

Chengcheng Xin

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EDUCATION

Columbia University <i>Ph.D., in Astronomy (Advisor: Professor Zoltan Haiman)</i>	New York, NY Sep 2020 – present
Columbia University <i>M.S., in Astronomy</i> <i>B.S., in Applied Physics</i>	New York, NY October 2022 May 2019

PUBLICATIONS

7. Z. Haiman, **C. Xin**, et al. “Massive Black Hole Binaries as LISA Precursors in the Roman High Latitude Time Domain Survey” (2023).
<https://ui.adsabs.harvard.edu/abs/2023arXiv230614990H/abstract>.
6. **C. Xin**, Z. Haiman, R. Perna, Y. Wang and T. Ryu. “Tidal Peeling Events: low-eccentricity tidal disruption of a star by a stellar-mass black hole” (2023). Submitted.
<https://ui.adsabs.harvard.edu/abs/2023arXiv230312846X/abstract>.
5. **C. Xin**, B. D. Metzger, and M. Renzo. “Dissecting the microphysics behind the metallicity-dependence of massive stars radii” (2022). *MNRAS*, 516, 4, 5816-5831
<https://doi.org/doi:10.1093/mnras/stac2551>.
4. **C. Xin**, and Z. Haiman. “Ultra-short-period massive black hole binary candidates in LSST as LISA ‘verification binaries’ ” (2021). *MNRAS*, 506, 2, 2408-2417
<https://doi.org/doi:10.1093/mnras/stab1856>.
3. **C. Xin**, C. M. F. Mingarelli, and J. S. Hazboun. “Multimessenger Pulsar Timing Array Constraints on Supermassive Black Hole Binaries Traced by Periodic Light Curves” (2021). *ApJ*, 915, 2, 97 <https://doi.org/doi:10.3847/1538-4357/ac01c5>.
2. **C. Xin**, M. Charisi, Z. Haiman, D. Schiminovich, M. J. Graham, D. Stern, and D. J. D’Orazio. “Testing the relativistic Doppler boost hypothesis for the binary candidate quasar PG1302-102 with multiband Swift data” (2020). *MNRAS*, 496, 2, 1683-1696
<https://doi.org/doi:10.1093/mnras/staa1643>.
1. **C. Xin**, M. Charisi, Z. Haiman, D. Schiminovich. “Correlation between optical and UV variability of a large sample of quasars” (2020). *MNRAS*, 495, 1, 1403-1413
<https://doi.org/doi:1093/mnras/staa1258>.

RESEARCH EXPERIENCE

Graduate Research Assistant <i>Columbia University</i>	Fall 2020 – present New York, NY
2022 – 2023: Micro-tidal disruption events in AGN disks - research with Prof. Zoltán Haiman. 2021 – 2022: Metallicity-dependence in stellar radii - research with Prof. Brian Metzger. 2020 – 2021: Detectability of LISA ‘Verification Binaries’ - research with Prof. Zoltán Haiman.	
Columbia Astronomy Lab Research Assistant <i>Columbia University</i>	Spring 2020 – Summer 2020 New York, NY
2019 – 2020: PTA constraints on SMBHBs - research with Prof. Chiara Mingarelli.	
Undergraduate Research Assistant <i>Columbia University</i>	2016 – 2019 New York, NY

2018–2019: UV-optical correlations in quasar light-curves - research with Prof. Zoltán Haiman and David Schiminovich.
 2018: Testing Doppler boost for SMBHB candidate PG1302-102 - research with Prof. Zoltán Haiman and David Schiminovich.

SELECTED TALKS AND PRESENTATIONS

AAS HEA Division Meeting	26-30 March 2023
<i>Talk: Tidal Peeling Events: low-eccentricity tidal disruption of a star by a stellar-mass black hole</i>	<i>Hilton Waikoloa Village, Waikoloa, Hawaii</i>
LISA AstroWG Meeting	22-24 Jun, 2022
<i>Talk: Ultra-short-period massive black hole binary candidates in LSST as LISA ‘verification binaries’</i>	<i>Virtual University of Birmingham</i>
YAGN21 Conference	1-3 Sep, 2021
<i>Talk: Ultra-short-period massive black hole binary candidates in LSST as LISA ‘verification binaries’</i>	<i>Virtual Niels Bohr Institute, Denmark</i>
IPTA Catch-up Meeting	22-23 Sep, 2020
<i>Talk: A toolkit for multi-messenger gravitational wave astrophysics with PTA</i>	<i>Virtual Australia Telescope National Facility</i>
NANOGrav Teleconference	9 April, 2020
<i>Talk: The Correlation between Optical-UV Variability of Quasars</i>	<i>Virtual</i>
Galaxies Group Meeting	17 Jan, 2020
<i>Talk: Correlation between optical and UV variability of quasars</i>	<i>Flatiron Institute (CCA), NY</i>
NANOGrav Fall Conference	14-16 Oct, 2019
<i>Talk: Multi-wavelength Test of Relativistic Doppler Boost for PG1302-102 with Multi-band Swift Data</i>	<i>Ithaca, NY</i>
Journal Club at Space Science Telescope Institute	6 Dec, 2019
<i>Talk: Part I: Testing Doppler Boost Model for Compact Binary Candidate PG1302-102; Part II: The Correlated Optical/UV Variability of Quasars</i>	<i>Baltimore, MD</i>

TEACHING, OUTREACH & OTHER EXPERIENCE

Teaching Assistant & Instructor	Fall 2020 – present
<i>Columbia University</i>	<i>New York, NY</i>
TA for Applied Electromagnetism (APPH3300), various TA roles for astronomy courses (ASTR3273, ASTR2001, ASTR2002, ASTR1753, ASTR1403, etc.), instructor for Astronomy Laboratory (ASTR1903)	
Volunteering	Fall 2018 – present
<i>Columbia University</i>	<i>New York, NY</i>
Mentor students through Women in Science at Columbia group, and Math Reading Team for kindergartners at Harlem Elementary School.	

PROGRAMING SKILLS

Computing: Python, MATLAB, Fortran, LaTeX, HPC, etc.