Astro2020: Panel on State of the Profession and Societal Impacts

Committee

Margaret M. Hanson

Co-Chair

MARGARET M. HANSON is an Associate University dean in the Graduate School and a professor in the Department of Physics at The University of Cincinnati. Her research interests include studying massive stars and stellar clusters, along with imaging simulations of stellar clusters that better constrain the properties of resolved clusters. Hanson has held many positions at the University of Cincinnati including associate and assistant professor, and was the associate editor-in-chief of The Astronomical Journal. Prior to joining her current organization, she was a Hubble Postdoctoral fellow at the University of Arizona, a graduate research assistant at the University of Colorado, and a graduate teaching assistant at the University of Washington. She is the recipient of numerous awards and honors including the Leading Women of Cincinnati Science & Technology Award, the Edith C. Alexander Award for Distinguished Teaching, and the Sigma Xi Research Recognition Young Investigator Award. Hanson is a member of the Astronomical Society of the Pacific and the American Astronomical Society. She received her Ph.D. in astrophysics from the University of Colorado.

Enrico Ramirez-Ruiz

Co-Chair

ENRICO RAMIREZ-RUIZ is a professor and chair of Astronomy and Astrophysics at the University of California, Santa Cruz. He is also the director of the Theoretical Astrophysics Santa Cruz Institute, the Niels Bohr professor at the Niels Bohr Institute, and the director of the Lamat Institute where he works vigorously to support the promotion and retention of women and underrepresented minorities in STEM. Ramirez-Ruiz’s research interests includes developing the conceptual framework needed to understand the violent capricious nature of the Universe. Prior to joining the University of California, Santa Cruz, he was a John Bahcall Fellow at the Institute for Advanced Study at Princeton. He is the recipient of numerous awards and honors including, a Packard Fellowship for Science and Engineering, the National Science Foundation CAREER Award, the Kavli Fellowship from the National Academy of Science, the Radcliffe Fellowship from Harvard University, the Niels Bohr Professorship from the Danish National Research Foundation, the Edward A. Bouchet Award from the American Physical Society, and the HEAD Mid-Career Prize from the American Astronomical Society. Ramirez-Ruiz received his Ph.D. in astronomy and astrophysics from the University of Cambridge.

Gurtina Besla

Member

GURTINA BESLA is an assistant professor of astronomy at the University of Arizona. She is also an assistant astronomer at Steward Observatory. Her research interests focus on understanding the formation and evolution of low mass dwarf galaxies, particularly the Large and Small Magellanic Clouds, through numerical simulations. She is the principal investigator of the University of Arizona's TIMESTEP program, which is focused on increasing the presence of under-represented minority students in the physical sciences. She earned her Ph.D. in astronomy from Harvard University. She has not previously served on an Academies committee.

Patricia T. Boyd

Member

PATRICIA T. BOYD is an astrophysicist at NASA's Goddard Space Flight Center. She serves as the chief of the Exoplanets and Stellar Astrophysics Laboratory and as project scientist for the Transiting Exoplanet Survey Satellite (TESS) mission at NASA's Goddard Space Flight Center. Her research interests focus on the long-term variability in stellar binaries, star-planet interaction, and accretion onto stellar-mass and supermassive compact objects. She has led the Guest Investigator Programs for several operating NASA missions including the Rossi X-ray Timing Explorer, Swift, and TESS. She spent two years at NASA headquarters, where she served as the program scientist for the Kepler mission through launch, commissioning and early operations, while also serving as the GALEX program scientist and managing the Origins of Solar Systems grants portfolio for the Astrophysics Division. She is a member of the NASA Astrophysics Advisory Committee (formerly the NASA Astrophysics Subcommittee). She was the Goddard lead for the National Astronomy Consortium, an internship program focused on recruiting and retaining STEM professionals from underserved populations, and co-organized the Women in Astronomy Roundtable at Goddard. She is also co-creator of the AstroCappella project, a musical exploration of the universe used in classrooms and in live performances. She has been recognized by NASA for her work several times, including exceptional achievement for diversity and EEO and exceptional outreach achievement for the Hubble 25th anniversary. She earned her Ph.D. in physics and atmospheric science from Drexel University. She has not previously served on an Academies committee.

