

## Drummond B. Fielding

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### OFFICE ADDRESS

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### EDUCATION

<i>Ph.D.</i> , Astrophysics University of California, Berkeley Advisor: Eliot Quataert Thesis: Interplay of Galactic Winds and Circumgalactic Media	2018
<i>Master of Arts</i> , Astrophysics University of California, Berkeley	2014
<i>Bachelors of Arts</i> , Physics & <i>Bachelors of Arts</i> , Mathematics Johns Hopkins University	2012

### EXPERIENCE

<i>Flatiron Research Fellow</i> , Center for Computational Astrophysics	2018 –
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### RESEARCH INTERESTS

- Astrophysical fluid dynamics using computational techniques.
- The circumgalactic medium; modeling its evolution and phase structure to establish its important role in galaxy formation and to improve interpretation of observations.
- Galactic winds; identifying their dominant driving mechanisms, and understanding their impact on the surrounding medium.

### AWARDS & HONORS

National Science Foundation Graduate Research Fellow	2014 - 2017 (awarded 2012)
Berkeley Fellow for Graduate Study	2012 - 2014
Outstanding Graduate Student Instructor Award	2013 - 2014
Donald E. Kerr Award for Outstanding Physics Undergraduate (JHU)	2012

### GRANTS

APS-IUSSTF Physics Ph.D. Student & Postdoc Visitation Program U.S.-India Travel Grant to Indian Institute of Science with Prof. Prateek Sharma	2016
Hubble Space Telescope cycle 25 Archival Research Grant <i>Towards an Understanding of the Origin of OVI in the Circumgalactic Medium</i> PI: Michael McCourt, Co-Is: Drummond Fielding, Peng Oh, Crystal Martin	2017
NSF Extreme Science and Engineering Discovery Environment (XSEDE) TG-AST160020 — 775,784 SUs on COMET TG-AST160020 — 1,732,096 SUs on COMET <i>The Physics of Supernova Feedback: Global 3D Simulations of Galactic Disks</i> PI: Davide Martizzi, Co-Is: Drummond Fielding, Eliot Quataert	2016-2018 2016 2017
NSF Extreme Science and Engineering Discovery Environment (XSEDE) TG-AST140083 — 1,159,956 SUs on Stampede <i>Conduction, Convection, and Thermal Instability in Hot Halos</i> PI: Michael McCourt, Co-I: Drummond Fielding	2016-2017

## PROFESSIONAL SERVICE & TEACHING

<i>Flatiron Pre-Doctoral Program</i> graduate student mentor ( <i>Iryna Butsky</i> )	2019
Referee: <i>ApJ</i> , <i>ApJL</i> , <i>MNRAS</i>	since 2016
Graduate Student Instructor: Astronomy C12 ‘The Planets’, Astronomy 7A	2012, 2013

## SCIENCE OUTREACH

Taught a series of astronomy classes to 2nd and 3rd grade students North Oakland Community Charter School	2017
Undergrad mentor UC Berkeley Astronomy	2016-2017
UC Berkeley Astronomy Department Public Liason	2015
<i>East Bay Astronomical Society</i> Public Lecture Chabot Space and Science Center	2014
<i>The Berkeley Compass Project</i> Summer Evening Instructor	2013

## PUBLICATIONS

Full list can be found *here*, *on ads*, or *here*, *on orcid*

### FIRST AUTHOR

**Drummond Fielding**, Eliot Quataert, and Davide Martizzi. Clustered supernovae drive powerful galactic winds after superbubble breakout. *MNRAS*, 481(3):3325–3347, Dec 2018

**Drummond Fielding**, Eliot Quataert, Davide Martizzi, and Claude-André Faucher-Giguère. *How supernovae launch galactic winds*. *MNRAS*, 470:L39–L43, September 2017

**Drummond Fielding**, Eliot Quataert, Michael McCourt, and Todd A. Thompson. *The impact of star formation feedback on the circumgalactic medium*. *MNRAS*, 466:3810–3826, April 2017

**Drummond Fielding**, Christopher McKee, Aristotle Socrates, Andrew Cunningham, and Richard Klein. *The turbulent origin of spin-orbit misalignment in planetary systems*. *MNRAS*, 450:3306–3318, July 2015

