# VEDANT CHANDRA

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ORCID: 0000-0002-0572-8012 | Publications: ADS Library

## Professional Appointments

**Graduate Student, Center for Astrophysics | Harvard & Smithsonian** — September, 2021–Present

**Research Intern, Space Telescope Science Institute** — June, 2020–May, 2021

**Research Assistant, Johns Hopkins University** — November, 2018–May, 2021

## Education

**Harvard University** — 2021–Present

- A.M., Ph.D. Astronomy & Astrophysics (intended)

**Johns Hopkins University** — 2017–2021

- B.S. Physics & Applied Mathematics, minor in Space Sciences

## Awards & Honors

**James Mills Peirce Fellowship, Harvard University** — 2021

**Chambliss Medal, American Astronomical Society** — 2021

$\Sigma\,\Pi\,\Sigma$ — 2020

**Summer Student Fellowship, JHU IDIES** — 2020

**Provost's Undergraduate Research Award, JHU** — 2019

**Dean's Undergraduate Research Award, JHU** — 2019

**Dean's List 7/7 Semesters, JHU** — 2017-2021

## Grant Allocations

**STScI JWST Discretionary Fund ($42,740)** — 2020

- "The Initial Mass Function of Resolved Stellar Populations in the Local Group"
- PI: Mario Gennaro, Co-I: Vedant Chandra

**Various Undergraduate Research Grants ($13,500)** — 2019-2020

- PI: Vedant Chandra, Co-Is: Nadia Zakamska, Hsiang-Chih Hwang, Kevin C. Schlaufman

## Selected Press Coverage

**ScienceNews Magazine** — August, 2020

- "Paradoxically, white dwarf stars shrink as they gain mass"

**JHU Press Release** — July, 2020

- "Johns Hopkins astrophysicists observe long-theorized quantum phenomena"

## Invited Talks

**Summer Symposium, Space Telescope Science Institute** — July, 2020

- "Fitting the Stellar Birth Function of Resolved Stellar Populations with Approximate Bayesian Computation", 19:30 onwards.

**Summer Symposium, Space Telescope Science Institute** August, 2019

- "White Dwarf Spectroscopy with Machine Learning", 21:00 onwards.

**Annual Symposium, Maryland Space Grant Consortium** July, 2019

- "White Dwarf Astronomy with Machine Learning".

## Poster Presentations

**237th Meeting of the American Astronomical Society** January, 2021

- "Resolved Stellar Populations in the Era of JWST and Roman", iPoster

**IDIES and MINDS Annual Symposium** October, 2020

- "Hunting for Metal-Poor Main-Sequence Stars in SDSS", awarded Best Poster.

**NASA HRP Investigators Workshop** January, 2020

- "Multivariate Analysis of Human Health and Performance in Spaceflight Simulation"

**IDIES Annual Symposium** October, 2019

- "Characterizing White Dwarf Spectra with Neural Networks"

**JHU DREAMS Conference** April, 2019

- "Hunting for Binary White Dwarf Stars with Spectroscopic Analysis"

## Observatory Allocations

**As Principal Investigator:**

**Gemini Observatory, GMOS, 4.5 hours** 2021

- "Double White Dwarf Binaries from SDSS-V"

**Apache Point Observatory 3.5 m, ARCTIC, 12 hours** 2021

- "Monitoring Circumstellar Debris around a Runaway SN Ia Donor"

**Apache Point Observatory 3.5 m, DIS, 23 hours** 2021

- "Peculiar Hypervelocity Stars from Gaia EDR3"

**Apache Point Observatory 3.5 m, DIS, 10 hours** 2020

- "Time-resolved Radial Velocities of Massive White Dwarfs in Close Binary Systems"

**As Co-Investigator:**

**Neils Gehrels Swift Observatory, UVOT, 1 hour** 2021

**Gemini Observatory, GMOS, 8 hours** 2020

**Apache Point Observatory 3.5 m, DIS, 10 hours** 2020

## Undergraduate Research Mentorship

**John Magardino (JHU Physics & Astronomy)** Summer, 2020

**Felix Yu (JHU Physics & Astronomy)** Summer, 2020

**Rebecca Mosier (JHU Human Spaceflight Lab)** 2019-2020

**Jessica Nguyen (JHU Human Spaceflight Lab)** 2019-2020

## Teaching

**Teaching Assistant, 360.133 Great Books at Hopkins, JHU** Fall, 2018

**Teaching Assistant, 171.101 General Physics I, JHU** Summer, 2018

## Professional Service

**Member, Sloan Digital Sky Survey V** 2020-Present

## Outreach

**Head of Logistics, JHU MedHacks Hackathon** 2018-2019

**Volunteer, JHU Physics Spring Fair** 2018-2019

**Contributing Writer, space.stackexchange.com** 2014-2018

## References

**Professor Charlie Conroy, Harvard University** (cconroy@cfa.harvard.edu)

**Professor Nadia L. Zakamska, Johns Hopkins University** (zakamska@jhu.edu)

**Dr Mario Gennaro, Space Telescope Science Institute** (gennaro@stsci.edu)

## Peer-Reviewed Publications

4. **Vedant Chandra**, Hsiang-Chih Hwang, Nadia L. Zakamska, Boris T. Gänsicke, J.J. Hermes, Axel Schwope, Carles Badenes, Gagik Tovmassian, Evan B. Bauer, Dan Maoz, Matthias R. Schreiber, Odette F. Toloza, Keith P. Inight, Hans-Walter Rix & Warren R. Brown (2021)
"A 99-minute Double-lined White Dwarf Binary from SDSS-V"
*The Astrophysical Journal, in press*

3. **Vedant Chandra** & Kevin C. Schlaufman (2021)
"Searching for Low-mass Population III Stars Disguised as White Dwarfs"
*The Astronomical Journal, 161, 197*

2. **Vedant Chandra**, Hsiang-Chih Hwang, Nadia L. Zakamska & Sihao Cheng (2020)
"A Gravitational Redshift Measurement of the White Dwarf Mass–Radius Relation"
*The Astrophysical Journal, 899, 146*

1. **Vedant Chandra**, Hsiang-Chih Hwang, Nadia L. Zakamska & Tamás Budavári (2020)
"Computational Tools for the Spectroscopic Analysis of White Dwarfs"
*Monthly Notices of the Royal Astronomical Society, 497, 2688*

## Co-Authored Publications

1. Evan Petrosky, Hsiang-Chih Hwang, Nadia L. Zakamska, **Vedant Chandra** & Matthew Hill (2021)
"Variability, periodicity and contact binaries in WISE"
*Monthly Notices of the Royal Astronomical Society, 503, 3975*

## Other Published Works

**astrobites** September, 2020

- "Measuring the White Dwarf Mass-Radius Relation using Thousands of Stars"