**Kyle Solowiej Hawkins**

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# Work Experience

**Airy Optics Inc. -** Algorithm Scientist **May 2016 – August 2018** (Tucson, AZ)

* Developed and integrated polarization ray tracing algorithms for Polaris-M ray tracing software
* Modeled/analyzed optical systems during engineering service projects with Polaris-M
* Built an image simulation program to model the effects of dichroic dies on polarized images
* Created marketing material and software demos for exhibitions at SPIE and OSA meetings
* Supervised two software development interns (quality control and documentation)
* Administrated the Polaris-M source code repository
* Taught classes to Polaris-M customers on using the software for optical analysis

**Zemax LLC. -** Optical Engineering Intern **June 2015 - August 2015** (Kirkland, WA)

* Performed study on the optical performance of Extended Aspheric Polynomial types

(Forbes Q-Type vs Even Polynomials) during numerical optimization

* Authored informative articles on Polarization for the Zemax Knowledge Base

**College of Optical Sciences -** Undergraduate Research Assistant **April 2014 – May 2016** (Tucson, AZ)

* Wrote Thin Film Optimization software in Mathematica
* Created computer generated graphics to describe polarization phenomena
* Updated webserver (JavaScript) for remote access to optical polarization ray tracing software

**U of A Think Tank -** Supplemental Instructor & Tutor **August 2013 – August 2015**  (Tucson, AZ)

* Led supplemental review sessions for the Electricity and Magnetism course PHYS 241
* Observed and mentored new coworkers as they began to facilitate their own instructional sessions
* Became lead instructor, directed session planning and interfaced with PHYS 241 professors
* Tutored students in calculus I, calculus II and algebra math classes - Certified Level 1 Tutor

# Education

**Institution**: University of Arizona, Honors College (August 2012- May 2016)

**Dual Major:** Optical Sciences and Engineering (B.S.), Applied Mathematics (B.S.)

**Graduate Course Work (non-degree seeking):** ten (10) units, three (3) classes, one (1) lab: Polarization in Optical Design, Polarimetry, and Electromagnetic Waves

**IBM Thomas J. Watson Memorial Scholarship:** Merit scholarship for academic excellence

## Programming Experience

**Mathematica/Matlab:** Professional and academic experience in modeling everything from light to sand dunes

**JavaScript:** See the projects section of ksolohawk.com for examples

**Python:** Used in senior design project, personal projects and course work at University of Arizona

## Interests

**Rock climbing enthusiast:** Traditional, sport, and gym climbing

**Math History Buff:** Lots of crazy stories

**Soccer:** It’s a lifelong game