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Was born in March 11, in 1970. He received BS from Sharif University and MSc. and Ph.D. degrees in mechanical engineering from Tabriz University, IRAN, in 2000 and 2005. He joined the faculty of engineering of Urmia University, Urmia, IRAN, where he is a professor in the Mechanical Engineering Department.

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## EDUCATION

**2000 –2005 Ph.D. in Mechanical Engineering ,Tabriz University, Tabriz, Iran.**

**1987 – 1989 M.Sc. in Mechanical Engineering ,Tabriz University, Tabriz, Iran.**

**1981 – 1985 in Material Engineering Sharif University of technology, Tehran, Iran.**

## MAJOR RESEARCH INTERESTS:

**Internal Combustion Engine Modeling**

**Energy and Exergy analyses in internal combustion engine**

## PUBLICATION

**1.S.Jafarmadar,Sh. Khalil Arya, S. Shafee, R. Barzegar.** Modeling the effect of spray/wall impingement on combustion process and emission of DI Diesel engine. **Journal of thermal Science, No.3, Vol.13, 2009**

**2. S.Jafarmadar, M. Khanbabazadeh.** A computational study of the effects of combustion chamber geometries on combustion process and emission in a DI diesel engine. **Journal of fuel and combustion, No.1, Vol.1, 2009**

**3.A.Abbassi, Sh. Khalil Arya, S.Jafarmadar.** The influence of injection system characteristics on the first- and second-law terms in high-speed DI diesel engines with swirl combustion chamber. **journal of Int. J. Exergy, Vol. 7, No. 4, 2010**

**4.A.Abbassi, Sh. Khalil Arya, S.Jafarmadar.** The influence of the inlet charge temperature on the second law balance under the various operating engine speeds in DI diesel engine. **Fuel, 2010.**

5. **S.Jafarmadar,A.Zehni.** Multi-dimensional modeling of the effects of split injection scheme on combustion and emission of direct-injection diesel engine at full load state. **International journal of engineering, No.4, Vol.23,2009.**
6. **S.Jafarmadar,Sh., S. Shafee, R. Barzegar.** Three dimensional modeling of combustion process and soot and Nox formation in a Direct injection diesel engine. *Journal of engine research*, No.1, Vol.14, 2009.
7. **S.Jafarmadar,A.Zehni.** Multi-dimensional modeling of combustion process combustion and emission of dual fuel engine. **International journal of engineering, No.5, Vol.13,2008.**
8. **V. Pirouzpanah, S.Jafarmadar.** Prediction of combustion process and emission formation at dual fuel engine by using single zone with detailed chemical kinetics models. **Journal of engineering, Tabriz University, No.32,Vol.2,2005.**
9. **V. Pirouzpanah, S.Jafarmadar.** Prediction of combustion process and emission formation at dual fuel engine by using quazi-dimensional with detailed chemical kinetics models . **Journal of engineering, Tabriz University, No.32,Vol.2,2006**
- 10.**S.Jafarmadar, B. Jalilpour.** Three Dimensional Modeling of Combustion Process and emission formation in a low heat rejection indirect injection diesel engine. **THERMAL SCIENCE: Year 2014, Vol. 18, No. 1, pp. 53-65.**
- 11.**S.Jafarmadar., V.Heiydarpoor.** Numerical Studies of Spray Breakup in a Gasoline direct injection engine. **THERMAL SCIENCE, Year 2011, Vol. 15, No. 4, pp. 1111-1122.**
12. **S. Emami, S. Jafarmadar.** **Multidimensional modeling of the effect of fuel injection pressure on temperature distribution in cylinder of a turbocharged DI diesel engine. Propulsion and Power Research:2013;2(2):162–175**
- 13.**R. Rahimi, S. Jafarmadar, Sh. Khalilarya, A. Mohebbi.** Numerical and experimental investigations of EGR distribution in a DI turbocharged diesel engine. **Transactions of the Canadian Society for Mechanical Engineering, Vol. 37, No. 2, 2013**
- 14.**E. Alizadeh Haghighi , S. Jafarmadar , H. Taghavifar.** Application of ANN-ICA Hybrid Algorithm toward Prediction of Engine Power and Exhaust Emissions. **International Journal of Automotive Engineering Vol. 3, Number 4, Dec 2013**

