Astro2020: Panel on Galaxies

Committee

Daniela Calzetti

Chair

DANIELA CALZETTI is a professor and head of the Department of Astronomy at the University of Massachusetts – Amherst. Her research interests include understanding star formation on the scales of galaxies, using information provided by a variety of both space-borne (Hubble, Spitzer, Herschel, etc.) and ground-based telescopes, at wavelengths that range from the ultraviolet to the radio. Prior to joining the University of Massachusetts – Amherst, she held various positions at the Space Telescope Science Institute, including – E.S.A. Fellow, postdoctoral researcher, assistant astronomer, and associate astronomer. Calzetti is a member of the American Astronomical Society and the International Astronomical Union. In addition, she is a member of the ERC Panel, Max Planck Society (ad-hoc appointment for the Chemistry, Physics and Technology Section), NASA STDT for the LUVOIR Surveyor Mission Concept Study, AURA Space Telescope Science Institute Council (STIC), and the EUCLID Science Consortium/Co-I of Euclid Science Program: Precision Studies of Galaxy Growth and Cosmology. Calzetti has received numerous awards including the Award for Outstanding Accomplishments in Research at the University of Massachusetts and the Clarivate-Reuters Worlds Most Cited Researchers. She received her Ph.D. in astronomy from the University of Rome. She has not previously served on an Academies' committee.

Michael Boylan-Kolchin

Member

MICHAEL BOYLAN-KOLCHIN is an assistant professor of astronomy at the University of Texas at Austin. His research focuses on theoretical astrophysics, including numerical simulations of the formation and evolution of cosmological structure, galaxies, and globular clusters; galaxy dynamics; the nature of dark matter; the epoch of reionization; and near-field cosmology. For this panel, he brings expertise with all associated wavelengths. Prior to joining the University of Texas, he was a faculty member at the University of Maryland and a postdoctoral scientist at the University of California, Irvine, and the Max-Planck-Institut für Astrophysik. He is the recipient of a National Science Foundation CAREER Award. He received his Ph.D. in physics from the University of California, Berkeley He has not previously served on an Academies' committee.

Hsiao-Wen Chen

Member

HSIAO-WEN CHEN is a professor of astronomy and astrophysics at the University of Chicago. Her research interests include the formation and evolution of galaxies across cosmic time, chemical enrichment in the intergalactic medium (IGM), and transient phenomena. Prior to joining the University of Chicago, Chen held a postdoctoral position at Carnegie Observatories and a Hubble Fellowship at Massachusetts Institute of Technology. She has served as the vice president of the International Astronomical Union IGM Commission, chair of the Adler Planetarium Visiting Committee, and chair of the Space Telescope Users' Committee. Her work is related to absorption-line spectroscopy of distant light sources (quasars/gamma-ray burst afterglows) to probe diffuse gas around galaxies, and in combining absorption-line observations with galaxy survey data to understand the recycling of baryonic matter between star-forming regions and dark intergalactic medium. For this panel, she brings expertise with ultraviolet wavelengths and spectroscopy. She received her Ph.D. for astronomy from State University of New York at Stony Brook. She has not previously served on an Academies' committee.

Ann E. Hornschemeier

Member

ANN E. HORNSCHEMEIER is the chief of the X-ray Astrophysics Laboratory at the NASA Goddard Space Flight Center. She specializes in studies of X-ray emission from accreting black hole and neutron star binary populations, both in the local universe and at cosmologically interesting distances. She chairs the NuSTAR Starburst and Local Group science working group, carrying out observations on nearby galaxies and coordinating observations with Chandra, XMM-Newton, and Swift. Dr. Hornschemeier is also involved in future missions, serving as the only U.S. science co-investigator on the Wide Field Imager on Athena and as a member of the international consortium for the Laser Interferometer Space Antenna mission. For this panel, she brings expertise with X-ray wavelengths. She won the American Astronomical Society's Annie Jump Cannon Award and NASA awarded her an Early Career Achievement Medal. She was awarded the Royal Astronomical Society of Canada Helen Sawyer Hogg lectureship for her studies of X-ray emission from galaxies. She received her Ph.D. for astronomy and astrophysics from Pennsylvania State University. She has not previously served on an Academies' committee.

Susan A. Kassin

Member

SUSAN A. KASSIN is an AURA Associate Astronomer with tenure at the Space Telescope Science Institute. She is also an associate research scientist at the Johns Hopkins University Department of Physics and Astronomy. Previous positions include NASA's Goddard Space Flight Center as a NASA Postdoctoral Program and JWST Fellow. Her work is related to observations of galaxy formation and evolution including dust gradients in high-redshift galaxies and theory and simulations of galaxy formation and evolution including the build-up of galaxy bulges and the field of using mock observations of numerical simulations of galaxies to inform how we interpret observations. As an astronomer, Dr. Kassin generally studies how galaxies form and evolve using observations with ground and space-based telescopes and simulations. For this panel, she brings expertise with optical and near-infrared wavelengths. She received her Ph.D. for astronomy and astrophysics from the Ohio State University. She has not previously served on an Academies' committee.

