

Resume

Saeed Karimian Aliabadi

Address: Room 408, Mechanical Eng. Faculty,
Tarbiat Modares University, Tehran, Iran

Post Box: 14115-111

Tel: 0098-21-82884933

Mobile: 0098-930-2727207

E-mail: Karimian@modares.ac.ir



Information					
Personal Details	Gender: Male	Year of Birth: 1981	City of Birth: Shiraz	Marriage status: married	Nationality: Iranian
Educational Records	<p>2007-2012 Sharif University of Technology, Tehran Ph.D. in Aerospace Engineering, Flight dynamics and Control, GPA: 17.32</p> <p>2003-2006 Sharif University of Technology, Tehran M. Sc. in Aerospace Engineering, Flight dynamics and Control, 2nd Rank in the aerospace college, GPA: 17.16</p> <p>1999-2003 Sharif University of Technology, Tehran B.Sc. in Aerospace Engineering and Analytical Physics, First Rank in the aerospace college, GPA: 16.98</p> <p>1995-1999 School of Talented students, Dezfool Diploma in Mathematics and Physics, First Rank in the region, GPA: 19.78</p>				
Thesis Publications	<ul style="list-style-type: none"> • Ph.D. Thesis: Aeroelastic modeling, experimentally validation and stability analysis of a flexible FMAV in planar Flight, under supervision of Dr. S. H. Pourtakdoust, February 2012 • M. Sc. Thesis: Computation of 3D Optimized flight path in climb phase of a jet transport aircraft and controller design, under supervision of Dr. A. A. Khayyat, February 2006 • B. Sc. Thesis: Estimation of Aerodynamic Forces and Moments for a regional propeller aircraft based on semi empirical methods and code generation, under supervision of Dr. K. Mazaheri, January 2003 				

Selected Journal Papers

1. S. Karimian and Z. Jahanbin, Bond graph modeling of a typical flapping wing micro-air-vehicle with the elastic articulated wings, *Meccanica journal (MECC)*, 1st revision, September 2019.
2. S. Karimain and Z. Jahanbin, Aerodynamic Modeling of a Flexible Flapping-Wing Micro-Air Vehicle in the Bond Graph Environment with the Aim of Assessing the Lateral Control Power, proceedings of the institution of mechanical engineer part g-journal of aerospace engineering, vol. 233(13), pp 4998-5015, 2019.
3. S. Karimian, S. Rasekh, Effect of Sudden Change in Free Stream Velocity on the Wind Turbine Airfoil Performance Based on Boundary Element Method, *journal of engineering analysis with boundary elements*, vol. 101, pp 360-370, 2019.
4. Z. Jahanbin and S. Karimain, Modeling and parametric study of a flexible flapping-wing MAV using the bond graph approach, *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, Vol 40, No 2, pp 96-1:96-19, 2018.
5. S. Karimian and S. Rasekh, Effect of Platform Surge Motion on the Performance of 5MW NREL Offshore Floating Wind Turbine, *journal of renewable energy and environment*, accepted for publication, 2019
6. S. Karimian and S. Rasekh, effect of platform disturbance on performance of the offshore wind turbine under pitch control, *wind energy journal*, 2nd revision, September 2019.
7. P. Seyedmatin, S. Karimian et.al, Electricity and hydrogen co-production via scramjet multi-expansion open cooling cycle coupled with a PEM electrolyzer, *international journal of energy*, 2nd revision, August 2019.
8. M. Alae, S. Karimian and F. Ommi, sensitivity analysis and optimization of delta wing design parameters using CFD based response surface method, *Journal of applied fluid mechanics*, vol. 12, no. 6, pp 1885-1903, 2019.
9. S. Rasekh, S. Karimian and M. Hoseinidoust, comparing the numerical and semi empirical approach in dynamic stall modeling, *journal of mechanic modares*, vol 18, no 3, pp 282-290, 2018 (Farsi).
10. S. Karimian, M. Hoseinidoust, unsteady response of a dynamically stalled section under harmonic jet flow control, *Journal of fluid and structure*, submitted July 2019.
11. S. Rasekh, M. Hoseinidoust, S. Karimian, Accuracy of dynamic stall response for wind turbine airfoils based on semi-empirical and numerical methods, *journal of applied fluid mechanics*, Vol 11, no 5, pp 1287-1296, 2018.
12. S. Karimian, B. Monfared, Numerical study of the effect of plasma actuator flow control on NACA0024 in different angle of attacks, *international journal of aerospace engineering*, submitted 2018.

