

CURRICULUM VITAE
Mahdi Gerdooei
Assistant Professor (Ph.D)

A. Personal Data

- Address: Faculty of Mechanical and Mechatronics Engineering,
Shahrood University of Technology, Shahrood, Iran
- Email Address: Gerdooei@shahroodut.ac.ir
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B. Education

- **Ph.D:** Mechanical Engineering (Amirkabir University of Technology, Iran, 2009)
Dissertation: Theoretical and experimental investigation of strain rate effects on sheet metals formability
- **M.Sc:** Mechanical Engineering (Amirkabir University of Technology, Iran, 2003)
Thesis: Preform die design using backward deformation method in multi-stages hot forging process
- **B.Sc:** Mechanical Engineering (Amirkabir University of Technology, Iran, 2001)

C. Taught Courses

- Statics
- Strength of Materials
- CAD/CAM/CAE
- Machining
- Engineering Drawing
- Computer Numerical Control (CNC)
- Forging Die Design
- Metal Forming Analysis
- Sheet metal forming Analysis

D. Research Interests

- Mechanics of metal Forming processes
- Modeling of sheet and bulk forming
- Composite material manufacturing
- High energy rate forming (Explosive forming, Electromagnetic forming, ...)

E. Professional Experience

- 1. Dec. 2009- Present** ***Shahrood University of Technology, Faculty of Mechanical and Mechatronics Engineering, Iran***
 - Taught Courses: Statics, Strength of Materials, CAD/CAM/CAE, Sheet metal forming Analysis
 - Supervised theses mainly in CAD/CAM and Metal Forming

- 2. Jan. 2007-Jul. 2007** ***Shahid Rajaei Teacher Training University, Department of Mechanical Engineering, Tehran, Iran***
 - Taught Forging die design course

- 3. May 2009-Present** ***Semnan University, Department of Metallurgy Engineering, Semnan, Iran***
 - Supervised graduate and undergraduate theses in metal forming processes

- 4. Nov. 2009-Present** ***Azad Semnan University, Department of Mechanical Engineering, Semnan, Iran***
 - Supervised graduate theses in Design and Manufacturing

- 5. Sep. 2002-2009** ***Amirkabir University of Technology, Department of Mechanical Engineering, Tehran, Iran***
 - Teaching Courses: Engineering Drawing
 - Developed graduate/undergraduate projects and assist graduate/undergraduate students on their projects
 - Developed Metal Forming laboratory to determine Forming limit diagrams of sheet metal
 - Performed sheet metals explosive forming process and determining forming limit diagrams using these tests

- 6. Jul. 2000-2008** ***Mehdi Tools Company, Damghan, Iran***

Designer engineer responsible for the development and design of new products in R&D, included below activities:

- Designed Process Planning of New Parts
- Designed and Manufactured Forging Dies
- Designed and Manufactured Jigs and Fixtures
- CAD/CAM and CNC Programming of new parts
- Designed and Manufactured Machining Tools (Broaching, EDM spark erosion electrodes, ...)
- Designed and Manufactured Controlling Gauges

7. June. 2010- June 2014

Fanar Lool Company, Damghan, Iran

- Teaching course: Computer Aided Analyzing using ABAQUS.
- Mechanical Designing of coil springs using FEM software ABAQUS.

F. Technical Skills

- Programming languages: Pascal, Fortran, Matlab
- CAD/CAM Packages: MDT, CATIA, SolidWorks, MasterCam, Delcam
- FEM Software: ABAQUS, ANSYS/ AUTODYN, MARC/Mentat, MARC/Autoforge, MSC/Super forge.

G. Membership

- Iranian Society of Manufacturing Engineers
- Iranian Society of Mechanical Engineers

H. Publication

- [1] B. M. Dariani, G. H. Liaghat, and M. Gerdooei, "Experimental investigation of sheet metal formability under various strain rates," *Proc. Inst. Mech. Eng. Part B J. Eng. Manuf.*, vol. 223, no. 6, pp. 703–712, 2009.
- [2] M. Dehghan, F. Qods, and M. Gerdooei, *Investigation of Microstructure of the Commercial Pure Aluminium in the ARB Process*, vol. 702–703. 2011.
- [3] M. Dehghan, F. Qods, and M. Gerdooei, *Effect of Accumulative Roll Bonding Process with Inter-Cycle Heat Treatment on Microstructure and Microhardness of AA1050 Alloy*, vol. 531–532. 2012.
- [4] M. Dehghan, F. Qods, M. Gerdooei, and J. Doai, *Analysis of Ring Compression Test for Determination of Friction Circumstances in Forging Process*, vol. 249–250. 2012.
- [5] S. Izadpanah, S. H. Ghaderi, and M. Gerdooei, "Prediction of earing in deep drawing of anisotropic aluminum alloy sheet using BBC2003 yield criterion," *J. Comput. Appl. Res. Mech. Eng.*, vol. 6, no. 2, 2016.
- [6] S. Izadpanah, S. H. Ghaderi, and M. Gerdooei, "Material parameters identification procedure for BBC2003 yield criterion and earing prediction in deep drawing," *Int. J. Mech. Sci.*, vol. 115–116, pp. 552–563, 2016.
- [7] M. F. Naghibi, M. Gerdooei, and M. B. Jooybari, "Experimental and Numerical Study on Forming Limit Diagrams of 304 Stainless Steel Tubes in the Hydroforming Process," *J. Mater. Eng. Perform.*, vol. 25, no. 12, pp. 5460–5467, 2016.

