Adam Briggs

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Education

University of Rochester, Rochester, NY
Bachelor of Science in Optical Engineering — Expected May 2021
GPA: 3.35/4.0

Selected Experience

Optical Design Intern, Texas Instruments, Dallas, TX — May 2020 - August 2020
Principal designer for illumination and projection subassemblies in preparation for new DMD launch. Took the project from inception to RTM. Design published by TI.

Optical Scientist Intern, ChemImage Corporation, Pittsburgh, PA — May 2019 - August 2019
Designed, tested, and validated experimental hyperspectral imaging systems for life science applications. Performed data analysis and characterization for supervised ML models.

Undergraduate Teaching Assistant, The Institute of Optics, Rochester, NY — August 2019 - Present
Head TA for Matlab for Optics II (OPT 212) Fall 2020; TA for Geometric Optics (OPT 241) Fall 2020; TA for Matlab for Optics (OPT 211) Spring 2020; TA for Geometric Optics (OPT 241) Fall 2019

Selected Optics Coursework and Projects

Lens Design*	Optical Interference Coatings*	Optical Fabrication and Testing
Optical System Layout and Analysis	Applied Statistics	(*) indicates graduate course

Automotive AR HUD Feasibility Design
Performed a feasibility study detailing efforts to design an AR HUD with a single freeform surface. Techniques of non-symmetric, off-axis, reflective systems were conducted within CodeV. Multiple design forms were presented and compared with current designs in literature.

Fluorimetry Collection Objective Subassembly
Designed a spectrometer objective, performed a photon budget analysis and evaluated various design forms. Proposed final design after reviewing specifications and manufacturing constraints.

Tessellated 4π *sr*. Cinema Camera
Redesign proof of concept camera with goal of improving tolerances, reducing weight, and making production ready.

Analysis of Q-Type Polynomials
Literature review exploring the benefits of Q-Type polynomials at the intersection of design and manufacture.

Campus Leadership, Activities, and Awards

Sigma Nu Fraternity - Secretary/Publicity/Philanthropy Chairman — May 2018-Present
Fluor Corporation Scholar — August 2020
Russell A. Peck Theatre Prize — May 2019
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

- Excellence in the design and analysis of optical systems with **Zemax** and **CodeV**
- Exposure to stray light analysis in **FRED**
- Fluent in visualization and data analysis with **MATLAB** and **R**
- Exposure in the analysis of thin film coatings in **OptiLayer**
- Excellent in interpretation of **2D/3D CAD** drawings and drafting in Vectorworks
- Comprehensive experience in optical **metrology** instrumentation and optical **fabrication**
- Effective hands on problem solving and analytical skills, both independently and as a team
- Excellent oral and written skills as demonstrated in technical settings
- Proficient with MS Office, MS Excel, MS Powerpoint, and LaTeX