

# David Vizgan

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## EDUCATION

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### University of Illinois at Urbana-Champaign

*PhD, Astronomy*

- Research Advisor: Joaquin Vieira

August 2022 —

Urbana, IL

### Wesleyan University

*BA, Astronomy and Physics*

- High Honors in Astronomy; double BA degree with Physics; 3.75/4.0 GPA
- Undergraduate Thesis Advisor: A. Meredith Hughes

May 2021

Middletown, CT

## RESEARCH WORKS

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### First-author publications (3):

- **Vizgan, D.**; Greve, T. R.; Olsen, K. P.; Zanella, A.; Narayanan, D.; Davé, R.; Magdis, G. E.; Popping, G.; Valentino, F.; Heintz, K. E.; “Tracing Molecular Gas in  $z = 6$  Galaxies with [CII]”, 2022, ApJ 929, 92
- **Vizgan, D.**; Hughes, A. M.; Carter, E. S.; Flaherty, K. M.; Pan, M.; Chiang, E.; Schlichting, H.; Wilner, D. J.; Andrews, S. M.; Carpenter, J. M.; Moór, A.; MacGregor, M. A.; “Multiwavelength Vertical Structure in the AU Mic Debris Disk: Characterizing the Collisional Cascade”, 2022, ApJ 935, 131
- **Vizgan, D.**; Heintz, K. E.; Greve, T. R.; Narayanan, D.; Davé, R.; Olsen, K. P.; Popping, G.; Watson, D.; “Investigating the [CII]-to-HI conversion factor and the HI gas budget of galaxies at  $z=6$  with hydrodynamical simulations”, 2022, ApJL 939, 1

### n<sup>th</sup>-author publications (8):

- Wilson, S. N.; Heintz, K.E.; *et al.*, ... **Vizgan, D.**; “A high-redshift calibration of the [OI]-to-HI conversion factor in star-forming galaxies”, 2023, eprint arXiv:2305.05213 (submitted to A&A)
- Chapman, S. C.; Hill, R.; *et al.*, ... **Vizgan, D.** ... “Brightest Cluster Galaxy Formation in the  $z=4.3$  Protocluster SPT2349-56: Discovery of a Radio-Loud AGN”, 2023, eprint arXiv:2301.01375 (submitted to ApJ)
- Apostolovski, Y.; Aravena, M.; *et al.* ... **Vizgan, D.**; Weiss, A.; “Extended Lyman-alpha emission towards the SPT2349-56 protocluster at  $z=4.3$ ”, 2023, eprint arXiv:2301.01328
- Murmu, C.; Olsen, K. P.; Greve, T. R.; *et al.*, ... **Vizgan, D.**; Narayanan, D.; “Revisiting the [CII]158um line-intensity mapping power spectrum from the EoR using non-uniform line-luminosity scatter, 2023, MNRAS 518, 3074
- Reuter, C.; Spilker, J. S.; Vieira, J. D.; *et al.*, ... **Vizgan, D.**; “The Rest-Frame Submillimeter Spectrum of High Redshift, Dusty, Star-Forming Galaxies from the SPT-SZ Survey”, 2022, eprint arXiv:2210.11671 (submitted to ApJ)
- Gururajan, G.; Béthermin, M.; Theulé, P.; *et al.*, ... **Vizgan, D.**; Weiss, A.; “High resolution spectral imaging of CO(7-6), [CI](2-1), and continuum of three high- $z$  lensed dusty star-forming galaxies using ALMA”, 2022, A&A 663, A22
- Spilker, J. S.; Hayward, C. C.; Marrone, D. P.; *et al.*, ... **Vizgan, D.**; Weiss, A.; “Chaotic and Clumpy Galaxy Formation in an Extremely Massive Reionization-era Halo”, 2022, ApJL 929, 3
- Olsen, K. P.; Burkhart, B.; Mac Low, M.; *et al.*, ... **Vizgan, D.**; ...; “SÍGAME v3: Gas Fragmentation in Postprocessing of Cosmological Simulations for More Accurate Infrared Line Emission Modeling”, 2021, ApJ 922, 88

## SELECTED FELLOWSHIPS AND AWARDS

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### NSF Graduate Research Fellow

*National Science Foundation*

- Awarded up to three years of financial support (\$37,000/yr) by the NSF to “ensure the quality, vitality, and

March 2023 —

diversity of the scientific and engineering workforce of the United States.”

**Fulbright Alumni Ambassador**

*U.S. Department of State*

**January 2023 —**

*Washington, D. C.*

- Selected and trained by the Institute of International Education (IIE) to represent the Fulbright Program at college campuses, academic conferences, and at Fulbright events/webinars/info sessions

**Fulbright U.S. Student Program**

*U.S. Department of State*

**August 2021 — June 2022**

*Copenhagen, Denmark*

- Visiting researcher at the Cosmic Dawn Center; visiting student at the Danish Technical University
- Obtained several hours on the Nordic Optical Telescope (NOT) to observe high-redshift protoclusters

**Littell Prize**

*Department of Astronomy, Wesleyan University*

**May 2021**

*Middletown, CT*

- Awarded for “excellence in one or more advanced courses in astronomy”

**Chambliss Astronomy Achievement Student Award**

*American Astronomical Society*

**April 2020**

*Honolulu, HI*

- Awarded at the 235th Meeting of the American Astronomical Society in recognition of “exemplary research”

**DAWN-IRES Scholar**

*Department of Astronomy, Wesleyan University*

**June 2019 — August 2019**

*Copenhagen, Denmark*

- Researched high-redshift galaxies on an NSF-funded REU at the Cosmic Dawn Center for 10 weeks

**SELECTED CONFERENCES**

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**Evolution of Gas around Galaxies Workshop**

**July-August 2023**

*Stanley, ID*

**Transient and Variable Universe at NCSA**

**July 2023**

*Urbana, IL*

**Copenhagen DAWN Conference**

**June 2022**

*Copenhagen, Denmark*

**DAWN Summit**

**June 2022**

*Copenhagen, Denmark*

**Research Visit, Chalmers University of Technology**

**May 2022**

*Gothenburg, Sweden*

**EU-US Young Leaders Summit**

**April 2022**

*Brussels, Belgium*

**Annual Danish Astronomy Meeting 2022**

**May 2022**

*Fredericia, Denmark*

**DAWN Summit**

**September 2021**

*Copenhagen, Denmark*

**237th Meeting of the American Astronomical Society**

**January 2021**

*Virtual*

## OTHER WORK

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### 64: A Chess Podcast

March 2021 —

- 50,000+ plays across all streaming platforms; sponsored by a major chess company (Chessable)
- Interviewed guests include the current coach of the World Chess Champion; a current top-10 chess player in the world; several popular chess streamers on Twitch; trailblazers for minority groups in chess
- Recorded, edited, produced, and published entirely by me; podcast also maintains a strong social media presence

### Office Assistant, Dr. Vladimir Gotlieb M.D.

Summer 2020 — Summer 2022

- On most Sundays over the past three summers, I worked at my uncle's hematology clinic in Queens, NY
- Handled front-desk duties and communication between the doctor's office and testing laboratories

## SKILLS & INTERESTS

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- **Skills:** Python; LaTeX; Unix; Mathematica; data modeling; data reduction; data calibration; data analysis; machine learning methods; Microsoft Office; Logic Pro X; Adobe Photoshop; research writing & presentation
- **Languages:** English, Hebrew, Danish
- **Interests:** Chess; classical music; heavy metal; podcasting; stand-up comedy; sci-fi; Lord of the Rings