

Astro2020: Panel on the Interstellar Medium and Star and Planet Formation

Committee

Lee W. Hartmann

Chair

LEE W. HARTMANN is the Leo Goldberg Collegiate professor of Astronomy at the University of Michigan. He has worked as an astrophysicist at the Smithsonian Astrophysical Observatory and was a vice-president of the American Astronomical Society. Dr. Hartmann's research interests include the formation of stars and star clusters, molecular cloud structure and dynamics, protostellar accretion, evolution of protoplanetary disks and planet formation, and mass function of stars. Dr. Hartmann is a fellow of the American Association for the Advancement of Science. He received his Ph.D. in astronomy from the University of Wisconsin System. Dr. Hartmann has served on three Academies' committees including: chair of the Astro2010 Panel on Planetary Systems and Star Formation, member of the U.S. National Committee for the International Astronomical Union, and member of the Committee on Astronomy and Astrophysics.

Sean M. Andrews

Member

SEAN M. ANDREWS is an astrophysicist with the Smithsonian Astrophysical Observatory (SAO) and lecturer on astronomy at Harvard University at the Harvard-Smithsonian Center for Astrophysics. Prior to that he was a Hubble Fellow at SAO. Sean does research on planet formation in the disks of gas and dust that orbit around young stars, primarily using radio interferometer data. In 2010 and 2017, he was awarded the Secretary's Research Prize by the Smithsonian Institution. Sean is the principal investigator of the Disk Substructures at High Angular Resolution Project (DSHARP) an Atacama Large Millimeter/submillimeter Array (ALMA) Large Program. He received his Ph.D. in astronomy from the University of Hawaii. He has not previously served on an Academies' committee.

Philip J. Armitage

Member

PHILIP J. ARMITAGE is a professor at Stony Brook University in the Department of Physics and Astronomy. He is also a group leader at the Center for Computational Astrophysics at the Flatiron Institute. Prior to his current position, he did postdoctoral work at the University of Toronto's Canadian Institute for Theoretical Astrophysics and at the Max Planck Institute for Astrophysics in Munich, Germany. He is interested in understanding the physical processes involved in the formation of planetary systems, including the role of two-fluid instabilities in forming the first analogs of asteroids and comets, and the importance of radiation hydrodynamic effects in the accretion of planetary envelopes. He received his Ph.D. from the University of Cambridge, Institute of Astronomy. He has not previously served on an Academies' committee.

Bruce T. Draine

Member

BRUCE DRAINE (NAS) is a professor of astrophysical sciences at Princeton University. After serving for two years in the Peace Corps, teaching physics and math in Ghana, he went to Cornell University. Draine has computed models for interstellar dust-grain properties, proposed a solution to the problem of the polarization of starlight by dust, showed that emissions from spinning grains is an important foreground to the cosmic background radiation, and discovered a new kind of interstellar shock wave. His work has created important models to interpret some of the processes that occur in interstellar space. Draine was a member of the Spitzer Infrared Nearby Galaxy Survey (SINGS), a Spitzer Space Telescope Legacy project which studied a sample of 75 nearby galaxies, and a member of the KINGFISH collaboration, a Herschel Key Project using Herschel Space Telescope (a 3.5m telescope in space with a cryogenic focal plane) to study 61 nearby (d 30 Mpc) galaxies using both far-infrared imaging and spectroscopy. Draine received his Ph.D. in theoretical physics from Cornell University. He served on the Astro2010 Panel on the Galactic Neighborhood.

Kaitlin M. Kratter

Member

KAITLIN KRATTER is associate professor of astronomy at the University of Arizona. She has been a Hubble Fellow at the University of Colorado and an Institute for Theory and Computation Fellow at Harvard University. Her research focuses on the formation and evolution of stellar and planetary systems. Kratter employs analytic and computational techniques to tackle topics including accretion disk dynamics, binary formation, few body dynamics, and planet-disk interactions. Kratter was awarded the Stromlo Distinguished Visitorship at Stromlo Observatory and was visiting scientist at the Max Planck Institute for Astrophysics. She received her Ph.D. in astrophysics from the University of Toronto. She has not previously served on an Academies' committee.

Karin M. Sandstrom

Member

KARIN M. SANDSTROM is assistant professor of astrophysics at the University of California, San Diego. She specializes in multiwavelength studies of the interstellar medium (ISM) in nearby galaxies. Her interests include ISM phases; heating and cooling of gas and dust; feedback from stellar populations; and chemical enrichment. She has been awarded observing time as principal investigator on numerous telescopes including the Atacama Pathfinder Experiment (APEX), the Arizona Radio Observatory (ARO), the Hubble Space Telescope (HST) and the Very Large Array (VLA). Sandstrom received her Ph.D. from the University of California at Berkeley. She has not previously served on an Academies' committee.

Snezana Stanimirovic

Member

SNEZANA STANIMIROVIC is professor of astronomy at the University of Wisconsin-Madison. She moved to Madison after working as a research associate in the Radio Astronomy Lab at the University of California, Berkeley. Before Berkeley, she spent three years on the island of Puerto Rico, working at the Arecibo Observatory. Her research interests include mapping neutral hydrogen in and around the Milky Way, statistical investigation of the interstellar medium, and star formation, magnetic fields, and diffuse matter in the galaxy. She was awarded the NSF Career Award in 2010, became a fellow of the American Association for the Advancement of Science and a Guggenheim Fellow. She earned her Ph.D. at the University of Western Sydney, jointly supervised by the Australia Telescope National Facilities. She has not previously served on an Academies' committee.

Ellen G. Zweibel

Member

ELLEN G. ZWEIBEL is the W. L. Kraushaar Professor of Astronomy and Physics, and the Vilas Distinguished Achievement Professor at the University of Wisconsin at Madison, and past director of the Center for Magnetic Self-Organization. Prior to joining the University of Wisconsin Madison, she was a faculty member at the University of Colorado. Her research interests and expertise include theoretical astrophysics with a specialty in plasma astrophysics. Zweibel received numerous awards including being elected as a fellow of the American Physical Society and the American Physical Society's Maxwell Prize for Plasma Physics. She received her Ph.D. in astrophysical sciences from Princeton University. She has served on the Space Studies Board and on many Academies' committees.