

CURRICULUM VITAE

PERSONAL INFORMATION:

Full Name: Ali H. Tarrad
Professor, PhD. Mechanical Engineering
Oldenburg
Germany
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EDUCATION

Nov. 1986-July 1991

- Doctor of Philosophy (PhD) - Heriot-Watt University/Mechanical Engineering Department/United Kingdom

Oct. 1980-July 1984

- Bachelor of Science (BSc) - University of Baghdad/College of Engineering/Mechanical Engineering Department/Republic of Iraq.

EXPERIENCE

Sep. 2016-May 2017

Associate Professor-University of Southern Denmark (SDU) /Mechatronic Department

Sep. 2015 - Sep. 2016

Professor-Arab Academy in Denmark

Nov. 2013 - Sep. 2014

Consultant Engineer- Head of Quality Control Department/Jordanian Mottaa Company for Ice Cream/Jordan

Dec. 1994 - June 2013

Assistant Professor - Mechanical Engineering - College of Engineering/Al-Mustansiriya University/Iraq.

Feb. 1992- Dec. 2005

Thermal Equipment Designer/Saad State Company-Ministry of Housing and Construction/Iraq

SCIENTIFIC ACHIEVEMENT

2015-2017

- Associate Professor/ Professor (Arab Academic University/University of Southern Denmark)/Denmark

2008-2015

- Assistant professor degree at College of Engineering/Al-Mustansiriya University/Iraq

2005-2008

- A lecturer degree at College of Engineering/Al-Mustansiriya University/Iraq

1994-2005

- External lecturer at College of Engineering/Al-Mustansiriya University/Iraq

Dec. 2005 - Dec. 2014

- A member of Iraqi Teacher Union/Republic of Iraq

Oct. 1993 - Dec. 2015

- A member of Iraqi Engineers Union/Republic of Iraq

2014-2017

- A member of editorial board for a number of international journals in the field of energy and environment

1987-2017

- Publishing (46) researches in the field of power, energy, heat transfer, sustainable energy and air conditioning and refrigeration science in different International journals and conferences.
- Completion of (13) theses under my supervision for (H. Dipl., MSc and PhD) students in different power and energy categories.

OTHER SKILLS

Computer Implementation

- Microsoft Office items such as, Word, Excel, Power Point, etc.
- FORTRAN and LIBERTY-BASIC languages and MATLAB in the programming process.
- Available commercial codes and programs such as (COMSOL), (EVAP-COND), (CoolPack), (HTFS) and (LabFit).

Languages

- Arabic (Mother tongue)
- English (Fluently)
- Danish (Good)

HELD POSITIONS

1994-1997

- The Head of Industrial Equipment Thermal Design Division/ /Saad State Company/Ministry of Housing and Construction Baghdad-Iraq.

1997-2005

- The Head of Equipment Thermal Design Department/Saad State Company/Ministry of Housing and Construction/Baghdad-Iraq.

AWARDS

1991

- Henry Black Memorial Prize during the PhD. study due to the high performance achievement during my research.

April 2011

- An official acknowledgement certificate by the Iraqi Ministry of Higher Education and Research Council due to the research activity shown in (2010-2011) academic year.

Professional Websites:

