

Sungjae Chi

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RESEARCH INTEREST

Quantum simulation of strongly correlated quantum systems using ultracold atoms.

EDUCATION

Massachusetts Institute of Technology

Sep 2022 - Present

Ph.D. Student in Physics

- Advisor: Prof. Martin Zwierlein

Princeton University

Sep 2016 - May 2022

A.B. in Physics, *with Highest Honors*

Certificate in Applications of Computing

- Thesis : “Programmable Quantum Simulation with Fermionic Atoms and Polar Molecules”
- Advisor: Prof. Waseem Bakr

Seoul Science High School

Mar 2013 - Feb 2016

PUBLICATIONS

- “Measuring pair correlations in Bose and Fermi gases via atom-resolved microscopy”, R. Yao, **S. Chi**, M. Wang, R. J. Fletcher, M. Zwierlein, *Phys. Rev. Lett.* **134**, 183402 (2025).
- “Observation of chiral edge transport in a rapidly-rotating quantum gas”, R. Yao, **S. Chi**, B. Mukherjee, A. Shaffer, M. Zwierlein, R. J. Fletcher, *Nat. Phys.* **20**, 1726-1731 (2024).
- “Probing site-resolved correlations in a spin system of ultracold molecules”, L. Christakis, J. S. Rosenberg, R. Raj, **S. Chi**, A. Morningstar, D. A. Huse, Z. Z. Yan, W. S. Bakr, *Nature* **614**, 64-69 (2023).
- “Two-dimensional programmable tweezer arrays of fermions”, Z. Z. Yan, B. M. Spar, M. L. Prichard, **S. Chi**, H. Wei, E. Ibarra-García-Padilla, K. R. A. Hazzard, W. S. Bakr, *Phys. Rev. Lett.* **129**, 123201 (2022).
- “Realization of a Fermi-Hubbard Optical Tweezer Array”, B. M. Spar, E. Guardado-Sanchez, **S. Chi**, Z. Z. Yan, W. S. Bakr, *Phys. Rev. Lett.* **128**, 223202 (2022).

HONORS AND AWARDS

Thomas Frank Fellowship

Sep 2022 - Aug 2023

Department of Physics, MIT

Kusaka Memorial Prize in Physics

May 2022

Department of Physics, Princeton University

Phi Beta Kappa Membership

May 2022

Phi Beta Kappa Society

Shapiro Prize for Academic Excellence

Sep 2020

Princeton University

Manfred Pyka Memorial Prize in Physics
Department of Physics, Princeton University

Jun 2017, Jun 2020

Presidential Science Scholarship
Korea Student Aid Foundation (KOSAF)

Sep 2016 - May 2022

45th International Physics Olympiad, Gold Medal
Astana, Kazakhstan

Jul 2014

TEACHING EXPERIENCE

McGraw Center for Teaching and Learning
Study Hall and Individual Tutor

Sep 2019 - May 2022

The Korean Physical Society
Korea Physics Olympiad (KPhO) Team Assistant

Dec 2015 - Jul 2017

WORK EXPERIENCE

Minds Lab Inc.
AI Research Intern

Jun 2019 - Aug 2019

28th Infantry Division, Republic of Korea Army
Army Mechanic

Sep 2017 - May 2019