

ASTRONOMY

POINTS OF PRIDE

- Recently ranked in the top 20 astronomy programs nationally by Academic Analytics based on their index of scholarly productivity.
- UMass Amherst is the sole public institution in New England offering Astronomy at either undergraduate or graduate level.
- Developed Bayesian Inference Engine, an interdepartmental interdisciplinary program funded by NASA and NSF.
- UMass Amherst astronomers lead major research programs using almost every international space observatory.
- 2014 marked the 20th anniversary of the agreement between UMass Amherst and the INOAE in Mexico to build the Large Millimeter Telescope (LMT), the largest radio telescope of its kind.

EDUCATION

- UMass Amherst forms the Five College Astronomy Department with Amherst, Hampshire, Mount Holyoke, and Smith colleges.
- With colleagues in College of Education, developed online program for master's degree in science education, and Noyce scholarship program for regional science and mathematics teachers.
- Participate in NSF/PAARE project to attract African American undergraduates to careers and research

LEADERSHIP & HONORS

- Mauro Giavalisco was named by Thomson Reuters in 2014 as one of the most highly-cited space scientists in the world.
- Daniela Calzetti was named 2013 Blaauw Professor at the Kapteyn Astronomical Institute in The Netherlands.
- Houjun Mo won the 2010

Scientists from around the world are collaborating on observations to study fundamental processes of star formation and the structure of galaxies.

- Alexandra Pope and Allison Kirkpatrick '18 PhD led an international team of astronomers in the first publications from the LMT, which examined star formation in distant dusty galaxies.

- Daniela Calzetti awarded 2015-2016 Samuel F. Conti Fellowship

- Aaron Dunbrack '17 named Goldwater Scholar.

- Peter Schloerb and colleagues coauthored some of the first research findings from the European Space Agency's Rosetta Mission, published in *Science*.

opportunities in astronomy.

- Direct the campus Sunwheel project that teaches university students, school children, and members of the public about the cycles of the sky.

- Department offers BS, BA, MS, and PhD degrees.

STUDENT ORGANIZATION

- UMass Astronomy Club

American Publishers Award for Professional Excellence for his book *Galaxy Formation and Evolution*.

- William Irvine, professor emeritus, was elected president of the International Astronomical Union Commission on Bioastronomy in 2009.

BY THE NUMBERS FY15

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|----------------------|---------|
| Tenure-track faculty | 14 |
| Research faculty | 3 |
| Postdoctoral fellows | 2 |
| Undergraduate majors | 92 |
| Graduate students | 23 |
| Research awards | \$2.44M |

RESEARCH AREAS

Observational and theoretical astrophysics:

- Understanding the beginning of the universe
- Birth and life of galaxies through cosmic time
- Ecology of galaxies
- The universe in x-rays
- The lives of stars from nurseries to black holes
- Comets as probes of the early solar system
- Interstellar chemistry and the origins of life

RESEARCH FACILITIES

Large Millimeter Telescope (LMT): World's largest single-dish millimeter wavelength telescope. Research commencing in 2011 permits pioneering research into the birth and evolution of stars and galaxies.

High-performance parallel computer facilities:

This powerful computing facility allows students and faculty to perform the latest simulations, and mine large observational databases.

ASTRONOMY

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