

Nicholas Maggio

Permanent Address:

38 Margate Drive
Rochester, NY 14616

nickmaggio@ymail.com
(585) 469-9632

www.maggick.com

Current Address:

Bataverweg 3
Bonn, 53117 Germany

WORK EXPERIENCE

Walt Disney Animation Studios

Technology Intern - Principled Lens Modeling

Burbank, CA
Summer 2015

- Implemented advanced physical lens models in Disney's in-house renderer, Hyperion.
- Performed lab experiments to compare real lenses and computer simulated lenses.
- Designed a user interface in QT for artists to preview and control the lens configurations.
- Developed an in-house non-linear optimization program to optimize lens designs based on animation artist's needs

Imatest LLC

Image Scientist and Software Developer - Intern

Boulder, CO
Summer 2014

- Developed algorithms to provide image quality analysis based on ISO and SMPTE standards.
- Developed an application from clients to customize and design their own image test charts.
- Implemented MATLAB algorithms to detect features on test charts for automatic image quality analysis.
- Wrote new and cleaned-up existing documentation. Performed debugging/quality control for Imatest 4.0 release.

IMAX

Production Intern

Los Angeles, CA
Summer 2013

- Performed color and noise quality control on film prints. Worked on scripting scratch removal algorithms in python.
- Helped develop a method for IMAX large screen color calibration based on SMPTE standards

EDUCATION

Rochester Institute of Technology

Master of Science in Imaging Science

Rochester, NY
Fall 2016

- **Relevant Coursework:** Geometric Optics, Physical Optics, Digital Image Processing, Optical System Design, Fourier Mathematics, Radiometry, Human Visual System, Remote Sensing, Hyper-spectral Imaging, Focal Plane Array Fabrication and Analysis

Rochester Institute of Technology

Bachelor of Science in Motion Picture Science

Minor in Psychology

Rochester, NY
Fall 2014

- **Relevant Coursework:** Color Science, Computer Vision, Vision & Psychophysics, Digital Color Management, Optics for Imaging, Developmental Psychology, Abnormal Psychology, Cognitive Psychology, Motion Capture, Image Capture Technology, Digital Cinema Projection, Digital Post-Production Technology, Calculus I-III, Physics I-III, Programming for Imaging Science in Matlab, Intro to C++, Computer Graphics, Global Illumination, Intro to Animation

TEACHING ASSISTANT

Color Science

Chester F. Carlson Center for Imaging Science, RIT

Rochester, NY
Spring 2015

Provided Python and color science tutoring. Converted the professors color science library from Matlab to Python

Computing and Control

Chester F. Carlson Center for Imaging Science, RIT

Rochester, NY
Fall 2014

Tutoring for Python and Raspberry Pi. Conducted one-on-one grading of Raspberry Pi hardware assignments with students.

Computer Vision

Thomas B. Golisano College of Computing and Information Sciences, RIT

Rochester, NY
Spring 2014

Held weekly office hours. Graded student's quizzes and projects. Provided Matlab and C++ tutoring

PROJECTS

Lens Flare Analysis & Polynomial Optics Optimization for Lens Reverse Engineering

Research Project with Dr. Matthias Hullin, Rheinische Friedrich-Wilhelms-Universität Bonn

Bonn, Germany
Spring 2016

- Built 3D linear stage to control a light source and pinhole in front of lens. Used to sample a wide space of incoming rays
- Measured the resulting out-coming rays. Used lens optimization to reverse engineer lens from flare and out-coming rays
- Developed a method to produce truncated polynomials from real measured lens, that can be used when rendering CG.

Linear Light Source Reflectometry

Independent Research Project at Rochester Institute of Technology

Rochester, NY
Spring 2015

- Improved processing of LLSR system to measure diffuse and specular reflections of surface textures.
- Developed OpenGL viewer to display the diffuse and specular reflections of materials on computer monitor.

High Dynamic Range Display

Independent Research Project at Rochester Institute of Technology

Rochester, NY
Spring 2014 — Fall 2014

- Built an HDR display using DLP projector and LED screen. Used GPUs to process and display HDR video streams.
- Developed code to geometrically, radiometrically and color calibrate HDR display.
- Conducted vision and psychophysical experiments using HDR display to test perception of materials and image contrast

Programming: MATLAB, Python, C(++), OpenCV, L^AT_EX, Arduino, Processing

Software: ZeMax, Nuke, Maya, Final Cut, AVID

Interests: Color & Vision Science, Optical Design, High Dynamic Range Imaging, Image Quality Analysis

Languages: English (native), German (B1)