Astronomy Propelling Interdisciplinary Research

PC: Kris Snibbe
Harvard Gazette

Alyssa Goodman
Robert Wheeler Willson Professor of Applied Astronomy

CURRENT RESEARCH

Fostering interdependence across astronomy, computer science, and medical imaging

Astronomy research has not only redefined our understanding of where and how stars form in our Galaxy, but it has also acquired phenomenal amounts of data that scientists can draw from. However, much of the abundant data produced by current research is still being hoarded on the hard drives of an individual research team, slowing progress. Often, answers could be at the fingertips of researchers facing a prevailing problem, and data must be aggregated and shared to quicken the discovery process. Dr. Alyssa Goodman, Robert Wheeler Willson Professor of Applied Astronomy at Harvard University, provides a number of platforms to "accelerate the pace of science" for scientists across multiple disciplines, and her team. Motivated to make an impactful difference, Dr. Goodman expands her influence beyond astronomy and brings people together to encourage collaboration, creating data visualization, and online systems for research and education.

Named the 2015 Scientist of the Year by the Harvard Foundation Dr. Goodman leads the "Seamless Astronomy" collaboration at Harvard and is the Founding Director of the Initiative in Innovative Computing (IIC) at Harvard. From 2005-2008, she led the IIC, teaming computer scientists up with disciplinary scientists to give each the opportunity to make the world's most important scientific challenges more tractable. Her expertise in utilizing resources and conducting swift computational analyses has more broadly allowed for improved and longer-lasting reuse of data, which is increasingly the most efficient path to new discoveries in science. To emphasize the importance of computer simulation in our everyday lives, she is also working with her Harvard colleagues to create a new set of...

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AFFILIATION

Harvard University

EDUCATION

- President's Fellowship in 1992,University of California, Berkeley
- Ph.D. in Physics 1989, Harvard University
- Sc.B. in Physics 1984,Massachusetts Institute of Technology

AWARDS

- Scientist of the Year, 2015
- Elected Fellow, 2009
- Scholar-in-Residence, 2008
- Newton Lacy Pierce Prize, 1997

RESEARCH AREAS

Technology, Computational Sciences / Mathematics, Informational Sciences / Internet, Materials Science / Physics

FUNDING REQUEST

Your contributions will support Dr. Alyssa Goodman's Astronomy research group, the "Seamless Astronomy" collaboration, and WorldWide Telescope Ambassadors Program. Donations will help expand and extend each project to make further impact, as Dr. Goodman increases her software presence and builds robust programs for facilitating research for her team and other researchers, and educating students and the public. Partner with Dr. Goodman to break through all frontiers of science with astronomical and computing technology!