Amanda A. Kepley

Member

AMANDA A. KEPLEY is an assistant scientist with the North American ALMA Science Center at the National Radio Astronomy Observatory (NRAO). Dr. Kepley previously held postdoctoral positions at NRAO and at the University of Virginia. Her research focuses on investigating the role that gas, dust, and magnetic fields within galaxies play in their evolution, primarily using radio telescopes like Atacama Large Millimeter/submillimeter Array (ALMA), the Very Large Array (VLA), and the Green Bank Telescope (GBT). She also develops and tests heuristics for automated data reduction pipelines, both for ALMA and her own research. For this panel, she brings expertise with infrared and radio wavelengths. She was the recipient of a National Science Foundation Graduate Research Fellowship. She received her Ph.D. for astronomy from the University of Wisconsin-Madison. She has not previously served on an Academies' committee.

Charles C. Steidel

Member

CHARLES C. STEIDEL (NAS) is the Lee A. DuBridge Professor of Astronomy at the California Institute of Technology. His previous positions include assistant professor of physics at MIT and Hubble Fellow at U.C. Berkeley. He is a world leader in observational cosmology. He defined the state and chemical composition of the intergalactic medium in the early universe. He discovered normal star-forming galaxies at high redshift. With co-workers, he measured the clustering of these galaxies, thus placing serious constraints on cosmological models. His expertise is related to the processes of galaxy formation and the nature of the intergalactic medium. He has received the Gruber Cosmology Prize from The Peter and Patricia Gruber Foundation in recognition of his revolutionary studies of the most distant galaxies in the universe. He received his Ph.D. in astronomy from California Institute of Technology. He has previously served on several Academies' committees, including the Panel on Optical and Infrared Astronomy from the Ground.

Daniel K. Stern

Member

DANIEL STERN is a NuSTAR project scientist at the NASA Jet Propulsion Laboratory. His prior work is related to implementing optical and infrared imaging and spectroscopy (Lick Observatory, Keck Observatory, HST, and IRTF), emphasizing observational cosmology and the distant universe and work on theoretical cosmology research considering microwave background fluctuations in a topologically closed universe. His current research interests are related to observational cosmology; identifying and studying galaxies and galaxy clusters at high redshift and active galaxies; and understanding the cosmic history of black hole formation and activity. For this panel, he brings expertise with X-ray, ultraviolet, and infrared wavelengths. Some of his recent awards are the NASA Exceptional Scientific Achievement Medal, the NASA Group Achievement Award to the NuSTAR Science Team, and the NASA Exceptional Achievement Medal. He received his Ph.D. for astrophysics from University of California Berkeley. He has not previously served on an Academies' committee.

Tommaso Treu

Member

TOMMASO TREU is a professor at University of California, Los Angeles (UCLA) in the Division of Astronomy and Astrophysics. Previous positions include Distinguished Visitor at the Space Telescope Science Institute and professor at University of California, Santa Barbara. His research interests and expertise includes galaxy formation and evolution. In particular he is interested in early-type galaxies, galaxies in clusters; high redshift galaxies; the co-evolution of spheroids and black-holes; gravitational lensing and dark matter in galaxies; and clusters of galaxies, cosmography from gravitational time delays, and galaxies in the epoch of reionization. For this panel, he brings expertise with ultraviolet and optical wavelengths. He is a recent recipient of the American Astronomical Society Newton Lacy Pierce Prize, the UCSB H.J. Plous Memorial Award, and the David and Lucille Packard Fellowship for Science and Engineering. He received his Ph.D. for physics from Scuola Normale Superiore. He has previously served on the Academies' Astro2010 Panel on Galaxies Across Cosmic Time.

Pieter van Dokkum

Member

PIETER VAN DOKKUM is the Sol Goldman professor of astronomy and the divisional director of the Physical Sciences and Engineering at Yale University. His research interests include stars and stellar populations of the most distant galaxies, along with astronomical instrumentation and telescopes. Prior to joining Yale University, Dr. van Dokkum was a Spitzer Fellow and Hubble Fellow at the California Institute of Technology. He has received numerous awards, including the Marc Aaronson Memorial Prize, the National Science Foundation CAREER award, and the Pastoor Schmeitz prize. He received his Ph.D. for astronomy from the University of Groningen. He has not previously served on an Academies' committee.

David H. Weinberg

Member

DAVID H. WEINBERG is a Distinguished University Professor and chair of the Department of Astronomy at the Ohio State University. Dr. Weinberg studies the large scale structure of the universe, dark energy and dark matter, the formation and evolution of galaxies and quasars, and the intergalactic medium (IGM). He is well-known for his development of “halo occupation” methods to connect observed galaxy clustering to underlying dark matter structure, for theoretical modeling and cosmological applications of the Lyman-alpha forest, and for numerical simulation studies of the mechanisms of galaxy growth. For this panel, he brings expertise with all associated wavelengths. He has received the University Distinguished Scholar award and the Lancelot M. Berkeley New York Community Trust Prize for Meritorious Work in Astronomy by the American Astronomical Society. He received his Ph.D. for astrophysical sciences from Princeton University. He has previously served on the Academies’ Committee on the Review of Progress Toward the Decadal Survey Vision in New Worlds, New Horizons in Astronomy and Astrophysics and the Astro2010 Panel on Cosmology and Fundamental Physics.