- [8] H. Ghaforian Nosrati, M. Gerdooei, and M. Falahati Naghibi, "Experimental and numerical study on formability in tube bulging: A comparison between hydroforming and rubber pad forming," *Mater. Manuf. Process.*, vol. 32, no. 12, pp. 1353–1359, 2017.
- [9] A. Saadatfard, M. Gerdooei, and A. Jalali Aghchai, "Drawing potential of fiber metal laminates in hydromechanical forming: A numerical and experimental study," *J. Sandw. Struct. Mater.*, 2018.
- [10] H. G. Nosrati and M. Gerdooei, "Feasibility study of cam-shaped tube production using elastomeric tool versus fluid forming method," *Int. J. Adv. Manuf. Technol.*, vol. 95, no. 5–8, pp. 3029–3036, 2018.
- [11] S. Keipour and M. Gerdooei, "Springback behavior of fiber metal laminates in hat-shaped draw bending process: experimental and numerical evaluation," *Int. J. Adv. Manuf. Technol.*, vol. 100, no. 5–8, pp. 1755–1765, 2019.

I. Thesis

1- Ali Hamidi Jaldehbakhani (2018), "Experimental and numerical investigation of low velocity impact response of fiber metal laminates reinforced with graphene nanoparticles", Msc Thesis, Shahrood University Of Technology, Mahdi Gerdooei [Supervisor], Hossein Toozandehjani [Advisor]

2- Hosein Jabbari (2018), "Experimental and numerical investigation of ballistic impact on ceramic/composite targets", Msc Thesis, Shahrood University Of Technology, Mahdi Gerdooei [Supervisor]

3- Mohammad Javad Rezaei (2018), "Strength analysis of a laminated composite plate subjected to explosion shock wave: underwater versus air blasting", Msc Thesis, Shahrood University Of Technology, Mahdi Gerdooei [Supervisor]

4- Mir Sadegh Akbarian Kuhkheyli (2017), "Optimization of Process Variables in Forming of Tube Fittings by Using Elastomer Tool", Msc Thesis, Shahrood University Of Technology, Mahdi Gerdooei [Supervisor], Seyed Vahid Hosseini [Advisor]

5- Mohammad Amin Salehi (2017), "Investigation on Torsional Rigidity of Common Connections in Iranian Steel Structures ", Msc Thesis, Shahrood University Of Technology, Vahid reza Kalat Jari [Supervisor], Mahdi Gerdooei [Advisor]

6- Hamed Maghsoudloo (2017), "Investigation of mechanical properties of a titanium implant processed by equal channel angular pressing", Msc Thesis, Shahrood University Of Technology, Mahdi Gerdooei [Supervisor], Seyed Hadi Ghaderi [Advisor]

7- Gholamreza Hosseinpour (2017), "Investigation of the effect of die manufacturing operation on the forging process tribology", Msc Thesis, Shahrood University Of Technology, Mahdi Gerdooei, Vali Alimirzaloo [Supervisors]

- 8- Saeed Naderi Mohammad Boanlo (2016), "Investigation of Normal Stress Effect on The Forming Limit Diagram of metallic Sheets Using M-K Model", Msc Thesis, Shahrood University Of Technology, Mahdi Gerdooei [Supervisor]
- 9- Soheil Keipour (2016), "Investigation of Springback in Forming of Hat Shapes Fiber metal Laminates", Msc Thesis, Shahrood University Of Technology, Mahdi Gerdooei [Supervisor]
- 10- Sajjad Izadpanah Najmabad (2015), "Earing prediction in cup drawing using an advanced anisotropic yield criterion", Msc Thesis, Shahrood University Of Technology, Mahdi Gerdooei, Seyed Hadi Ghaderi [Supervisors]
- 11- Omid Arjmand (2015), "Experimental analysis of stress and strain in sheet metal forming processes using digital image processing", Msc Thesis, Shahrood University Of Technology, Mahdi Gerdooei [Supervisor], Hossein Khosravi [Advisor]
- 12- Alireza Saadatfard (2015), "Numerical and Experimental analysis of hydro-mechanical drawing of fiber metal laminate (FML)", Msc Thesis, Shahrood University Of Technology, Mahdi Gerdooei, Hosein Jalali Aghchai [Supervisors]
- 13- Nasser Dabiri (2014), "Numerical and Experimental Study on Stress Peen Forming of Sheet metals", Msc Thesis, Shahrood University Of Technology, Seyed Hadi Ghaderi [Supervisor], Mahdi Gerdooei [Advisor]
- 14- Hasan Ghaforian Nosrati (2014), "FEM simulation, Rubber Pad Forming, Hydro-Bulging, Forming limit diagram, seamed tube bulging.", Msc Thesis, Shahrood University Of Technology, Mahdi Gerdooei [Supervisors]
- 15- Ibrahim Keshavarzian (2014), "Numerical and Experimental Study on Single Point Incremental Sheet metal Forming With a Continuous Tool Path", Msc Thesis, Shahrood University Of Technology, Seyed Hadi Ghaderi, Mahdi Gerdooei [Supervisors]
- 16- Hassan Salihi (2014), "Manufacturing of yttria stabilized zirconia based ceramic thin films by tape casting method to be used in solid oxide fuel cells", Msc Thesis, Shahrood University Of Technology, Mojtaba Ghatee, Mahdi Gerdooei [Supervisors]
- 17- Iman Abbasi (2014), "Analytical and Numerical Investigation of Through-Thickness Stress Effect on Plastic Instability of Sheet metals ", Msc Thesis, Shahrood University Of Technology, Mahdi Gerdooei [Supervisor]
- 18- Mehdi Falahati Naghibi (2013), "Experimental and numerical study of formability in metallic tubes hydroforming process ", Msc Thesis, Shahrood University Of Technology, Mahdi Gerdooei [Supervisor]