15. S. Jafarmadar, M. Hossaeinzadeh. **IMPROVEMENT OF EMISSIONS AND PERFORMANCE BY USING OF AIR JET, EXHAUST GAS RE-CIRCULATION AND INSULATION METHODS IN A DIRECT INJECTION DIESEL ENGINE.** THERMAL SCIENCE: Year 2013, Vol. 17, No. 1, pp. 57-70
16. **S. Jafarmadar , S. Shafee, R. Barzegar.** NUMERICAL INVESTIGATION OF THE EFFECT OF FUEL INJECTION MODE ON SPRAY/WALL INTERACTION AND EMISSION FORMATION IN A DIRECT INJECTION DIESEL ENGINE AT FULL LOAD STATE. **THERMAL SCIENCE: Year 2010, Vol. 14, No. 4, pp. 1039-1049**
17. **A. Lotfiani, S. Kalil Arya, S.Jafarmadar.** A semi-analytical model for prediction of the behavior of turbulent coaxial gaseous jets. **THERMAL SCIENCE: Year 2013, Vol. 17, No. 4, pp. 1221-1232**
18. **H. Khatamnezhad, S. Khalil Arya, S. Jafarmadar, A. Nemati .** Incorporation of exhaust gas recirculation and split injection for reduction of Soot and NOx emissions in direct injection diesel engine. **THERMAL SCIENCE, Year 2011, Vol. 15, Suppl. 2, pp. S409-S427**
19. **S. jafarmadar , M. Khanbabazadeh.** A Full-Cycle 3 Dimensional Numerical Simulation of a Direct Injection Diesel Engine. **International Journal of Automotive Engineering Vol. 3, Number 2, June 2013**
- 21.A. **Mohebbi , S. jafarmadar , J. Pashae.** Performance Evaluation and Emissions improving of Turbocharged DI Diesel Engine with Exhaust Gas Recirculation (EGR). **International Journal of Automotive Engineering Vol. 2, Number 2, April 2012**
- 22.A. **Nemati, Sh. Khalilarya, S. Jafarmadar, H. khatamnejhad, V. Fathi .** Effect of Injection Characteristics on Emissions and Combustion of a Gasoline Fuelled Partially-premixed Compression Ignition Engine. **International Journal of Automotive Engineering Vol. 1, Number 1, January 2011**
23. **S. Parsa, R. Khoshbakhti , S. Jafarmadar, R. Akbarpour Ghiasi, Y. Ajabshirchi.** Exergy Analysis of a Diesel Engine using Multi-zone Combustion Model. **Journal of Fuel and Combustion,2013**