Researchgate: https://www.researchgate.net/profile/Ali_Tarrad2

LinkedIn: <https://dk.linkedin.com/in/tarrad7>

A List of published papers and reports

- 1- Bryce M. Burnside, Alasdair Maciver and Ali H. Tarrad, "The Application of Enhanced Surfaces to Boiling over Tube Bundles", Report No. 3, Department of Industry Contract, NEL^{*} / 123/98, 45 pages, July (1988).
- 2- Bryce M. Burnside, Alasdair Maciver and Ali H. Tarrad, "The Application of Enhanced Surfaces to Boiling over Tube Bundles", Report No. 4, Department of Industry Contract, NEL^{*} /123/98, 63 pages, December (1988).
- 3- Bryce M. Burnside, Alasdair Maciver and Ali H. Tarrad, "The Application of Enhanced Surfaces to Boiling over Tube Bundles", Report No. 5, Department of Industry Contract, NEL^{*} /123/98, 76 pages, May (1989).
- 4- Bryce M. Burnside, Alasdair Maciver and Ali H. Tarrad, "Boiling a Pentane/Tetradecene Mixture at Atmospheric Pressure Over a 241 Tube Bundle Configuration With All-Plain and HighFlux-Plain Tubes", HTFS⁺ Research Symposium, Edinburgh, Part No. RS796, September (1989).
- 5- Ali H. Tarrad and Bryce M. Burnside, "Instabilities in Pool Boiling of Mixtures Over a Plain Tube at Atmospheric Pressure", Eurotherm No. 8 Conference, Advances in Pool Boiling Heat Transfer, Paderborn, West Germany, (1989)
- 6- Ali H. Tarrad and Bryce M. Burnside, "Instability in Pool Boiling of a Wide Boiling Mixture on a Horizontal Tube", Int. J. Heat Mass Transfer, Vol. 34, No. 11, pp. 2797- 2803, (1991).
- 7- Ali H. Tarrad and Bryce M. Burnside, "Pool Boiling Tests on Plain and Enhanced Tubes Using a Wide Boiling Range of Mixtures", HTFS⁺ Research Symposium, Canterbury, Part No. RS873, September (1991).
- 8- Ali H. Tarrad and Bryce M. Burnside, "Nucleate Pool Boiling of The Ethanol/Water Binary Mixture on Plain and Enhanced Horizontal Tube Surfaces at Atmospheric Pressure", 3rd U.K., National Heat Transfer Conference, July

(1992).

