



BOSTON UNIVERSITY
ASTRONOMY



BOSTON UNIVERSITY

Welcome!



The Boston University Astronomy department offers a rich and thriving program with about 20 faculty and 35 PhD students. Our students, professors, and researchers are at the forefront of a variety of research areas including theoretical and observational space physics, planetary science, stellar, galactic, and extragalactic astronomy, and cosmology. Several groups design, build, and operate new ground-based and space-based instruments. The graduate program consists of both courses in astronomy and original research conducted under the guidance of a faculty advisor. During the first academic year, students generally concentrate on foundation coursework; a research area is usually chosen during the second year. Original research, the most important part of the graduate program, occupies much of the student's time after the first year. Graduate students are supported through University Fellowships or Department of Astronomy teaching fellowships and research assistantships. Generally, students receive a teaching fellowship in the first year or two and are then supported with research assistantships while working closely with individual faculty members on their research. Keep reading to learn more about why you should choose the BU Astronomy Department!

FACILITIES & INSTRUMENT

ALUM

STUDENTS P.

14

FACULTY P.

6

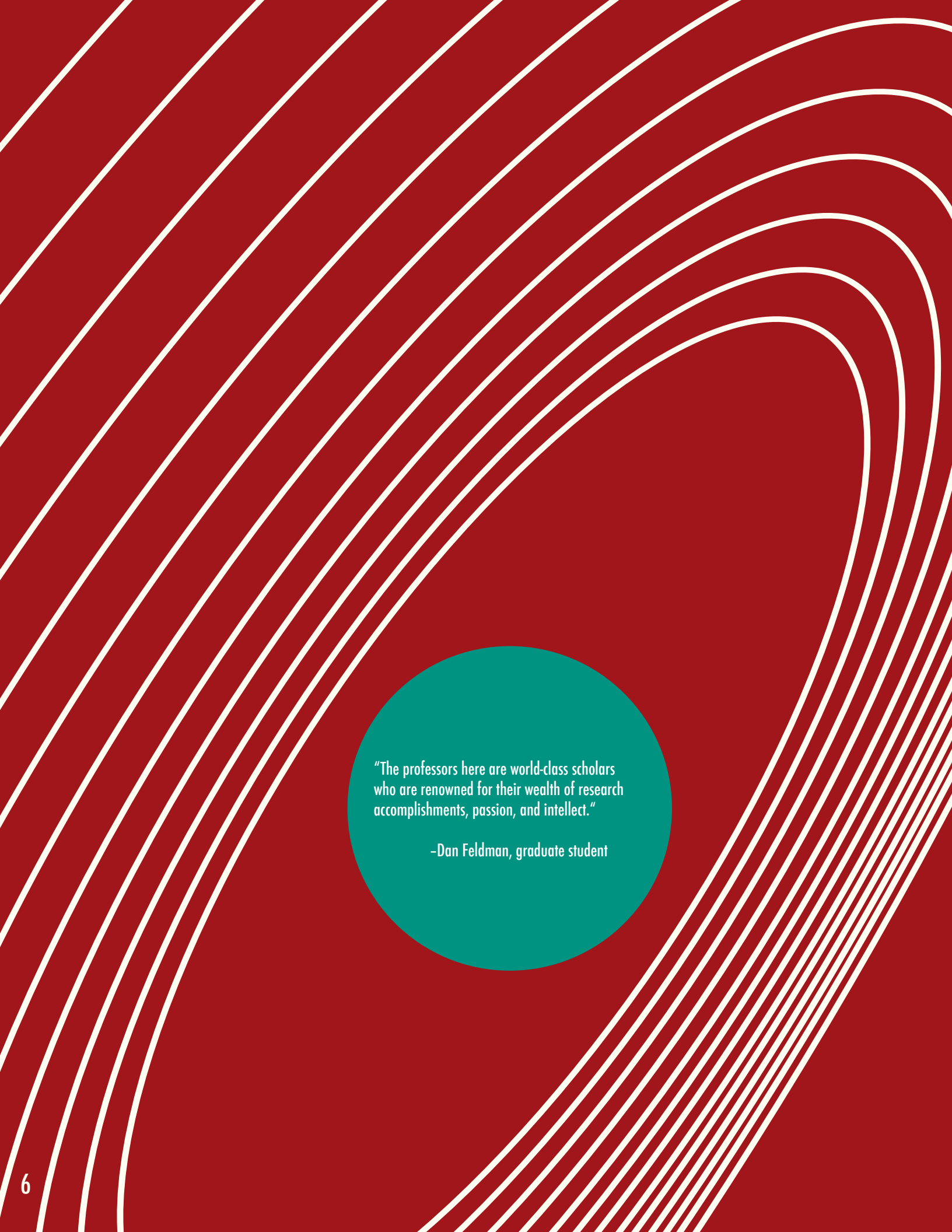
CONTENT

OTHER OPPORTUNITIES P. 30

29

20

30



"The professors here are world-class scholars who are renowned for their wealth of research accomplishments, passion, and intellect."

