# **Mohammad Hossein Sabour**

## Aerospace Department, Faculty of New Sciences & Technologies,

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## **PROFILE**

TO MELON

PhD in Aerospace Engineering (Concordia University) with GPA: 4 (Topic: *Creep-Fatigue Interactions*), 3 years work experience at Pratt & Whitney Canada (Topic: *1-D Creep Modeling, using ANSYS*), more than 30 years work experiences in IRAN (*Marin, Railway, Aerospace*), 5 years teaching at Concordia University, and 21 years teaching at Iranian Universities (*Mechanical and Aerospace Eng. Courses*), 8 books published & 12 ISI papers, 30 conference papers in Fracture, Control, Fuzzy and Strategic Management. Experience of Translating, Editing, and Proof reading, Author of 3 entries in 1<sup>st</sup> 4-volume Springer Encyclopedia of Tribology, Music player, Poet, Basketbalist.

EDUCATION		
<u>PhD</u>		January 2005
	(Mechanical & Industrial Engineering) Concordia Unive	ersity
Thesis: Creep-I	Fatigue Interaction in Aircraft Gas Turbine Components by Simulation and T	Festing at Scaled Temperatures
Master of Scie	ence	October 1993
	(Mechanical Engineering) Tarbiat Modares Universit	y
Thesis: Dynam	nic Simulation and Design of Modern Control System for Diesel Eng	gine Governors.
WORK EXPE	CRIENCE	
<b>Manager</b>	Chair of Aerospace Department	[2010 to Present]
	Employer: Tehran University, Faculty of New Science & Techn	nology
<b>Manager</b>	<b>Research Deputy, Chair of Aerospace Department</b>	[2010 to 2012]
	Employer: Tehran University, Faculty of New Sciences & Tech	nologies
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<b>Manager</b>	Manager of Industry & Entrepreneurship Consultation Center	er [2009 to 2010]
	Employer: Tehran University Science & Technology Park	
<u>Chairman</u>	Manager of Aerospace Committee	[2009 to 2010]
	Employer: Tehran University Science & Technology Park	
<u>Consultant</u>	Managing Director	[2007 to 2010]
	Employer: AMID Co. (Affiliated to IDRO)	
Teaching	Instructor of Mechanical Eng. Courses	[1993 to 2007]
	Employer: Semnan University	
<u>Consultant</u>	Consultant	[2006 to 2007]
	Employer: Nanocid Company (Nanotechnology)	
<b>—</b> ••		F2001 + 2007
Teaching	Instructor of Mechanical Eng. Courses	[2001 to 2006]
	Employer: Concordia University	
Desservel	Dagaawahari	[2001 to 2004]
Kesearcher	Kesearcner Employer: Pratt & Whitney Canada	[2001 to 2004]
	n Modeling, Using ANSVS groop gradal # ( an 11	
• 1-D Creej	p wodening, Using ANSYS creep model # 6 or 11	
Research Assi	stant Researcher	[2000 to 2004]
	Employer: Concordia University	[]

Creep-Fatigue Interaction in Aircraft Gas Turbine Components by Simulation and Testing at Scaled Temperatures

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<b>Research Assistar</b>	ıt	[1990 to 1993]
	Employer: Mechanical Eng. Dept., Tar	biat Modares University
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Junior Engineer		[1999 - 2000]
·····	Employer: Iran Railway Co.	[]
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Junior Engineer		[1994 - 1998]
Junor Engracer	Employer: Tide Water, Middle East Marine	Services (P S O)
	Employer. The water, when East warme	50 1003 (1.5.0)
I		[1002 1004]
Junior-Engineer	England Indian Dailand Community	[1992 - 1994]
	Employer: Iranian Raliway Company	
Junior-Engineer		[1987 - 1992]
	Employer: Ministry of Heavy Industries.	
TEACHING EXI	PERIENCES	
Instructor		[2010 - Present]
	Employer: University of Tehran.	
Instructor		[2001 - 2006]
	Employer: Concordia University.	
Instructor		[1993 - 2009]
	Employer: Semnan University.	
	1 5 5	
Instructor		[1993 - 1997]
instructor	Employer: Azad University	
	Employer. There employed	
Instructor		[1002 1004]
<u>instructor</u>	Employer: Babol University	[1993 - 1994]
	Employer. Dabor University	

Teaching: Mechanical Vibrations, Automatic Control, Technical Language, Machine Tools design, Eng. Design Methods, Mechanisms & Linkages, Measurement Systems, Planning & Commissioning of Mechanical group, Thermodynamics

