**Dr. Mohammad Ghalambaz**

Assistant Professor,

Department of Mechanical Engineering,

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Islamic Azad University, Dezful, Iran.

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## Education

**Jun 2010 - May 2014: Ph.D. in Mechanical Engineering (Energy- Fluid Mechanics)**

School of Mechanical Engineering, Shahid Chamran University of Ahvaz, Ahvaz, Iran.

**Sep 2007-Sep 2008: M.Sc. in Mechanical Engineering (Energy- Fluid Mechanics)**

School of Mechanical Engineering, Shahid Chamran University of Ahvaz, Ahvaz, Iran.

**Sep 2002-Jul 2007: B.S. in Mechanical Engineering (Mechanics)**

Department of Mechanical Engineering, Islamic Azad University, Dezful, Iran.

## Honors and Awards

Winner of the best Ph.D. researcher award by Shahid Chamran University of Ahvaz, Iran. 2012 (University Level among 17000 students).

Winner of the best faculty member researcher award by Islamic Azad University, Dezful, Iran. 2012 (University Level among 1100 faculty members).

Winner of award for teaching excellence by Islamic Azad University, Dezful, Iran. 2013. (University Level among 1200 faculty members).

Winner of award for teaching excellence by Islamic Azad University, Dezful, Iran. 2012. (University Level among 1100 faculty members).

Winner of award for teaching excellence by Islamic Azad University, Dezful, Iran. 2011. (University Level among 930 faculty members).

**Selected Referred Journal Publications:**

1- **Ghalambaz, M.**, Noghrehabadi, A. Ghanbarzadeh, A., Effects of Variable Viscosity and Thermal Conductivity on Natural-Convection of Nanofluids past a Vertical Plate in Porous Media Journal of Mechanics, 30(03) (2014) 265-275, (IF: 0.333)

2- **Ghalambaz , M.**, Noghrehabadi, A.R, Ghanbarzadeh, A., Natural Convection of Nanofluids over a Convectively Heated Vertical Plate Embedded in a Porous Medium, Brazilian Journal of Chemical Engineering., 31 (2014) 413 – 427. (Springer, IF: 0.7)

3. Noghrehabadi, A., Behseresht, A. and **Ghalambaz, M.,** Natural convection of nanofluid over vertical plate embedded in porous medium: prescribed surface heat flux. Applied Mathematics and Mechanics, 34 (2013) 669-686 (Springer, IF: 1.12).

4. Noghrehabadi, A., Izadpanahi, E., **Ghalambaz**, **M**., Analyze of fluid flow and heat transfer of nanofluids over a stretching sheet near the extrusion slit, Computers & Fluids 100 (2014) 227–236. (Elsevier, IF: 1.61)

5. Noghrehabadi, A., **Ghalambaz M**., Ghalambaz, M., Ghanbarzadeh, A., Comparing thermal enhancement of Ag-water and SiO2-water nanofluids over an isothermal stretching sheet with suction or injection, Journal of Computational and Applied Research in Mechanical Engineering, 2 (2012) 35-47 (ISC).

6. Noghrehabadi, A.R., **Ghalambaz, M.**, Ghanbarzadeh, A., Heat Transfer of Magnetohydrodynamic Viscous Nanofluids over an Isothermal Stretching Sheet, Journal of Thermophysics and Heat Transfer, 26 (2012) 686-689. (AIAA, IF: 0.881)

7. Noghrehabadi, A.R., Pourrajab, R., **Ghalambaz, M.**, Effect of Partial Slip Boundary Condition on the Flow and Heat Transfer of Nanofluids Flow Past Stretching Sheet Prescribed Constant Wall Temperature, International Journal of Thermal Sciences, 54 (2012) 253-261, 2012. (Elsevier, IF: 2.47; Hot paper)

8. **Ghalambaz, M.,** Noghrehabadi, M., Effects of heat generation/absorption on natural convection of nanofluids over the vertical plate embedded in a porous medium using drift-flux model, Journal of Computational and Applied Research in Mechanical Engineering, 3 (2014) 113-123 (ISC).

