

CURRICULUM VITAE

Nasser Ahmed Al-Azri

PERSONAL INFORMATION

Date of Birth: 22nd of July, 1976

Nationality: Omani

Marital Status: Married

Address: Department of Mechanical and Industrial Engineering,
College of Engineering, Sultan Qaboos University, P.O.Box 33 AlKhodh,
Muscat, P.C.123 Office: (+968) 2414-1355, Fax: (+968) 2414-1316,
Email: nalazri@squ.edu.om

EDUCATION AND EMPLOYMENT INFORMATION

EDUCATIONAL

PhD. :<u>Chemical Engineering</u>	The Artie McFerrin Department of Chemical Engineering, Texas A&M University at College Station, USA
MEng. :<u>Industrial Engineering</u>	Industrial and Systems Engineering, Texas A&M University at College Station, USA
Graduate Certificate :<u>Business</u>	Mays Business School, Texas A&M University at College Station, USA
MSc. :<u>Chemical Engineering</u>	The Artie McFerrin Department of Chemical Engineering, Texas A&M University at College Station, USA
BEng.: <u>Mechanical Engineering</u>	Department of Mechanical Engineering, Sultan Qaboos University, Muscat, Oman

EMPLOYMENT HISTORY

Aug. 1999 - Dec. 2002	<i>Demonstrator</i>	Department of Mechanical Engineering Sultan Qaboos University, Muscat, Oman
Dec. 2002 - Oct. 2008	<i>Lecturer</i>	Department of Mechanical and Industrial Engineering, Sultan Qaboos University, Muscat, Oman

Oct. 2008 - Present	<i>Assistant Professor</i>	Department of Mechanical and Industrial Engineering, Sultan Qaboos University, Muscat, Oman
---------------------	----------------------------	---

AWARDS AND RECOGNITION

TEACHING

SERVICES

UNIVERSITY ADMINISTRATION AND COMMITTEES

1. Supervisory Committee for Omanizing Workforce at SQU and SQUH	March 2016 - May 2017
2. Ad hoc committee in charge of reviewing University Consumption of Electricity, Water and Telecommunication, Chair	April 2016 - May 2016
3. Demonstrators Selection Committee, Member	October 2015 - December 2016
4. ASHRAE Student Chapter at SQU, Advisor	September 2013 - Present
5. SQU Long Term Strategic Plan, International Cooperation Committee, Member	January 2013 - May 2013

PROFESSIONAL SERVICE SERVICE TO THE PUBLIC HONORS/MEMBERSHIPS

American Society of Heating, Refrigerating and Air conditioning Engineers (ASHRAE)
(Membership ID# 8220159)

SCHOLARLY ACHIEVEMENTS

PUBLISHED REFEREED JOURNAL PAPERS

1. **Al-Azri, N.**, Al-Saadi, S. (2018) "Variant developments of TMYs for Muscat, Oman and their impact on energy simulation of residential buildings" *The Journal of Engineering Research*. (accepted)
2. Marchand, M., **Al-Azri, N.**, Ombe-Ndeffotsing, A., Wey, E., Wald, L. (2017) "Evaluating meso-scale change in performance of several databases of hourly surface irradiation in South-eastern Arabic Peninsula." *Advances in Science & Research* 14:7-15.
3. Triki, C., Akil, J., **Al-Azri, N.** (2017) "Optimising the periodic distribution of gas cylinders with customers priority." *Int. J. Operational Research* 28(2):279-289.
4. Al-Kindi, M., Al-Lawati, M., **Al-Azri, N.** (2016) "Estimating Drilling Cost and Duration Using Copulas Dependencies Models" *The Journal of Engineering Research* (Accepted).
5. **Al-Azri, N.**, (2016) "Development of a typical meteorological year based on temperature and humidity for passive cooling applications." *Energy for Sustainable Development* 33:61-74.

