

Paul Soldate

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EXPERIENCE

University of Washington Doctoral Student	Dept. of Mechanical Engineering, Mechatronics, Automation, & Control Systems Laboratory In Progress
<ul style="list-style-type: none">Currently pursuing doctoral studies in precision instrumentation, control systems, and numerical modeling for model-predictive processes	
Boeing Systems Engineer	Boeing Defense, Space, & Security 2022 – 2024
<ul style="list-style-type: none">Developed numerical models to analyze hardware requirements for advanced electro-optical/IR systemsCollaborated with multi-disciplinary teams to develop simulations and deliver data-driven solutions to customersIdentified knowledge gaps and assessed product functionalityPresented results to stakeholders, developed white papers, and met with customers to assess product requirementsAwards: Engineering Excellence, 2023	
Lockheed Martin Systems Engineer	Rotary & Mission Systems 2019 – 2021
<ul style="list-style-type: none">Developed simulations and calibration methods to optimize electro-optical system performancePerformed product lifecycle and root-cause analysis to assess product limitationsPresented results to stakeholders, developed white papers, and met with customers to assess product performance	
Harvard University Research Fellow	Division of Applied Physics, School of Engineering & Applied Science 2017 – 2018
<ul style="list-style-type: none">Developed model-based methods to predict the behavior of patented electrohydrodynamic manufacturing processes [2]Presented findings to faculty/researchers and published original research in peer reviewed journals	
Cornell University Researcher	Dept. of Fiber Science, Nano-Manufacturing Laboratory 2013 – 2017
<ul style="list-style-type: none">Patented new nanomanufacturing processes [1] and developed instrumentation, simulations, and control systems for the Intel Strategic Research Alliances (ISRA) programDesigned integrated systems for materials testing, rheological measurements, and thermal analysis [3]Presented findings at technical conferences, and published results in peer reviewed journals	
California Institute of Technology Research Technician	Dept. of Applied Physics & Materials Science, Space Radiation Laboratory 2009 – 2011
<ul style="list-style-type: none">Developed computational tools to process and analyze data from space-based telescopesDeveloped and tested high-voltage hardware for research in x-ray optics and plasma physics	
Lawrence Berkeley National Laboratory Research Assistant	The Advanced Light Source, X-Ray Optics Laboratory 2008
<ul style="list-style-type: none">Developed calibration methods for the modulation transfer function of surface profilometers for research in optical metrologyPresented findings to faculty/researchers and published original research in peer reviewed journals [4][5]	

EDUCATION

University of Washington	Mechanical Engineering	Ph.D. (In Progress)
University of Washington	Entrepreneurship	Certificate (In Progress)
Cornell University	Applied Physics	M.Eng.
Rensselaer Polytechnic Institute	Physics	B.S.

IP & PUBLICATIONS

- 1. Methods and Systems for Electrospinning**, PCT/US2018/042354, January, 2019.
- 2. [Editor's Pick] Journal of Applied Physics**, Volume 125, Issue 5, Controlled Deposition of Electrospun Nanofibers by Electrohydrodynamic Deflection, February, 2019.
- 3. Springer, Advances in Intelligent Systems and Computing**, Development of an Automated Pressure Sensitive Thermesthesiometer..., 2018.
- 4. SPIE Volume 7448, Advances in XRay/EUV Optics and Components**, IV, ISBN: 9780819477385, Binary Pseudo-random Gratings and Arrays for Calibration of Modulation Transfer Function of Surface Profilometers: Recent Developments, 2009.
- 5. Journal of Vacuum Science and Technology, Microelectronics and Nanometer Sci. B**, Volume 27, Issue 6, pp. 3213-3219, Development of Pseudo-random Binary Arrays for Calibration of Surface Profile Metrology Tools, 2009.

COMPUTATION

Git, Python, C, C++, MATLAB, Linux, LabVIEW, COMSOL, ANSYS, Arduino, CAD, LaTeX, JIRA, Confluence, DOORS