9. Noghrehabadi, A.R., **Ghalambaz, M.**, Samimi, A. , Approximate solution of laminar thermal boundary layer over a thin plate heated from below by convection, Journal of Computational and Applied Research in Mechanical Engineering, 2 (2013) 45-57. (ISC)

10. Noghrehabadi, A.R., Saffarian, M.R., Pourrajab, R., **Ghalambaz, M.**, Entropy analysis for nanofluid flow over a stretching sheet in the presence of heat generation/absorption and partial slip, Journal of Mechanical Science and Technology, 27 (2013) 927-937. (Springer, IF: 0.616)

11. Noghrehabadi, A.R., Pourrajab, R., **Ghalambaz, M.**, "Flow and heat transfer of nanofluids over stretching sheet taking into account partial slip and thermal convective boundary conditions", Heat and Mass Transfer, Vol. 49, pp. 1357-1366, 2013. (Elsevier, IF: 0.84)

12- Behseresht, A., Noghrehabadi, A., **Ghalambaz, M.**, Natural-Convection Heat and Mass Transfer from a Vertical Cone in Porous Media filled with Nanofluids Using the Practical Ranges of Nanofluids Thermo-Physical Properties, Chemical Engineering Research and Design, 92 (2014) 447–452 ; DOI: 10.1016/j.cherd.2013.08.028 (Elsevier, IF: 2.34)

13. Noghrehabadi, A.R., Behseresht, A., **Ghalambaz, M.**, Behseresht, J., Natural-Convection Flow of Nanofluids over Vertical Cone Embedded in Non-Darcy Porous Media, Journal of Thermophysics and Heat Transfer, 27 (2013) 334-341. (AIAA, IF: 0.881)

14. Zargartalebi, H., Noghrehabadi, A., **Ghalambaz, M.**, Pop, I. "Natural Convection Boundary Layer Flow over a Horizontal Plate Embedded in a Porous Medium Saturated with a Nanofluid: Case of Variable Thermophysical Properties", Transport in Porous Media, 107 (2015) 153–1708. (Springer, IF: 1.55)

15. A. Noghrehabadi, P. Salamat, **M. Ghalambaz**, Integral treatment for forced convection heat and mass transfer of nanofluids over linear stretching sheet, Applied Mathematics and Mechanics, 36(3), 337–352 (2015). (Springer, IF: 0.80)

16. **Ghalambaz, M.**, Behseresht, A., Behseresht, J., Chamkha, A., Effects of nanoparticles diameter and concentration on natural convection of the Al2O3–water nanofluids considering variable thermal conductivity around a vertical cone in porous media, Advanced Powder Technology 26 (2015) 224–235. (Elsevier, IF: 2.63)

17. E., Izadpanahi, Noghrehabadi, A., **Ghalambaz, M.**, Chamkha, A., Study of the boundary layer heat transfer of nanofluids over a stretching sheet: Passive control of nanoparticles at the surface, Canadian Journal of Physics 93 (2015) 725–733 (NRC Research Press, IF: 0.928)

18. Zargartalebi, H., **Ghalambaz, M.**, Noghrehabadi, A., & Chamkha, A. (2015). Stagnation-point heat transfer of nanofluids toward stretching sheets with variable thermo-physical properties. Advanced Powder Technology 26 (2015) 819–829 (Elsevier, IF: 2.63).

19. Zaraki, A., **Ghalambaz, M.**, Chamkha, A. J., Ghalambaz, M., De Rossi, D. (2015). Theoretical analysis of natural convection boundary layer heat and mass transfer of nanofluids: Effects of size, shape and type of nanoparticles, type of base fluid and working temperature. Advanced Powder Technology 26 (2015) 935–946 (Elsevier, 2.63).

20- Noghrehabadi, A.R., **Ghalambaz, M.**, Izadpanahi, E., Pourrajab, R., Effect of magnetic field on the boundary layer flow, heat, and mass transfer of nanofluids over a stretching cylinder, Journal of Heat and Mass Transfer Research, 1 (2014) 9-16. (ISC)

21- Noghrehabadi, A.R, Ghalambaz, M., **Ghalambaz, M.**, "A Theoretical Investigation of SiO2-Water Nanofluid Heat Transfer Enhancement over an Isothermal Stretching Sheet", International Journal of Multidisciplinary Sciences and Engineering, 2 (2011) 18-21.

22. **Ghalambaz, M.**, Sheremet, M. A., Pop, I. Free Convection in a Parallelogrammic Porous Cavity Filled with a Nanofluid Using Tiwari and Das' Nanofluid Model PLoS ONE 10(5): e0126486 (2015) (Publisher: PLOSONE, 3.23).

23. Yazdanpanahi, M., Noghrehabadi, A.R., **Ghalambaz, M.**, "Balance Dielectric Layer for Micro Electrostatic Switches in the Presence of Capillary Effect", International Journal of Mechanical 74 (2013) 83–90 (Elsevier, IF: 2.03).

