

# Matthew J. Rutala

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Last Updated: Jan. 26, 2021

## RESEARCH POSITIONS

PRESENT MAY 2019	<b>Research Fellow</b> Boston University   Boston, Massachusetts Prof. John Clarke
AUGUST 2018 SEPTEMBER 2017	<b>Research Fellow</b> Boston University   Boston, Massachusetts Prof. John Clarke
MAY 2017 SEPTEMBER 2015	<b>Undergraduate Research Assistant</b> Rutgers University Prof. Jack Hughes
AUGUST 2015 JUNE 2015	<b>REU Research Assistant</b> Boston University Prof. Catherine Espallat
MAY 2015 JUNE 2014	<b>Undergraduate Research Assistant</b> Rutgers University Prof. Troy Shinbrot

## TEACHING EXPERIENCE

MAY 2019 JANUARY 2019	<b>Teaching Fellow</b> AS100 “Cosmic Controversies” at Boston University
SEPTEMBER 2018 DECEMBER 2018	<b>Teaching Fellow</b> AS107 “Life Beyond Earth” at Boston University
DECEMBER 2017 JANUARY 2017	<b>Coadjutant</b> Coursera MOOC “Analyzing the Universe” via Rutgers University

## PUBLICATIONS

Shinbrot, T., **Rutala, M.**, and Herrmann, H. (2017). Surface contact charging. Phys. Rev. E, 96:032912.

Shinbrot, T., **Rutala, M.**, Montessori, A., Prestininzi, P., and Succi, S. (2015). Paradoxical ratcheting in cornstarch. Physics of Fluids, 27(10):103101.

## ABSTRACTS

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DECEMBER 2020	illuminating the Physics of Jupiter's Auroral Dawn Storms <b>Poster</b> at the American Geophysical Union Fall conference
JUNE 2019	New Insights into Jupiter's Dawn Storms <b>Poster</b> at the Magnetospheres of the Outer Planets conference
JULY 2018	Characterizing Local and Interplanetary Control of Jupiter's Auroral Dawn Storms using HST and Juno <b>Poster</b> at the Magnetospheres of the Outer Planets conference
MAY 2015	Size Segregation in Asteroid Regolith <b>Poster</b> at the New Jersey Space Grant Consortium Poster Session
APRIL 2015	Size Segregation in Asteroid Regolith <b>Poster</b> at the Aresty Research Symposium
AUGUST 2014	Paradoxical Ratcheting in Oobleck <b>Poster</b> at the Aresty Summer Research Symposium

## AWARDS

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JUNE 2020	<b>Research Fellowship</b> Awarded by: The Massachusetts Space Grant Consortium
MAY 2019	<b>Outstanding Teaching Fellow in the Department of Astronomy</b> Awarded by: Boston University College and Graduate School of Arts and Sciences
MAY 2017	<b>Honors Scholar</b> Awarded by: Rutgers University School of Arts and Sciences
MAY 2017	<b>Richard T. Weidner Physics Prize</b> Awarded by: Rutgers University Department of Physics and Astronomy
MARCH 2016	<b>Phi Beta Kappa Scholar</b> Awarded by: The Phi Beta Kappa Society
SEPTEMBER 2015	<b>Herman Y. Carr Scholarship</b> Awarded by: Rutgers University Department of Physics and Astronomy
OCTOBER 2014	<b>Research Fellowship</b> Awarded by: the New Jersey Space Grant Consortium (NJSGC)

## OUTREACH

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PRESENT	<b>Boston University Public Open Night</b>
SEPTEMBER 2017	An event hosted by the graduate students at Boston University which invites the public to view the night sky and learn more about astronomy.
AUGUST 2019	<b>GWISE Open Night</b> A one-time open-night-like event for members of the Graduate Women In Science and Engineering group.
JULY 2018	<b>Precollege Women Open Night</b> A one-time open-night-like event for precollege women interested in studying science in college.
JUNE 2018	<b>Space Science for Kids</b> An educational event for elementary- and middle-school children, coinciding with the 30 <sup>th</sup> anniversary of the Center for Space Physics at Boston University.

## EDUCATION

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CURRENT	<b>Ph.D. Candidate in Astronomy</b> Boston University   <i>Boston, Massachusetts</i> Advisor: Prof. John T. Clarke
SEPTEMBER 2019	<b>M.A. in Astronomy</b> Boston University   <i>Boston, Massachusetts</i> Advisor: Prof. John T. Clarke
MAY 2017	<b>B.Sc. in Astrophysics and Linguistics</b> <i>summa cum laude</i> Rutgers University   <i>New Brunswick, New Jersey</i> Advisor: Prof. Jack P. Hughes Graduated with Highest Honors in Astrophysics and Honors in Linguistics

## LEADERSHIP

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SEPTEMBER 2019	<b>Graduate Student Representative</b>
SEPTEMBER 2018	Represented the interests of the graduate students to departmental faculty, so that students could anonymously voice questions or complaints; arranged weekly journal clubs and seminars for students to present their own research; arranged department-sponsored social events to promote student interaction.