Danial Cheraghali

Research assistant

Health Technology Incubator Center
Shahroud University of Medical Sciences
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ResearchGate
Google scholar
LinkedIn
Website

EDUCATIONS

Sep 2013–Sep 2016 **MSc, Mechanical Engineering**
Shahrood University of Technology, Semnan, Iran
Faculty of Mechanical Engineering
GPA: 3.13/4 (last-two-year 3.64/4)
Thesis: Numerical investigation of non-Newtonian blood flow through multilayer stenosis vessels with Casson model

Sep 2008–Dec 2012 **BSc, Mechanical Engineering**
Islamic Azad University, Sari Branch, Mazandaran, Iran
College of Engineering
GPA: 3.04/4
Thesis: Numerical investigation of heat transfer in computer fins with variable cross-sectional area

RESEARCH INTEREST

Numerical Modeling/ Finite Element Modeling/ Biomechanics
Skin Tissue Engineering/ Cell & Tissue Mechanics/ Mechanobiology

WORK EXPERIENCES

Jan 2019 – Present **Research and Development Engineer** – Full Time
Partian Golestan Company
Gorgan, Iran

ACADEMIC EXPERIENCES

Jul 2021 – Present **Research Assistant** – Part Time
Shahroud University of Medical Sciences, Faculty of Medicine
Department of Tissue Engineering

Sep 2014–Jun 2016 **Teacher Assistant**
Shahroud University of Technology, Semnan, Iran

Sep 2010–Jun 2012 **Teacher Assistant**
Islamic Azad University, Mazandaran, Iran

TEST RESULTS

IELTS Band score: **7.5**
Listening: 9.0, Reading: 8.0, Speaking: 7.0, Writing: 6.5

PUBLICATIONS

PUBLISHED

- "Pulsatile flow of non-Newtonian blood flow inside stenosed arteries: Investigating the effects of viscoelastic and elastic wall, arteriosclerosis, and polycythemia diseases", Computer Methods and Programs in Biomedicine, Volume 154, 2018, Pages 109-122, ISSN 0169-2607. [Link]
- "Bio Ionic Liquids: Enabling a Paradigm Shift Towards Advanced and Smart Biomedical Applications", Advanced Intelligent Systems, 2022, ISSN 2640-4567. [Link]

CONFERENCE

- "A numerical study on non-Newtonian pulsatile blood flow through artery with stenosis using fluid-structure interaction approach", the International Conference on Engineering and Applied Sciences (TICEAS), Feb. 2017, Singapore. [Link]

ON-GOING PUBLICATIONS

- "Evaluation of the effect of Resveratrol containing Poly (ε-caprolactone)/Poly (L-lactic) acid/Gelatin nanofiber scaffold on bone regeneration" – [under review]
- "Electrospun Nano fibrous Scaffold of Poly (ε-caprolactone)/Gelatin containing gold Nanoparticles for skin wound regeneration" – [under review]
- "The Antibacterial effect of Carboxymethyl Cellulose hydrogel containing silver nanoparticles on diabetic wound regeneration"– [in progress]
- "The effect of electrospun Poly (ε-caprolactone)/Gelatin scaffolds containing Bioglass 58S for burning wound regeneration" – [in progress]

PROJECTS

- Skin Tissue Engineering, Application of Nano structured scaffolds Loaded with Different types of Antibiotics and Herbal Drugs **on Bedsore**, in vitro and in Vivo Studying – [two projects]
- Skin Tissue Engineering, A Vast Study About Applications of 16 Different Natural and Synthetic Polymers as well as Acellular tissues on Acute **Wound Healing**, in Vitro and in Vivo Studying.
- Application of Targeted Drug Delivery in Intestine to Prevent and Treat **Atherosclerosis**, in Vitro and in Vivo Modeling.
- Fabrication and Characterization of **Smart Bandages** Loaded with Drugs for Wound Healing, in Vitro and in Vivo Study.

SKILLS

EXPRIMENTAL SKILLS

- Cell Culture
- Animals Modeling
- Scaffolds Fabrication
- Scaffolds Characterization
- Microchannel Fabrication
- Plant Extractions

COMPUTER SKILLS

- MATLAB
- COMSOL Multiphysics
- Solidworks
- Python
- Abaqus
- AutoCAD

AWARD AND HONOR

- Superior Idea Award at First Startup Weekend Event
  in Shahroud University of Medical Sciences - [June 2022]

BOOKS

- "Tissue Engineering" second edition by Clemens A. et al. – [In Press - Translated to Persian]
- "Biomaterials and its applications in Regenerative Medicine" – [in progress (English)]
- "Handbook of principle of tissue engineering" – [in progress (English)]

PATENT

- Non-adherent Antibacterial Oily Dressing for **Skin Wound Healing** – [under review]

WORKSHOPS

2022	Basic Applications of **Cell Culture**, 6th International and 8th National Congress of Wound and Tissue Repair.
2022	**Biofilms** and Wounds, 6th International and 8th National Congress of Wound and Tissue Repair.
2014	**Non-Newtonian Fluids** Mechanics and its biomedical applications, Shahrood University of Technology.
2014	The application of Gambit & Fluent software in Biomechanical Projects, Shahrood University of Technology.

REFERENCES

- **Dr. Mahmood Norouzi** - Associate Professor of Mechanical Engineering Department
  mnorouzi@shahroodut.ac.ir
  Shahrood University of Technology, Semnan, Iran
- **Dr. Ali Abbasnejad** - Assistant Professor of Mechanical Engineering Department
  abbasnejad@shahroodut.ac.ir
  Shahrood University of Technology, Semnan, Iran
- **Dr. Morteza Alizadeh** - Assistant Professor of Tissue Engineering Department
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  Shahroud University of Medical Sciences, Semnan, Iran
- **Dr. Majid Salehi** - Assistant Professor of Tissue Engineering Department
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  Shahroud University of Medical Sciences, Semnan, Iran
- **Dr. Iman Noshadi** - Assistant Professor of Bioengineering Department
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  University of California, Riverside