

CV of Mohammad Golzar

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Mohammad Golzar, PhD, MSc, BE

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Cv page: <http://modares.ac.ir/uploads/EnResume.m.golzar.pdf>

Education:

- Ph.D., Mechanical Engineering, 2004, Technical University of Dresden TUD, Dresden, Germany
- MSc, Vocational Training, 2000, Technical University of Dresden TUD, Dresden, Germany
- MSc, Mechanical Engineering, 1993, TarbiatModares University, Tehran, Iran
- BE, Mechanical Engineering, 1990, Shiraz University, Shiraz, Iran

Research Interest:

Mechanical and physical properties of Polymer, Composites Design and manufacturing (Fiber Reinforced polymeric Composites), Textile based composites, Heat Transfer and Solidification in Plastics Processing, Smart material and Structures, and Structural testing.

Composite Mechanics, Finite Element Method and its Application Non-linear and Large Deformations, Rheology of Polymer, Tolerance Design of Parts and Assemblies (Geometrical and Dimensional).

Professional Experience:

- May 2017- May 2018 Sabbatical Stay at TU Delft, Structural integrity and composite department, Netherland
- 2014-2017 Associate Professor in Mechanical Engineering Faculty, Tarbiat Modares University , Tehran
- 2009 – 2013 Head of Engineering manufacturing division, Faculty of Mechanical Engineering, TarbiatModares University , Tehran
- 2010 – Associate Professor in Mechanical Engineering Faculty, TarbiatModares University , Tehran
- 2005-2010 Assistant Professor in Mechanical Engineering Faculty, TarbiatModares University , Tehran
- 2000-2004 Research assistant, Institute for Polymer research Dresden, Germany
- 1997-1999 Centre of Technology development Sharif, Tehran - Technical Documentation of Irrigation Equipment

- 1995-1996 Time Expert at Centre of Research Studies of Railway, Tehran - Test Equipment Development, Technology Transfer
- 1990 Mechanical Engineer at the Amir Kabir University, Tehran

Funded Research Projects

- 2017-2108 Dimensional Stability of Composite Parts
- 2013-2014 Lightweight structure for rehabilitation instrument.
- 2006-2011 TMU research affair, Composite parts Manufacturing Center (CMC)
- 2005-2006 Project consultant, Iran transfo Co., Zanjan investigation of cellulose sheet forming Ho-pressing
- 2006-2007 TMU research affair, System design and on-line measuring of PVT in wood-plastic composite Research Experiences:
- 2000-2004 Research assistant at Institute of polymer research, Dresden, Germany. topics: plastics processing, heat transfer and solidification, stability of -melt spinning process, extensional flow, composite manufacturing process
- 1992-1994 Research granting aid, Azarab Company, Tehran -Topics: Structural and Dynamical Strength Computation, FEM

Teaching Activity

Coursed Taught at graduate level

Physical and mechanical Properties of Polymers, Mechanics of Composites, Smart Material and Structures, Engineering Mathematics, Numerical Method, Finite Element Method, Continuum Mechanics

Coursed Taught at undergraduate level

Statics, Dynamics of Machine, Manufacturing Methods, Mechanics of Materials

Reviewers to:

Journal of Composite Materials, Journal of Thermoplastic composite, Journal of Reinforced Plastics and Composites, Iranian Journal of Polymer Science and Technology, Modares Mechanical Engineering

Honors and Awards:

(DFG) German research Foundation Fellowship award 2003
 (BMBF) Federal ministry of education and research Fellowship award 2000-2002
 (DAAD) German academics exchange Scholarship 1998-2000
 Iranian Ministry of Higher Education of Iran Scholarship, 1990-1993

Languages:

well spoken, written and read in Persian Farsi (native), English, German and Arabic.

