

Yarone Meir Tokayer

yarone.tokayer@yale.edu

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 EXPERIENCE

AREAS OF INTEREST: cosmology • galactic 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 of X-ray telescope
data; fabrication and testing of detector arrays for balloon-born 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 | 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

NAAALEH HIGH SCHOOL FOR GIRLS | STEM TEACHER

Sep. 2019 – Jun. 2020 | Fair Lawn, NJ

THE COOPER UNION | TEACHING ASSISTANT

Fall 2021 | New York, NY

SKILLS & LANGUAGES

PROGRAMMING

Python (esp. pkgs for computation, data,
visualization, and astronomy)

C/C++ • MATLAB • HTML

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

Teacher Award, 2017

(Robottraffic Competition, Technion, Israel)

Entrance Scholarship, 2016

(Philosophical Foundations of Physics, Columbia)

Tau Beta Pi

(Engineering Honors Society)

Goodman Prize, 2013

(Cooper Union)

LINKS

Professional Webpage

ORCID:// [0000-0002-0430-5798](#)

Github:// [YaroneTokayer](#)