6. Al-Ismaili, A., **Al-Azri, N.** (2016) "Simple iterative approach to calculate wet-bulb temperature for estimating evaporative cooling efficiency." *Int. J. Agriculture Innovations and Research* 4(6):2319-1473.
7. Afzal, H., **Al-Azri, N.** (2016) "Performance analysis of multiple micro-jet impingements cooling model." *The Journal of Engineering Research* 13(1): 58-71
8. **Al-Azri, N.**, (2015) "Energy management through heat integration: a simple algorithmic approach for introducing pinch analysis." *The Sultan Qaboos University Journal for Science* 20 (2):1-11.
9. **Al-Azri, N.**, Al-Kindi, M. (2015) "Computational Approach to large Scale Process Optimization through Pinch Analysis." *Technology Education Management Journal* 4(3):229-235.
10. Afzal, H., **Al-Azri, N.**, Al-Rawahi, N., Zurigat, Y. H., and Samad, A., (2014) "Comparative performance analysis of multiple micro-jet impingement cooling models with different spent-flow schemes." *Journal of Thermophysics and Heat Transfer* (Print version still in press, online version available with DOI: 10.2514/1.T4577)
11. Al-Rawahi, N., Zurigat, Y. H., and **Al-Azri, N.**, (2014) "Investigating different diffuse solar radiation models to analyses solar radiation on inclined surfaces in Oman." *International Journal of Sustainable Energy* (Print version still in press, online version available with DOI: 10.1080/14786451.2014. 950961.)
12. **Al-Azri, N.**, Zurigat, Y. H., and Al-Rawahi, N. (2013) "Selection and assessment of passive cooling techniques for residential buildings in Oman using a bioclimatic approach." *The Journal of Engineering Research* 10(2):53-65.
13. **Al-Azri, N.**, Zurigat, Y. H., and Al-Rawahi, N., (2013) "Development of bioclimatic chart for passive building design." *International Journal of Sustainable Energy* 32(6):713-723DOI: 10.1080/14786451.2013.813026.
14. Al-Rawahi, N., Zurigat, Y.H. and **Al-Azri, N.** (2011) "Prediction of hourly solar radiation on horizontal and inclined surfaces for Muscat, Oman", *The Journal of Engineering Research*, 8(2):19-31.
15. Al-Thubaiti M, **Al-Azri N**, El-Halwagi M (2008) "Optimize heat transfer networks: an innovative method applies heat integration to cost effectively retrofit bottlenecks in utility systems." *Hydrocarbon Process* 87:109–115
16. **Al-Azri, Nasser.** , Al-Thubaiti, Musaed. ,El-Halwagi, Mahmoud (2008) "An Algorithmic Approach to the Optimization of Process Cogeneration." *Clean Technologies and Environmental Polices*.11(3): 329-338
17. Al-Thubaiti M, **Al-Azri N** , El-Halwagi, M. M (2007) "Integrated Techniques for Low-Cost Process Debottlenecking." *Hydrocarbon Process* 86:161–16.
18. **Al-Azri, N.A.**, S.H. Jung, K.M. Lusford, A. Ferry, J.A. Bullin, R.R. Davison, and C.J. Glover. (2006) "Binder Oxidative Aging in Texas Pavements: Hardening Rates, Hardening Susceptibilities, and the Impact of Pavement Depth." *Transportation Research Record*. 1962:12-20.

