

Curriculum Vitae



1) Personal Information:

Mohammad Zabetian Targhi

Birth date: 5/23/1982

Nationality: Iranian

Assistant Professor of Mechanical Engineering

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Tarbiat Modares University

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2) Educational Record:

- BSc in Mechanical Engineering, Iran University of Science and Technology, 2000-2005.
GPA: 16.97/20.0, Thesis Grade: 20.0/20.0
Thesis Title: Thermal analysis of internal combustion engine
- MSc in Mechanical Engineering, Sharif University of Technology, 2005-2007.
GPA: 17.77/20.0, Thesis Grade: 20.0/20.0
Thesis Title: Analysis and computational modeling of homogeneous charge compression ignition engines
- PhD in Mechanical Engineering, Sharif University of Technology, 2007-2013.
GPA: 18.39/20.0, Thesis Grade: Excellent
Thesis Title: Theoretical and experimental investigation of integration of laser beam with particulate microflows

3) Administrative Works

- Manager of Academic Affairs, University Campus, Tarbiat Modares University, Jan. 2015-Present.
- Secretary of the Industrial Committee, 25th International Mechanical Engineering Conference(ISME 2017), Tarbiat Modares University, Feb. 2016-Present.
- Coordinator of Laboratory Network, Department of Mechanical Engineering, Tarbiat Modares University, May 2016- Present.

4) Awards:

- Scholarship from Sharif University of Technology for outstanding achievement in educational record: 2007-2008.

- Honored Student During BSc(7 Semesters), MSc(3 Semesters) and PhD(8 Semesters).
- Research assistant during PhD program: 2007-20011.
- PhD thesis was granted by industrial Development and Renovation organization of Iran(IDRO), 2009-2011.
- Best PhD thesis of Iran, awarded by Iranian Society of Mechanical Engineers(ISME), 2013.

5) Publications:

English Journal publications:

- 1- M.Zabetian, M.S.Saidi, M.B.Shafii, M.H.Saidi, Separation of microparticles suspended in a minichannel using laser radiation pressure, *Applied Optics* Vol. 52, Iss. 20, pp. 4950–4958 (2013)
- 2- M.Zabetian, M.H.Saidi, M.S.Saidi, M.B.Shafii, Modeling of Laser Thermal and Hydrodynamic Effects on a Dilute Suspension of Micro-Particles in Water, *Journal of Mechanical Science and Technology*, Vol.28, No.2, pp.1017-1026, 2013.
- 3- M.Zabetian, M.B.Shafii, M.H.Saidi, M.S.Saidi, A New Experimental Approach to Investigate the Induced Force and Velocity Fields on a Particulate Manipulation Mechanism, *Scientia Iranica*, Vol 21, No.2, pp.414-424, 2014.
- 4- H.Keramati, M.H.Saidi, M.Zabetian, Stabilization of Suspension of Zirconia Microparticles Using Nanoparticle Halos Mechanism: Zeta Potential, *Journal of Dispersion Science and Technology*, Vol 37, No.1, pp 6-13, 2015.
- 5- Reza Razaghi, Farhud Shirinzadeh, Mohammad Zabetian, Erfan Aghanoorian, Velocity Domain and Volume Fraction Distribution of Heavy Micro-Particles in Low-Reynolds Number Flow in Microchannel, *Journal of Dispersion Science and Technology*, DOI:10.1080/01932691.2016.1170607, 2016.

Persian Journal publications:

- 6- M.Zabetian, A.Mozafari, Simulation of Combustion in Homogeneous Charge Compression Ignition Engines with Natural Gas Fuel and Analysis of Operating Parameters on the Ignition, *Journal of Engine Research*, Year 5, No.15, 2009.
- 7- G.Taherian, M.Nili, M.Zabetian, M.Karbasipour, Two-Dimensional Free-Convective Flow over a Horizontal Cylinder Immersed in Water Using PIV Method, *Journal of Solid and Fluid Mechanics* No.1, PP.107-117, 2014.
- 8- H.Keramati, M.H.Saidi, M.Zabetian, Experimental Analysis of Stabilization of Suspension Containing Microparticles Using Nanoparticle Halos, *Modares Mechanical Engineering*, Vol.15, No.5, PP.81-88, 2015.

Under Review Journals:

- 1- M.Zabetian, M.H.Saidi, M.S.Saidi, M.B.Shafii, A Novel Technique to Increase the Stability and Homogeneity of Suspension of Micro-Particles in Liquids, Powder Technology. Under review.
- 2- F.Forughi, M.Zabetian and M.S.Saidi ,Determination of Actual Size of Particles with Different material By Means of Multi Angular Light Scattering Aerosol Spectrometer

English Conference publications:

