

Elizabeth Glista

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EDUCATION

University of California, Berkeley

Pursuing a Doctor of Philosophy

Department of Mechanical Engineering, Controls Major

August 2018 - Present

GPA 3.869/4.0

Massachusetts Institute of Technology

Bachelor of Science in Mechanical Engineering

Minors in Statistics & Data Science, French

September 2013 - June 2017

GPA 4.9/5.0

INTERESTS

Non-convex optimization | Statistical learning | Numerical methods

Optimization & control of power systems | Smart grid

WORK & RESEARCH EXPERIENCE

Prof. Somayeh Sojoudi's Research Group

Graduate Student Researcher

August 2018 - Present

Berkeley, CA

- Contributed to a novel homotopy method for solving the optimal power flow (OPF) problem with line or generator outages

Northrop Grumman, Aerospace Systems

Structural Engineer

August 2017 - August 2018

San Diego, CA

- Developed a MATLAB program to analyze flight test stress data for the Firebird project
- Monitored Firebird flight testing and successfully implemented the program with actual flight test data
- Performed stress analysis and created stress reports for several installations on Fire Scout helicopters
- Designed new parts for Fire Scout helicopters and created finite element models for these parts
- Built several APIs in FEMAP to automate tasks for mechanical and structural analysis

Tesla

Powertrain Engineering Intern

May - August 2016

Palo Alto, CA

- Created a parametric tool in MATLAB for the automation of motor geometry generation
- Developed code to integrate structural FEA with electromagnetic analysis and design software
- Advanced the optimization of motor geometry with respect to structural constraints

Université Pierre et Marie Curie

Fracture Mechanics Research Intern

June - August 2015

Paris, France

- Designed peeling tests with single and randomized heterogeneities to examine the dynamics of heterogeneous fracture
- Formulated MATLAB code to analyze the non-uniform front shapes of peeling tests and compared the numerical results to adhesive fracture energy models

MIT Experimental Hydrodynamics Laboratory

Fluid Dynamics Research Intern

June - August 2014

Cambridge, MA

- Conducted experiments using 3D Particle Image Velocimetry (PIV) to visualize the hydrodynamics of piston vortices
- Developed MATLAB code to perform image analysis of PIV data

AWARDS & ACHIEVEMENTS

National Science Foundation Graduate Research Fellowship (2020), UC Berkeley Chancellor's Fellowship (2018), Phi Beta Kappa (2017), Tau Beta Pi (2016), MIT January Scholar (2015), Academic All-Patriot League Team (2015), MIT Women's Technology Program (2012), Congressional Award Silver Medal (2012), AP Scholar with Distinction (2012), Walton High School Physics Department Award (2012), Walton High School Raider Pride Award for Character (2009)

PUBLICATIONS

E. Glista and S. Sojoudi, "Convex model to evaluate worst-case performance of local search in the Optimal Power Flow problem," 2020, available online at https://people.eecs.berkeley.edu/~sojoudi/GS_Paper_2020.pdf. Submitted to 2020 Conference on Decision and Control.

S. Park, E. Glista, J. Lavaei, and S. Sojoudi, "Homotopy method for finding the global solution of post-contingency optimal power flow," 2019, available online at https://lavaei.ieor.berkeley.edu/SCOPF_hom_2019_1.pdf. To appear in the 2020 American Control Conference. Finalist for Best Student Paper Award.

T. Cabannes, E. Glista, K. Dwarakanath, X. Rao, T. Veeravalli, A.M. Bayen, "Sensitivity analysis and relaxation of the Static Traffic Assignment Problem with Capacity Constraints," 2019 Conference on Decision and Control. Available online at https://people.eecs.berkeley.edu/~theophile/docs/publications/Cabannes_19_CDC.pdf.

PRESENTATIONS

T. Cabannes, E. Glista, "Sensitivity analysis and relaxation of the Static Traffic Assignment Problem with Capacity Constraints," 2019 Conference on Decision and Control.

SKILLS

Software	MATLAB, Python
Modeling and Analysis	FEMAP, CATIA, NX, HyperWorks, ANSYS, SolidWorks
Languages	Written & spoken proficiency in French

COMMUNITY SERVICE & LEADERSHIP

MIT Global Teaching Labs <i>Instructor</i>	<i>January 2017</i> Tangier, Morocco
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- Taught hands-on engineering in a makerspace to 30 middle and high school students
- Prepared and presented topics in robotics such as control theory and electronics

MIT Project Connect <i>Co-President, http://projectconnect.mit.edu</i>	<i>2013 - 2017</i> Cambridge, MA
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- Led monthly events to include Boston youth with disabilities on MIT's campus

EXTRA-CURRICULAR

East Bay Rowing Club (2018 - Present)

San Diego Rowing Club (2017 - 2018)

MIT Arts Scholars (2015 - 2017)

Boston Ballet Student Ambassador (2016 - 2017)

MIT Division I Women's Varsity Openweight Crew (2013 - 2016)