13. M. Alaei, F. Ommi, S. Karimian, evaluation of the numerical approach in estimation of the aerodynamic coefficients of an air based career Delta wing, journal of mechanic modares, Vol 17, no 9, pp 237-244, 2017 (Farsi).
14. S. Karimian, Derivation of a reduced order aeroelastic model for typical flapping wing robot based on multi body dynamics, journal of multi body system dynamics, submitted 2018.
15. S. Karimian and A. Ebrahimi, parametric study for kinematic optimization of flapping wing air vehicle using a new aeroelastic model, Modares mechanical engineering journal, volume 14, No 9, pages 73-80, 2014 (in Persian).
16. S. Karimian and A. Ebrahimi, modeling of propulsion system in a flapping vehicle and parametric study, Iranian journal of aerospace propulsion, volume 1, No 1, pages 89-96, 2014 (in Persian).
17. H. Pourtakdoust and S. Karimian, Performance Analysis of the flapping wing air vehicle based on a new aeroelastic model, Journal of system design and dynamics JSME, volume 6, No 1, pages 1-16, 2012.
18. H. Pourtakdoust and S. Karimian, Evaluation of the Flapping Wing Propulsion based on a new experimentally validated aeroelastic model, Scientia Iranica journal of mechanical system, vol. 19, No 3, pages 472-482, 2012.
19. K. Mazaheri, A. Ebrahimi and S. Karimian, Performance Analysis of a Flapping Wing Vehicle based on Experimental Aerodynamic Data, Journal of Aerospace Engineering ASCE, volume 25, No 1, pages 1-7, 2012.
20. H. Pourtakdoust, S. Karimian et.al, Experimental Analysis of a Flapping Aeroelastic Wing and Derivation of Generalized Curves, Journal of Aeronautical Engineering, volume 14, No 1, pages 13-25, 2012 (in Persian).
21. S. Karimian, B. Monfared, numerical investigation of unsteady effect of plasma actuator on the aerodynamic performance of a moving airfoil, journal of aerospace science and technology, submitted 2018.
22. S. Karimian and M. Hoseinidoust, numerical study of synthetic jet actuator and aerodynamic analysis of a high angle of attack pitching surface, journal of wind engineering and industrial aerodynamics, submitted 2018.
23. S. Karimian and M. Azimi, Periodic Solution for Vibration of Euler-Bernoulli Beams Subjected to Axial Load Using DTM and HA, Scientific Bulletin Series D, volume 76, Issue 2, pages 69–76, 2014.
24. M. Azimi, A. Hedesh and S. Karimian, Flow modeling in a porous cylinder with regressing walls using semi analytical approach, int. journal of Multi physics, volume 9, No 1, pages 75-82, 2015.

<p>Some of the Conference Papers</p>	<ol style="list-style-type: none"> 1. Karimian S., Stability and performance improvement of a flexible FMAV using adaptive PID controller, 8th Ankara international aerospace conference, Turkey, 2015 2. Karimian S., FMAV propulsion system modeling and parametric study, 2nd propulsion society conference, Tarbiat modares univ., Tehran, 2013 3. Karimian S., Hovering flight considerations for a flexible FMAV, 2nd propulsion society conference, Tarbiat modares univ., Tehran, 2013 4. Mazaheri K., Ebrahimi A., Karimian S., Dynamic simulation and performance analysis of a flapping wing air vehicle, aerospace conference, Malek univ., Isfahan, 2008 5. Shahmoradi S. A., Karimian S., noise reduction in the capacitive MEMS accelerometer using Sigma Delta Modulator, Navigation system conference, Malek univ., Tehran, 2007 6. Karimian S., Mazaheri K., stability analysis of a FMAV based on the flight simulation, aerospace conference, Khaje nasir univ., Tehran, 2006 7. Mazaheri K., Karimian S., Buzarjomehri E., A practical method for optimization of dynamic characteristics of a FMAV, aerospace conference, Khaje nasir univ., Tehran, 2006 8. Shahmoradi S. A., Karimian S., Modeling of Brownian Noise in Capacitive MEMS Accelerometer, Mechatronics Int. conference and exhibition, Sharjeh university, Dubai, 2006 9. Khayyat A. A., 3D flight trajectory optimization in climb phase, ISME conference, Isfahan university, Isfahan, 2004 10. Shahmoradi A., Karimian S., Comparison of GPS and GALILEO systems, International aerospace conference and exhibition, Amir Kabir university, Tehran, 2003 (in Farsi)
---	---

<p>Book</p>	<ul style="list-style-type: none"> • Shahmoradi S. A. and Karimian S., Design and Manufacturing of Capacitive MEMS Accelerometers, Malek University publication, 2005, Tehran, Iran (in Farsi)
--------------------	---

<p>Awards</p>	<ul style="list-style-type: none"> • Second Rank in M.S. graduates, aerospace engineering college, Sharif university, 2003-2006 • First Rank in M.S. aerospace engineering entrance exam, 2003 • First Rank in B.S. graduates, aerospace engineering college, Sharif university of technology, 1999-2003 • First rank of the high school in Talented regional school, 1995-1999 • Best paper award in the 2nd aerospace propulsion conference, 2013
----------------------	--

