

JAMES T. NATHAN

ENGINEERING QUALIFICATIONS

- ❖ Invented novel optical systems for lidar qualification and calibration (two patents pending)
- ❖ Extensive experience in optical system manufacturing, calibration, and validation testing
- ❖ Managed technical projects for optical test solutions development
- ❖ Coded CLI and GUI applications for lidar and camera calibration and verification
- ❖ Trained engineers and technicians on optical test processes and optics fundamentals
- ❖ Traveled internationally to transfer knowledge to and from customers

RELEVANT EMPLOYMENT

Chronos Photonics

Owner

Orlando, FL

August 2022 - Present

- ❖ Responsible for business development, management of the engineering team, optical engineering, parametric modeling, programming, and electrical systems design.

Luminar Technologies

Optical System Test Engineer

Orlando, FL

February 2019 - August 2022

- ❖ Optical test, optical metrology, and lidar calibration domain expert
 - Support DFMEAs, EV, & DV at every level from highway pilot system to lidar components
 - Refine optical component specifications and metrology processes
 - Advocate, define, and train optics handling & cleaning best practices
- ❖ Technical Project Manager
 - Manage contract manufacturer test station development
 - Identify and close gaps in IQC, EOL, & DV optical test coverage
 - Analyze subassembly and component requirements for system requirement compatibility
 - Lead 8D problem solving projects for Hardware Engineering
 - Design experiments for DFSS robust optimization using Taguchi orthogonal arrays
- ❖ Principal System Test MATLAB developer
 - Define workflows to measure temperature-dependent optical performance
 - Develop algorithms critical to EOL, EV, & DV qualification
 - Train test engineers in lidar point cloud analysis

JENOPTIK Optical Systems

System Test Engineer

Jupiter, FL

May 2017 - February 2019

- ❖ Led a team of 12 optical test technicians as deputy to the manager
- ❖ Spearheaded pilot projects from first articles to NPI
- ❖ Owned hardware and software calibration processes
 - Focus, uniformity, and geometric calibration of industrial inspection lenses
 - Transferred EOL calibration from a west coast customer for an FSOC project
 - Calibrated and integrated optical systems in a customer factory in rural Japan
- ❖ Authored image processing algorithms for optical system qualification
 - MTF and chromatic aberration of lenses for the Perseverance Mars Rover
 - Automated compilation of MTF test data
- ❖ Maintained test and metrology equipment including spectrum analyzers, spectrometers, wavefront sensors, MTF benches, interferometers, and oscilloscopes

JAMES T. NATHAN

LANGUAGE PROFICIENCIES

Native English
Limited Working Japanese
Limited Working Spanish
Elementary German

TRAINING & CERTIFICATIONS

Certified SAFe® 4 Scrum Master
DFSS Green Belt from ASI
DVP&R, DFMEA from Quality-One
8D Problem Solving
Soldering Certification from EM Sciences

EDUCATION, ACTIVITIES, & HONORS

University of Rochester

Bachelor of Arts in Business, Bachelor of Arts in Engineering Science

Rochester, NY
May 2017

- ❖ President of Optical Society of America, 2015-16; Networking Chair, 2013-14
- ❖ Minor in Optics
- ❖ Wilder Trustee Merit Scholarship, All 4 Years

University of Central Florida

Master of Science in Optics & Photonics

Orlando, FL
Expected May 2025

- ❖ Concentration in integrated photonics

RELEVANT COURSEWORK

Engineering & Technical Courses

Laser Engineering, Optical Fabrication and Testing, Lens Design, Interference & Diffraction, Color Technology, Vision and the Eye, Geometrical Optics, Theoretical Foundations of Optics, Engineering Computing (MATLAB), Electronic Devices & Circuits, Intro to CAD and Drawing, Statics & Dynamics (Fundamentals of Biomechanics), Fluid Dynamics, Basic Mechanical Fabrication

Business Development Courses

Intermediate Microeconomics, Financial Accounting, Financial Management, Business Law, Principles of Marketing, Operational Management and Technology, Industrial Organization, Economic Theory of Organizations, Pricing Strategy, Technical Entrepreneurship