

Yarone Meir Tokayer

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EDUCATION

YALE UNIVERSITY | NEW HAVEN, CT

Ph.D. Physics | exp. 2027

Thesis: "Probing the dynamical structure of dark matter halos using N-body and analytical techniques"; Advisor: Frank van den Bosch

COLUMBIA UNIVERSITY | NEW YORK, NY

M.A., Philosophical Foundations of Physics | Feb. 2020

Thesis: "Probability in Everettian Quantum Mechanics"; Advisor: David Z. Albert

THE COOPER UNION | NEW YORK NY

B.S., Engineering, Mathematics | May 2014

Summa cum laude; GPA: 3.9; Dean's List all semesters

RESEARCH

AREAS OF INTEREST: cosmology • gravitational dynamics • dark matter gravitational lensing • supermassive black holes• X-ray astronomy

5 refereed journal publications; 1 in prep.; 3 conference posters

A complete list of publications can be found on my [Google Scholar page](#)

Further details of undermentioned research can be found in my [academic CV](#)

YALE UNIVERSITY | PH.D. CANDIDATE

Jul. 2021 – Present | New Haven, CT

Key aspects: N-body simulations; analytical simulations; curve fitting algorithms; spectral fitting; simulations of spectra; data processing and visualization; spectral analysis of X-ray telescope data

COLUMBIA UNIVERSITY | RESEARCH ASSISTANT

Aug. 2019 – Dec. 2020 | New York, NY

Key aspects: timing analysis, spectral analysis, and imaging analysis of X-ray telescope data; fabrication and testing of detector arrays for balloon-borne dark matter experiment

MOTOR NEURON CENTER, COLUMBIA | RESEARCH ASSISTANT

Sep. 2013 – May. 2014 | New York, NY

Key aspects: immunohistochemistry, stem cell-derived neuron cultures

TEACHING

LEITNER OBSERVATORY AND PLANETARIUM | PRESENTER

Jan, 2024 – Present | New Haven, CT

YALE UNIVERSITY | GRADUATE TEACHING FELLOW

Sep. 2021 – Present | New Haven, CT

SAR HIGH SCHOOL | PHYSICS TEACHER AND ADVISOR

Sep. 2014 – Jun. 2019; Jan. 2021 – Jun. 2021 | Riverdale, NY

NAALEH HIGH SCHOOL FOR GIRLS | STEM TEACHER

Sep. 2019 – Jun. 2020 | Fair Lawn, NJ

THE COOPER UNION | TEACHING ASSISTANT

Fall 2011 | New York, NY

SKILLS & LANGUAGES

PROGRAMMING

Python (esp. pkgs for computation, data, visualization, and astronomy) • C/C++ FORTRAN • MATLAB • HTML/CSS

SOFTWARE & TOOLS

Mathematica • Latex • LabVIEW
N-body codes • NASA HEASoft • Excel

DESIGN TOOLS

Arduino • Microchip PIC • AutoCAD
SolidWorks • laser cutting

TELESCOPES

data: *Chandra* • *Swift*, *NuSTAR* • *NICER*
observing: Keck • Palomar

SPOKEN LANGUAGE

English (native) • Hebrew (fluent)
German (basic) • Yiddish (basic)

COMMUNITY

SERVICE

Slifka Center Board of Trustees ('23-'24)
Physics faculty search committee ('23)

OUTREACH

Astronomy on tap
(*New Haven, CT*)
Super Science Showdown
(*Yale Open Labs*)
Engineers as Teachers
(*Iridescent & Cooper Union*)
High school talks: links [here](#) and [here](#)

AWARDS

Leigh Page Award (teaching), 2025
(*Yale University Physics Dept.*)
Teacher Award, 2017
(*Robotraffic Competition, Technion, Israel*)
Entrance Scholarship, 2016
(*Philosophical Foundations of Physics, Columbia*)
Tau Beta Pi
(*Engineering Honors Society*)
Goodman Prize (essay), 2013
(*Cooper Union*)

LINKS

Professional Webpage
[LinkedIn:// yarone-tokayer](#)
[Github:// yaronetokayer](#)