CONFERENCE PROCEEDINGS

1. **Al-Azri, N.**, Zurigat Y., Al-Rawahi, N., (2016) "Development of bioclimatic of Oman using international archive of weather data" International Conference on Applied Mechanics and Industrial Systems (ICAMIS), Muscat, December 6-8.
2. **Al-Azri, N.**, (2017) "Development of typical meteorological year for passive cooling applications using world weather data." International Conference on Advances on Clean Energy Research (ICACER 2017), Berlin, Germany, April 7-9.
3. **Al-Azri, N.**, Zurigat, Y., Al-Rawahi, N. (2016) "bioclimatic charts for Oman using dry bulb and dew point temperatures." International Conference on Applied Mechanics and Industrial Systems (ICAMIS 16), Muscat, Oman, December 6-8.
4. **Al-Azri, N.**, Triki, C. (2016) "A linear programming model for optimizing heat integration in chemical processes." International Conference on Applied Mechanics and Industrial Systems (ICAMIS 16), Muscat, Oman, December 6-8.
5. Zurigat, Y., **Al-Azri, N.**, Al-Rawahi, N. (2016) "Bioclimatic chart and comfort zone potential in buildings cooling in Sharjah City, UAE." International Conference on Applied Mechanics and Industrial Systems (ICAMIS 16), Muscat, Oman, December 6-8.
6. Al-Shuaili, M., **Al-Azri, N.**, Al-Rawahi, N. (2016) "Comparison of ground and satellite weather parameters data for Muscat Oman." International Conference on Applied Mechanics and Industrial Systems (ICAMIS 16), Muscat, Oman, December 6-8.
7. Mathilde, M., **Al-Azri, N.**, Ombe-Ndeffotsing, A., Wey, E., Wald, L. (2016) "Evaluating regional change in performance of several databases in Arabic Peninsula." 16th European Meteorological Society Annual Meeting & 11th European Conference on Applied Climatology (ECAC), Trieste, Italy, September 12-16.
8. **Al-Azri, N.**, Al-Rawahi, N., Khodaei, A., Afzal, H. (2016) "Linear regression models for the thermodynamic properties of working fluids in waste heat recovery." The 4th International Conference on Renewable Energy: Generation and Applications (ICREGA16), Belfort, France, February 8-10.
9. Ariz, M., Afzal, H., **Al-Azri, N.**, Al-Rawahi, N. (2016) "Thermal performance analysis of hybrid jet impingement/microchannel cooling system for densely packed concentrated photovoltaic (CPV) cells." ASME International Conference on Nanochannels, Microchannels, and Minichannels (ICNMM 2016), Washington DC, USA, July 10-14.
10. Boukhris, Y., Allani, Y., **Al-Azri, N.**, Abdallah Saad, Z. (2015) "A new intelligent predictive solar-gas trigeneration system for air conditioning industrial spaces." *International Conference on Future Building & District Sustainability from Nano to Urban Scale (CISBAT2015)*. Lausanne, Switzerland, 9-11 September.
11. Boukhris Y., **Al-Azri, N.**, Allani, Y. (2015) "Solar power generation and solar cooling trigeneration: A new approach of conceptual design for countries of Mena region." *International Conference on Future Building & District Sustainability from Nano to Urban Scale (CISBAT2015)*. Lausanne, Switzerland, 9-11 September.
12. **Al-Azri, N.**, Al-Saadi, S. (2015) "The effect of variations in typical reference year on energy analysis and simulation for residential buildings" *5th International Conference on Energy and Environmental Science (ICEES 2015)*. Penang, Malaysia, 3-4 September.

13. Husain, A., **Al-Azri, N.**, Samad, A., Kim, S., Kim, K. (2015) "Spent flow effects of multiple micro-jet impingement cooling models" *ASME-JSME-KSME 2015 Joint Fluids Engineering Conference (AJKFluids201)*. Seoul, Korea, 26-31 July.
14. **Al-Azri, N.**, (2014) "Pinch Technology for Large Scale Engineering Applications" *The Annual Conference on Engineering and Technology (ACEAT)*. Osaka, Japan, October 15-17.
15. Zurigat, Y. H., Al-Rawahi, N., and **Al-Azri, N.**, (2014) "Solar absorption cooling: the potential and the obstacles" *Second International Conference on Sustainable Systems and the Environment*. Sharjah, UAE, February 12-13.
16. **Al-Azri, N.**, (2014) "Algorithmic procedure for heat integration using pinch technology" *International Conference on Numerical Analysis and Optimization*. Muscat, Oman, January 5-9.
17. Al-Rawahi N., Zurigat Y., **Al-Azri N.** (2013) "Analysis of Solar Radiation on Horizontal and Inclined Surfaces for Six Different Locations in Oman", 24th Canadian Congress of Applied Mechanics (CANCAM '13), Saskatoon, Saskatchewan, Canada, June 2- 6.
18. **Al-Azri, N.**, Zurigat Y., Al-Rawahi, N., (2012) "Development of bioclimatic chart for passive building design in Muscat-Oman" *International Conference on Renewable Energies and Power Quality (ICREPQ'12)*, Santiago de Compostela, Spain, March 28-30.
19. Al-Rawahi N., Zurigat Y., **Al-Azri N.** (2011) "Applications of Different Models for the prediction of hourly solar radiation on horizontal and inclined surfaces", 23rd Canadian Congress of Applied Mechanics (CANCAM '11), Vancouver, Canada, June 5- 9.
20. Al-Rawahi N., Zurigat Y., **Al-Azri N.** (2010) "Prediction of Hourly Solar Radiation on Horizontal and Inclined Surfaces Using Daily Averaged Global Radiation Data", International Conference on Applied Mechanics, Materials, and Manufacturing, Muscat, Oman, December 13-15.
21. Tahat M., **Al-Azri N.** (2010) "Experimental Investigation of Evaporative Air Cooling System performance", International Conference on Applied Mechanics, Materials, and Manufacturing, Muscat, Oman, December 13-15.