Computer Skills:

Computer programming: Fortran, Basic, Visual Basic and Pascal Softwares: All MS Office (Word, Excel, PowerPoint, Access) AutoCAD, SolidWorks, MathLAB, MathCAD, FEM Software ANSYS

Ph. D. Thesis supervised

1. Experimental and Numerical Investigation on the effect of Nanoclay on the Bending Property of Polymer Nanocomposites.
PhD. Candidate: Payam Sareian 2007-2011
2. Experimental and Theoretical Investigation on the Flow of Wood Plastic Composite in the Extrusion Die and its Effect on Mechanical Properties.
PhD. Candidate: Nathan Jafarian Jam 2008-2012
3. Dimensional and Mechanical Stability of Manufactured Thermoplastic Composite by Hot Pressing
PhD. Candidate: Adham Ghaderi 2009-2013
4. Investigations of two laminated thermoplastic composites laminates produced by Pultrusion
PhD. Candidate: Hadi Ghorbani 2011-2016
5. Thermal behavior of corrugated unsymmetrical laminated composites.
PhD. Candidate: Mostafavi 2012-2017
6. Analysis of different impregnation submodels process of glass/PP
PhD. Candidate: Mohammadipoor 2012-2017
7. Wind turbine blade design investigation based on thermoplastic material
PhD. Candidate: Mehdi Nikforuz 2013-2018
8. Experimental, numerical and biological analysis of Polurethane based shape memory polymer stent at invivo and invitro condition
PhD candidate Mehdi Ansari 2013-2019
9. Curve bending of thermoplastic composite directly in pultrusion process, Mohammedi 2014-2019
- 10 Experimental and Numerical Analysis of Thermally Stimulated Thermoplastic Composite in Smart Bistable Slit Tube Shahriarifard 2015-2020
10. Mathematical and experimental analysis of flexural and torsional shape shifting in 4 D printing Saliminejad 2016-2020
11. Ultrasonic welding of unidirectional thermoplastic PA6/GF Sadeghi dizaji 2017-2021

MSc Student Supervised

- 1 Benyamin Alalmati, Hot press Forming of Cellulose Plates Affected by Process conditions, 2006.
- 2 Sadeghian Aghkand Naser, Design and manufacture of PVT measuring system for Wood Plastic Composites, 2007.
- 3 Ghaderi Adham, , Experimental and Numerical Analysis of Manufacturing Cellulose Ring with Various Diameters by One Die. 2008
- 4 Poorzeinolabedin Mohsen, Design and Manufacturing of Body Cover of Samand Sarir with Composite Material, 2009.
- 5 Salem Ehsan, Effect of Commingled Hybrid Yarn Press Conditions on Final Mechanical Properties, 2009.
- 6 Abootalebi Morteza, Investigation on effect of Hybrid Yarn structure on mechanical properties of thermoplastic composites, 2009.
- 7 Pashaei Amir, Design and Manufacture of Full Composite CNG Cylinder, 2009.
- 8 Ghasemi Amir, Design and Manufacturing of CNG Cylinder Liner Mold Type 4 by Rotational Molding, 2009

