

# 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  
(Robottraffic 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](#)