Adam Briggs

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Education

University of Rochester, Rochester, NY
Bachelor of Science in Optical Engineering — Expected May 2021
GPA: 3.29/4.0

Selected Experience

Optical Scientist Intern, ChemImage Corporation, Pittsburgh, PA — May 2019 - August 2019
Acted as expert in optical physics within the Biomedical Research and Development group.
Designed, tested, and validated experimental hyperspectral imaging systems for life science applications.
Taught foundations of optics to chemists and biologists within the R&D teams.

Undergraduate Teaching Assistant, The Institute of Optics, Rochester, NY — August 2019 - Present
Teaching Assistant for Matlab for Optics (OPT 211) Spring 2020
Teaching Assistant for Geometric Optics (OPT 241) Fall 2019.

Lighting Designer/Master Electrician/Teaching Assistant, Various, Rochester, NY — January 2018 - Present
Head of lighting department for University of Rochester International Theatre Program.

Selected Optics Coursework and Projects

Lens Design*	Optical System Layout and Analysis	Sources and Detectors
Aberration Theory	Electromagnetic Theory	(*) indicates graduate course

Fluorimetry Collection Objective Subassembly
Designed a spectrometer objective to meet a client's specification demands. Performed a photon budget analysis and evaluated various design forms. Proposed final design after reviewing specifications and manufacturing constraints. Design and optimization completed in CodeV.

Grating Fiber Demultiplexer Design
Designed a biomedical spectrometer using reflective gratings, catalog lenses, and stock linear detectors. Layout and analysis performed inside of Zemax.

LED Source Coupling Module
Designed and compared optical systems to couple a LED diode into a homogenizing rod using catalog components. Performed analysis of the designs in Zemax. Provided a detailed report comparing the two systems within the original constraints of the system.

Campus Leadership, Activities, and Awards

Sigma Nu Fraternity - Secretary/Publicity/Philanthropy Chairman — May 2018-Present
Russell A. Peck Theatre Prize — May 2019
Sigma Nu Fraternity - 6th Annual Battle of the Bands Charity Concert - Team Leader/Creative Director — Spring 2019
Optical Society of America - Photographer/Member — Spring 2019
WRUR 88.5 FM - FM DJ / Productions Engineer — August 2017 - Present
Eagle Scout, Boy Scouts of America — October 2016

Research Presentations

- **Briggs, A.;** Foley, E.; Nussbaum, B. "Group Creativity: Less Than the Sum of its Parts." Presented at the Fall 2019 CETL Research Symposium, Rochester, NY, December 6, 2019.

Skills

- Proficient in the design and analysis of optical systems with Zemax and CodeV
- Fluent in visualization and data analysis with MATLAB and R
- Excellent in interpretation of CAD drawings and drafting in Vectorworks
- Experience in optical metrology instrumentation including: spectrophotometry interferometry, and MTF measurement
- Excellent with MS Office, MS Excel, MS Powerpoint, and LaTeX
- Effective hands on problem solving and analytical skills, both independently and as a team
- Excellent oral and written skills as demonstrated in technical settings