- 9 Rahimian, Ali, Analysis of modular mechanism to produce closed ring from cellulose sheet, 2009.
- 10 Khalighi Alireza, Viscoelastic properties of PA6/Clay nanocomposites. , 2009
- 11 Rajabi Jalal Sajad, , Improving the Manufacturing Method of Composite Wing Covering. 2010
- 12 Lotfi Mazyar, , Solidification Effects on Mechanical Properties of Extruded Wood Plastic Composite 2010
- 13 Vazifehasl Yaghub, Investigation on Bonding of Composite Cover to Metal Automotive Frame , 2010
- 14 Mojtaba Jafari, Configuration of Void and its Effect on the Final Properties of Composite parts produced by VARTM, 2011.
- 15 Farhad Halimi, Effect of Distribution Media on Mold Filling and Quality of the Final part in VARTM, 2011.
- 16 Pouyan Ghabezi, Investigation on Mechanical Behavior (effective elastic constant) of Corrugated Composite Structures Glass/Epoxy and Graphite/Epoxy, 2011
- 17 Ehsan Tolou Honoary, Theoretical and Experimental Analysis of VARTM for Manufacturing Honeycomb Sandwich Composite, 2012.
- 18 Jafar Kangazian, Design and manufacture of light unmanned air vehicle with Variable Wings, 2013
- 19 Mehdi Ansari, Investigation of corrugated laminated composite skin deformation using shape memory alloy, 2013
- 20 Majeed Mulaee, Investigation on wood starch composite properties in Extrusion process, 2012
- 21 Mehrdad Tutunchi, Design and manufacture of pultruded tube HDPE/GF section, 2013
- 22 Behruz Ataee, Effect of void on mechanical properties tabular thermoplastic section , 2013
- 23 Hamid Jafari, Deformation induced on laminated composite by SMA, 2014
- 24 Hamed Hedayati valis, manufacturing of constant profile wood plastic composite with continuous jute fibre (wood plastic pultrusion), 2014
- 25 Hamed Taymori, Manufacturing of corrugated composite skins by resin infusion , 2014.
- 26 Rostamiyan, effect of Transverse reinforcement on tensile and shear properties in pultrusion process using G\?PE prepregs, 2015
- 27 Mojtaba Paknejad, Monitoring of laminated composite in wind turbine blades , 2015
- 28 Shahriarifard, Effect of bolted joint on performance of structural laminated composites, 2015
- 29 Mehran Abbasi, Preparation Simulation and investigation on mechanical Behaviour of the stent Polurethane/polycaprolactone Blend with Shape memory Effect, 2016
- 30 Oftade, Investigation of manufacturing effect of PVC/Glass fibre composites on Bistability, 2016.
- 31 Mehdi Farahanchi, Small wind turbine blade from thermoplastic composites, 2016.
- 32 Amir Hossain Dadu, Visualization of processing of Pultrusion of long fiber thermoplastic composite, 2016.
- 33 Aghili, Thermoplastic Prepregs for wind turbine blade, 2016
- 34 Nikzad, Shape Memory Polymer Stent Simulation based on nano Polyurethane Polycarbolacton, 2016
- 35 Najafi, welding and bolting parameters as joining method of composites, 2017
- 36 Yahyavi, Blood and Mechanical test of SMP stent and effect of geometry , 2017

- 37 Jamshidi M., Investigation of the effect of pattern and thickness of two-dimensional printing layers in creating three-dimensional shape, 2018
- 38 Masoudi A, Investigation of the effect of layup parameters on the properties of bistable , 2018
- 39 Hasanzadeh, Manufacturing of shape memory polymers by Additive Manufacturing Method and investigation of layer design on the shape, 2018

MSc still under work

- 40 Sasani, Ultrasonic welding process to be 2020
- 41 Zare, developing the 4D printing for composites to be 2020
- 42 Samadi, Automated lay up process in composites to be 2020

