Hani Nejadriahi.

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EDUCATION

GEORGE WASHINGTON UNIVERSITY **Washington, DC**
Masters of Science in Electrical Engineering, **Concentration: Nanophotonics, MEMS, and electronics** *May 2017*
Current GPA: 3.7/4

- OSA member and President of the GWU student chapter (August 2016- Present)
- Vice President of the GWU student chapter and Member of the SPIE (The Society of Photo-optical Instrumentation Engineers) (August 2015- September 2016)
- GWU's Dean's List (2015, 2016)

ST. OLAF COLLEGE **Northfield, MN**
Bachelor of Science in Mathematics & Physics; Minor in Music *May 2014*
Scholarships: National Merit Scholarship (Illinois), (2010), Music Scholarship, St. Olaf College, (2010-2014), Buntrock's (Science and Math) Scholarship, St. Olaf College, (2010-2014)

TECHNICAL SKILLS AND CERTIFICATES

Micro and Nanofabrication: EBeam Lithography, Optical Lithography, SEM Imaging
Computer Skills: Programming in Java (self-taught), C++, STATISTICA, Visual Basic, My SQL, VPython, MathCad, LaTeX, Mathematica, Matlab (Octave), XML, HTML, a little bit of Java Script, SOAP (Simple Object Access Protocol), Familiar with JBoss, worked in Eclipse, Keyence vision software programs, Lumerical, COMSOL
Problem Solving: Resolves in-depth queries independently and as a team
Certifications: Six Sigma Black Belt Certified, February 2015

WORK EXPERIENCE

THE GEORGE WASHINGTON UNIVERSITY **Washington, DC**
Graduate Research Assistant, Department of Electrical and Computer Engineering *Aug 2015 - Present*
Thesis Research: Designing and fabricating an integrated all optical circuit that performs fast Fourier transform in the optical domain; using the fact that optical FFT can perform beyond the limits of electronic digital processing with negligible energy consumption, fast speed, and size compactness. The design is proposed by using photonics and later on plasmonic components.

- Member of the Sorger's Orthogonal Physics Enabled Nanophotonics (OPEN) at GWU

Summer of 2016

- Working on design of the layout for fabrication and simulation of the optical FFT circuit using Lumerical, Matlab, Klayout, Mentor Graphics, and Pyxis.
- Attending the Active Photonics Workshop offered by CMC- Lukas Chrostowski, Hamilton, Canada
- Lumerical Interconnect Training workshop offered by Lumerical, James Pond, GWU

Lab Technician and IT Support *Aug 2016 - Present*

- Constructing, maintaining, and operating standard laboratory equipment
- Ensuring the laboratory is well- stocked and resourced
- Performing software checks and installations

SAGE ELECTROCHROMICS **Faribault, MN**
Thermal Laser Scribing (TLS) - Lamination Process Engineer *Aug 2014 - Aug 2015*
TLS

- Investigated and finalized new recipes for the process + defining the process window of the lase using Final Element Method
- Analyzed data on bad laser cuts and chips
- Created and organized SOP (Standard Operating Procedures) documents for different sections of the process
- Operated a class 4 laser to scribe coated (electro-chromic) glass

Project

- Team leader for "Bad Cutting Prevention" project
- Designed and performed new experiments for the bad cuttings issue on the laser,

Lamination

- Improved the cleanroom environment and organized the operations inside
- Improved the cycle time of the machines in the process.
- Designed and built new airlock and soft wall for the lamination cleanroom
- Designed and programmed ways and experiments to fully automate laminating different layers of glass
- Programmed the vision systems for the Keyence cameras inside the lamination cleanroom where they detect and measure the alignment on each layer of the glass
- Integrated quality and process engineering by investigating the quality of the product (electro-chromic glass)
- Created and organized SOP (Standard Operating Procedures) documents for different sections of the process

Project: SGP on Rolles

- Designed a machine to straighten and transport material from an airlock type room to the cleanroom with the objective of making the most of the middle layer (SGP plastic) of laminates coming off of rolls instead of sheets
- Created and monitored a controlled debris-free environment in the cleanroom, tracking weekly and daily pareto charts to avoid problems
- Participated in Material Review Board (MRB) sessions regularly

Physics and Data Analyst Intern *May - Aug 2014*

(*Active consultant on automatic data cleaning, Summer 2014)*

- Automated data cleaning by programming in STATISTICA (writing visual basic in a macro based environment).
- Acquired corrupted data from the universal database was fully analyzed, cleaned, and useable Based on the desired criterion approved by the quality team
- Generated STATISTICA PDF report with visual demonstrations of the clean data (such as box and whiskers and histograms), with the ability to email using programmed batch files
- Improved the automatic process of laminating glass to minimize glove finger prints of operators, and light gaps on the glass

Engineering Practicum- Patent for Sage Glass January 2014

PATENT

- Submitted by SageGlass Electrochromics for the design and building of F.R.E.D. (Fast Resistivity Evaluation Device) (January 2014)

University of Maryland **College Park, MD**

Summer Researcher May- Aug 2013

- Demonstrated the conditional stability of a 2nd order and period doubling route to chaos in a 3rd order PLL using a 12 bit oscilloscope
- Investigated and demonstrated the stability of phase locked loops and their dependence on three main factors such as gain, order/type of the filter, time delay.
- Investigated the relationship between PLL stability and filter topology (such as Butterworth, Bessel, Linkwitz-Riley)
- Best Presentation among three REU programs at the University of Maryland, College Park (Summer-2013)

Provation Medical Software **Minneapolis, MN**

Summer Intern May- Aug 2012

- Programed using JAVA in an open source cloud system called Open CDS (Clinical Decision Support)
- Mapped information from XML files (built in medical library) to external servers (e.g. hospitals/doctors) using the cloud based programming
- Consulted the company for a year to help with the development

ACTIVITIES & HONORS

- Member of the IEEE student chapter (August 2016- Present)
- Member of the Society of Women Engineers (August 2015- Present)
- Member of the Engineers Without Borders (August 2015- Present)