### CONTRIBUTING AUTHOR

Jonathan Stern, **Drummond Fielding**, Claude-André Faucher-Giguère, and Eliot Quataert. Cooling flow solutions for the circumgalactic medium. *MNRAS*, 488(2):2549–2572, Sep 2019

Jonathan Stern, **Drummond Fielding**, Claude-André Faucher-Giguère, and Eliot Quataert. The maximum accretion rate of hot gas in dark matter halos. *arXiv e-prints*, page arXiv:1909.07402, Sep 2019

Cassandra Lochhaas, Greg L. Bryan, Yuan Li, Miao Li, and **Drummond Fielding**. Properties of the Simulated Circumgalactic Medium. *arXiv e-prints*, page arXiv:1908.00021, Jul 2019

Davide Martizzi, Eliot Quataert, Claude-André Faucher-Giguère, and **Drummond Fielding**. Simulations of jet heating in galaxy clusters: successes and challenges. *MNRAS*, 483(2):2465–2486, Feb 2019

Jonathan Stern, Claude-André Faucher-Giguère, Joseph F. Hennawi, Zachary Hafen, Sean D. Johnson, and **Drummond Fielding**. Does Circumgalactic O VI Trace Low-pressure Gas Beyond the Accretion Shock? Clues from H I and Low-ion Absorption, Line Kinematics, and Dust Extinction. *ApJ*, 865(2):91, Oct 2018

Davide Martizzi, **Drummond Fielding**, Claude-André Faucher-Giguère, and Eliot Quataert. *Supernova feedback in a local vertically stratified medium: interstellar turbulence and galactic winds*. *MNRAS*, 459:2311–2326, July 2016

Stella S. R. Offner, Michael M. Dunham, Katherine I. Lee, Héctor G. Arce, and **Drummond Fielding**. *The Turbulent Origin of Outflow and Spin Misalignment in Multiple Star Systems*. *ApJ*, 827:L11, August 2016

Joshua E. Schlieder, Sébastien Lépine, Emily Rice, Michal Simon, **Drummond Fielding**, and Rachael Tomasino. *The Na 8200 Å Doublet as an Age Indicator in Low-mass Stars*. *AJ*, 143:114, May 2012

## SELECT PRESENTATIONS

\* denotes an invited talk.

*\*Astro Seminar*, NYU CCPP, New York NY (10/2019)

*\*Invited Talk*, CGM conference, Berlin Germany (10/2019)

*Lunch Talk*, CCA, New York NY (10/2019)

*Contributed Talk*, Feedback conference, Spetses Greece (6/2019)

*Contributed Talk*, Turbulence workshop, Aspen CO (6/2019)

*Contributed Talk*, CGM/IGM conference, Spineto Italy (6/2019)

*\*Invited Talk*, athena++ conference, Las Vegas NV (3/2019)

*Lunch Talk*, CCA, New York NY (12/2018)

*\*Invited Talk*, CGM conference, Northwestern, Chicago IL (8/2018)

*\*Invited Talk*, CGM/DLA conference, Big Sur CA (3/2018)

*Lunch Talk*, CCA, New York NY (11/2017)

*TAPIR Seminar*, Caltech, Pasadena CA (11/2017)

*Hernquist group meeting*, Harvard CfA, Cambridge MA (10/2017)

*SFIR Seminar*, Princeton University (10/2017)

*FLASH Seminar*, U.C. Santa Cruz (10/2017)

*Astronomy Seminar*, University of Washington (10/2017)

*Contributed Talk*, UCSC Galaxy Workshop (8/2017)

*IMPS seminar*, U.C. Santa Cruz (5/2017)

*\*Astronomy Seminar*, Raman Research Institute (12/2016)

*\*Astronomy Department Colloquium*, Indian Institute of Science (10/2016)

*Lunch Talk* U.C. Berkeley (10/2016)

*Astronomy Seminar* U.C. Santa Barbara (9/2016)

*Contributed Talk*, Crossing the Rubicon, Italy (9/2016)

*Contributed Talk*, U.C. Santa Cruz Galaxy Workshop, Santa Cruz CA (8/2016)

*Galaxy Group Seminar*, University of Michigan, Ann Arbor MI (3/2016)

*Lunch Talk* U.C. Berkeley, Berkeley, CA (12/2013)