

# R. MICHAEL JENNINGS

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[michaeljennings11.github.io](https://michaeljennings11.github.io)

## EDUCATION

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### University of California, Berkeley

*August 2018 - Present*

B.A. Physics (In Progress)

B.A. Astrophysics (In Progress)

Advisors: Yuan Li, Eugene Chiang, Eliot Quataert

Berkeley, CA, GPA: 3.685

### Diablo Valley College

*January 2016 - July 2018*

A.S. Physics

A.S. Mathematics

Certificate of Achievement in C++ Programming

Certificate of Achievement in Japanese Language

Pleasant Hill, CA, GPA: 3.835 *Honors*

## RESEARCH EXPERIENCE

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### Constraints on Transport Processes from Kelvin-Helmholtz Generated Turbulence in Jellyfish Galaxy Tails

Advisor: Yuan Li

*December 2020 - Present*

### Determining the Obliquity of Fragments Formed Within Gravitationally Unstable Self-Gravitating Disks (*Honors Thesis*)

Advisor: Eugene Chiang

*August 2020 - Present*

### Simulating Mixing Layers in the ISM through the Kelvin-Helmholtz Instability

As ULab Mentor

*September 2019 - May 2020*

### Simulating Thermal Instability and Multiphase Gas in the Interstellar Medium

Advisors: Yuan Li, Eliot Quataert

*January 2019 - December 2020*

## PUBLICATIONS

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[2] Jennings, R. M.; Chiang, E.; *Obliquity of Fragments Formed Within Gravitationally Unstable Self-Gravitating Disks*, in prep

[1] Jennings, R. M.; Li, Y.; *Thermal Instability and Multiphase Gas in the Simulated Interstellar Medium with Conduction, Viscosity and Magnetic Fields*, submitted to MNRAS (2020), [arXiv:2012.05252](https://arxiv.org/abs/2012.05252)

## SKILLS

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Computer Languages	C/C++, Python, Linux/Unix, L <sup>A</sup> T <sub>E</sub> X, bash, git, ADQL, HTML, CSS
Parallel Computing	MPI, OpenMP
Software	Athena/Athena++, Enzo, yt
Supercomputing	NASA Pleiades, UCB Savio

## AWARDS AND SCHOLARSHIPS

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James Monroe McDonald Scholarship	2020-2021
Ensign-Hornbeck Scholarship	2020-2021
DLMC Foundation Scholarship	2020-2021
George A. Douglass Scholarship	2019-2021

Albert L. Ehrman Memorial Scholarship  
Odell Wilson Scholarship

2019-2020  
2019-2020

## TALKS, POSTERS AND OTHER WRITINGS

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- [5] **Jennings, R. M.**; *Thermal Instability and Multiphase Gas in the ISM*, University of North Texas, January 2021. (talk)
- [4] Lee, M.; **Jennings, R. M.**; *Large Scale Structure Evolution With Various Cosmologies: Exploring Particle Mesh Cosmological Simulations*, ASTRON C161 Final Project, Berkeley, CA, May 2020. (class project)
- [3] Sunseri, J.; Tausik, N.; Zezulka, S.; Wellnitz, G.; Lera, I.; Deak, B.; Chan, T. Y.; **Jennings, R. M.**; *Computational Analysis of Mixing Layers in the Interstellar Medium*, ULab poster session, Berkeley, CA, May 2020. (poster)
- [2] **Jennings, R. M.**; Li, Y.; Quataert, E.; *Thermal Instability In The Interstellar Medium And The Implementation of Anisotropic Conduction in Athena++*, Astronomy Poster Summer Intern Symposium, Berkeley, CA, August 2019. (poster)
- [1] Mo, S.; Raizada, S.; Ott, J.; Dicks, P.; Kofford, S.; **Jennings, R. M.**; *Interplanetary Radiation Harnessing Voltaic System*, ULab poster session, Berkeley, CA, May 2019. (poster)

## TEACHING AND WORK EXPERIENCE

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<b>Mentor, ULab Theoretical Astrophysics Group</b> University of California, Berkeley	<i>September 2019 - May 2020</i>
<b>Mentor, ULab Particle Physics Group</b> University of California, Berkeley	<i>September 2018 - May 2019</i>
<b>Technician, Physics Laboratory</b> Diablo Valley College	<i>February 2017 - June 2018</i>
<b>Astronomy Tutor, Physical Science Department</b> Diablo Valley College	<i>August 2016 - May 2018</i>

## SERVICE AND OUTREACH

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<b>Observatory Deck Docent and Telescope Operator</b> Chabot Space and Science Center, Oakland	<i>August 2017 - December 2017</i>
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## REFERENCES

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Yuan Li  
Professor, Department of Physics, University of North Texas  
Email: yuan.li@unt.edu

Eugene Chiang  
Professor, Department of Astronomy & Department of Earth and Planetary Science  
Email: echiang@astro.berkeley.edu

Mariska Kriek  
Professor, Department of Astronomy  
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