- 9- Ali H. Tarrad and Bryce M. Burnside, "Pool Boiling Tests on Plain and Enhanced Tubes Using a Wide Boiling Range Mixture", *Experimental Heat Transfer, An Int. J.* Vol. 6, No. 1, Jan. – March (1993).
- 10- David McNeil, Bryce M. Burnside, K. M. Miller and Ali H. Tarrad, "A Comparison Between HIGHFLUX and Plain Tubes, Boiling Pentane in a Horizontal Kettle Reboiler", *Applied Thermal Engineering*, Vol. 22, pp. 803-814, (2002).
- 11- Ali H. Tarrad and Hameed M. Kamal, "A Model for Prediction of Surface Condenser Performance in Thermal Power Plants", *Engineering and Development Journal*, Vol. 8, No. 3, pp. 18-42, December (2004).
- 12- Ali H. Tarrad, "Application of a Numerical Moving Boundary Model For Prediction of Bubble Growth Rate in Boiling of Pure Liquids and Miscible Binary Mixtures", *Engineering And Development Journal*, Vol. 9, No. 4, pp. 23-44, December (2005).
- 13- Ali H. Tarrad and Ali Ghazi Mohammed, "A Mathematical Model for Thermal-Hydraulic Design of Shell and Tube Heat Exchanger Using a Step by Step Technique", *Engineering and Development Journal*, Vol. 10, No. 4, pp. 12-35, December (2006).
- 14- Ali H. Tarrad and Usama S. Shehhab, "The Prediction of Environment Effect on the Performance of a Vapor Compression Refrigeration System in Air Conditioning Application", *Engineering and Development Journal*, Vol. 11, No. 1, pp. 169-189, May (2007).
- 15- Ali H. Tarrad, " A Numerical Model for Thermal-Hydraulic Design of a Shell and Single Pass Low Finned Tube Bundle Heat Exchanger", *Engineering and Technology Journal*, Vol. 25, No. 4, pp. 619-645, (2007).
- 16- Ali H. Tarrad, "A Simplified Correlation for the Prediction of Nucleate Pool Boiling Performance of Single Integral Enhanced Tubes Boiling Pure Liquids at Atmospheric Pressure", *Engineering and Development Journal*, Vol. 11, No. 3, pp. 131-148, (2007).
- 17- Ali H. Tarrad, "A Numerical Analysis of Adiabatic Capillary Tube Performance in Vapor Compression Refrigeration Systems", *The Iraqi Journal for Mechanical and Materials Engineering*, Vol. 8, No. 3, pp. 201-218, (2008).
- 18- Ali H. Tarrad, Damiaa Saad and Maathe Abdulwahed Theeb "A Simplified Model for the Prediction of Thermal Performance for Cross Flow Air Cooled Heat Exchanger with a New Air Side Thermal Correlation", *Engineering and Development Journal*, Vol. 12, No. 3, pp. 88-119, (2008).
- 19- Ali H. Tarrad and Ameera Y. Salem, "Experimental Perspective Assessments for a Proper Refrigerant Alternative to R-22 in a Window Type Air Conditioning Unit", *Journal of Engineering*, Vol. 15, No. 2, pp.3756-3775, June (2009).
- 20- Ali H. Tarrad, Fouad A. Saleh and Ali A. Abdulrasool, "A Simplified Numerical Model for a Flat Continuous Triangle Fins Air Cooled Heat Exchanger Using a Step by Step Technique", *Engineering and Development Journal*, Vol. 13, No. 3, pp. 38-59, (2009).
- 21- Ali H. Tarrad, Fouad A. Saleh and Wathiq A. Ali, "Experimental and Theoretical Study to Minimize the Cooling Load by Using a New Alternatives in a Space Located in Baghdad City", *Engineering and Development Journal*, Vol. 13, No. 3, pp. 109-127, (2009).
- 22- Jafar M. Hassan, Ali H. Tarrad and Mohammed N. Abdullah, "A Dynamic Modeling Capability for Subcritical Vapor Compression Refrigeration System", *Engineering and Technology Journal*, Vol. 27, No. 13, pp. 2319-2338, (2009).
- 23- Ali H. Tarrad and Laith M. Majeed, "The Application of a Step by Step Technique for the Performance Prediction of Thermal Power Plant Condensers", *Journal of Engineering*, Vol. 16, No. 1, pp. 4748-4770, (2010).
- 24- Ali H. Tarrad, "A Numerical Model for Performance Prediction of Dry Cooling Conditions of Air Cooled Condensers in Thermal Power Plant Stations", *Engineering and Technology Journal*, Vol. 28, No. 16, pp. 5271-5292, (2010).
- 25- Ali H. Tarrad and Ayad K. Al-Nadawi, "Evolution of A Proper Alternative Refrigerant for R-22 in Air Conditioning Systems", *Emirates Journal for Engineering Research*, Vol. 15, No. 2, pp. 41-51, (2010).
- 26- Ali H. Tarrad, "A Correlation for the Prediction of Nucleate Pool Boiling Performance of Pure Liquids from Enhanced Tubes", *Jordan Journal of Mechanical and Industrial Engineering*, Vol. 5, No. 2, pp. 139 – 144, April (2011).
- 27- Ali H. Tarrad, Fouad A. Saleh and Deyaa M. Mahmood, "A Proper Alternative Refrigerant for R-22 in Water Chillers", *Gulf University Journal*, Vol. 3 – Eng. Div. / No. 1, pp. 161-179, (2011).
- 28- Ali H. Tarrad, Fouad A. Saleh and Deyaa M. Mahmood "A Quasi-steady State Operation Mode of Alternative Refrigerants for R-22 in Water Chillers", *The Iraqi Journal for Mechanical and Material Engineering*, Vol.13, No.1, pp. 13-33, (2013).
- 29- Ali H. Tarrad and Damiaa S. Khudor, "A Correlation for the Pool Boiling Enhancement Factor from Low Finned Tubes", *Global Journal of Researches in Engineering (GJRE)*, A Mechanical and Mechanics Engineering, Vol. 14, Issue 5, Version 1.0, pp. 1-8, (2014).
- 30- Ali H. Tarrad, Rafea A. Al-Baldawi and Ahmad A. Al-Issa, "Implementation of Expert System Modeling to Thermal-Hydraulic Design of Hydraulic Systems", *Proceedings of the ASME 2014 Power Conference Power 2014*, paper no. Power 2014-32038, pp. 1-8, Baltimore, Maryland, USA, (28-31) July, (2014).
- 31- (A) Ali H. Tarrad and Ayad K. Al-Nadawi, " Modeling of Finned-Tube Evaporator using Pure and Zeotropic Blend

Refrigerants”, 2nd Annual International Conference on Technology & Engineering, ATINER’s Conference Paper Series No: TEN2015-1548, Athens, Greece, 22-25 June 2015.