Journal Papres

1. Vogel R., Hartzikiriakos G., Bruenig H., Taendler B., **Golzar M.**, Improved Spinnability of Metalocene Polyethylene by Using Processing Aids, *International Polymer Processing*, (2003). XVIII: 67-73.
2. **Golzar M.**, Beyreuther R., Bruenig H., Taendler B., Vogel R., Online Temperature Measurement and Simultaneous Diameter Estimation of Fibers by Thermography of the Spinnline in the Melt Spinning Process, (2004), 23: 176-185.
3. **Golzar M.**, Bruenig H., Maeder E., Commingled Hybrid Yarn Diameter Ratio in Continuous Fibre Reinforced Thermoplastic Composites, *Journal of Thermoplastic Composite Materials*, (2007), 20:17-26
4. Nazari M. M., Behraves A. H., **Golzar M.**, Extrusion Foam Coating Cables using Chemical Blowing Agent, *Cellular Polymers*, March (2008), 27:27-41.
5. Sadeghian N., **Golzar M.**, PVT Measurement System for Wood Plastic Composite Melt in Extrusion Process, *Journal of Reinforced Plastic and Composites*, (2008), 27:739-750.
6. Ghaderi A., **Golzar M.**, Material characterization and finite element analysis of a pressboard under press forming, *Journal of Materials Processing Tech.* (2009), 209: 4043-4050.
7. **Golzar M.**, Ghaderi A., Effect of Temperature on the Spring Back of Cellulose-Based Sheet in Hot Pressing, *International Journal of Advanced Manufacturing Technology* (2009), 42:633-642.
8. Nazari M. M., Behraves A. H., Mahmoodi M., **Golzar M.**, Extrusion Foam Coating Cables using Butane as Physical Blowing Agent, *Cellular Polymers*, (2009), 28:303-323.
9. Shakouri E., Behraves A.H., Zolfaghari A., **Golzar M.**, Effects of Die Pressure on Mechanical Properties of Wood-Plastic Composite in Extrusion Process, *Journal of Thermoplastic Composite Materials*, (2009), 22:605-616.
10. Mahmoodi M., Behraves A. H., Rezavand S. A. M., **Golzar M.**, Theoretical and Visual Study of Bubble Dynamics in Foam Injection Molding, *Polymer Engineering and Science*, (2010), 50:561-569.
11. Behraves A.H., Shakouri E., Zolfaghari A., **Golzar M.**, Theoretical and Experimental Study on Die Pressure Prediction in Extrusion of Wood-Plastic Composite, *Journal of Composite Materials*, (2010), 44:1293-1304.
12. **Golzar M.**, Poorzianalbedin M., Prototype fabrication of a composite automobile body based on integrated structure, , *International Journal of Advanced Manufacturing Technology* (2010), 49:1037-1045.
13. Poorzianalbedin, **Golzar M.**, Improving the Woven Glass/Epoxy Composite for Automobile Exterior M.Body Cover, *Materials and Manufacturing Processes*, accepted.
14. **Golzar M.**, Jam N.J., A.H. Behraves, Mathematical and experimental study on flow of wood plastic composite to acquire its constitutive equation, *Journal of Reinforced Plastic and Composites*, Volume 31, Issue 11, June 2012, Pages 749-757
15. Halimi F., **Golzar M.**, Asadi P., Beheshti M.H., Core modifications of sandwich panels fabricated by vacuum-assisted resin transfer molding, *Journal of Composite Materials*, Volume 47, Issue 15, July 2013, Pages 1853-1863
16. Ghabezi P., **Golzar M.**, Mechanical analysis of trapezoidal corrugated composite skins, *Applied Composite Materials*, Volume 20, Issue 4, August 2013, Pages 341-353
17. **Golzar M.**, Ghabezi P., Corrugated Composite Skins, *Mechanics of Composite Materials*, Vol. 50, No. 2, May, 2014. Pages 137-148.
18. H Ghorbani, **M Golzar**, Ah Behraves, Modeling Of Impregnation In The Pultrusion Of Thermoplastic Composites, *Journal Of Science And Technology Of Composites (Jstc)* 3 (1), June 2016, 31-41,
19. S Mostafavi, **M Golzar**, A Alibeigloo, On the thermally induced multistability of connected curved composite plates, *Composite Structures* 139, 2016, 210-219, 2016
20. M Nikforooz, J Montesano, **M Golzar**, MM Shokrieh, Fatigue behavior of laminated glass fiber reinforced polyamide, *Procedia engineering* 213, 816-823, 2018

21. M Nikforooz, **M Golzar**, MM Shokrieh, J Montesano, Processability and tensile performance of continuous glass fiber/polyamide laminates for structural load-bearing applications, *Composites Part A: Applied Science and Manufacturing* 105, 156-164, 2018.
22. MM Shahryarifard, **M Golzar**, M Safarabadi, Novel parameters in load capacity and failure of coaxial steel tubes jointed by wrapped GFRP sleeve, *International Journal of Adhesion and Adhesives* 82, 79-89, 2018.
23. M Nikforooz, J Montesano, **M Golzar**, MM Shokrieh, Assessment of the thermomechanical performance of continuous glass fiber-reinforced thermoplastic laminates, *Polymer Testing* 67, 457-467, 2018.
24. M Ansari, P Fahimi, M Baghani, **M Golzar** An Experimental Investigation on Training of NiTi-Based Shape Memory Alloys, , *International Journal of Applied Mechanics* 10 (04), 1850040, 2018.
25. M Ansari, **M Golzar**, M Baghani, M Soleimani Shape memory characterization of poly (ϵ -caprolactone)(PCL)/polyurethane (PU) in combined torsion-tension loading with potential applications in cardiovascular stent, *Polymer Testing* 68, 424-432, 2018.
26. H Hedayati Velis, **M Golzar**, O Yousefzade, Composites based on HDPE, jute fiber, wood, and thermoplastic starch in tubular pultrusion die: The correlation between mechanical performance and microstructure, *Advances in Polymer Technology* 37 (8), 3483-3491, 2018.
27. M Abbasi-Shirsavar, M Baghani, M Taghavimehr, **M Golzar**, M Nikzad, An experimental–numerical study on shape memory behavior of PU/PCL/ZnO ternary blend, *Journal of Intelligent Material Systems and Structures* 30 (1), 116-126, 2019.
28. M Nikforooz, J Montesano, **M Golzar**, MM Shokrieh, Assessment of failure toughening mechanisms in continuous glass fiber thermoplastic laminates subjected to cyclic loading ,*Composites Part B: Engineering* 161, 344-356, 2019.