	<ul style="list-style-type: none"> • Third Rank in aircraft design contest, Isfahan, 2003 • First Rank in Iranian Students Sport Olympiad, Tehran university, 2003 and Third Rank in regional sport competition, Ahwaz university, 2005 • Design and manufacturing of the first Iranian AFM and Tip scanning controller, ARA research Ltd., 2008 • Design and manufacturing of the first Iranian ornithopter, 2006
--	---

<p>Job Experiences</p>	<ul style="list-style-type: none"> • Assistant professor in mechanical engineering faculty, Tarbiat Modares university, Tehran, March 2014 – up to now <ul style="list-style-type: none"> ○ Some of the Courses offered: Advanced math., advanced fluid mechanics, advanced aerodynamics, flight dynamics, unsteady aerodynamics, aeroelasticity and special topics in aerodynamics • Consultant in the engineering branch of Modares Science and Technology park (MST park), June 2016 – July 2017 • Administrator of the engineering branch of Modares Science and Technology park (MST park), July 2017 – up to now • Visiting assistant professor, Jundi Shapur university, Mechanical and Aerospace Engineering group, Dezfoul, Iran, 2008 - 2012 <ul style="list-style-type: none"> ○ Some Courses offered: Dynamics, Statics, Thermodynamics, Fluid Mechanics, Mechanical Measurements, Gas Turbine and Jet Engine, Advanced Mathematics • Design and manufacturing the flexible UAVs, Tadbirgaran sharif Energy co., Tehran, 2005 - 2008 • Design and Manufacture of high precession systems, ARA Research Ltd., Tehran, 2003 - 2005
-------------------------------	--

<p>Some of Technical Reports</p>	<ol style="list-style-type: none"> 1. MST park, general layout and equipment design for the UAV test saloon in the east site of modares park, 2016 (Farsi) 2. MST park, landscape design of the aerospace park in the east site of modares park, 2016 (Farsi) 3. Click House, geodesic special structures based on the plywood material and CNC fast production, report of invention, 2017 (Farsi)
---	--

	<ol style="list-style-type: none"> 4. Click House, software development for the miss distance indicator system based on the microphone sensor arrangement, 2017 (Farsi) 5. ARA, MEMS gyro performance and noise analysis, 2003 (in Farsi) 6. ARA, Optical methods for displacement detection, 2004 (in Farsi) 7. ARA, Piezo Material properties and application, 2004 (in Farsi) 8. ARA, Design and Simulation of active anti vibration system, 2004 (in Farsi) 9. Tadbirgaran, Preliminary design of Tadbir ornithopter, 2005 (in Farsi) 10. Tadbirgaran, Design of stabilized platform for image processing, 2005 (in Farsi) 11. Tadbirgaran, Design of test stand for measuring the flapping wing parameters, 2006 (in Farsi) 12. Tadbirgaran, Optimization of design parameters of Tadbir flapping wing air vehicle robot, 2006 (in Farsi) 13. Tadbirgaran, Aeroelastic modeling of the flight dynamics of the flapping wing air vehicle robot, 2007 (in Farsi) 14. Tadbirgaran, Experimental Evaluation of the propulsion system of flapping wing vehicle, 2007 (in Farsi) 15. Tadbirgaran, Experimental investigation and dimensional analysis based on test results of flapping wing, 2008 16. Tadbirgaran, flight dynamics multi body modeling and simulation of flexible wings, 2008 (in Farsi)
--	--

<p>Computer Environment Familiarity</p>	<ul style="list-style-type: none"> ➤ Academic Software and Packages MATLAB - Solid works - ADAMS - V. NASTRAN – FLUENT 20SIM – Mathematica ➤ Programming Languages Visual Basic - Delphi
--	--

<p>Frequently experienced and Teaching ability</p>	<ul style="list-style-type: none"> • Unsteady aerodynamics • Advanced Aerodynamics • Subsonic aerodynamics • Special topics in aerodynamics • Computational fluid dynamics • Aeroelasticity • Wind turbine aerodynamics • Micro air vehicle design and performance • Flow control in aerodynamics • Advanced mathematics • Flight dynamics and flight performance
---	--

	<ul style="list-style-type: none">• Optimal control• robust control• multi body dynamics• Special topics in flight mechanics
--	---

Research Fields and Interests	<ul style="list-style-type: none">➤ Flapping flying robots and test stands construction for UAVs➤ Wind turbine modeling, analysis, control and optimization➤ Active flow control and actuator design➤ Unsteady aerodynamics and aeroservoelasticity
--------------------------------------	--

Last updated: September 16, 2019