-Dan Feldman, graduate student



FACULTY

Phil Muirhead



Research Interests: Experimental astrophysics; infrared astronomy; stars and exoplanets

B.S., University of Michigan
M.S., Ph.D., Cornell University

What is your favorite exoplanet and why?

If I had to choose, my favorite exoplanet would be Kepler 42d. The planet is one of three sub-Earth-sized planets orbiting the small star Kepler 42. The Kepler spacecraft discovered the planets during its first year of observations, then my team was able to determine the exoplanet sizes. Kepler 42d is the smallest of the three: a Mars-sized exoplanet. At the time of our study it was the smallest extrasolar planet found to orbit a main-sequence star. The host star, Kepler 42, sits between the Sun and Jupiter in mass, and its tiny orbiting planets may represent a link between the formation of the planets in our solar system and the Galilean moons that orbit Jupiter.

What is your favorite research article and why?

My favorite publication is titled “KOI-256: A Mutually Eclipsing Post-common Envelope Binary.” It is a very boring title, but the project was truly a lot of fun. The object we studied, KOI-256, was originally thought to be a hot Jupiter exoplanet orbiting a small star, an interesting discovery if true. Our investigation revealed that the “planet” was in fact a white dwarf: a compact, dead star representing the final evolutionary stage of Sun-like stars. To write the paper, my team had to do a significant amount of research on white dwarfs, which we don’t typically study. In the end we discovered that the white dwarf was gravitationally lensing its companion, which had never been seen in a binary star like this one. I encourage my students to learn new areas of astronomy outside of their comfort zones and to follow these rabbit holes that often lead to new discoveries.

Catherine Espaillat



Research Interests: Structure and evolution of circumstellar disks around T Tauri stars; planet formation; dust growth; gas dissipation; radiative transfer modeling

B.A., Columbia University
M.S., Ph.D., University of Michigan

What is your favorite star-forming region and why?

My favorite star-forming region is Taurus. This is the best-studied cloud and it's used as a benchmark for many studies of star formation. Yet there is so much we still don't know about it. Over half of my publications feature at least one object in Taurus and many other researchers are publishing papers on Taurus regularly as well. There is a lot of active research going on in this region. I'm looking forward to seeing what else it has to teach us.

What is your favorite research article and why?

My favorite publication is my chapter in Protostars & Planets VI. New editions of this book have been published about every five years over the past two decades with the goal of summing up our current knowledge in the field of star and planet formation. My chapter is the first one ever dedicated to transitional disks, which have inner holes that may be due to planets forming in them. Given that only a couple of paragraphs were dedicated to transitional disks in the previous edition of the book, it shows how rapidly the field is changing and growing. It's a very exciting time to be in the field of star and planet formation.

Merav Opher



Research Interests: Computational and theoretical plasma physics in space and astrophysics; interaction of the solar system with the interstellar medium (ISM); the solar wind; shocks in the lower corona; T Tauri and solar-like stars

B.S., Ph.D., University of Sao Paulo

What is your favorite atmospheric layer of the Sun and why?

My favorite atmospheric layer of the Sun is the corona, where the solar wind is formed. We think that most stars have similar winds. The solar wind extends from the Sun to the outer edges of the solar system, the heliopause. The corona is also mysterious because it's very hot, about 10 million degrees Kelvin, although the surface of the Sun is about 5,000 degrees Kelvin, so there is a puzzle of what heats the corona. You expect as you go away from the surface of the Sun that the temperature will cool off, but instead it shoots up to 10 million degrees. Why? We are still exploring that mechanism, so the formation of the solar wind is related to this question. We have the Voyager probes that are sampling the edge of the solar system (the heliopause) and we will also have the Solar Probe Plus mission that will be launched in 2017, which will probe the region close to the Sun. In both cases, it is the first time that we are sampling in situ boundaries of the wind of a star. So, exciting times are ahead!

What is your favorite research article and why?

My favorite publication is Opher et al. (2009) A strong, highly-tilted interstellar magnetic field near the solar system, featured in Nature. Here we showed that the magnetic field in the interstellar medium is strong enough to be one of the main components of energy in the interstellar medium. It is also strong enough to shape our home in the Galaxy, the heliosphere. It acts as a compass to tilt the main axis of the heliosphere to be aligned with the magnetic field orientation of the interstellar medium. We also showed that the flows in the heliosheath (the final region of the solar wind before we enter into the interstellar medium) are very sensitive to the direction of the interstellar magnetic field.

