

Ho Sang (Leon) Chan

CURRICULUM VITAE

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🐙 GitHub | 🔗 LinkedIn | 🏠 ADS

RESEARCH STATEMENT

I am an astrophysicist interested in a wide range of high-energy astrophysics problems, including but not limited to black holes, accretion discs, collapsars, supernovae, and compact objects. To address these problems, I performed numerical simulations, and sometimes semi-analytical calculations. I also developed my own numerical tools to solve complicated astrophysical fluid dynamic problems

EDUCATION

University of Colorado <i>Doctor of Philosophy in Astrophysics</i> Major GPA: 4.000/4.000	Boulder, Colorado 08/2023 – Present
The Chinese University of Hong Kong <i>Master of Philosophy in Physics</i> Major GPA: 3.869/4.000	Shatin, Hong Kong 09/2019 – 03/2022
The Chinese University of Hong Kong <i>Bachelor of Science in Physics, First Class Honours</i> Major GPA: 3.859/4.000	Shatin, Hong Kong 08/2015 – 07/2019

WORKING EXPERIENCE

Research Associate <i>Centre for Advances in Reliability and Safety</i>	Hong Kong Science Park 07/2022 – 06/2023
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PUBLICATIONS

Journal Publications

- Chan, H. S.**, Chan, C. K., Prather, B. S., Wong, G. N., & Gammie, C. (2023). The 230 GHz Variability of Numerical Models of Sagittarius A* I. Parameter Surveys on Varying the Ion-to-electron Temperature Ratio Under Strongly Magnetized Conditions. *The Astrophysical Journal* 964.1 (2024): 17.
- Chan, H. S.**, Chu, M. C., & Leung, S. C. (2022). *Accretion-induced Collapse of Dark Matter-admixed Rotating White Dwarfs: Dynamics and Gravitational-wave Signals*. *The Astrophysical Journal*, 945(2), 133.
- Chan, H. S.**, Chu, M. C., & Leung, S. C. (2022). *Dark Matter-admixed Rotating White Dwarfs as Peculiar Compact Objects*. *The Astrophysical Journal*, 941(2), 115.
- Chan, H. S.**, Villar, A., Cheung, S. H., Ho, S., O'Grady, A. J., Drout, M. R., & Renzo, M. (2022). *Searching for Anomalies in the ZTF Catalog of Periodic Variable Stars*. *The Astrophysical Journal*, 932(2), 118.
- Cheung, S. H., Villar, V.A., **Chan, H. S.**, & Ho, S. (2021). *A New Classification Model for the ZTF Catalog of Periodic Variable Stars*. *Research Notes of the AAS*, 5(12), 282.
- Chan, H. S.**, Chu, M. C., Leung, S. C., & Lin, L. M. (2021). *Delayed Detonation Thermonuclear Supernovae with an Extended Dark Matter Component*. *The Astrophysical Journal*, 914(2), 138.

Conference Proceedings

Chan, H. S., Cheung, S. H., Villar, A., & Ho, S. (2021). *A Convolutional Autoencoder-Based Pipeline for Anomaly Detection and Classification of Periodic Variable Stars*. NeurIPS 2021 Machine Learning and the Physical Sciences Workshop.

Chan, H. S., Cheung, S. H., Villar, A., & Ho, S. (2021). *Searching for the Weirdest Stars: A Convolutional Autoencoder-Based Pipeline for Detecting Anomalous Periodic Variable Stars*. NeurIPS 2021 Deep Generative Models and Downstream Applications Workshop.

CONFERENCE CONTRIBUTIONS AND TALKS

Invited Talks

Seminar, the Chinese University of Hong Kong	Shatin, Hong Kong 05/2024
Astronomy Journal Club, the Chinese University of Hong Kong	Shatin, Hong Kong 03/2022

Contributed Talks

244th American Astronomy Society Meeting	Madison, WI 06/2024
240th American Astronomy Society Meeting	Pasadena, CA 06/2022
Seminar Tea-Talk, California Institute of Technology	Pasadena, CA 10/2021
238th American Astronomy Society Meeting	Virtually 06/2021
Research Seminar, California Institute of Technology	Pasadena, CA 04/2021
CUHK Physics Student Conference 2019	Shatin, Hong Kong 09/2019

Posters

244th American Astronomy Society Meeting	Madison, WI 06/2024
243th American Astronomy Society Meeting	New Orleans, LA 01/2024
NeurIPS 2021 D.G.M.S. and D.A. Workshop	Virtually 12/2021
NeurIPS 2021 M.L. and the Physical Science Workshop	Virtually 12/2021
Astroinformatics 2021 Conference	Virtually 11/2021

FELLOWSHIPS

Croucher Scholarships for Doctoral Study	2023 - 2026
C.U. Boulder Department of Astrophysical and Planetary Sciences Fellowship	2023 - 2024
University of Colorado Boulder Department of Physics Fellowship (declined)	2023 - 2024
University of Colorado Boulder Chair's Fellowship (declined)	2023 - 2024
Master of Philosophy Postgraduate Studentship	2019 - 2022

AWARDS

C.W. Chu College's Foundation Scholarship	2018 - 2019
Dean's Honours List	2018 - 2019
Undergraduate Research Experience Grant	2017 - 2018
C.W. Chu College's Physics Scholarship	2017 - 2018
Dean's Honours List	2017 - 2018
Undergraduate Research Experience Grant	2016 - 2017
C.W. Chu College's Physics Scholarship	2016 - 2017
Dean's Honours List	2016 - 2017
Undergraduate Research Experience Grant	2015 - 2016
C.W. Chu College's Lee Wai Wing Scholarship	2015 - 2016
Department of Physics Admission Scholarships	2015 - 2016
Honours at Entrance	2015 - 2016

SKILLS

Programming: C, C++, Java, Python, Fortran, Latex, MySQL, Unix

Software: Git, VS Code, JetBrains PyCharm, TeX Studio, Matlab

Languages: Cantonese (Native), English (Fluent), Mandarin (Fluent)

AFFILIATION

JILA, University of Colorado <i>Research Assistant</i>	<i>Sep 2023 – Present</i>
Event Horizon Telescope Collaboration <i>Member</i>	<i>Sep 2023 – Present</i>

REFERENCES

Prof. Jason Dexter, Department of Astrophysical and Planetary Sciences, University of Colorado
Prof. Mitchell Begelman, Department of Astrophysical and Planetary Sciences, University of Colorado
Prof. Ming-chung Chu, Department of Physics, the Chinese University of Hong Kong
Prof. Chi-Kwan Chan, Department of Astronomy, University of Arizona
Prof. Shing-Chi Leung, Department of Mathematics and Physics, SUNY Polytechnic Institute
