







Luocheng Huang

Graduate Researcher

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Education

Sep 2019 – Ongoing	University of Washington, Seattle <i>Ph.D. in Electrical and Computer Engineering</i>
Jun 2017 – Sep 2019	University of Washington, Seattle <i>Master of Science in Materials Science and Engineering</i>
Sep 2013 – Jun 2017	University of Washington, Seattle <i>Bachelor of Science in Materials Science and Engineering</i>

Experience

Oct 2017 – Jun 2018	University of Washington – DIRECT Program <i>Trainee</i> <ul style="list-style-type: none">Developed Thermoelectric Materials Artificial Neural Network (TEMANN), a python package that can be used to predict Seebeck coefficients for novel materials. https://github.com/Luochenghuang/TEMANN/Completed courses on various topics concerning artificial neural networks including architectures, hyperparameter tuning, regularization, optimization, etc.
Jul 2018 – Jun 2019	American Institutional Assets, Seattle <i>Intern</i> <ul style="list-style-type: none">Successfully developed an organic liquid fertilizer that has anti-bacterial, anti-fungal, and anti-parasitic properties. Also drip irrigation compatible.

Leadership and Teaching Experience

Sep 2019 – Jun 2021	University of Washington, Seattle <i>Teaching assistant</i> <ul style="list-style-type: none">Held quiz sections and office hours for EE215 and EE299.
Sep 2016 – Jun 2017	American Ceramic Society – Keramos UW Chapter <i>President</i> <ul style="list-style-type: none">Organized weekly meetings, and coordinated outreach events.

Technical Skills

Programming	Python, MATLAB, Java, JavaScript, HTML/CSS, L ^A T _E X
Frameworks	Proxmox, HAProxy, Tensorflow, SLURM
Softwares	Zemax OpticStudio, Lumerical FDTD, SolidWorks
Fabrication	ABM Semi-Auto aligner, Heidelberg DWL66 ⁺ , spin coater, Profilometer (DektakXT), EBeam Lithography (JBX6300FS), ellipsometer (Woollam Alpha SE), SEM, Optical Microscopy, Quorum sputter coater, E-beam Evaporator (SEC-600), ICP-Fluorine etcher, Evatec LLS EVO Sputter System, Barrel Asher, SPTS PECVD, Disco Wafer Dicer.

Honors

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| 2016 | Livingston Wernecke Memorial Scholarship, UW
James I. Mueller Scholarship, UW |
| 2014 | Composers Guild 44 th Annual Composition Contest, Utah
Utah Best of Young Composer & 2nd Prize & Best of Age Group, Utah |
| 2013 | National Scholastic Art & Writing Silver Medalist, New York
Utah State Math Contest 1st Team Award & Finalist, Utah |

Publications

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| 2021 | <ul style="list-style-type: none">[1] E. Bayati, A. Wolfram, S. Colburn, L. Huang, and A. Majumdar. “Design of achromatic augmented reality visors based on composite metasurfaces”. In: <i>Applied Optics</i> 60.4 (2021), pp. 844–850.[2] L. Huang, Z. Coppens, K. Hallman, Z. Han, K. F. Böhringer, N. Akozbek, A. Raman, and A. Majumdar. “Long wavelength infrared imaging under ambient thermal radiation via an all-silicon metalens”. In: <i>Optical Materials Express</i> 11.9 (2021), pp. 2907–2914.[3] L. Huang, J. Whitehead, S. Colburn, and A. Majumdar. “Extended Depth of Focus Metalenses for Achromatic Computational Imaging”. In: <i>CLEO: Science and Innovations</i>. Optical Society of America. 2021, STh4O–2.[4] E. Tseng, S. Colburn, J. Whitehead, L. Huang, S.-H. Baek, A. Majumdar, and F. Heide. “Neural Nano-Optics for High-quality Thin Lens Imaging”. In: <i>arXiv preprint arXiv:2102.11579</i> (2021).[5] J. E. Whitehead, A. Zhan, S. Colburn, L. Huang, and A. Majumdar. “Fast Extended Depth of Focus Meta-Optics for Varifocal Functionality”. In: <i>arXiv preprint arXiv:2106.15807</i> (2021). |
| 2020 | <ul style="list-style-type: none">[6] L. Huang, J. Whitehead, S. Colburn, and A. Majumdar. “Design and analysis of extended depth of focus metalenses for achromatic computational imaging”. In: <i>Photonics Research</i> 8.10 (2020), pp. 1613–1623. |
| 2018 | <ul style="list-style-type: none">[7] S. Colburn, A. Zhan, E. Bayati, J. Whitehead, A. Ryou, L. Huang, and A. Majumdar. “Broadband transparent and CMOS-compatible flat optics with silicon nitride metasurfaces”. In: <i>Optical Materials Express</i> 8.8 (2018), pp. 2330–2344. |