Paul Withers



Research Interests: Upper atmospheres and ionospheres of planets; planetary atmospheres; accelerometer instruments; radio science instruments

B.A., M.S., Cambridge University
Ph.D., University of Arizona

What is your favorite solar system object and why?

I like Mars, because I've been privileged to be involved in about ten spacecraft missions to Mars. It is thrilling to see a spacecraft mission that you've contributed to blast off into space, and it is exciting to work with data from experiments that have never been attempted before. Being a member of a spacecraft's science team gives me tremendous opportunities to make discoveries before anyone else.

What is your favorite research article and why?

My favorite publication is Withers and Neumann (2001) Enigmatic northern plains of Mars, which was published in Nature. I used a new topographic map of Mars, which was produced by a laser altimeter on the Mars Global Surveyor spacecraft, to show that features that earlier workers had suggested were the shorelines of an ancient ocean, were in fact part of an immense network of tectonic ridges. This work was the product of a 3-month summer internship as a graduate student. It reminds me that impactful science can result from a short project if you select the right project.

It is an exciting time to be an observational astronomer at Boston University. We currently have dedicated access to the telescope facilities at Lowell Observatory, including the 4.3m Discovery Channel Telescope, we are secondary members in the SMARTS consortium (for use of the 0.9m telescope at CTIO in Chile), and win numerous nights of telescope time on publicly available facilities around the world. Our graduate students do the bulk of the observing and have the opportunity to leave our PhD program as expert observers (and with substantial frequent flier miles).

-Andrew West, assistant professor

Thomas Bania

Research Interests: Radio spectroscopy; galactic structure; interstellar medium

Elizabeth Blanton

Research Interests: High-energy astrophysics; optical and near-infrared observational astronomy; clusters of galaxies; radio galaxies

Tereasa Brainerd

Research Interests: Theoretical astrophysics; cosmology; computational astrophysics; galaxy formation & evolution; astrophysical applications of gravitational lensing

John Clarke

Research Interests: Planetary atmospheres; UV astrophysics; FUV instruments for remote observations

Dan Clemens

Research Interests: Galactic structure; interstellar medium; star formation; infrared and optical astronomy

Catherine Espaillat

Research Interests: Structure and evolution of circumstellar disks around T Tauri stars; planet formation; dust growth; gas dissipation; radiative transfer modeling

Theodore Fritz

Research Interests: Space plasma physics; magnetospheric physics; magnetosphere-ionosphere coupling; substorms; rocket and satellite experiments

Jeffrey Hughes

Research Interests: Space physics; planetary atmospheres; observations and models

James Jackson

Research Interests: Radio, infrared, and sub-mm astronomy; interstellar medium; starburst galaxies; star formation; the Milky Way; Antarctic astronomy

The Department of Astronomy at Boston University is remarkable for its breadth. Our teaching and research faculty, postdocs and students study everything from plasmas in the Earth's ionosphere to high-redshift galaxies. The broad range of disciplines provides an atmosphere ripe for new ideas and inspiration, and our students move on from BU with a diverse set of knowledge and skills. As an example, I am personally excited about projects that combine our department's historical strength in space physics and solar storms to the potential habitability of exoplanets orbiting active stars! These types of cross-discipline collaborations drive new discoveries and often create entirely new fields.

-Philip Muirhead, assistant professor

Alan Marscher

Research Interests: Quasars and other active galactic nuclei; high-energy astrophysics; black holes; jets

Carlos Martinis

Research Interests: Ionospheric physics; space physics; thermosphere/ionosphere plasma irregularities

Michael Mendillo

Research Interests: Space physics; planetary atmospheres; observations and models

Philip Muirhead

Research Interests: Experimental astrophysics; infrared astronomy; stars and exoplanets

Merav Opher

Research Interests: Computational and theoretical plasma physics in space and astrophysics; interaction of the solar system with the interstellar medium; solar wind; shocks in the lower corona; T Tauri and solar-like stars