Conferences Published Paper (in English)

- 1 Fazelzadeh ,S.A., **Golzar ,M** , Pressure Vessel Analysis by Local-Global Finite Element Method, Proc. of Pressure and Steam Boiler Annual Conference, September 1992 , AZAR-AB Company ,Arak, I. R. Iran. Volume 1, pp. 195-202.
- 2 Brünig H., Beyreuther R., Vogel R., Tändler B., **Golzar M.**, Schmelzspinnen von PEEK-Garnen mit feintitrigen Filamenten, Proc. of Symposium Schmelzspinnen von Polymeren und Glas in der Polymerforschung, Institute of Polymer Research Dresden, Dresden, Germany, 13.-14.05.2002, pp. 251.
- 3 **Golzar M.**, Beyreuther R., Brünig H., Tändler B. and Vogel R., Online Temperature Estimation and Simultaneously Estimation of Diameter of Fibres in Melt Spinning Process, Polydays 2002, TU Berlin, Germany, Sept 30-Oct 02, 2002, P 5.5.
- 4 **Golzar M.**, Brünig H., Tändler B. And Meader E., Advances in Hybrid Yarn Processing for Fibre Reinforced Thermoplastics, 6th IPF Colloquium on Advanced Heterogeneous Polymer Materials, IPF Dresden, Germany, November 18 and 19, 2004, pp 55
- 5 **Golzar M.**, Brünig H., Mäder E., Considerations on Diameter Ratio in Commingled Hybrid Yarn for Fiber Reinforced Thermoplastic Composites, TICME 2005, Tehran International Congress on Manufacturing Engineering, December 12-15, 2005, Abstract Book, pp.162.
- 6 **Golzar M.**, Alamati, B., Material constants of Pressboard in Bending Forming and Hot-Pressing Part (I), 27th Risoe International Conference on Material science, Roskilde, Denmark, 2006,pp. 165-172.