24. Noghrehabadi, A.R., Eslami, M., **Ghalambaz, M.**, "Influence of size effect and elastic boundary condition on the pull-in instability of nano-scale cantilever beams immersed in liquid electrolytes", International Journal of Non-Linear Mechanics, 52, (2013) 73-84. (Elsevier, IF: 1.345)

25- Yazdanpanahi, E., Noghrehabadi, A., Ghalambaz, M., Pull-in instability of electrostatic doubly clamped nano actuators: Introduction of a Balanced Liquid Layer (BLL), International Journal of Non-Linear Mechanics 58 (2014) 128–138 (Elsevier, IF: 1.97)

26. A. Noghrehabadi, **M. Ghalambaz**, M. Ghalambaz, and A. Ghanbarzadeh, A Hybrid Power Series Artificial Bee Colony Algorithm to Obtain a Solution for Buckling of Multiwall Carbon Nanotube Cantilevers Near Small Layers of Graphite Sheets, Applied Computational Intelligence and Soft Computing, (2012), Article ID 683483, 1-6.

27- Noghrehabadi, A., **Ghalambaz**, **M.**, Vosough, A., A hybrid power series—Cuckoo search optimization algorithm to electrostatic deflection of micro fixed-fixed actuators, Int J Multi discip. Sci. Eng. 2 (4) (2011) 22-26.

28. Noghrehabadi, A.R., **Ghalambaz, M.**, Ghanbarzadeh, A., "A new approach to the electrostatic pull-in instability of nanocantilever actuators using the ADM-Padé technique", Journal of Computers & Mathematics with Applications, 64 (2012) 2806-2815. (Elsevier, IF: 2.069)

29- Noghrehabadi, A., **Ghalambaz**, **M.**, Bern, YT, Abadyan, M., Abadi, MN, Abadi, A new solution on the buckling and stable length of multi wall carbon nanotube probes near graphite sheets, Procedia Engineering 10 (2011) 3733-3741 (Elsevier).

30- **Ghalambaz**, **M.**, Noghrehabadi, A., Abadyan, M., Beni, Y.T., Abadi, ARN, Abadi, MN, A new power series solution on the electrostatic pull-in instability of nano cantilever actuators, Procedia Engineering 10 (2011) 3716-3724 (Elsevier).

31. Noghrehabadi, A.R., **Ghalambaz, M.**, Ghanbarzadeh, A., "Buckling of multi wall carbon nanotube cantilevers in the vicinity of graphite sheets using monotone positive method", Journal of Computational and Applied Research in Mechanical Engineering, 1 (2012) 89-97 (ISC).

32. **Ghalambaz, M**., Noghrehabadi, A., Abadyan, M., Beni, Y.T., Abadi, A.R.N. and Abadi, M.N., 2011. A deflection of nano-cantilevers using monotone solution. Procedia Engineering, 10 (2011) 717-3724 (Elsevier).

33- Yazdanpanahi, M., Noghrehabadi, A., **Ghalambaz, M.**, Effect of dielectric-layer on the stress field of micro cantilever beams at the onset of pull-in instability, Journal of Mechanics, 30(01) (2014) 49-56, (Cambridge, IF: 0.333).

**Financial Supported Researches:**

1. Ph.D. Thesis, supported by Iran Nanotechnology Initiative Council (INIC).

2. Effect of partial slip boundary condition on the flow and heat transfer of nanofluids past stretching sheet prescribed constant wall temperature, supported by Iran Nanotechnology Initiative Council (INIC)

3. A new approach to the electrostatic pull-in instability of nanocantilever actuators using the ADM–Padé technique, supported by Iran Nanotechnology Initiative Council (INIC)

4. Influence of size effect and elastic boundary condition on the pull-in instability of nano-scale cantilever beams immersed in liquid electrolytes, supported by Iran Nanotechnology Initiative Council (INIC)

5. Entropy analysis for nanofluid flow over a stretching sheet in the presence of heat generation/absorption and partial slip, supported by Iran Nanotechnology Initiative Council (INIC)

6. Natural-Convection Flow of Nanofluids Over Vertical Cone Embedded in Non-Darcy Porous Media, supported by Iran Nanotechnology Initiative Council (INIC)

7. Natural convection of nanofluid over vertical plate embedded in porous medium: prescribed surface heat flux, supported by Iran Nanotechnology Initiative Council (INIC)

8. Flow and heat transfer of nanofluids over stretching sheet taking into account partial slip and thermal convective boundary conditions, supported by Iran Nanotechnology Initiative Council (INIC)

9. Balance dielectric layer for micro electrostatic switches in the presence of capillary effect, supported by Iran Nanotechnology Initiative Council (INIC)

10. Pull-in instability of electrostatic doubly clamped nano actuators: Introduction of a balanced liquid layer (BLL), supported by Iran Nanotechnology Initiative Council (INIC)

11. Effect of Dielectric-Layer on the Stress Field of Micro Cantilever Beams at the Onset of Pull-In Instability, supported by Iran Nanotechnology Initiative Council (INIC)