Meers Oppenheim

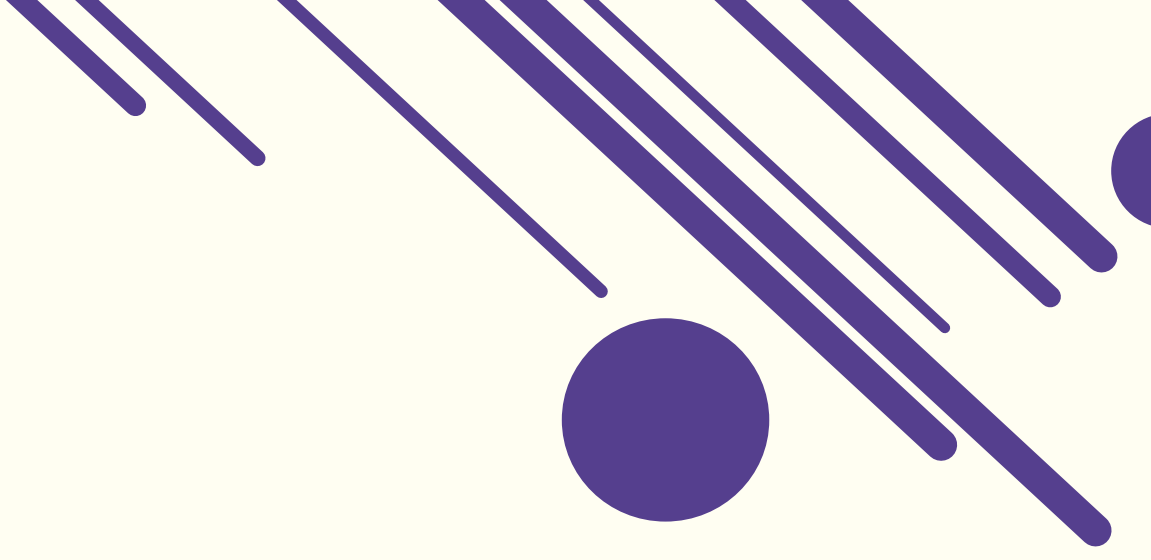
Research Interests: Computational and theoretical space plasma physics; dynamics of the E-region ionosphere and the electrojet; particle-wave interactions in the auroral ionosphere and magnetosphere; physics of meteor trails

Andrew West

Research Interests: Kinematics, distribution, and magnetic activity of low-mass stars; metallicity, structure, and evolution of the Milky Way thin disk; magnetic field generation in M and L dwarfs

Paul Withers

Research Interests: Upper atmospheres and ionospheres of planets; planetary atmospheres; accelerometer instruments; radio science instruments



STUDENTS



"The graduate student community is very close-knit, and we do a lot of activities both within the department and outside (game nights, the Musical Soiree, Astronomy Unplugged, and Astro-ph discussions). When I first came here and saw how happy the grad students were, I knew this was a great department."

-Chris Theissen, graduate student



Christopher Theissen, Ford Fellow
Advisor: Andrew West

What he is studying:

I am studying low-mass stars (M dwarfs) that show signs of warm dust orbiting around them. My research combines data from SDSS, 2MASS, and WISE. These stars are expected to be many billions of years old. Yet, according to planet formation theories, stars this old are not expected to still have disks. One possible explanation is that terrestrial planets have collided, creating dust, which reprocesses light from the host star, and emits in the infrared. Due to the search for habitable planets around M dwarfs, if such collisions are common around low-mass stars, this could have serious implications on the habitability of these planetary systems. I hope to characterize the frequency of such occurrences, and also explore other possible methods for creating infrared flux around older stars.

Why BU?

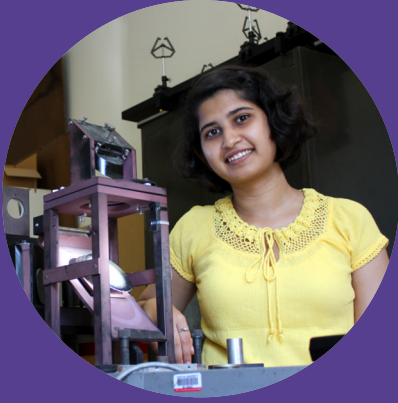
The faculty put a lot of trust into the students, and we have helped shape the direction of the department. This includes being involved in hiring new faculty members, organizing prospective graduate student visits, and recreating our departmental website. Good ideas are recognized by the faculty, and the graduate students are organized enough to implement them. There are also ample opportunities to become involved in mentoring high school and undergraduate research, including the Research in Science and Engineering (RISE), Upward Bound, and the Research Experience for Undergraduates (REU) programs.

“With space physics and astronomy under one roof in the hub of Boston, there’s always something fascinating going on at BU Astronomy. The possibilities for research, collaboration, and growth are endless.”

-Meredith Danowski,
graduate student

“The diverse research at BU—from solar physics to cosmology—has helped me understand the overarching themes of astronomy and how to ask important scientific questions.”

-Zachary Girazian,
graduate student



Dolon Bhattacharyya
Advisor: John Clarke

What she is studying:

I study the characteristics of atomic hydrogen populating the uppermost layers of the Martian atmosphere. The hydrogen present in this layer of atmosphere is mainly generated by breaking up water molecules with UV light from the Sun. I use data from the Hubble Space Telescope (HST) to study emissions from this layer of hydrogen and simulate it using a model I have developed alongside my collaborators here at BU. I am able to determine characteristics, such as the temperature and number density of the hydrogen population, in the exosphere of Mars from which I can estimate its escape rate. This can then be extrapolated to trace the history of water on Mars. My research is going to help answer key questions about the red planet's habitability conditions and potential for finding life on it.