- 7 Sadeghian N., **Golzar M.**, Measurement of PVT Properties of Wood-Plastic Composites, ICCM-16, Kyoto, Japan, July 8-13, 2007, pp. 128-129.
- 8 **Golzar M.**, Ghaderi A., Spring Back in Cellulose Sheet Forming, TICME 2007, 10-13 December, Tehran, 2007
- 9 **Golzar M.**, Ghaderi A., Numerical and Experimental analysis of cellulose sheet Hot-pressing, 16th ISME, Kerman, Iran, May 2008
- 10 Pashaei A., **Golzar M.**, Design and analysis of dome contour for filament-wound composite pressure vessel in Geodesic winding pattern using netting theory, NCME2008, Iran, November, 2008.
- 11 Poorzeinolabedin M., **Golzar M.**, Soury E., Design and manufacture of woven reinforced e-glass/epoxy composites for car outer side body, ICCST/7, Sharjah, 20-22 Jan 2009.
- 12 Nathan Jam J., **Golzar M.**, Behraves A. H., Flow Behavior Assess and Mathematical Approach to Acquire Constitutive Equation of Wood-Plastic Composites, ICCST/7, Sharjah, UAE, 20-22 Jan 2009.
- 13 Saraeian P., **Golzar M.**, Behraves A. H., The Effect of Nanoclay on Polystyrene-Nanocomposite Rheology Properties, ICCST/7, Sharjah, UAE, 20-22 Jan 2009.
- 14 Pashaie A., **Golzar M.**, Windability of Composite Pressure Vessel by Planar Winding considering the Fibre Slippage, ISME2009, Tehran, 19-21 May 2009.
- 15 Mahmoodi M., Behraves A.H., Rezavand S.A.M., **Golzar M.**, An Investigation on Non-Isothermal Bubble Growth Dynamics in PS-CO₂ System, ISME2009, Tehran, 19-21 May 2009.
- 16 Rajabi S and **Golzar M.**, Effect of Woven Fabric Density and Distribution Media on VARTM Filling Process, ETDCM9- 9th Seminar on Experimental Techniques and Design in Composite Materials, -DTG University of Padova- Vicenza, Italy, 30 September-2 October 2009
- 17 Khalighi A.R, **Golzar M.**, Tensile and Relaxation Properties of PA6/Nanoclay Nanocomposites, WCE 2010, London, UK., 30 June - 2 July 2010.
- 18 Ghabezi P., **Golzar M.**, Rajabi J. S., Effect of Inlet Tube Dimensions on VARTM Mold Filling Time, Kish Iran, CCFA-2, 2010..
- 19 Ghabezi P., **Golzar M.**, Corrugated composites as flexible structures theory and FEM analysis, 32nd Risoe International Symposium on Material Science, Roskilde, Denmark, 5-9 September, 2011..
- 20 Ghabezi P., **Golzar M.**, Investigation of Thermal Behavior of Trapezoidal Corrugated Composites, PPS 2011, Kish, IRAN.
- 21 Tolou H E., **Golzar M.**, Rajabi S, .Investigation of Permeability coefficient at time of die of composite parts with honeycomb core in VARTM process as theoretical and experimental, , PPS 2011, Kish, IRAN.
- 22 Halimi K. F., **Golzar M.**, Beheshti M.H., Halimi, Bending Failure Behavior of Sandwich Beams Manufactured by Vacuum Infusion Process, PPS 2011, Kish, IRAN.
- 23 Halimi K. F., **Golzar M.**, Beheshti M.H., Khani M., Flexural Properties of Sandwich Panels with Perforated Core - Hole Number and Pattern Investigation, PPS 2011, Kish, IRAN.
- 24 Tolou H E., **Golzar M.**, Rajabi S, Investigation of mechanical properties of honeycomb composite parts made by VARTM and Hand Lay-up, PPS 2011, Kish, IRAN, 2011.
- 25 Ansari M., **Golzar M.**, Kasae M.M., Ghabezi P., Investigation of cured shapes of trapezoidal corrugated composite skins, PPS 2011, Kish, IRAN, 2011.
- 26 Ghabezi P., **Golzar M.**, Stiffness Matrices Terms for Quasi-Sinusoidal Corrugated Composites, PPS 2011, Kish, IRAN, 2011.
- 27 Ghabezi P., **Golzar M.**, FEM and Theoretical Analysis of Equivalent Stiffness of Quasi-Sinusoidal Corrugated Composites in Different Direction of Corrugation, ICME 2011, Tehran, IRAN, 2011.
- 28 **Golzar M.**, Behraves A.H., Molaee M., Ansari M., Experimental and Theoretical Investigation of Mechanical Properties of Biodegradable Wood - Plastic Composites in the Extrusion Process, CCFA-3, Tehran, IRAN, 2012.
- 29 Ghorbani H., Ataee B., **Golzar M.**, Investigation of Impregnation in a Pultrusion die for glass/ polypropylene composite wire CCFA-3, Tehran, IRAN, 2012.

- 30 **Golzar M**, Behravesht A.H., Ansari M., Jafaree M., Evaluation of bending deformation of Glass _ Epoxy composite beam by shape memory alloy actuator CCFA-3, Tehran, IRAN, 2012.
- 31 Ansari M., **Golzar M**., Behravesht A.H, Experimental study on the Effect of Training on Performance of Shape Memory Alloy, WASET, 2013, Dubai, UAE.
- 32 Hedayati