KENNETH JABON

Education

Boston University, September 2020 - GPA: 3.94
Master of Science, Materials Science and Engineering
University of Illinois, Urbana-Champaign, May 2016 - GPA: 3.58
Bachelor of Science with Honors, Materials Science & Engineering
Minor, Computer Science
Selected Coursework: Quantum Structures & Photonic Devices, System Programming, E/O/M Properties of Materials, Silicon Photonics, Thermodynamics and Statistical Mechanics, Discrete Structures

Experience

Photonic Automation Engineer, Analog Photonics, December 2018 - Present
- Developed edge-coupled electro-optical testing of photonic chips on 300mm silicon wafer.
- Wrote back-end and GUI for CM300 wafer prober for 6-axis optical alignment and fiber array attach.
- Wrote internal messaging system code for optical phased array-based LiDAR.
- Studied higher-order mode coupling to second order microring filter for device redesign.

Graduate Researcher, Popović Group, ECE BU, May 2019 - December 2021
- Designed and demonstrated silicon photonic microring-based photon pair source.
- Device improves four-wave mixing efficiency by tuning ring dispersion, and sets the purity and escape efficiency of the output photon pairs by setting coupling to each ring resonance with a 2-point coupler.
- Developed a custom finite difference frequency domain Maxwell's equations solver in MATLAB.

Process Engineer, IPG Photonics, May 2017 - December 2018
- Redesigned station and wrote C# program to align volume Bragg gratings (VBG) for wavelength stabilization of laser diodes. Wrote C# program for automated scribing of laser bars.

Undergraduate Researcher, Lyding Group, ECE UIUC, March 2015 - May 2016
- Studied charge density waves in TaS_2 and graphene nano-ribbons with scanning tunneling microscopy (STM). Determined topography, local electron density, and band structure.

Stretchable Electronics Research, John Rogers Group, MSE UIUC, May 2014 - August 2014
- Determined electrical response of different device geometries under mechanical strain.
Fabricated Au-based stretchable electronics in cleanroom. Photolithography, PVD, RIE.

Publications

K.M. Jabon, C.V. Poulton, …, R.P. Millman, D. Atlas, M.R. Watts and E. Timurdogan, "Edge-Coupled Active and Passive Wafer-Scale Measurements on 300mm Silicon Photonics Wafers," in Proceedings of the Optical Fiber Communication Conference (OFC) 2021, OSA Technical Digest, paper M3A.1.

K.M. Jabon, I. Wang, M.A. Popović, "Dispersion-compensated microring photon pair source design with tunable purity-pair rate-heralding efficiency tradeoff," submitted to Conference on Lasers and Electro-Optics (CLEO) 2022.

Languages

Experienced: Python, Java, C#, C++, C, Matlab, Excel. Intermediate: SQL, Verilog, MIPS, HTML, Spanish.