Why BU?

BU was my top choice because of the diversity of research being done here. I can explore different aspects of Astronomy even though my research topic deals with a specific field. Also, Boston is the best city to be in with its student-friendly atmosphere, great public transportation facilities, and the ability to collaborate with even more astronomy experts located right across the Charles River at M.I.T. and Harvard. Coming to BU was one of the best decisions I have made because of the amazing and friendly people who make up the Department of Astronomy.

"I chose Boston University not only for the top-quality research and education, but also for the community of passionate, hard-working faculty and students."

-Dylan Morgan,
graduate student

"One thing that drew me to BU was the courseworks' grounding in a broad range of astrophysics, which sped building up a toolchest of physics to apply to research. For example, we take courses in radiative transfer and gas dynamics as broad topics, rather than courses that focus just on one type of object or another."

-Ewan Douglas,
graduate student

What she is studying:

I take a multi-wavelength approach to the study of galaxy clusters. Galaxy clusters are the largest structures in the Universe, containing approximately fifty to thousands of galaxies, as well as large amounts of diffuse, hot, X-ray gas and dark matter. Using the Chandra X-ray telescope, I have studied the effects of cluster-cluster mergers on the X-ray gas. I am also using bent, double-lobed radio sources to find new, high-redshift clusters. These objects are found in clusters about 60%-80% of the time. I am using both Spitzer and the Discovery Channel Telescope (DCT) to find these clusters, which can be used to learn about galaxy formation and evolution, as well as place constraints on cosmological parameters.

Why BU?

The BU Astronomy Department has been a great place for me, both personally and professionally. Professionally, I have access to excellent facilities, such as the DCT, as well as collaborators at Harvard's Center for Astrophysics (CfA). I love the work that I'm doing. I also appreciate the support that the department (and especially my advisor!) has given me when it comes to balancing my personal and professional aspirations. They support the whole student, rather than focus solely on the academics.



Rachel Paterno-Mahler
Advisor: Elizabeth Blanton

"As soon as you enter the Boston University Astronomy Department, it is evident that the faculty not only conduct cutting-edge research, but they truly care about their students and go above and beyond to help each student succeed."

-Adam Michael,
graduate student

"The Boston University Astronomy grad program has given me a top-notch education in a wide variety of subjects while encouraging me to apply them directly to cutting-edge research questions."

-Dustin Hickey,
graduate student

What he is studying:




I study the layers of charged particles around Venus, Earth, Mars, and Titan. These layers, called ionospheres, lie at the boundary between the planet and the space environment and, at Venus and Mars, shield the planet from the impinging solar wind. I characterize the vertical structure and variability of these regions to gain insights into the processes currently acting at each planet and to determine which processes are general to all terrestrial planets. In addition, since ionospheres are reservoirs of potential escaping molecules, my research helps constrain how terrestrial atmospheres have evolved over time.

Why BU?

The BU Astronomy Department studies a diverse range of subjects that include the solar wind, planet formation, and cosmology. Exposure to these topics has helped me understand the bigger picture of my research. The diversity also means that there is a friendly post-doc or faculty member in the department who can answer any questions I may have.

Zachary Girazian, NESS Fellow
Advisor: Paul Withers



"I've made friends and met colleagues that I'll maintain for my whole career. The department gave me the flexibility to pursue research that interested me, the resources to make new discoveries, the foundation for a successful job hunt and a handful of fruitful projects that I still keep in my back pocket."

-Carl Schmidt, alumnus



ALUMNI



Brian Walsh

Ph.D. Thesis: Energetic Particles in the Earth's Magnetospheric Cusps

Current Position: Research Associate, University of Maryland, College Park

Why BU?

Boston University provided a diverse research opportunity that facilitated growth and helped develop my approach to science. The expertise of the faculty and researchers spans a wide range of overlapping topics. As a student learning about the field, this provided me with an expert to guide me through the topics in a variety of areas in astronomy and space physics. As I developed and conducted more research on my own, the diverse skill set of the department allowed me to integrate techniques and ideas from different fields and researchers into my work. Although many of the topics may seem different at first glance, learning about things such as the formation of planetary atmospheres and fine auroral structures on Earth were valuable in understanding plasma heating from my work. The diverse backgrounds of the researchers at Boston University allows for these connections to be made, which facilitates new scientific discovery.

I worked alongside my advisor, Ted Fritz, to study the role of the magnetospheric cusps in heating charged particles using measurements from the European Space Agency's Cluster mission. During my third year as a graduate student I was elected as the student representative and steering committee member for the National Science Foundation's Geospace Environment Modeling (GEM) organization. I also became involved in the BUSAT program, which is a student-led effort to build all the necessary parts for a functioning scientific spacecraft. As a truly interdisciplinary effort, students from a number of departments worked as a group to develop all the necessary subsystems for the spacecraft.