1. H.Keramati, M.Zabetian, M.H.Saidi, A.A.Mozafari, Experimental Characterization of Stabilized Suspensions Caused by Formation of Nanoparticle Halos, ASME, ICNMM 2014, August 3-7, Chicago, Illinois, USA.
2. M.Zabetian, M.S.Saidi. M.H.Saidi, M.B.Shafii, Thermal interaction of laser beam with particulate flows, 9th International Conference on Nanochannels, Microchannels and Minichannels, ASME, ICNMM 2011, June 19-22, 2011, Edmonton, Canada
3. M.Zabetian, M.H.Saidi, M.B.Shafii, M.S.Saidi, Laser induced flow in particulate media, 7th International Conference on Computational Heat and Mass Transfer, July 18-22, 2011, Istanbul, Turkey
4. R.Rohani, M.Zabetian, M.H.Saidi, M.S.Saidi, M.B.Shafii, An experimental study on the stability and homogeneity of a dilute dispersion of micro-particles, 8th International Conference on Multiphase Flow, ICMF 2013, Jeju, Korea, May 26 - 31, 2013.
5. A.Ghasemi, M.Zabetian, B.Sajjadi, R.Niroomand, M.H.Saidi, A New Method for Optimizing the Air Circulation System in the Car Paint Booths, 21st Annual International Conference on Mechanical Engineering-ISME2013, 7-9 May, 2013, School of Mechanical Eng., K.N.Toosi University, Tehran, Iran.
6. S.N.Saeidi, S.E.Kiaei, B.Sajjadi, M.Zabetian, M.H.Saidi, Experimental investigation of indoor airflow using PIV technique, Clima 2010 - REHVA World Congress, Antalya Turkey, May 9-12, 2010
7. M.Zabetian, A.Mozafari, Combustion of natural gas in homogenous charge combustion compression ignition engines, analysis, oxidation mechanisms and controlling strategies, Conference on Applications and Design in Mechanical Engineering, 25-26 October 2007, Kangar, Perlis, Malaysia
8. M.H.Shojaefard, A.R.Noorpoor, M.Zabetian, M.Ghaffarpour, Analysis of engine operating conditions on thermal behavior of piston, International conference on recent advances in mechanical and material engineering(ICRAMME2005), Malaysi, 2005.
9. M.Zabetian, M.Rashidi, R.Maddahian, Design of an optical imaging and spectroscopy system for combustion measurement in internal combustion engines, Seminar on sensor science and technology, Sharif university of technology, November 2015, Tehran, Iran.

Persian Conference publications:

10. H.Keramati, M.H.Saidi, M.Zabetian, R.Rohani, A.Mozafari, Using Nanoparticles for Stabilization of Microparticles Suspension, 22th International Conference on Mechanical Engineering, ISME 2014.

11. M.Zabetian, M.H.Saidi, M.B.Shafii, M.S.Saidi, R.Rohani, A.Sarraf, S.Haghighayegh, Dispersion of Microparticles in Liquid Phase Using a Novel Method, 20th International Conference on Mechanical Engineering, ISME 2012.
12. M.H.Saidi, A.Ghasemi, M.Zabetian, Experimental-Analytical Comparative Study of Velocity Field in Minichannels, 20th International Conference on Mechanical Engineering, ISME 2012.
13. E.Ataei, M.Pouroosta, M.Zabetian, M.Morad, M.B.Shafii, K.Mazaheri, Study of Characterization of V-Shape Objects Using PIV Method, 21th International Conference on Mechanical Engineering, ISME 2013.
14. R.Rouhani, M.Zabetian, M.H.Saidi, M.B.Shafii, M.S.Saidi, S.Haghighayegh, Analysis of Stability and Homogeneity of a Processed Suspension of Microparticles Using Transmitted Light of Laser, 20th International Conference on Mechanical Engineering, ISME 2013.
15. A.Foroghi, M.S.Saidi, M.Zabetian, Measurement of Droplet Size via a Novel Optical Method and Mire Scattering, 21th International Conference on Mechanical Engineering, ISME 2013.
16. E.Ataei, M.Pouroosta, M.Zabetian, M.Morad, M.B.Shafii, K.Mazaheri, Using PIV Method for Measurement of Flow Behind a V-type Flame Holder, The first conference Study of Characterization of V-Shape Objects Using PIV Method, The First International Conference on Aerodynamics and Hydrodynamics, Tehran, Iran 2012.
17. E.Kiae, N.Saidi, B.Sajadi, M.Zabetian, M.H. Saidi, Experimental Study of Internal Flows Using Particle Image Velocimetry(PIV), The Second International Conference on Heating, Ventilation and Air Conditioning, Tehran, Iran, 2009.
18. M. Zabetian, A.Mozafari, Simulation of Ignition in Homogeneous Charge Compression Ignition(HCCI) Engines and Analysis of Control Strategies, The Fifth International Conference on International Combustion Engines, Tehran, Iran, 2006.

Developing National Standards as a member of board in national standard committee:

- 1- Particulate air filters for indoor ventilation applications, Standard number: ISIRI 14017, 2011.
- 2- Disposable Mask for clinical applications: requirements and test methods, Standard number: INSO 6138, 2012.
- 3- Protection against sharp objects: requirements and test methods, 2014.

6) Patent:

An automated measurement system for PM10 particles using laser beam, Patent No. 773372, 2012.

7) Funded Research:

Design, fabrication and documentation of technical knowledge of a machine for particle detection and separation using laser, 2009-2011.

8) Courses Taught:

Row	Course Name
1	Advanced Engineering Mathematics
2	Advanced Thermodynamics
3	Advanced Internal Combustion Engines
4	Advanced Measurement Systems and Laboratory

9) Research Interests

- **Experimental Methods in Thermal Fluids**
- **Optical Measurement Systems**
- **Microscopic Imaging and Analysis**
- **Particulate Flows**
- **Internal Combustion Engines**
- **Aerosol Technology**
- **Micro Gas Turbines**
- **Microflows**

Date Updated: 6/24/2016 by Mohammad Zabetian Targhi