

Nejat Can

607-542-6702 • ncan@u.rochester.edu • Rochester, NY

EDUCATION

University of Rochester

B.S. in Biomedical Engineering

Rochester, NY

2018-2022

- **Honors and Scholarships:** NAE Grand Challenges Scholar Program, International Baccalaureate Scholarship, Jesse L. Rosenberger Prize, Dean's List
- **Selected Courses:** Neuroscience of Neuroprosthetics (*graduate-level*), Biosolid Mechanics (*graduate-level*), Intro to CAD, Signals & Systems, MATLAB for Biomedical Engineering

RESEARCH EXPERIENCE

Massachusetts Institute of Technology

Research Intern at the Martinos Center

Boston, MA

May 2021 – present

- Joint-institutional program at Harvard, MIT, and Massachusetts General Hospital
- Utilizing unsupervised deep learning to improve diffusion MRI reconstruction

Advanced Physiological Optics Laboratory

Research Assistant at the Yoon Lab

Rochester, NY

August 2020 – January 2021

- Researched non-contact optical methods to measure the human cornea's mechanical properties *in vivo* by exploiting the phenomenon of Brillouin scattering

University of Rochester Medical Center

Research Assistant at the Whasil Lee Lab

Rochester, NY

April 2019 – May 2021

- Participating in engineering projects using mechatronics tools to create experiment systems.
- Used MATLAB to analyze mechanical loads on mice during ACL rupture. (*Summer 2020*)
- Independently investigated calcium activation of Piezo channels in knee cartilage. (*Summer 2019*)

PUBLICATIONS

Kotelsky, A, Proctor, A, Anissa, E, **Can, NY**, Mannava, S, Lee, W. (2021). Unilateral and bilateral ACL injuries exhibit distinct vulnerability of chondrocytes to injurious mechanical forces, *ORS 2021 Annual Meeting*, Virtual.

Can, NY, Kotelsky, A, Proctor, A, Mannava, S, Lee, W. (2020). Design of a Portable and Low-Cost Device to Quantify Anterior Cruciate Ligament Rupture Force in Mice, *Center for Musculoskeletal Research 10th Annual Symposium*, Virtual.

Kotelsky, A, Proctor, A, Anissa, E, **Can, NY**, Mannava, S, Lee, W. (2020). Unilateral and bilateral ACL injuries exhibit distinct sensitivity of chondrocytes to injurious impact loading, *Center for Musculoskeletal Research 10th Annual Symposium*, Virtual.

Kotelsky, A, **Can, NY**, ..., Lee, W. (2021) One journal article currently in peer-review.

SELECTED PROJECTS

Force Gauge Device for Research Application

<https://github.com/ncan33/STIF-2019>

Designed a device that measures the amount of force applied during ACL injury on mice. The device has contributed to three publications so far. Access technical report for device [here](#).

Computational Analysis of HighFinesse Laser Spectra

<https://github.com/ncan33/matlabHighFinesse>

Acquired a large dataset of laser spectra using optical methods. In MATLAB, wrote an automated algorithm that converts raw ASCII output into an easy to analyze data structure. Processed the signal using tools such as Fourier transform and destructive interference.

Confocal Microscope Imaging Platform

<https://tinyurl.com/3mcuws34>

Designed and 3D printed a part that fulfilled the design need for a platform that allows greater spatial translation in the x and y directions during imaging in the confocal microscope.

Football Helmets Promote Neck Injuries

<https://github.com/ncan33/helmet-2019>

Data collected at U of R by Brown, et al. was analyzed in MATLAB to investigate the effects of football helmets on mechanical loads at the neck.

TEACHING EXPERIENCE

U of R Department of Biomedical Engineering

Rochester, NY

Statics and Dynamics (BME 201) Teaching Assistant

August 2020 – December 2020

- Recorded recitation videos; held office hours to assist students on mechanics problems

LEADERSHIP

University of Rochester Varsity Rowing

Rochester, NY

Men's Team Captain

- Acted as a liaison between coaches and athletes; promoted a competitive team atmosphere

International Model United Nations of Alkmaar

Alkmaar, Netherlands

Committee Chair

- Chair at the IMUNA 2017 conference

SKILLS

Software Proficiency:	Solidworks, Creo (Pro/ENGINEER), MATLAB, LaTeX, FEBio, Arduino IDE
Communication Skills:	Competed in World Debate Championships
Languages:	English (Bilingual Proficiency), Turkish (Native Speaker)
Programming Languages:	Python, C/C++, Git, Zsh
Technical Skills:	CAD, 3D Printing, Arduino Systems, FEM/FEA, PyTorch, Scikit-learn