Upon graduating from Boston University in 2011, I received the NSF Atmospheric and Geospace Sciences (AGS) Postdoctoral Fellowship and traveled to NASA Goddard Space Flight Center (GSFC). I am currently a research associate at the University of Maryland, College Park and NASA GSFC.



Monica Young

Ph.D. Thesis: Probing Quasar Accretion Physics with Optical and X-ray Spectroscopy

Current Position: Web Editor at Sky & Telescope magazine

Why BU?

Boston University's Astronomy Department has a diverse set of research programs for incoming graduate students to explore. The exciting plethora of opportunities available at the university and in the surrounding academic community (accessible in large part through the department's seminars) enables students to shape their own studies. The department facilitated my outside collaborations, which was essential to my success. My Ph.D. studies were essential to receiving my current editorial position at a popular science magazine.

I came to BU to pursue a Ph.D. in astronomy, and spent a year exploring the many space physics and astronomy research programs offered at BU. At the beginning of my second year, I received a predoctoral fellowship at the Harvard-Smithsonian Center for Astrophysics (CfA). I found the opportunity ideal for collaborating with my Ph.D. advisor, Alan Marscher, and my predoctoral fellowship advisor, Martin Elvis (CfA), to study optical and X-ray emission from quasars. The collaboration took me across the river to the CfA, where I took part in high-energy and quasar seminars as well as discussions with other CfA scientists, and to Italy to work with collaborator Guido Risaliti (CfA and Arcetri Observatory, Florence) — all while receiving excellent instruction and resources at BU.

After graduating, I took a one-year postdoc at Penn State, where I wrote a paper on X-ray variability in quasars with advisor Niel Brandt, while also writing astronomy press releases for the Media Relations department. My experiences in graduate school and afterward helped me land a position as Web Editor for Sky & Telescope magazine.



Alberto Bolatto

Ph.D. Thesis: The Interstellar Medium in Low Metallicity Environments
Current Position: Associate Professor, Department of Astronomy,
University of Maryland, College Park

Why BU?

The faculty at Boston University had an open-doors policy and a personal level of engagement that is rarely seen. As a student I had more than my share of opportunities to engage in exciting research, and I took on projects with their support and advice. The open-doors policy fostered my intellectual curiosity, allowing my personal development as a multidimensional researcher in the field. The chance to hear a wide range of speakers and attend colloquia throughout the Boston area was very important to appreciate the landscape of astronomical research.

I arrived from Uruguay to pursue a Ph.D. as a Presidential Fellow in 1993. Early on I became involved in the Antarctic Submillimeter Telescope and Remote Observatory project (AST/RO). As a student, I helped build and deploy the radio observatory to the remote Antarctic plateau, under the guidance of my advisor (Jim Jackson), Tom Bania, and Tony Stark, the project leader based at the Harvard-Smithsonian Center for Astrophysics (CfA). At the same time I became involved in the design and construction of the South Pole Imaging Fabry-Perot Interferometer (SPIFI), in collaboration with Gordon Stacey at Cornell. Upon graduation I moved to UC Berkeley, first as a postdoc at the Radio Astronomy Lab, then staying as a researcher. During this time I helped build the Combined Array for Research in Millimeter-wave Astronomy (CARMA), an interferometer located in California.

Since 2007 I have been a professor at the University of Maryland at College Park, where I was tenured in 2012. I am a Humboldt Fellow, a Cottrell Scholar, and an NSF CAREER Award recipient.



Sigrid Close

Ph.D. Thesis: Theory and Analysis of Meteoroids Using High-Resolution Multi-Frequency Radar Data
Current Position: Assistant Professor, Aeronautics and Astronautics, Stanford University