- (B) Ali H. Tarrad and Ayad K. Al-Nadawi, “Modeling of Finned-Tube Evaporator using Pure and Zeotropic Blend Refrigerants”, Athens Journal of Technology & Engineering, Vol. 2, No. 4, pp. 263-281, December 2015.
- 32- Ali H. Tarrad and Damiaa S. Khudor, “A Correlation for the Air Side Heat Transfer Coefficient Assessment in Continuous Flat Plate Finned Heat Exchangers”, ASME, Journal of Thermal Science and Engineering Applications, 7 (2), Paper No. TSEA-14-1194, DOI: 10.1115/1.4029459, 1st June 2015.
- 33- Ali H. Tarrad, Fouad A. Saleh and Deyaa M. Mahmood, “A Thermal Assessment for Vertical Helical Immersion Coil Evaporator in a Water Chiller”, American Association for Science and Technology (AASCIT), American Journal of Energy and Power Engineering, 2(5), 62-73, 2015.
- 34- Ali H. Tarrad, Ali F. Altameemi, “Experimental Investigation for a Hybrid Arrangement of Steam Condensers”, American Association for Science and Technology (AASCIT), American Journal of Environmental Engineering and Science, 2(6), 62-73, 2015.
- 35- Ali H. Tarrad and Ali F. Al-Tameemi, “Experimental and Numerical Model for Thermal Design of Air Cooled Condenser”, Global Journal of Researches in Engineering (GJRE-A), Mechanical and Mechanics Engineering, Volume 15, Issue 3, Version 1.0, pp. 11-26, 2015.
- 36- Ali H. Tarrad and Ayad K. Al-Nadawi, “A Rating Model for Air Cooled Condensers Using Pure and Blend Refrigerants”, American Association for Science and Technology (AASCIT), American Journal for Science and Technology, 3(1), 1-11, 2016.
- 37- Ali H. Tarrad, Ali F. Altameemi and Deyaa M. Mahmood, “A Numerical Rating Model for Thermal Design of Air Cooled Condensers in the Industrial Applications”, American Association for Science and Technology (AASCIT), American Journal of Mathematical and Computational Sciences, 1 (1), 18-28, May 13, 2016.
- 38- Ali H. Tarrad, “Thermodynamic Performance Evaluation for Low Temperature Heat Source Cascade System Circulating Environment Friendly Refrigerants”, International Journal of Energy and Environmental Science, Vol. 2, No. 2, pp. 36-47, (2017).
- 39- Ali H. Tarrad, “Thermodynamic Analysis for Hybrid Low Temperature Sustainable Energy Sources in Cascade Heat Pump Technology”, Asian Journal of Engineering and Technology (AJET), Vol.5 No.2, pp. 29-46, April (2017).
- 40- Ali H. Tarrad, “Performance Optimization Assessment for a Proper Heat Pump Technology Functions at Low Temperature Heat Source”, International Research Journal of Power and Energy Engineering (IRJPEE), 3(1), pp. 019-034, June (2017).
- 41- Ali H. Tarrad, “Perspective Performance Evaluation Technique for a Cascade Heat Pump Plant Functions at Low Temperature Heat Source”, International Journal of Economy, Energy and Environment, 2(2), pp. 13-24, (2017).
- 42- Ali H. Tarrad and Damiaa S. Khudor, “Experimental Assessment for Sinusoidal Wavy Corrugated Channels at Early Stages of Turbulent Flow”, International Journal of Engineering Technology and Management (IJETM), 4(3), pp. 1-12, June (2017).
- 43- Ali H. Tarrad, “Heating Mechanism and Energy Analyses for Over-Ground Outdoor Swimming Pool Technology”, Asian Journal of Applied Science and Technology (AJAST), 1(6), pp. 08-22, July (2017).
- 44- Ali H. Tarrad, “A Perspective Numerical Step by Step Thermal Modeling for Over-Ground Outdoor Swimming Pool Design Optimization”, International Journal of Engineering Sciences and Management Research (IJESMR), 4(8), pp. 1-20, August (2017).
- 45- Ali H. Tarrad, “Thermodynamic Evaluation for Intermediate Temperature Optimization in Low Temperature Heat Source Cascade Heat Pump Technology”, Asian Journal of Engineering and Technology, Volume 5, No. 5, pp. 126-139, October (2017).
- 46- Ali H. Tarrad, “A Perspective Evaluation Methodology for Economic Feasibility of Low Temperature Sustainable Energy Source in Heating Mode Technology”, ASME-Journal of Energy Resources Technology, Vol. 140(2), FEBRUARY 2018, doi: 10.1115/1.4037900.

* NEL: National Engineering Laboratory

† HTFS: Heat Transfer and Fluid Service