

Updated: February 5, 2021

EDUCATION**PhD, Mechanical Engineering**

Clemson University, USA

Aug. 2014 - Dec. 2018

Dissertation Title: "Fabrication and Mechanical Properties of Micro-Architected 3D scaffolds"**MS, Mechanical Engineering**

K. N. Toosi University of Technology, Iran

Aug. 2009 - Jan. 2012

Thesis Title: "Numerical Solution of Flow Problems Using Graphical Processing Units"**BS, Mechanical Engineering**

Isfahan University of Technology, Iran

Aug. 2005-Jul. 2009

EMPLOYMENT**Assistant Professor**

Department of Mechanical Engineering, The Citadel, SC

Aug. 2020-Present

Lecturer

Department of Mechanical Engineering, Clemson University, SC

Jan. 2019-Jul. 2020

Graduate Laboratory Instructor

Department of Mechanical Engineering, Clemson University, SC

Aug. 2014-Dec. 2018

HVAC Engineer

Mojda Counseling Engineering Co., Hamedan, Iran

Aug. 2012–Jun. 2014

Internship

Hamedan's 1000 MW steam power plant, Hamedan, Iran

Jun. 2007–Aug. 2007

JOURNAL PAPERS

- **Niksiar, P.**, Su, F.Y., Frank, M.B., Ogden, T.A., Naleway, S.E., Meyers, M.A., McKittrick, J. and Porter, M.M. "External Field Assisted Freeze Casting", *Ceramics*, 2(1), pp.208-234. (invited), 2019
- **Niksiar P.**, Frank M. B., McKittrick J., Porter M. M. "Microstructural evolution of paramagnetic materials by Magnetic Freeze Casting", *Journal of Materials Research and Technology*, 8(2), pp. 2247-2254, 2019
- Porter, M.M. and **Niksiar, P.**, "Multidimensional mechanics: Performance mapping of natural biological systems using permutated radar charts", *PLoS one*, 13(9), p.e0204309, 2018
- Porter, M.M., **Niksiar, P.** and McKittrick, J. "Microstructural control of colloidal-based ceramics by directional solidification under weak magnetic fields", *Journal of the American Ceramic Society*, 99(6), pp.1917-1926, 2016
- **Niksiar P.**, Porter, M. M., "Multidimensional anisotropic compressive properties of 3D-printed scaffolds", Journal Draft Paper

CONFERENCE PAPER

- Bubaz M., **Niksiar P.**, Elamin G., Ragan D., Bass P., "Potentials and limitations of Face to Face and Hybrid Teaching Modes", *American Society of Engineering Education-South East, In press*

- **P. Niksiar**, A. Ashrafizadeh, M. Shams, A. Madani, "Implementation of a GPU-based CFD Code", *International Conference on Computational Science and Computational Intelligence*, March 2014, Las Vegas.

PRESENTATIONS

- **Niksiar, P.**, Porter, M. M., "Effect of weak external magnetic fields on micro/macro structure of freeze cast scaffolds" *The Minerals, Metals and Materials Society Meeting*, February 26 - March 02, 2017, San Diego California
- **Niksiar P.**, Nath S., Frank M., McKittrick J., Porter M. M., "Microstructural Characterization of Magnetic Freeze Cast Scaffolds", *Poster competition*, October 2015, Clemson University

TEACHING

- Applied Aerodynamics Spring 2021, The Citadel
- Aerospace Propulsion Fall 2019/Spring 2020 Clemson University
- Thermodynamics Spring & Summer 2019, Clemson University
- Engineering Materials Fall 2020, The Citadel
- Machine Design Clemson summer 2020, The Citadel, Spring 2021
- Foundations of Mechanical Systems Spring & Fall 2019, Clemson University
- Measurements and Instrumentation Fall 2020, The Citadel
- Senior Design Fall 2019, Clemson University
- Thermal and Fluid Science Laboratory Spring 2015/Fall 2018, Clemson University

HONORS AND AWARDS

- Outstanding Graduate Teaching Assistant Award, Clemson University 2016-2017
- Selected to NODET (National Organization for Development of Exceptional Talents) school for gifted students in both middle school and high school, Hamedan, Iran 1998-2005

AFFILIATIONS

- American Association for Engineering Education (ASEE) since 2020
- Minerals, Metals & Materials Society (TMS) since 2016
- American Society of Mechanical Engineers (ASME) since 2018
- American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) since 2016

SPONSERED RESEARCH

- NASA's MINI-REAP Research grant (\$10,000) October 2020

TECHNICAL SKILLS

- **Material Characterization and Fabrication:** Freeze casting, Scanning Electron Microscopy (SEM), Energy Dispersive X-ray Spectrometer (EDS), 3D printing
- **Programming and Simulations:** CUDA (GPU programming), C++, MATLAB, ANSYS-CFX, SolidWorks, AutoCAD, Maple, LabVIEW
- **Numerical Simulations:** Finite Element, Finite Volume and Finite Difference Analysis, Grid generation
- **Graphical and Visual Edits:** Adobe Illustrator, Adobe Photoshop, Adobe Premiere, Camtasia

LEADERSHIP SERVICE AND PUBLIC OUTREACH

The Citadel's Rocket Club founder and adviser	2020-2021
Clemson Rocket Engineering Club advisor	2019-2020
Course Leader of Mechanical Engineering Summer Camp, Clemson University	Jul. 17-23, 2018
Graduate Writing Teaching Assistant, Clemson University	2017-2018
Curriculum Representative of Mechanical Engineering Graduate Student Council (MEGSC)	2017-2018
Poster Judge, Undergraduate Research Poster Symposium, Clemson University	Jul. 27, 2018
Artisphere, science and art festival, Greenville, SC	May 2016 & 2017
iMAGINE Upstate, STEAM festival in Greenville, SC	Apr. 2016
Volunteer at Helping Hands of Clemson	Summer 2018