

Speaker Bios: Science Writers Workshop on the Roman Space Telescope (Oct. 5, 2020)

Dr. Harry Ferguson has been on the scientific staff at the Space Telescope Science Institute since 1995, working areas broadly related to galaxy evolution and observational cosmology. Since the original Hubble Deep Field, he has been engaged in “Deep Field” observations with the multiple observatories, most recently as co-PI for the Cosmic Assembly Near-infrared Deep Legacy Survey (CANDELS). In addition to accomplishing a wide variety of goals — from detection of some of the most distant galaxies, to constraining cosmic acceleration using high-redshift supernovae — these surveys have provided non-proprietary data to the community, and observing strategies have been carefully tailored to meet diverse scientific objectives. In his service role at STScI, he has worked in various capacities on the Hubble and James Webb Space Telescope (JWST) projects, including having led science instrument support group at STScI, overseen the orbital verification and calibration programs for the Space Telescope Imaging Spectrographs, and led the development of the initial Operations Concept for JWST. He has also previously served as Chair of the Senior Science Staff. He currently leads the Data Analysis Tools Branch, and is heavily involved in development of Astropy-related data-analysis tools.

Ferguson is a Fellow of the American Society for the Advancement of Science (AAAS) and serves as an at-large member of the Astronomy Section steering committee. He also serves on the Executive Board of the LSST Corporation and is a co-investigator on the EXPO extragalactic Science Investigation Team for the Nancy Grace Roman Space Telescope.

Dr. Julie McEnery is the Senior Project Scientist for the Nancy Grace Roman Space Telescope and an astrophysicist in the Astrophysics Science Division of NASA’s Goddard Space Flight Center. Her research focuses on the study of extreme high-energy transients and the development of the ground- and space-based observatories needed to pursue this. McEnery previously served as the Project Scientist for the Fermi Gamma-ray Space Telescope from 2009 to 2019. She is an Adjunct Professor of Physics at the University of Maryland and at the George Washington University. She is co-Director of the Joint Space Science Institute between Goddard Space Flight Center and the University of Maryland. She became a fellow of the American Physical Society in 2011. She received a B.Sc. from the University of Manchester and a Ph.D. from University College Dublin.

Dr. Olivia Lupie is the Hubble Space Telescope instrument systems manager at NASA’s Goddard Space Flight Center in Greenbelt, Maryland. Over the course of 21 years at STScI, Lupie contributed to many aspects of the Hubble science operations mission. She served as the observatory scientist leading the effort to define programs to characterize overall observatory performance such as pointing stability and cross instrument effects. She also served as the Fine Guidance Sensor instrument scientist and the Wide Field Camera 3 operations scientist during its design and development, and led the team of scientists that defined the Wide Field Camera 3 filter suite. In 2004, in order to experience Hubble’s Servicing Mission 4 from the frontlines with an operations and engineering perspective, Lupie joined Goddard as Hubble’s life extension initiatives and operations manager. As technical manager, Lupie led the team that developed the critical capability to use one gyro control to prolong the life of Hubble.

As a Ph.D. astronomer, Lupie's research interests include stellar and quasi-stellar object spectropolarimetry, long-term studies of the Jupiter-Io system and lunar spectroscopy. She has been recognized with many individual achievement and group awards, including the Computer Science Corporation President's Excellence Award for Career Achievement and a NASA Exceptional Achievement Award. Lupie was born and raised in Westchester County, New York, and graduated with a Bachelor of Science in astronomy from Villanova University and a master's and Ph.D. in astronomy from the University of Wisconsin-Madison.

Dr. Adam Riess is an internationally renowned observational cosmologist working on the measurement of the expansion of the universe and a recipient of the 2011 Nobel Prize in Physics. His research is critically important for furthering our knowledge of the origin, composition and ultimate destiny of our universe, and to understanding the fundamental physics of space and time.

Riess uses numerous astronomical phenomena, such as supernovae (exploding stars), Cepheids (pulsating stars) and stellar parallax to map the universe and measure its expansion history. He is currently developing new tools for measuring the present expansion rate or Hubble constant to unprecedented precision. Riess uses NASA's Hubble Space Telescope to provide important independent probes of the nature of dark energy through techniques he helped develop for this purpose. His goal is to determine the nature of dark energy, how gravity behaves across the Universe and how these may impact the fate of the Universe.

Riess joined Johns Hopkins University in 2006 and the Space Telescope Science Institute in 1999 and was named a Bloomberg Distinguished Professor in 2016.

Dr. Jason Rhodes graduated from Valley High School in West Des Moines, Iowa. He earned a B.S. in Physics from Harvey Mudd College in Claremont, CA; an M.A and a Ph.D. in Physics from Princeton University, NJ. After stints as a postdoctoral researcher at NASA's Goddard Space Flight Center in Maryland and Caltech in Pasadena, California, he landed at NASA's Jet Propulsion Laboratory in 2004. His projects include NASA's Nancy Grace Roman Space Telescope (formerly WFIRST), the European Space Agency's Euclid mission, and the Vera Rubin Observatory's Legacy Survey of Space and Time (LSST). All of these are designed to study "dark energy," the hypothesized cause of the Universe's accelerated expansion.

Dr. Rachel Somerville is a Group Leader at the Center for Computational Astrophysics at the Flatiron Institute. Her research interests are in galaxy formation, cosmology and large scale structure. She explores these topics through numerical simulations, analytic models, and deep multi-wavelength observations. She co-directs the Simulating Multiscale Astrophysics to Understand Galaxies (SMAUG) collaboration.