12. Analyze of fluid flow and heat transfer of nanofluids over a stretching sheet near the extrusion slit, supported by Iran Nanotechnology Initiative Council (INIC)

13. A Deflection of Nano-Cantilevers Using Monotone Solution, supported by Iran Nanotechnology Initiative Council (INIC)

14. A new power series solution on the electrostatic pull-in instability of nano cantilever actuators supported by Iran Nanotechnology Initiative Council (INIC)

15. Effects of Variable Viscosity and Thermal conductivity on Natural-Convection of Nanofluids Past a Vertical Plate in Porous Media, supported by Iran Nanotechnology Initiative Council (INIC)

16. Natural convection of nanofluids over a convectively heated vertical plate embedded in a porous medium, supported by Iran Nanotechnology Initiative Council (INIC)

17. Effects of nanoparticles diameter and concentration on natural convection of the Al2O3–water nanofluids considering variable thermal conductivity around a vertical cone in porous media, supported by Iran Nanotechnology Initiative Council (INIC)

18. Theoretical analysis of natural convection boundary layer heat and mass transfer of nanofluids: Effects of size, shape and type of nanoparticles, type of base fluid and working temperature, supported by Iran Nanotechnology Initiative Council (INIC)

19. Free Convection in a Parallelogrammic Porous Cavity Filled with a Nanofluid Using Tiwari and Das' Nanofluid Model, supported by Iran Nanotechnology Initiative Council (INIC)

20. Study of the boundary layer heat transfer of nanofluids over a stretching sheet: Passive control of nanoparticles at the surface, supported by Iran Nanotechnology Initiative Council (INIC)

21. Stagnation-point heat transfer of nanofluids toward stretching sheets with variable thermo-physical properties, supported by Iran Nanotechnology Initiative Council (INIC)

22. Integral treatment for forced convection heat and mass transfer of nanofluids over linear stretching sheet, supported by Iran Nanotechnology Initiative Council (INIC)

23. Natural Convection Boundary Layer Flow over a Horizontal Plate Embedded in a Porous Medium Saturated with a Nanofluid: Case of Variable Thermophysical Properties, supported by Iran Nanotechnology Initiative Council (INIC)

24. Buckling of multi wall carbon nanotube cantilevers in the vicinity of graphite sheets using monotone positive method, supported by Iran Nanotechnology Initiative Council (INIC)

25. Comparing thermal enhancement of Ag-water and SiO2-water nanofluids over an isothermal stretching sheet with suction or injection, supported by Iran Nanotechnology Initiative Council (INIC)

26. Analysis of natural convection heat transfer of nanofluids in a trapezoidal enclosure filled with a saturated porous medium in local thermal non-equilibrium, supported by Iran Nanotechnology Initiative Council (INIC)

27. Investigation of effective parameters on laminar free convection flow inside quadrilateral enclosures filled with a nanofluid, supported by Iran Nanotechnology Initiative Council (INIC) and National Iranian South Oil Company (NISOC)

28. Modeling nanoparticles' filtration in the shallow fibrous microfilters, supported by Iran Nanotechnology Initiative Council (INIC) and National Iranian South Oil Company (NISOC)

29. Mechanisms of nanoparticles transport in laminar free convection flow inside a cavity, supported by Iran Nanotechnology Initiative Council (INIC).

**Editorial Board Member of:**

Advanced Energy: An International Journal (AEIJ);

Journal of Fluids and Thermal Sciences;

**Managing Editor of:**

Journal of Energy Conversion

**Teaching Experience:**

| | |
|---|---|
| Thermodynamics I | Fluid Mechanics I |
| Fluid Mechanics II | Heat Transfer (Ph.D. Level) * |
| Dynamics | Thermodynamics Laboratory |
| Turbo Machinery | Introduction on Computational Fluid Dynamic (B. Sc.)* |
| Boundary layer (Ph.D. Level)* | Two phase flows (Ph.D. Level)* |
| Convective heat transfer (M.Sc. Level)* | Special Topics in Computer Design (M.Sc. Level)* |
| Computer and Optimization (M.Sc. Level)* | Research Methods (M.Sc. and Ph.D. Level)* |

*Those marked with an asterisk are current duties*

**Industrial and Experimental Experience**

October 2010 to present: Project Manager, Imen Madar Naslha Co., Dezful, Iran.

**Fields of Interest:**

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|---|---|
| Nanofluids | Boundary Layer Heat and Mass Transfer |
| Swarm Optimization Methods | Applied Mathematics and Applications |
| Nano/Micro Switches Actuators | Two phase flows |
| Melting and Solidification phenomena | |