Nick Choksi

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Education

Present **Ph.D. Candidate in Astrophysics**, *University of California*, *Berkeley*. Advised by Eugene Chiang.

2020 **M.A. Astrophysics**, *University of California*, *Berkeley*.

2019 **B.A. Physics; B.A. Astrophysics**, *University of California*, *Berkeley*.

Research interests

theoretical astrophysics with an emphasis on planet formation, gravitational dynamics, circumstellar disks, stellar cluster formation

Publications

12 first-authored publications with 342 citations and $h = 9$
16 total publications with 571 citations and $h = 11$

1. **Choksi** & Chiang, "Spectral Energy Distributions of Disc-Embedded Accreting Protoplanets," MNRAS 537 2945 (2025), arXiv 2403.10057.
2. Dai, Goldberg, Batygin, van Saders, Chiang, **Choksi**, et al., "The Prevalence of Resonance Among Young, Close-in Planets," ApJ 168, 239 (2024), arXiv 2406.06885.
3. Li, Chiang, **Choksi**, and Dai, "The Resonant Remains of Broken Chains from Major and Minor Mergers," ApJ submitted, arXiv 2408.10206.
4. **Choksi**, Chiang, Fung, & Zhu, "The maximum accretion rate of a protoplanet: how fast can runaway be?," MNRAS 525, 2806 (2023), arXiv 2305.01684.
5. **Choksi** & Chiang, "Exciting the TTV Phases of Resonant Sub-Neptunes," MNRAS 522, 1914 (2023), arXiv 2211.15701.
6. Rein & **Choksi**, "An Implementation of Stochastic Forces for the N-body Code `REBOUND`," RNAAS 6, 5 (2022), arXiv 2205.06757.
7. **Choksi** & Chiang, "Testing planet formation from the ultraviolet to the millimeter," MNRAS 510, 1657 (2021), arXiv 2110.00029.
8. **Choksi**, Chiang, Connolly, Gainsforth, and Westphal, "Chondrules from high-velocity collisions: thermal histories and the agglomeration problem," MNRAS 503, 3297 (2021), arXiv 2009.10093.
9. **Choksi** & Chiang, "Sub-Neptune Formation: The View from Resonant Planets," MNRAS 495, 4192 (2020), arXiv 2003.03388.
10. **Choksi** & Kruijssen, "On the initial mass-radius relation of stellar clusters," MNRAS 507, 5492, arXiv 1912.05560.
11. **Choksi** & Gnedin, "Origins of scaling relations of globular cluster systems," MNRAS 488, 5409 (2019), arXiv 1905.05199.
12. **Choksi** & Gnedin, "Formation of Globular Cluster Systems II: Impact of the cutoff of

the cluster initial mass function," MNRAS 486, 331 (2019), arXiv 1810.01888.
13. **Choksi**, Volonteri, Colpi, Gnedin, and Li, "The star clusters that make black hole binaries across cosmic time," ApJ 873, 100 (2019), arXiv 1809.01164.
14. El-Badry, Quataert, Weisz, **Choksi**, and Boylan-Kolchin, "The formation and hierarchical assembly of globular cluster populations," MNRAS 482, 4528 (2018), arXiv 1805.03652.
15. **Choksi**, Gnedin, and Li, "Formation of globular cluster systems: from dwarf galaxies to giants," MNRAS 480, 2343 (2018), arXiv 1801.03515.
16. **Choksi**, Behroozi, Volonteri, Schneider, Ma, Silk, and Moster, "Recoiling supermassive black hole escape velocities from dark matter halos," MNRAS 472, 1526 (2017), arXiv 1707.06220.

Conference talks

1. Gas Accretion in Planet Formation, Heidelberg, 2025
2. Exoplanets V, Leiden, 2024 (**two** accepted talks)
3. Open problems in the astrophysics of gas giants, Patagonia, 2023
4. Disk hydrodynamics and planet formation, Tucson, 2023
5. Other Worlds Laboratory Summer Program, Santa Cruz, 2023
6. Bay Area Exoplanets Meeting, Santa Cruz, 2023
7. Exoplanet Demographics, 2020
8. Bay Area Exoplanets Meeting, 2020
9. Formation of stars and massive clusters in dwarf galaxies over cosmic time, Leiden, 2019 (**invited**)
10. Formation of globular clusters at high and low-z, Sesto, 2018
11. Galaxy formation workshop, Santa Cruz, 2017
12. Massive black holes in evolving galaxies, Institut d'Astrophysique Paris, 2017

Invited Seminars

1. Theory Seminar, CIERA, 2025
2. Exoplanet Seminar, Princeton, 2024
3. TAPIR Seminar, Caltech, 2024
4. Trottier Space Sciences Seminar, McGill, 2023
5. Star and Planet Formation Seminar, Hawaii IfA, 2023
6. CfA Seminar, Harvard, 2023
7. Lunch Seminar, Indiana University, 2022

Honors, Awards, and Grants

2024	Robert J. Trumpler Award, Berkeley Astronomy
2024	UC Dissertation-Year Fellow ($40,000)
2019-2024	NSF Graduate Research Fellowship
2020	Esper Larsen Jr. Grant, Berkeley Earth & Planetary Science Department ($20,000)

2021 H2H8 Fellow ($10,000)

2019 Student commencement speaker, Berkeley Astronomy

2019 Finalist, Hertz Fellowship

2018 Isidore Pomerantz Award, Berkeley Physics

Service and Outreach

2019 - Current **Referee**, *MNRAS, ApJ.*

2021 **Team member, Berkeley Discover Astronomy & Physics**. Collaborator on successful proposal ($800,000) to revamp undergraduate teaching and mentoring in physics & astronomy at Berkeley, with an eye towards improving DEI outcomes.

2021 **Lead organizer**, *AstroJustice*, Weekly DEI journal club..

2021 **Research mentor**, *Lister Chen*, Research topics: TTVs, planetary dynamics.

2019 - 2021 **Mentor**, *Jesus Martinez, Synclaire Moragne, Shengzhu Wang*, Professional development mentoring organized by the MPS Scholars program.

2019 **Mentor**, *Mine Gocken*, Physics department reading program..

Teaching

5 semesters **Graduate student instructor**, *Astrophysics I & II, Astronomy for non-majors.*