Kathryne J. Daniel

Member

KATHRYNE J. DANIEL is assistant professor of physics at Bryn Mawr College. Her research interests are in galaxy evolution and dynamics. She is a member of the Society for Advancing Chicanos/Hispanics and Native Americans in Science, serves on the AAS Committee on the Status of Minorities in Astronomy, and is a committee member for the Division for Dynamical Astronomy. She also co-organized a workshop at the AAS on combating racism in astronomy. She received the American Dissertation Fellowship from the American Association of University Women for both her academic work and her role in promoting women in astrophysics. She earned her Ph.D. in physics and astronomy from Johns Hopkins University. She has not previously served on an Academies' committee.

Martha P. Haynes

Member

MARTHA P. HAYNES (NAS) is the Goldwin Smith Professor of Astronomy at Cornell University. Her research interests focus on observational cosmology, galaxy evolution, and techniques of radio astronomy. She is a fellow of the American Association for the Advancement of Science and has been elected to the American Academy of Arts and Sciences. She has received the Henry Draper Medal for investigations in astronomical physics for her work in mapping the distribution of galaxies in the Universe. She has been recognized at Cornell for her commitment to undergraduate education and mentoring. She earned her Ph.D. in astronomy at Indiana University. She has previously served on the Board of Physics and Astronomy, the Division Committee on Engineering and Physical Sciences, and the Report Review Committee at the National Academies, and was co-vice chair of the 2010 Decadal Survey.

Jedidah Isler

Member

JEDIDAH C. ISLER is an assistant professor of physics and astronomy at Dartmouth University and a consultant and speaker. Her research interests focus on studying blazars using multi-wavelength observations of their particle jets. She is a well-known speaker and advocate for women of color in science. She founded Vanguard: Conversations with Women of Color in STEM, a panel discussing the experiences of women of color in STEM. She also founded and leads the STEM en Route to Change Foundation with the goal to use STEM as a tool for social justice. She received the American Astronomical Society Roger Doxsey Dissertation Prize and became a TED Fellow. She earned her Ph.D. in astrophysics from Yale University. She has not previously served on an Academies' committee.

Rachel L. Ivie

Member

RACHEL L. IVIE is the senior director of education and research at the American Institute of Physics (AIP). In this capacity, she is responsible for the Center for the History of Physics, the Niels Bohr Library and Archives, the Society of Physics Students, and the Statistical Research Center. Prior to her appointment as senior director, Ivie served AIP in the Statistical Research Center for 21 years, both as assistant and associate director before leading it entirely as director. Her research interests include physics and astronomy faculty in 4-year institutions, women and under-represented groups in physics and astronomy, and employment and career paths in physics and astronomy. She has carried out a number of studies related to the career outlook of women in physics, including on tenure and promotion practices for male and female faculty. She also completed an NSF-funded longitudinal study on gender differences in career outcomes for astronomy graduate students. She earned her Ph.D. in sociology at the University of North Carolina, Chapel Hill. She has not previously served on an Academies committee.

Kathryn V. Johnston

Member

KATHRYN V. JOHNSTON is professor of astronomy at Columbia University. Past appointments include postdoctoral membership of the Institute for Advanced Study, junior faculty at Wesleyan University and three years as the chair of the Columbia Astronomy department. Her research interests focus on the dynamics, formation, interactions, and evolution of the galaxy, stellar populations, and the Milky Way and Local Group. Beyond her own research, she is committed to enabling science through community projects and networks. At Columbia she helped move the institution to a shared model for research computing and is currently the chair of the Committee for Equity and Diversity in the School of Arts & Sciences. She has also led discussions on women in science at over 20 departments nationwide in the last decade. She is just starting a joint appointment as Dynamics Group Leader at the Flatiron Institute's Center for Computational Astrophysics. Johnston earned her Ph.D. in astronomy from the University of California at Santa Cruz. She has not previously served on an Academies committee.

Casey W. Miller

Member

CASEY W. MILLER is the associate dean for Research and Faculty Affairs for the College of Science at the Rochester Institute of Technology. He is also a professor in the School of Chemistry and Material Science. His research interests include experimental, nanoscale magnetic materials, and he is a nationally recognized expert in science, technology, engineering, and mathematics (STEM) graduate education. He has served as the Director of the American Physical Society (APS) Bridge Program's site at University of South Florida which strives to increase the number of physics PhDs awarded to underrepresented minority students. Miller has also served on the APS Committee on Minorities, and he was the chair of the 2017 APS Graduate Education and Bridge Program Conference. He earned his Ph.D. in physics from the University of Texas at Austin. He has not previously served on an Academies committee.

