. Alomar**, Experimental Assessment of Performance For Atmospheric Vortex Engine, 1st International Conference on Sustainable Development Techniques, Mosul, Iraq, June 2022.

Books

- **O. R. Alomar**, Modeling and simulation of complete liquid-vapor phase change process inside porous media, Cuvillier Verlag, Göttingen, Deutschland, 2016.

USEFULL LINKS

- **Scopus:** https://www.scopus.com/authid/detail.uri?authorId=56358304100
- **Google Scholar**: https://scholar.google.com/OmarRafaeAlomar
- **Publons: https://publons.com/researcher/1546893/dr-ing-omar-rafae-alomar/**
- **Research gate**: https://www.researchgate.net/profile/Omar_Alomar
- **Academia**: www.tu-freiberg.academia.edu/OmarRafaeAlomar
- **Elsevier Mendeley**: https://www.mendeley.com/profiles/omar-rafae-mahmood-alomar/
- **LinkedIn**: https://www.linkedin.com/in/dr-ing-omar-rafae-alomar-06859675
- **Facebook**: https://www.facebook.com/omar.alomar.370
- **EDAS ID: 1454068**

REFERENCES

Available upon request