

CURRICULUM VITAE

Personal Information

Surname : Abidin
First name : Zainal
Address : 8902 Hetherington Drive, San Antonio
Texas 78240
Phone: 210 5223904 (office)
210 2694670 (cell)
Email: zabidin@swri.org
Date of birth : January 3rd 1975
Place of birth : Nganjuk, East Java, Indonesia
Sex : Male
Nationality : Indonesia
Marital status : Married



Education

August 1994– Oct. 1998 Bachelor degree at the Department of Mechanical Engineering, Bandung Institute of Technology, Indonesia.
Graduate with Grade Point Average: 3.10 (out of 4).
August 1999 – May 2001 Master degree at the Department of Mechanical Engineering, Bandung Institute of Technology, Indonesia.
Thesis: Theoretical Study and Simulation of Hydrocarbon Production System.
Graduate with Grade Point Average: 3.93 (out of 4).
Oct. 2002 – Nov. 2005 Ph.D. at the Faculty of Mechanical Engineering, Graz University of Technology, Austria.
Dissertation: Thermodynamics Analysis of a Hermetic Reciprocating Compressor for Household Refrigeration Using CFD.
Graduate with distinction (*mit Auszeichnung*), Grade Point Average: 4 (out of 4).

Work Experiences

Nov. 1998 – June 1999 Research staff at Indonesian Institute of Science.
• Responsible for the feasibility study of micro gas turbine in Indonesia.
May 2001 – Oct 2002 Lecturer staff at the Department of Mechanical Engineering, Brawijaya University Malang, Indonesia.
• Responsible for the course of thermodynamics, heat transfer and fluid mechanics.
• Responsible for research project of solar energy for swimming pool.
Oct. 2005 – Feb. 2008 Researcher at Christian Doppler Laboratory for the Thermodynamics of Reciprocating Engines, Graz University of Technology, Austria.
• Responsible for the section of 3-dimensional simulation of the hermetic reciprocating compressor.

- Part 2, SAE Technical Paper, 2017-01-0766, DOI: 10.4271/2017 01-0766 Published 2017-03-28 by SAE International in United States
- 11 Hoag K, Mangold B, Alger T, Abidin Z, Wray C, Walls M, Chadwell C, *A Study Isolating the Effect of Bore-to-Stroke Ratio on Gasoline Engine Combustion Chamber Development*, SAE Journal Paper 2016-01-2177
 - 12 Abidin Z., Hoag K., Badain N., *Port Design for Charge Motion Improvement within the Cylinder*, SAE Technical Paper, 2016-01-0600, DOI: 10.4271/2016 01-0600 Published 2016-04-05 by SAE International in United States
 - 13 Abidin Z., Florea R., Callahan T., *Dual Fuel Combustion Study Using 3D CFD Tool*, Technical Paper, 2016-01-0595, DOI: 10.4271/2016-01-0595, Published 2016-04-05 by SAE International in United State
 - 14 Florea R., Neely G., Abidin Z., Miwa J., *Efficiency and Emissions Characteristics of Partially Premixed Dual-Fuel Combustion by Co-Direct Injection of NG and Diesel Fuel (DI2)*, Technical Paper, 2016-01-0779, DOI: 10.4271/2016-01-0779, Published 2016-04-05 by SAE International in United States
 - 15 Abidin Z. and Chadwell C., *Parametric Study and Secondary Circuit Model Calibration*, SAE World Congress, Detroit, 2015.
 - 16 Abidin Z., Das K., Roberts CH., *3D-Semi 1D Coupling for a Complete Simulation of an SCR System*, SAE World Congress, Detroit, 2013.
 - 17 Das S., Abidin Z., Mehta D., *Effects of Various Model Parameters in the Simulation of a Diesel SCR System*, SAE World Congress, Detroit, 2012.
 - 18 Rothbauer RJ., Stovell CH., Robert CE., Alger T., Abidin Z., *Low Soot and Low Heat Loss Combustion Bowl Development for High Efficiency Diesel Engines Using CFD*, JSAE Proceeding, Yokohama, 2010.
 - 19 Abidin Z., Lang W., Almbauer RA., Nagy D., Burgstaller A., *Development and Validation of a One-Dimensional Simulation Model of a Hermetic Reciprocating Compressor for Household Refrigeration*, International Journal of Engineering Systems Modeling and Simulation, 2008.
 - 20 Rothbauer RJ., Grasberger G., Abidin Z., Almbauer R., *Reed Valve, Crankcase and Exhaust Models Coupled to 3D Fluid Domains for the Predictive CFD Simulation*, Proceeding of Small Engine Technology Conference, Niigata Japan, 2007.
 - 21 Abidin Z., Almbauer RA., Burgstaller A., Nagy D., *Assessment Method for the Thermodynamic Quality of Parts of a Hermetic Reciprocating Compressor*, Proceeding of International Conference on Compressors and their System, City University London, 2007.
 - 22 Almbauer RA., Nagy D., Burgstaller A., Abidin Z., *Development of Test Cases for the Experimental Quantification*, Proceeding of International Conference on Compressors and their System, City University London, 2007.
 - 23 Abidin Z., Almbauer RA., Burgstaller A., Nagy D., *One-Dimensional and Thermal Network Application for a Complete Thermodynamic Analysis of a Piston Compression Machine*, Proceedings of the International Conference on Fluid and Thermal Energy Conversion, FTEC Jakarta, INDONESIA, ISSN 0854-9346, p.181-1, 2006.
 - 24 Almbauer RA., Burgstaller A., Abidin Z., Nagy D., *3-Dimensional Simulation for Obtaining the Heat Transfer Correlations of a Thermal Network Calculation for a Hermetic Reciprocating Compressor*, Proceedings of the International Compressors Engineering Conference, Purdue USA, C079, 2006.
 - 25 Abidin Z., Almbauer RA., Burgstaller Z., Nagy D., *Domain Decomposition Method for 3-Dimensional Simulation of the Piston Cylinder Section of a Hermetic Reciprocating Compressor*, Proceedings of the International Compressors Engineering Conference, Purdue USA, C079, 2006.
 - 26 Abidin, Z., Almbauer, RA., Burgstaller, A., *Simulation of the Heat Transfer between Cylinder, Piston and Gas in a Hermetic Reciprocating Compressor*, Proceedings of the International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics, HEFAT 2005, Cairo, Egypt: p.1-4, 2005.

- 27 Almbauer, RA., Abidin, Z., Burgstaller, A., *Determination of the Thermodynamic Feedback of the Shell of a Small Hermetic Piston Compressor, International Conference on Compressors and their Systems*, London, England: p.351-360, 2005.
- 28 Abidin, Z., Almbauer, RA., 2003, *Three-dimensional CFD Analysis on the Suction Section of a Piston Compressor and Its Potentiality to Improve the COP*, Proceeding of the International Conference on Fluid and Thermal Energy Conversion, Bali, Indonesia: p.1-9.

Paper / Journal Reviewer:

1. CIMAC Congress: 2019
2. CFD- and modeling-related papers for SAE World Congress: 2010 - current
3. Journal of Energy and Fuels: 2012 and 2013

Professional Society:

Society of Automotive Engineers (SAE)

Awards

- 1 Southeast Asia Technology Grant from Austrian Government (2002)
- 2 Karya Siswa Grant from Higher Education Department of Indonesia (1999).

San Antonio, April 2020