Jesus Pando

Member

JESÚS PANDO is an associate professor of physics and astrophysics at DePaul University and currently serves as the chair of the department. His research interests focus on uncovering structure in a noisy environment, such as large-scale structure formation in the universe. He is a member of the Society for the Advancement of Chicanos/Hispanics and Native Americans in Science and a board member of the National Society of Hispanic Physicists, both with the goal of dealing with issues faced by underrepresented students and professionals in STEM. He earned his Ph.D. in physics from the University of Arizona. He has not previously served on an Academies' committee.

Julie Posselt

Member

JULIE R. POSSELT is an associate professor of higher education at the University of Southern California at the Rossier School of Education. Her research examines institutionalized inequalities in higher education and methods to reduce inequities and encourage diversity. She has written three books focusing on equity and inclusion in higher education, as well as numerous articles and papers on the subject. She completed the National Academy of Education's first national study of graduate student mental health, and directs the National Science Foundation-funded California Consortium for Inclusive Doctoral Education and the Inclusive Graduate Education Research Hub. She is associate editor of the Journal of Higher Education. She earned her Ph.D. in higher education from the University of Michigan. She has not previously served on an Academies' committee.

Jane R. Rigby

Member

JANE R. RIGBY is an astrophysicist at the NASA Goddard Space Flight Center. She served for nine years as a project scientist for the James Webb Space Telescope (JWST) and is currently the operations project scientist. Rigby was a NASA headquarters-appointed member of the Science and Technology Definition Team for the NASA Large UV/Optical/IR Surveyor (LUVOIR) mission concept. Her research interests focus on observations of star-forming galaxies, supermassive black holes, and gravitational lensing as a tool to study galaxies. She has received numerous awards including the John C. Lindsay Memorial Award for Space Science, the Robert H. Goddard Award for Exceptional Achievement for Science, and the Robert H. Goddard Award for Diversity and Equal Employment Opportunity. Rigby co-organized the "Inclusive Astronomy 2015" conference, served as a founding member of the AAS's Working Group on LGBTIQ Equality, and served on the AAS Committee for Sexual-Orientation and Gender Minorities in Astronomy. She has given public talks to large audiences including TEDx, the Library of Congress, and two conferences for undergraduate women in physics, and has lectured on the impact of gay activist and astronomer Frank Kameny. She earned her Ph.D. in astronomy from the University of Arizona. She has not previously served on an Academies committee.

Willie S. Rockward

Member

WILLIE S. ROCKWARD is chair and professor of physics at Morgan State University. His research interests include micro/nano optics lithography, extreme ultraviolet interferometry, metamaterials, and the spectroscopy of binary stars. He is the currently the president of the National Society of Black Physicists. As chair of his department, he investigated the barriers faced by the physics departments of historically black colleges and universities and launched the “We C.A.R.E.” approach meant to improve the overall number of African-American physicists. He gave the keynote speech at the Conference for Underrepresented Minority Physicists in 2017. He received his Ph.D. in physics from Georgia Institute of Technology. He has not previously served on an Academies committee.

Keivan G. Stassun

Member

KEIVAN G. STASSUN is the Stevenson Endowed professor of Physics & Astronomy at Vanderbilt University. He is also the founding director of the Vanderbilt Initiative in Data-intensive Astrophysics (VIDA). His research focuses on the formation of stars and planetary systems, which increasingly involves approaches at the interface of astronomy, physics, computer science, and informatics. Stassun currently serves as a general councilor of the American Physical Society and served for eight years as chair of the American Astronomical Society's (AAS's) Committee on the Status of Minorities. He's known for his leadership and distinction as a scientist and as an innovator in broadening the participation of underrepresented minorities in STEM fields. Stassun received the 2018 Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring. He earned a Ph.D. in astronomy from the University of Wisconsin at Madison. Stassun has served on numerous Academies' committees and was a member of the Astro2010 study group on education and public outreach.