CONFERENCE, FORUM, SHORT COURSE & WORKSHOP ATTENDANCE

1. "Introduction to DCIO Initiative." Muscat, Oman May 2016, Sultan Qaboos University.
2. "Training in Solar radiation- 4th Edition", Mines Paris Tech and Transvalor S. A., Sophia Antipolis, France 27-29 January 2016.
3. "Preparing Engineers for a globalized economy: how to teach engineering students process skills." Muscat, Oman May 2015, Sultan Qaboos University.
4. "HVAC Design: Level II- Applications", American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Dubai, UAE 10-11 September 2014.
5. "HVAC Design: Level I- Essentials", American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Dubai, UAE 7-9 September 2014.
6. "Project Management Professional" Sultan Qaboos University and Al-Alawi Training Center, Muscat, Oman 16-27 February 2014.

7. *"Energy Efficiency and Conservation- Energy Audit."* , by JICA Study Team, TEPCO, Japan. Muscat, Oman 26 November 2012
8. *"Program Assessment"* Muscat, Oman, February 2012, Accreditation Board of Engineering and Technology.
9. *"IAEA Mission on facts and Considerations for Introducing Nuclear Power"* , International Atomic Energy Agency Team and The Ministry of Foreign Affairs, Oman. Muscat, Oman 17-19 October 2011
10. *"Writing for Publication"*, Deanship of Postgraduate Studies, Sultan Qaboos University, Muscat, Oman 2-7 June 2010.
11. *"Sustainable Program Assessment"*, Muscat, Oman, April 2010, Accreditation Board of Engineering and Technology.
12. *"Industrial Energy Management."*, Rossiter & Associates, Houston, Texas, USA 16-18 April 2007.
13. *"Leading and Managing with Emotional Intelligence."*, Austin, Texas, USA June 2007.
14. *"French Language Course."*, French-Omani Center for Learning French Language, Muscat, Oman Spring 2004.
15. *"Extensive Training Course"*, Schlumberger Oilfield Services, Karachi, Pakistan Summer 1998.
16. *"Introduction to MS PowerPoint"*, National Training Institute, Muscat, Oman June, 1997.

FUNDING GRANT AND CONTRACT SUPPORT

Grants

1. Research Title: *Investigation of integrated sustainable building solar cooling system.*
 SQU Code: CR/ENG/MIED/10/01
 Principal Investigator: **Nasser Al-Azri**
 Co-investigator: Yousef Zurigat, Nabeel Al-Rawahi
 Sponsor: The Research Council (TRC)
 Period: April 2010- March 2012.

2. Research Title: *Study of asphaltene precipitation from Omani crude oils using SARA analysis and modeling.*
 SQU Code: IG/ENG/PCED/11/05
 Principal Investigator: Abdul-Aziz Al-Hashmi
 Co-investigator: Golamreza Vakili, **Nasser Al-Azri**, Haider Al-Lwati
 Sponsor: SQU, Internal Grant
 Period: January 2011 to December 2012

3. Research Title: *Optimal design configuration of an organic Rankine cycle using waste heat and solar energy in hot arid areas.*
 SQU Code: IG/ENG/MIED/13/01

Principal Investigator: **Nasser Al-Azri**
Co-investigator: Nabeel Al-Rawahi, Abdul-Aziz Al-Hashmi
Sponsor: SQU, Internal Grant
Period: January 2013 to December 2015

4. Research Title: *Solar power generation and solar cooling cogeneration.*
SQU Code: RC/ENG/MIED/14/01
Principal Investigator: **Nasser Al-Azri**
Co-investigator: Nabeel Al-Rawahi, Yousef Zurigat
Sponsor: The Research Council (TRC)
Period: January 2014- Present

5. Research Title: *Developing enhanced micro-scale heat transport designs and optimization models.*
SQU Code: IG/ENG/MIED/14/03
Principal Investigator: Afzal Husain
Co-investigator: **Nasser Al-Azri**, Nabeel Al-Rawahi
Sponsor: SQU, Internal Grant
Period: January 2014 to December 2015

6. Research Title: *Electronic spot markets based on combinatorial auctions for the transportation e-procurement in Oman.*
SQU Code: RC/ENG/MIED/15/01
Principal Investigator: Chefi Triki
Co-investigator: **Nasser Al-Azri**, Sujan Piya
Sponsor: The Research Council (TRC)
Period: April 2015- March 2018

Short course Income

- “Refrigeration and Air Conditioning: Fundamentals and Applications” an industrial training course, Sultan Qaboos University, 25-29 December 2016.