

SEBASTIAN FERNÁNDEZ-MULLIGAN

333 Cedar St, New Haven, CT 06510
sebastian.fernandez-mulligan@yale.edu

EDUCATION AND EXPERIENCE

Yale University, New Haven CT September 2021 - Present
Doctor of Philosophy, History of Science

Pritzker School of Molecular Engineering, Chicago IL March 2019 - September 2021
Researcher, Quantum Engineering
Research Areas: time-resolved ARPES, Molecular Beam Epitaxy, Quantum Materials
Advisor: Shuolong Yang

University of Chicago, Chicago IL September 2015 - June 2019
Bachelor of Arts, Physics
Degree Honors: Departmental Honors (Physics), General Honors (The College)
Honors Thesis: "Modeling of Unresolved Substructures in Galaxies: A Bayesian Approach"
Advisor: Michael Gladders

PUBLICATIONS

C. Yan, E. Green, R. Fukumori, N. Protic, **S. Fernandez-Mulligan**, R. Raja, R. Erdakos, S.-L. Yang
An Integrated Quantum Material Testbed with Multi-Resolution Photoemission Spectroscopy. *Review of Scientific Instruments* **92**, 113907 (2021)

C. Yan, **S. Fernandez-Mulligan**, R. Mei, S. H. Lee, N. Protic, R. Fukumori, B. Yan, C.-X. Liu, Z. Mao, S.-L. Yang. Origins of electronic bands in the antiferromagnetic topological insulator MnBi₂Te₄. *Physical Review B* **104**, L041102 (2021)

PRESENTATIONS

Inducing Phonons in an Antiferromagnetic Topological Insulator, Quantum Information Science and Engineering Seminar, Chicago, March 2021.

AWARDS AND ACHIEVEMENTS

Summer Research Fellow, University of Chicago (2017, 2018)

Award given to fund independent summer research (\$4,000)

Jeff Metcalf Summer Research Grant (2018)

Award given to fund summer employment and student research (\$4,000)

University Scholar Award, University of Chicago (2015-2019)

Merit based scholarship for incoming students

Deans List (2017-2018, 2018-2019)

TEACHING

PHYS 123: General Physics III — Teaching Assistant, Spring 2019

SERVICE AND ACTIVITIES

Manuscript review for *Physical Review B*, *Physical Review Letters*

Scientific mentor for Chicago Public School STEM fair project — 2020

Demo-Experimenter at the science education event Physics with a BANG! — 2019

ACT Prep Tutor to Chicago Public School Students — 2018, 2019

LANGUAGES AND SKILLS

English: Native, Fluent

Spanish: Fluent

Russian: Reading Proficiency

Technical Languages: C++, FORTRAN(90), Igor, python, R, MATLAB