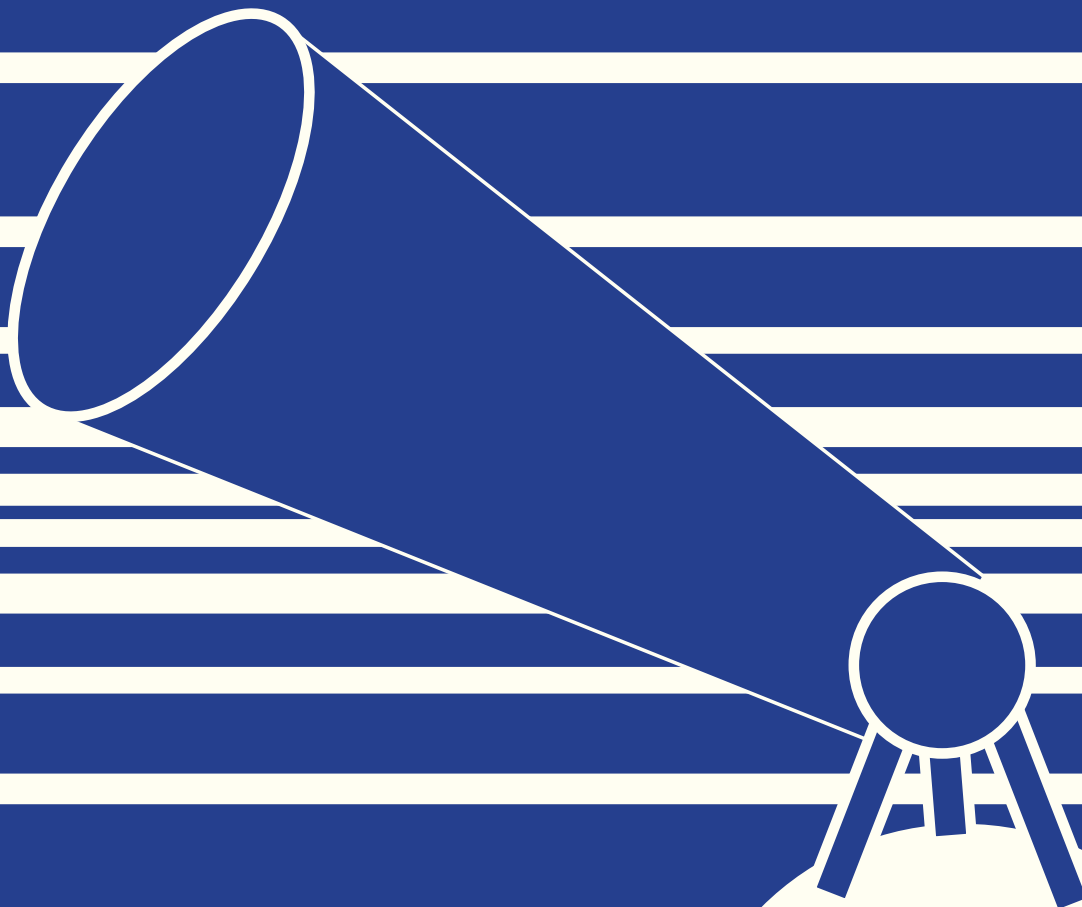
Why BU?

I specifically wanted to work with Professor Oppenheim. He was and is regarded as the world expert in meteor plasma physics and I wanted to solidify my theoretical knowledge in this area. I also was excited to become a part of the Center for Space Physics. BU's multi-disciplinary approach—combining engineering and physics—to space research is crucial for its ongoing success.

After obtaining an M.S. degree in Physics from UT Austin, I came to BU to pursue my Ph.D. in Astronomy as a Lincoln Scholar. I worked with Professor Meers Oppenheim on the behavior of meteors as they burn up in the atmosphere. Upon completing my graduate work, I joined the technical staff at Lincoln Labs, eventually moving on to become a Project Leader at Los Alamos National Lab, and ultimately obtaining a faculty position at Stanford. My current research involves space weather detection and modeling for improved spacecraft designs, as well as advanced signal processing and electromagnetic wave interactions with plasma for ground-to-satellite communication systems.

I am a recipient of the NSF CAREER Award, the Presidential Early Career Award, and the Department of Energy (DoE) Early Career Award. In addition, I co-hosted “Known Universe” on the National Geographic Channel.

FACILITIES & INSTRUMENTS



"As a graduate student I accumulated over 140 nights on a telescope because of our exclusive access to Lowell Observatory. In the era of large telescopes, fewer and fewer people get the opportunity to run a telescope by themselves."

-Mike Pavel, alumnus

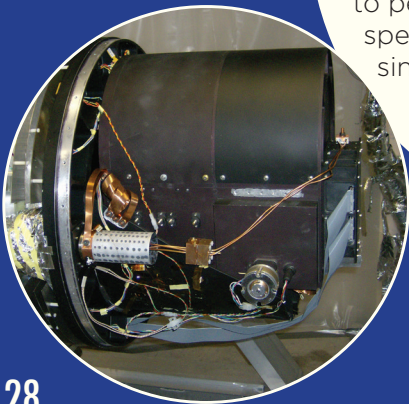
Discovery Channel Telescope

In 2012, BU signed an agreement to be permanent partners with Lowell Observatory in operating the new Discovery Channel Telescope, a reflecting telescope with a diameter of 4.3 meters, located at Happy Jack, Arizona. The arrangement provides Boston University astronomers with guaranteed observing time on this world-class scientific facility.



MIMIR

MIMIR is a facility-class infrared instrument built in the department and at Lowell Observatory. MIMIR saw first light on the 1.8 meter Perkins telescope outside Flagstaff, Arizona on August 19, 2004. MIMIR allows observers to perform astronomical imaging, spectroscopy, and polarimetry with a single instrument.



