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

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 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 | 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 2021 | New York, NY

SKILLS & LANGUAGES

PROGRAMMING
Python (esp. pkgs for computation, data, visualization, and astronomy)
C/C++ • 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

Teacher Award, 2017
(Robotraffic 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**