## PUBLISHING EXPERIENCES

\* Books Encyclopedia of Tribology, Entries » Creep » Creep-Fatigue Interactions » Fatigue SPRINGER SCIENCE+BUSINESS MEDIA, LLC, 233 Spring Street, New York, NY 10013-1578

## \* Journal Papers

- 1. Vibrational Rotating Structures in Thermal Environment: *Advanced Vibration Engineering*, India, V7 N2 Issue 2008.
- 2. Thermal Scale Modeling by FEM and Test: *Journal of Aerospace Engineering (American Society of Civil Engineers)*, Jan 2010, V23, N1, pp24-33.
- 3. Lifetime Prediction in Creep-Fatigue Environment: *Materials Science, Poland*, ISSN 0137-1339, Feb 2008.
- 4. Designing of Semi Composite Pressure Vessel with Fuzzy Decision making and Finite Element Method: Springer, *Applied Composite Materials (ACM), 2010, V17, N2, pp175-182.*
- 5. Experimental Analysis of Internal Heat Exchanger for Automotive A/C System, ASME, *Applied Mechanics and Mathematics*, Conference Proceedings, Jan 2010, pp583.
- 6. Imperialist Competitive Ant Colony Algorithm for Truss Structures, World Applied Sciences, 2011, V12, N1.
- 7. Fuzzy Logic Tracking Control for a Three Wheel Circular Robot in Unknown Environment, *World Applied Sciences*, 2010, V11, N 3.
- 8. Experimental Study of an Internal Heat Exchanger Influence on R134a Automobile Air Conditioning System, *Applied Mechanics and Materials Vol. 165 (2012) pp 145-149*.

- 9. A new approach for investigation of damage zone properties in orthotropic materials, *Engineering Solid Mechanics*.
- 10. Effects of Flame Speed Development on the Response of Premixed Flames, International Journal of Current Life Sciences.
- 11. The Influence of CNT Contents on the Electrical and Electromagnetic Properties of CNT/Vinylester, *Journal of Electronic Materials.*
- 12. Lean Design of Aeroengine for Adapting With Environment, Indian Journal of Scientific Research.
- 13. Size Distribution Modelling of Secondary Atomization in Spray of Plain-Jet, *Indian Journal of Scientific Research.*
- 14. A Visual Study on the Spray of Gas-Liquid Atomizer, Indian Journal of Scientific Research.
- 15. The Impact of Business Model Innovation on Growth of High Growth SMEs, International Journal of Management and Computing Sciences (IJMCS).
- 16. Surface Pressure Characteristics of a Highly Loaded Turbine Blade at Design and Off-Design Conditions; A CFD Methodology, *Thermophysics and Aeromechanics*.

## \*Conference Papers I) English

- 1. Experimental Investigation on Damping of Nanocomposite Laminated Beam Structures, Proceedings of the 3rd International Conference on Nanotechnology: Fundamentals and Applications, Montreal, Quebec, Canada, 7-9 August 2012
- Numerical Study on Mixed Convection in an Enclosure Filled with Nanofluid, Proceedings of the 3rd International Conference on Nanotechnology: Fundamentals and Applications, Montreal, Quebec, Canada, 7-9 August 2012
- Experimental Analysis of Internal Heat Exchanger for Automotive A/C System, ASME Conf. Proc. / Year 2010 / ASME 2010 10th Biennial Conference on Engineering Systems Design and Analysis, Volume 2 / Heat Transfer
- 4. Curve Veering and in Rotating Structures: 7<sup>th</sup> Conference of CSME forum, Queens University, Kingston, 2001.
- Fracture Properties of Composite and its Application in Gas Turbine, 1<sup>st</sup> Composite International Conference, Kish Island, Iran, December 2009.
- 6. Elastostatic Fracture Response of a Cracked Plate Subjected at Infinity to a Biaxial Uniform Load, AIAC (The 5<sup>th</sup> Ankara International Aerospace Conference), Ankara, September 2009.
- Modeling 12 degree Human based Robot using Fuzzy Logic, 16<sup>th</sup> Annual (International) Conference on Mechanical Engineering, Kerman, Iran (ISME), 2008.
- 8. Engine Governors, 3<sup>rd</sup> International ISME Conference, Tehran, Amirkabir University, 1993.
- 9. Trajectory Optimization in Terrain Following Flight of a Quadrotor, Iran, ISME2015.
- 10. Fuzzy Control for Path Tracking and Obstacle Avoidance of Quadrotor Flight, Iran, IEEE2015.
- 11. Numerical Study of Off-Design Performance of a Highly Loaded Low Pressure Turbine Cascade, International Conference on Fluid Mechanics, Heat Transfer, and Thermodynamics.
- 12. Conceptual Design and Construction of A Mini Unmanned Helicopter, Proceedings of the ASME 2014 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference
- 13. A proposed Modern Approach in Interdisciplinary Teaching, Int'l Conference for Academic Disciplines.
- 14. Improving the Quadrotor Model Accuracy by Improving Aerodynamic Nonlinear Terms for Path Tracking Purpose, 13th Conference of Iranian Aerospace Society.
- An Experimental Method for Investigation of Damaged Zone Size in Orthotropic Materials, The Bi-Annual International Conference on Experimental Solid Mechanics X-Mech 2014
- 16. Damaged Zone Behavior Investigation Using Viscoelastic Models, The Bi-Annual International Conference on Experimental Solid Mechanics X-Mech 2014
- 17. cfd Study of Mesenchymal Stem Cells in Fluid Flow, 20th iranian conference on biomedical engineering.
- 18. Optimization of Friction Stir Welding by Fuzzy Logic, 13th Iranian Conference of Fuzzy Systems.
- 19. Evaluation of the electrical and electromagnetic properties of CNT-based composites, ICCS17.
- 20. Evaluation of the Role of Knowledge Management in Education and Learning in Iran, 9th International Conference of Science, Technology & Society.
- 21. Fracture Properties of Ceramic Composites and its Application in Gas Turbine, 1st Conference of Composite Fabrication & Applications, Kish Island.

