

Chrisy Xiyu Du

ASSISTANT PROFESSOR

Department of Mechanical Engineering, University of Hawaii at Mānoa

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Academic Positions

Assistant Professor

DEPARTMENT OF MECHANICAL ENGINEERING, UNIVERSITY OF HAWAII AT MĀNOA

Jan. 2023 - Present

Honolulu, HI, USA

Research Associate

SCHOOL OF ENGINEERING AND APPLIED SCIENCES, HARVARD UNIVERSITY

Sept. 2021 - Dec. 2022

Cambridge, MA, USA

Postdoctoral Fellow

SCHOOL OF ENGINEERING AND APPLIED SCIENCES, HARVARD UNIVERSITY

Sept. 2018 - Aug. 2021

Cambridge, MA, USA

Education

University of Michigan

PHD IN PHYSICS

Ann Arbor, MI, USA

2012 - 2018

Beloit College

BACHELOR OF ARTS IN PHYSICS (WITH DEPARTMENTAL HONORS) AND MATHEMATICS

Beloit, WI, USA

2008 - 2012

Selected Publications

- 5 E. M. King*, **CX. Du***, Q-Z. Zhu, S. S. Schoenholz, M. P. Brenner, *Programmable patchy particles for materials design*, Proceedings of National Academy of Sciences, 121.27, e2311891121 (2024)
- 4 **CX. Du**, HA. Zhang, T. Pearson, J. Ng, P. L. McEuen, I. Cohen, M. P. Brenner, *Programming Interactions in Magnetic Handshake Materials*, Soft Matter 18 (34), 6404-6410. (2022)
- 3 **CX. Du**, G. van Anders, J. Dshemuchadse, P. M. Dodd, S. C. Glotzer, *Inverse Design of Pressure-Induced Solid-Solid Transitions in Colloids*, Molecular Simulation. (2020)
- 2 R. Niu, **CX. Du**, E. Esposito, J. Ng, M. Brenner, P. McEuen, I. Cohen, *Magnetic handshake materials: a new platform for scale invariant programmed self-assembly*, Proceedings of National Academy of Sciences, vol. 116, 49, 24402-24407. (2019)
- 1 **CX. Du**, G. van Anders, R. Newman, S. C. Glotzer, *Shape-driven solid-solid transitions in colloids*, Proceedings of National Academy of Sciences, vol. 114, 20, E3892-E3899. (2017)

Grants & Fellowships

Post-award management, NSF Artificial Intelligence Institute: Dynamic Systems

TOTAL AWARD AMOUNT: \$20,000,000 USD, SUB AWARD AMOUNT: \$1,500,000 USD

University of Washington

Jan. 2023 - July 2026

Recipient, Rackham Predoctoral Fellowship

TOTAL AWARD AMOUNT: \$32,000 USD

University of Michigan

May 2017 - Apr. 2018

Selected Teaching Experience

Mechanical Engineering, University of Hawaii at Mānoa

INSTRUCTOR

Honolulu, HI, USA

Jan. 2023 - Present

Applied Mathematics, Harvard University

TEACHING ASSISTANT

Cambridge, MA, USA

Sept. 2020 - Dec. 2020

Selected Honors & Awards

2024	MGB-SIAM Early Career Fellowship , Society for Industrial and Applied Mathematics	USA
2018	Frank Sevcik Award , Department of Physics, University of Michigan	Ann Arbor, MI, USA
2017	Graduate Student Speaker Award Winner , APS GSNP(Group of Statistical and Nonlinear Physics)	New Orleans, LA, USA
2012	Phi Beta Kappa	USA

Selected Service

Co-Organizer , World Congress on Computational Mechanics 2024 Minisymposium: Design Beyond Optimization: why, what if, and how much?	July 2024
Co-Organizer , SIAM Conference for Mathematical Aspects of Materials Science Minisymposium: Programmable Assembly: Inverse Design of Materials from Discrete Components.	May 2024
Co-Organizer , 2022 MRS Symposium SB05: Emergent Order and Mesoscale Structure Formation in Soft Condensed Matter	Dec. 2022
Committee Member , APS DSOFTE Membership Committee	Apr. 2019 - Sept. 2021
Invited Speaker , APS Delta Phy Webinar on Immigration and Scientists	Sept. 2021
Committee Member , Harvard Faculty of Arts and Sciences Postdoc Association	Sept. 2018 - Aug. 2021
Career Mentoring Fellow , American Physical Society (APS)	Mar. 2020 - Mar. 2021
Co-Chair , Soft Condensed Matter Gordon Research Seminar (GRS)	Aug. 2019
Co-Organizer , APS GSOFTE Short Course on <i>Structures and Order in Soft Matter Physics</i> at the APS March Meeting	Mar. 2019
Committee Member , Department of Physics DEI (D iversity, E quity, I nclusion) Committee, University of Michigan	Sept. 2016 - Aug. 2018

List of Presentations

Selected Invited Talks

- SIAM Conference on Mathematical Aspects of Materials Science, May 19th-23rd **2024**, Pittsburgh, PA, USA.
(6) CX. Du, *Programming Interaction and Assembly with Magnetic Handshake Materials*, May 20th
- SIAM Conference on Optimization, May 31st-June 3rd **2023**, Seattle, WA, USA.
(5) CX. Du, *Programming Soft Materials by Inverse Design*, June 3rd
- APS March Meeting 2023, Mar. 6th-10th **2023**, Las Vegas, NV, USA.
(4) CX. Du, *Programming Soft Materials by Inverse Design*, Mar. 9th
- Aspen Winter Physics Conference: Active Matter in Complex Environments, Jan. 1st-6th **2023**, Aspen, CO, USA.
(3) CX. Du, *Programming Soft Materials by Inverse Design*, Jan. 6th
- APS March Meeting 2021, Mar. 15th-19th **2021**, Virtual, USA.
(2) CX. Du, *Magnetic Handshake Materials: an Integrative Programmable Assembly Platform*, Mar. 18th
- 34th Annual Center for Simulational Physics Workshop, Feb. 22nd-25th **2021**, Virtual, USA.
(1) CX. Du, *Integrating Computational Paradigms for Magnetic Handshake Materials Design*, Feb. 23rd