- 24.S.Jafarmadar, A.Zehni.** Combustion Modeling for Modern Direct Injection Diesel Engines. **Iran. J. Chem. Chem. Eng. Research Note Vol. 31, No. 3, 2012**
- 25. M. Abbasalizadeh, S. Jafarmadar and H. Shirvani.** The effects of pressure difference in nozzles two phase flow on the quality of exhaust mixture. **IJE TRANSACTIONS B: Applications Vol. 26, No. 5 (May 2013) 553-562**
- 26.N. Pourvosoghi, A. M. Nikbakht , S. Jafarmadar.** An Optimized Process for Biodiesel Production from High FFA Spent Bleaching Earth. **IJE TRANSACTIONS C: Aspects Vol. 26, No. 12, (December 2013) 1545-1550**
- 27.N. Pourvosoghi, A. M. Nikbakht , S. Jafarmadar, M.Tabatabaei, A.H. Goli, A.Habibnia, M. Pakzad.** Effect of waste bleaching earth oil derived biodiesel on diesel engine performance and emissions. **Journal of Fuel and Combustion,2012,vol 5, Num 2**
- 28.A. Mohebbi, S. Jafarmadar, J. Pashae and M. Shirnezhad.** Experimental studying the effect of EGR distribution on the combustion, emissions and performance in a turbocharged DI diesel engine. **IJE TRANSACTIONS A: Basics Vol. 26, No. 1 (January 2013) 73-82**
- 29. S. Jafarmadar , J. Pashae.** Experimental Study of the Effect of Castor Oil Biodiesel Fuel on Performance and Emissions of Turbocharged DI Diesel. **IJE TRANSACTIONS B: Applications Vol. 26, No. 8 (August 2013) 905-912**
- 30.S. Jafarmadar, A. Zehni.** Multi-Dimensional Modeling of the Effects of Spilt Injection Scheme on Performance and Emissions of IDI Diesel Engines. **IJE TRANSACTIONS C: Aspects Vol. 25, No. 2 (June 2012) 135-146**
- 31.S. Jafarmadar.** The Numerical Exergy Analysis of H<sub>2</sub>/Air Combustion with Detailed Chemical Kinetic Simulation Model. **IJE TRANSACTIONS C: Aspects Vol. 25, No. 3 (September 2012) 239-248**
- 32.S. Jafarmadar, R.Barzegar.** Three Dimensional Modeling of Combustion Process and Emissions Formation in Pre and Main Chambers of an Indirect Injection Diesel Engine. **IJE TRANSACTIONS C: Aspects Vol. 25, No. 4 (December 2012) 311-320**
- 33.H. Khatamnezhad, S. Khalil Arya, S. Jafarmadar, H. Oryani , M. Pourfallah.** Numerical Investigation on the Effect of Injection Timing on Combustion and Emissions

in a DI Diesel Engine at Low Temperature Combustion Condition. **IJE TRANSACTIONS B: Applications Vol. 24, No. 2 (July 2011) 165-179**

**34. M. Mardi Kolor, S. Khalil Arya, S. Jafarmadar ,A. Nemati .**Hydrogen and Ethanol as Potential Alternative Fuels Compared to Gasoline under Improved Exhaust Gas Recirculation. **IJE TRANSACTIONS C: Aspects Vol. 27, No. 3 (March 2014) 449-456**

**35. M. Mansoury , S. Jafarmadar .** Experimental Investigation of the Effects of Air Injection and Injection Timing in a Natural Aspirated DI Diesel Engine. **IJE TRANSACTIONS C: Aspects Vol. 26, No. 12 (December 2013) 1479-1484**

**36.B. Jalilpour, S. Jafarmadar, D.D. Ganji, A.B. Shotorban, H. Taghavifar.** Heat generation/absorption on MHD stagnation flow of nanofluid towards a porous stretching sheet with prescribed surface heat flux .**Original Research Article,Journal of Molecular Liquids, Volume 195, July 2014, Pages 194-204**

**37. S. Jafarmadar.** Multidimensional modeling of the effect of EGR (exhaust gas recirculation) mass fraction on exergy terms in an indirect injection diesel engine. **Original Research Article Energy, Volume 66, 1 March 2014, Pages 305-313**

**38.S. Jafarmadar.** Three-dimensional modeling and exergy analysis in Combustion Chambers of an indirect injection diesel engine. **Original Research Article ,Fuel, Volume 107, May 2013, Pages 439-447**

**39.G. Rezazadeh, A. Keyvani, S. Jafarmadar.** On a MEMS based dynamic remote temperature sensor using transverse vibration of a bi-layer micro-cantilever. **Original Research Article , Measurement, Volume 45, Issue 3, April 2012, Pages 580-589**

**40.V. Fathi, A. Nemati, Sh. Khalilarya, S. Jafarmadar.** The effect of the initial charge temperature under various injection timings on the second law terms in a direct injection SI hydrogen engine. **International Journal of Hydrogen Energy, Volume 36, Issue 15, July 2011, Pages 9252-9259**

**41. H. Taghavifar, S.Khalilarya, S. Mirhasani, S. Jafarmadar.** Numerical energetic and exergetic analysis of CI diesel engine performance for different fuels of hydrogen, dimethyl ether, and diesel under various engine speeds. **International Journal of Hydrogen Energy, In Press, Corrected Proof, Available online 25 April 2014**