#### THESIS SUPERVISORY

- 1. Improving Pitch stability of Airplane Using Neural-Fuzzy
- 2. Designing of Semi Composite Pressure Vessel with Fuzzy Decision making and FEM
- 3. Elastostatic Fracture Response of a Cracked Plate
- 4. Applications of Ceramic Composites in Gas Turbine Engines
- 5. Optimization of Robot Trajectory using Fuzzy Controller
- 6. Lifetime Prediction of Cracked Gas Turbine Blade Under Creep Conditions
- 7. Lifetime Prediction of Gas Turbine Blade Under Fatigue Conditions
- 8. Lifetime Prediction of Edge Cracked Gas Turbine Blade Under Creep Conditions
- 9. Design and Control of Unmanned Air Vehicle
- 10. Failure Analysis of Wagon Bogies
- 11. Nanotechnology in Iran
- 12. Wind Turbine Design
- 13. Failure and Modal Analysis of Wagon Coil Springs
- 14. Car Parking Design
- 15. Analysis of Bogy Width Reduction
- 16. Failure Analysis of Bogy's Shaft
- 17. Car Thermoelectric Refrigerator Design

## TRANSLATIONS

#### English to Persian:

- 1. Handbook of nanotechnology business, policy, and intellectual property law, Miller, John C.
- 2. Kinematic Synthesis of Linkages, Hartenberg & Denavit, McGraw-Hill
- 3. Heating & Cooling Systems, Games E. Brumbaurgh, Macmillan.
- 4. Fluid Mechanics, Source book, Parker (editor in chief), McGraw-Hill
- 5. Dredging, a hand book for engineers, second edition, R. N. Bray & A. D. Bates & J. M. Land, ARNOLD

## \*Editing and Proof reading:

- 1. McGraw- Hill Encyclopedia of Science & Technology.
- 2. Modern Control, Dr. A. Ghaffari.
- 3. Compact Mechanics, Dr. G. Lyaghat.
- 4. Introduction to Continuum Mechanics, W. Michael Lai, D. Rubin, E. Krempl / Rensselaer Polytechnic Institute, New York, USA Translator: Dr. G. H. Rahimi.
- 5. Bearing and Lubrication, Joseph Edward Shigley, Translator: Dr. A. Heidarineghad
- 6. Reliability Based Structural design, Ranganathan, Tata McGraw Hill, Translator: Dr. Fereidoon
- 7. Professional book production encyclopedic dictionary & thesaurus, Persian-English-German, A. Pourmomtaz
- 8. Earth Reinforcement sand soil structures. Colin jfp Jones, Butterworth & co.

## **RESEARCHES AND INNOVATIONS**

- \* New generation of Printers (fire jet).
- \* Extraction of Machine Coolant by Physical Filtration and Chemical Purification.
- \* Generating Electricity from Water Hydrostatic.
- \* Horn Sound detection and assessment.
- \* Coolant from Metan.

## PROFESSIONAL AFFILIATIONS & HONORS

- \* Member of the American Society of Mechanical Engineers: ASME.
- \* Formerly Member of the American Society of Materials: ASM.
- \* Member of the Iranian Society of Mechanical Engineering: ISME.
- \* Under process to be a member of PEO.
- \* Author of 3 entries in 1<sup>st</sup> 4-volume Encyclopedia of Tribology.