MAVEN

Professors Clarke, Mendillo, and Withers are members of the science team for NASA's Mars Atmosphere and Volatile Evolution (MAVEN) mission to Mars.

MAVEN will characterize the magnetosphere, ionosphere, and upper atmosphere of Mars from orbit.



Sounding Rockets


The department builds rockets that carry instruments for low-cost science above the majority of Earth's atmosphere. These instruments perform imaging and spectroscopy at ultraviolet, visible, and infrared wavelengths.

A laboratory is dedicated to the design, construction, and integration of sounding rocket payloads.

Perkins Telescope

Since 1999, BU has partnered with Lowell Observatory to operate their 72-inch Perkins telescope on Anderson Mesa, near Flagstaff, Arizona. Today, the Perkins telescope hosts two instruments built by BU, MIMIR and an optical imager/spectrometer called the Perkins Re-Imaging System (PRISM), and is used extensively by graduate students.





"Being at Boston University has not only given me the chance to pursue the research that interests me, but has also exposed me to topics and collaborations I never considered before."

-Matt Young, graduate student

OTHER OPPORTUNITIES

In the BU Astronomy Department, we encourage you to expand your horizons when it comes to your research, your studies, and even your friends. That's why we offer many opportunities for graduate students to get involved with undergraduate learning and research.

Research Experience for Undergraduates

The Astronomy Department hosts a Research Experience for Undergraduates (REU) program that is funded by NSF. This is a ten-week summer program in which undergraduate students from across the country come to BU to work on research projects. Many BU undergraduates also participate in research projects throughout the academic year. For undergraduate students, working closely with faculty, postdoctoral researchers, and graduate students allows them to experience fully the process of scientific research. For graduate students, working with undergraduates develops their mentoring and leadership skills.



Pre-Majors Program

The department's Pre-Majors Program (Pre-MaP) provides interested freshmen with the opportunity to be a part of a small cohort with whom to adventure through the first year of college, to participate in some off-campus activities, and to learn what a career as a scientist looks like. Pre-MaP aims to encourage diversity in science, technology, engineering, and mathematics (STEM) fields through community, collaboration, and fun. The program accomplishes these goals through weekly meetings, participation in a research project, and field trips. Pre-MaP discusses ways to be successful in and out of the classroom, highlights the importance of peer mentoring and cohort building, and serves as a mechanism to introduce first-year students to research skills. Graduate students are invited to share recollections of their undergraduate experiences with Pre-MaP students and to mentor them on exploratory research projects.



OTHER
OPPORTUNITIES

ABOUT BOSTON

Historic, intellectual, full of charm. It's no wonder that Boston gets about 12 million visitors a year, making it one of the ten most popular tourist locations in the country. Boston is one of America's oldest cities and, since being incorporated as a town in 1630, has become the economic and cultural hub of New England. This vibrant city is a world center of higher education, medicine, finance, and biotechnology. And let's not forget, Boston is home to some of the nation's best sport teams (Fenway Park is right across the way from BU), leading museums, tastiest restaurants, and swankiest shopping. With dozens of universities and other research institutions in the Boston area, there are plenty of opportunities to develop collaborations with colleagues outside BU and to socialize with other students.

Here are just a few of the many exciting Boston landmarks. From left to right: the John Hancock tower, the George Washington statue, the Massachusetts State House, and the iconic Citgo sign.



CAMPUS LIFE

The slice of Boston that is Boston University is a mosaic like no other: a swirl of languages, faces and religions, over 500 student clubs, shows and lectures, a state-of-the-art fitness center, a slew of pubs and restaurants, and the thrills and spills of Terrier hockey. Oh, and don't forget the tailgate parties.

When BU students aren't enjoying the perks and quirks of college life, they are lucky enough to call Boston their second campus. The University blends seamlessly with the city. Yes, we have our share of grassy lawns and ivy-covered walls, but Commonwealth Avenue, where many of our schools, colleges, and University buildings are located, is a lively urban street lined with shops, restaurants, and offices. Some of our student residences are city brownstones. Others are high-rises. Our transportation is urban too: we routinely hop on the "T," Boston's mass transit system, to ride from one end of our 1.3-mile-long campus to the other.

When you're a student here, nothing separates you from Boston's world-class museums, artistic community, vibrant cultural life, great sports teams, rich history, or world-renowned scientific and medical communities. In fact, the city loves to open its doors to BU students. BU offers hundreds of internships, research projects, and community service programs in connection with Boston businesses, organizations, and agencies.

Our world, yours for the taking.



For more information
about our program, and
details on applying,
find BU ASTRONOMY on:



www.bu.edu/astronomy