- 42. S. Jafarmadar.** Exergy analysis of hydrogen/diesel combustion in a dual fuel engine using three-dimensional model. **International Journal of Hydrogen Energy, In Press, Corrected Proof, Available online 26 April 2014**
- 43. R.Tasouji Azar, S.Khalilarya, S. Jafarmadar.** Tube bundle replacement for segmental and helical shell and tube heat exchangers: Experimental test and economic analysis. **Applied Thermal Engineering, Volume 62, Issue 2, 25 January 2014, Pages 622-632**
- 44. S. Jafarmadar, R. Tasoujiazar , B. Jalilpour.** Exergy analysis in a low heat rejection IDI diesel engine by three dimensional modeling. **INTERNATIONAL JOURNAL OF ENERGY RESEARCH,Int. J. Energy Res. (2013), Published online in Wiley Online Library (wileyonlinelibrary.com). DOI: 10.1002/er.3100**
- 45. S. Jafarmadar, A.Zehni.** Numerical investigation of the effects of dwell time duration in a two-stage injection scheme on exergy terms in an IDI diesel engine by three-dimensional modeling . **Energy Science & Engineering published by the Society of Chemical Industry and John Wiley & Sons Ltd.**
- 46. S. Jafarmadar, B. Jalilpour, D. D. Ganji, and H. Taghavifar.** A Unified Model Considering Effects of Droplet Break-Up and Air Entrainment at the Initial Stage of Fuel Spray Penetration . **Hindawi Publishing Corporation, Mathematical Problems in Engineering, Volume 2014, Article ID 127107, 11 pages ,<http://dx.doi.org/10.1155/2014/127107>,RESEARCH ARTICLE**
- 47. S.Jafarmadar , N.Javani .** Exergy analysis of natural gas/DME combustion in homogeneous charge compression ignition engines (HCCI) using zero-dimensional model with detailed chemical kinetics mechanism. **Int. J. Exergy, Vol. 15, No. 3, 2014**
- 48. S.Jafarmadar.** Multidimensional modeling of the effect of engine load on various exergy terms in an indirect injection Diesel Engine. **Int. J. Exergy, Vol. 15, No. 1, 2014**
- 49. D. D. Ganji ,S. Jafarmadar, B. Jalilpour, R. Rahimi,A.B. Shotorban, Seyd H.Hashemi Kachapi.** Analytical and numerical simulation of radiation and porosity on a non-orthogonal stagnation-point flow towards a stretching sheet. **Indian J. Pure Appl. Math., Indian National Science Academy,2013**

**50 .S.Jafarmadar** .The Effect of Split Injection on the Combustion and Emissions in DI and IDI Diesel Engines .**Book Chapter of Diesel Engine - Combustion, Emissions and Condition Monitoring** ,Edited by: Saiful Bari,ISBN 978-953-51-1120-7,Publisher : InTech,Publication date: April 2013.

**51.A .Mohebbi ,M.H Komarizade, S. Jafarmadar ,J.Pashai** .Use of waste cooking oil biodiesel in a tractor DI diesel engine .**Journal of Food, Agriculture and Environment Vol.10(2):1290-1297.2012.**

**53. H.Taghavifar, Sh.Khalilarya, S.Jafarmadar.** Engine structure modifications effect on the flow behavior, combustion, and performance characteristics of DI diesel engine. **Energy Conversion and Management 85 (2014) 20–32**

**54. H.Taghavifar, Sh.Khalilarya, S.Jafarmadar.** Diesel engine spray characteristics prediction with hybridized artificial neural network optimized by genetic algorithm. **Energy 71 (2014) 656-664**

**55. B. Jalilpour , S. Jafarmadar ,D. D. Ganji.** MHD stagnation flow towards a porous stretching sheet with suction or injection and prescribed surface heat flux. **J Braz. Soc. Mech. Sci. Eng.DOI 10.1007/s40430-014-0218-z.**

**56. M. Mansoury , S. Jafarmadar** Experimental Study of the Effects of Air-Injection, Injection Timing and Cooled EGR on the Combustion, Emissions and Performance of a Nature Aspirated Direct Injection Diesel Engine. Accepted in **Iranian journal of science and technology,2014.**

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