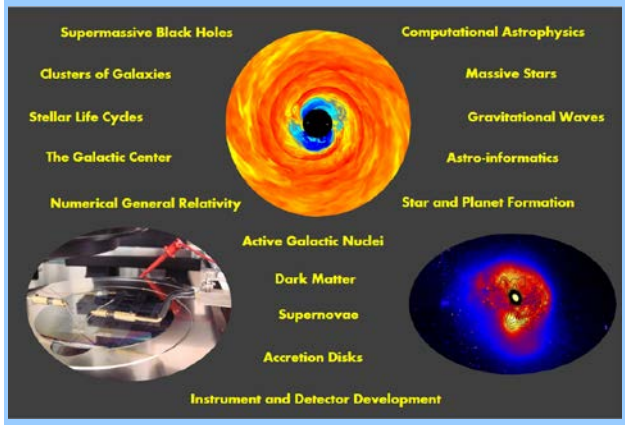
Rochester Institute of Technology

Graduate Studies in

Astrophysical Sciences and Technology

Masters and Ph.D. programs

Explore your interests amongst a rich set of research opportunities



Pursue tracks in Astrophysics, Computational Astrophysics, or Astronomical Instrumentation

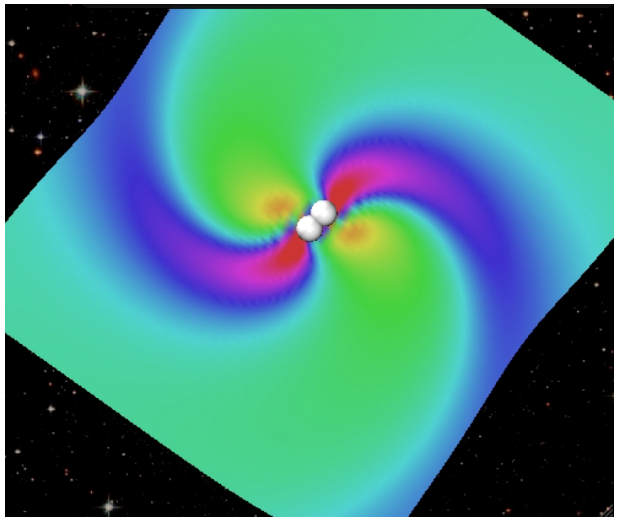
How to Apply

Visit
http://www.rit.edu/cos/astrophysics/
for admission requirements and information on how to submit an on-line application

For more information email:
astroinfo@rit.edu

There has never been a more exciting time to study the universe beyond the confines of the Earth. A new generation of advanced ground-based and space-borne telescopes and enormous increases in computing power are enabling a golden age of astrophysics. RIT's PhD and MS program in Astrophysical Sciences and Technology focuses on the underlying physics of phenomena beyond the Earth, and on the development of the technologies, instruments, data analysis, and modeling techniques that will enable the next major strides in the field. The multi-disciplinary emphasis of this program, jointly offered by the School of Physics and Astronomy, the School of Mathematical Sciences, and the Chester F. Carlson Center for Imaging Science, sets it apart from conventional astrophysics graduate programs at traditional research universities.

With 16 research active faculty, the program provides students a comprehensive curriculum and a broad range of research opportunities in forefront topics, e.g. supermassive black holes, numerical general relativity, gravitational wave astronomy, dark matter, galaxy formation and evolution, active galactic nuclei, star and planet formation, evolved and massive stars, supernovae. astro-informatics, computational astrophysics, and instrument and detector development. The program faculty regularly obtain data from the most advanced facilities in the world, including HST, Gemini, VLT, VLA, Keck, XMM, Chandra and LIGO. Students will gain the preparation necessary to take advantage of the next generation of exciting astrophysics facilities such as SOFIA, ALMA, JWST, LSST and TMT, develop the next generation of astronomical instruments and detectors, or participate in theoretical research using petascale supercomputing facilities. Students are encouraged to explore their interests amongst this rich set of opportunities.



Faculty involved in the program regularly attract substantial external research funding from national and state agencies (e.g., NASA, NSF, NYSTAR), amounting to over $12 million in the last 4 years. The program offers research opportunities in the Center for Computational Relativity and Gravitation (ccrg.rit.edu), the Center for Detectors (ridl.cfd.rit.edu) and the Laboratory for Multi-wavelength Astrophysics (lama.cis.rit.edu). For further information on astrophysics research at RIT and the AST graduate program visit www.rit.edu/cos/astrophysics.

Contact: Dr. Andrew Robinson,

AST Program Director; axrsps@rit.edu

(585) 475-2726

Program Faculty

Manuela Campanelli - general relativity and gravitation, computational astrophysics, supermassive black holes

Sukanya Chakrabarti - galaxy formation and evolution, radiative transfer, dark matter, computational astrophysics

Joshua Faber - general relativity and gravitation, computational astrophysics, neutron stars

Don Figer - massive Stars, regions of star formation, detectors

Jeyhan Kartaltepe - galaxy evolution, galaxy mergers and interactions, infrared galaxies, active galactic nuclei, galaxy morphology

Joel Kastner - young stars and planet formation, evolved stars and planetary nebulae; X-ray, IR, and radio astronomy

Carlos Lousto - general relativity and gravitation, computational astrophysics, supermassive black holes

Zoran Ninkov - solid state image sensors, automated observatories, planetary searches, astronomical imaging

Jason Nordhaus - core-collapse supernovae, binary interactions, strongly magnetized compact objects, physics of common envelopes

Michael Richmond - supernovae, variable stars, astronomical software

Andrew Robinson - active galactic nuclei, supermassive black holes, emission-line nebulae

Richard O'Shaughnessy - gravitational wave astrophysics of stellar mass and supermassive compact objects

John Whelan - gravitational wave data analysis, astrophysical relativity

Michael Zemcov - experimental cosmology, astrophysical instrumentation

Yosef Zlochower - General Relativity and Gravitation, Computational Astrophysics, Supermassive Black Holes

The RIT AST Program

The MS and PhD in Astrophysical Sciences and Technology provide a comprehensive curriculum and a broad range of research opportunities.

The program offers tracks in Astrophysics (including observational and theoretical astrophysics), Computational Astrophysics (including numerical relativity, gravitational wave astronomy and astro-informatics), and Astronomical Technology (including detector and instrumentation research and development).

Admission Requirements

- Successful completion of a baccalaureate degree in physical science, mathematics, computer science, or engineering at a regionally accredited college or university. For students with a bachelor's degree in another area or lacking in adequate academic preparation, bridge and foundation coursework may be necessary prior to full admission.
- A minimum undergraduate GPA of 3.2 out of 4.0 in undergraduate work in mathematical, science, engineering, and computer subject areas;
- Submission of scores from the Graduate Record Exam (GRE General Test);
- Applicants whose native language is other than English must submit scores from the Test of English as a Foreign Language (TOEFL) examination to demonstrate strong English language skills. A score of at least 550 (paper-based), 213 (computer-based), or 79 (internet-based) is required.