GOZDE BASARA

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EDUCATION

UNIVERSITY OF NOTRE DAME Notre Dame, IN
Graduate Student, Bioengineering – 3.72/4.00 Expected September 2022
Advisor: Pinar Zorlutuna

MIDDLE EAST TECHNICAL UNIVERSITY Ankara, TURKEY
MSc., Mechanical Engineering – 3.70/4.00 July 2017
"Numerical Analyses of Mechanical and Thermal Stresses In 3D Printed Objects"

MIDDLE EAST TECHNICAL UNIVERSITY Ankara, TURKEY
BSc., Mechanical Engineering June 2014

PROFESSIONAL EXPERIENCE

Teaching Experience:

UNIVERSITY OF NOTRE DAME Notre Dame, IN
Teaching Assistant, Aerospace and Mechanical Engineering August 2017 – Present

- Courses: Lab1 for mechanical engineers, mechanics of solids, biomaterials, biomechanics, introduction to bioengineering, design methodology, thermodynamics.
- Held laboratory sessions and office hours. Prepared and graded homework assignments and exams. Conducted problem solving sessions.

MIDDLE EAST TECHNICAL UNIVERSITY Ankara, TURKEY
Teaching Assistant, Mechanical Engineering January 2016 – June 2017

- Prepared and graded homework assignments, held laboratory sessions and office hours, did problem solving sessions for different level undergraduate courses including Thermodynamics (Sophomore), Fluid Mechanics (Junior), Heat Transfer (Junior) and Mechanical Engineering Systems Laboratory (Senior).

Research Experience:

UNIVERSITY OF NOTRE DAME Notre Dame, IN
Research Assistant, Aerospace and Mechanical Engineering August 2017 – Present

- Developed a two-step crosslinking method for hydrogels, to improve their mechanical properties and stability.
- Developed cardiac tissue constructs allowing a native tissue like orientation of the heart cells.
- Experienced in aseptic techniques for cell culture, using various material characterization tools such as nanoindenter and rheometer, extrusion based bioprinting, PCR and Western Blot.

MIDDLE EAST TECHNICAL UNIVERSITY Ankara, TURKEY
Research Assistant, Mechanical Engineering September 2014 – June 2017

- Numerically modeled the mechanical stresses in 3D printed objects using ANSYS.
- Printed objects using a fused deposition modeling printer.
- Assessed the mechanical properties of the extrusion based printed objects using conventional tensile testing.

PUBLICATIONS & PRESENTATIONS

Journal Publications:

1. **G. Basara**, X. Yue, P. Zorlutuna, Dual Crosslinked Gelatin Methacryloyl Hydrogels for Photolithography and 3D Printing. *Gels*2019, *5*, 34.
2. **G. Basara**, M. Saeidi-Javash, X. Ren, G. Bahcecioglu, B.C. Wyatt, B. Anasori, Y. Zhang, P. Zorlutuna, Electrically Conductive 3D Printed $Ti_3C_2T_x$ MXene-PEG Composite Constructs for Cardiac Tissue Engineering, Acta Biomaterialia, 2020.
3. G. Bahcecioglu, **G. Basara**, B.W. Ellis, X. Ren, P. Zorlutuna, Breast cancer models: Engineering the tumor microenvironment, Acta Biomaterialia, Volume 106, 2020, Pages 1-21.

Conference presentations:

1. **G. Basara**, (2019, October). Dual crosslinked gelatin methacryloyl hydrogels for photolithography and 3D printing. Poster presentation in annual Biomedical Society Meeting in Philadelphia, PA.
2. **G. Basara**, (2020, October). Electrically Conductive 3D Printed $Ti_3C_2T_x$ MXene-PEG Composite Constructs for Cardiac Tissue Engineering. Oral presentation in annual Biomedical Society Meeting (virtual).

LEADERSHIP & SERVICE

Social Co-Chair, Graduate Society of Women in Engineering (SWE)	May 2019 – May 2020
Workshop Leader, Expanding Your Horizon (EYH)	May 2018, April 2019
Workshop Leader, Peace Through Science (PTS)	July 2018, July 2019
Judge, Northern Indiana Regional Science & Engineering Fair (NIRSEF)	2019-2021
Translating science news to Turkish for a Turkish Science Journal	2018-present

TECHNICAL SKILLS & AWARDS

Certificates:

Striving for Excellence in College and University Teaching from Kaneb Center	2018
Online College Teaching from Kaneb Center	2019

Honors & Awards:

Riley-Jabbour Fellowship, University of Notre Dame	2017
Graduate Student Professional Development Award, University of Notre Dame	2019
Graduate Student Union Conference Presentation Grant, University of Notre Dame	2019
Shaheen 3 Minutes Thesis at University of Notre Dame finalist	2020

Patents:

Demirbag, H., Cuvalci, A.U., Derebasinlioglu, G.N., Ertug, S.T., Degerli, M., **Basara, G**., Konukseven,Erol, F., 2015, *A dishwasher comprising an automatic door opening mechanism*, WO2016020082A1.

Computer Skills: Microsoft Office, ANSYS Mechanical, MATLAB.

Languages: Turkish (native), English (fluent), German (intermediate)

PROFESSIONAL AFFILIATIONS

Biomedical Engineering Society 2019-present

PERSONAL INTERESTS

- Cooking and sharing recipes (my YouTube channel)
- Sharing motivational quotes and funny memes for PhD students
- Writing short stories
- Travelling
- Zumba