



# CHARLOTTE CHANG LE LOH

[cloh@mit.edu](mailto:cloh@mit.edu) | +1 (617)-230-8897

Github: <https://github.com/clott3>

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## RESEARCH INTERESTS

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## EDUCATION

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### Massachusetts Institute of Technology

PhD, Electrical Engineering and Computer Science

2019 – present

Master of Science, Electrical Engineering and Computer Science

2019 – 2021

Thesis Advisor: Prof. Marin Soljačić

### University of Cambridge

2014 – 2016

Master of Advanced Studies, Physics

### Imperial College London

2011 – 2014

Bachelor of Science, Physics with Theoretical Physics

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## PROFESSIONAL EXPERIENCE

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### DSO National Laboratories, Singapore

2016 – 2019

Member of Technical Staff, Functional and Smart Materials Lab

Research Areas: Meta-surfaces for tailoring wavefronts on complex geometries; Origami & Kirigami architectures for volumetric electromagnetic tunability

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## PUBLICATIONS AND PREPRINTS

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1. Surrogate- and invariance-boosted contrastive learning for data-scarce applications in science. (2021) **Charlotte Loh**, Thomas Christensen, Rumen Dangovski, Samuel Kim and Marin Soljačić. 2021. Under Review. arXiv preprint at [arXiv:2110.08406](https://arxiv.org/abs/2110.08406)
2. Scalable and Flexible Deep Bayesian Optimization with Auxiliary Information for Scientific Problems. (2021) Samuel Kim, Peter Lu, **Charlotte Loh**, Jamie Smith, Japser Snoek and Marin Soljačić. Under Review. arXiv preprint [arXiv:2104.11667](https://arxiv.org/abs/2104.11667)

3. Predictive and generative machine learning models for photonic crystals. (2020) Thomas Christensen, **Charlotte Loh**, Stjepan Picek, Domagoj Jakobović, Li Jing, Sophie Fisher, Vladimir Ceperic, John D. Joannopoulos and Marin Soljačić. Nanophotonics 9 (13), 4183-4192

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## AWARDS

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DSO Postgraduate Scholarship	2018
DSO Innovation Award	2018
Corpus Christi Postgraduate Prize in Physics	2016
Runner-up Prize in Second Year Physics Essay	2013
Defence Science & Technology Agency Undergraduate Scholarship (Singapore)	2011

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## PROFICIENCY

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Coding/Software: Python, C++, MATLAB, PyTorch, TensorFlow, LaTeX, Adobe Illustrator, Inkscape

Spoken: English, Mandarin Chinese