Committee on Radio Frequencies (CORF)

Committee

Kelsey Johnson

Co-Chair

KELSEY E. JOHNSON is professor of astronomy at the University of Virginia, and previously served as interim associate dean for undergraduate education and director of the Echols Scholars Program. Johnson is an observational astrophysicist whose research focuses on star formation and galaxy evolution, with extensive experience in radio, millimeter, and submillimeter astronomy. Johnson’s broader professional work includes issues related to the governance and sustainable use of space, including previous service on the Astronomy and Astrophysics Advisory Committee, which advises NSF, NASA, DOE, and Congress?and the American Astronomical Society Committee on Public Policy.?Johnson is a past president of both the American Astronomical Society and the Astronomical Society of the Pacific, and her honors include a David and Lucile Packard Fellowship, an NSF CAREER Award, and an NSF Distinguished Lectureship. Johnson earned a Ph.D. in astrophysics from the University of Colorado, and subsequently held an NSF Astronomy and Astrophysics Postdoctoral Fellowship and a Hubble Fellowship.?Johnson served as a member of the National Academies’ Committee on Radio Frequencies from 2019 to 2025.

David G. Long

Co-Chair

DAVID G. LONG is director of the BYU Center for Remote Sensing and head of the Microwave Earth Remote Sensing Laboratory. Long’s research interests include microwave remote sensing, space-borne scatterometry, synthetic aperture radar, signal processing, estimation theory, resolution en-hancement, and polar ice. Long has been principal investigator on a number of NASA projects in scat-terometry, climate studies, rain observation, soil moisture and SAR. Long is PI for the Scatterometer Climate Record Pathfinder (www.scp.byu.edu) and is a long-term member of the Ocean Vector Winds Science Team (OVWST) among others. Previously, Long served as associate dean of the BYU College of Engineering 2012-2016 and before coming to BYU in 1990 worked at NASA's Jet Propul-sion Laboratory (JPL) with the responsibility for the design and development of multiple satellite remote sensing radars. Long has 154 journal papers, three books, three patents, and over 300 confer-ence papers. Long has received several NASA Award of Achievement and Team Recognition awards and is a founding Associate Editor for IEEE Geoscience and Remote Sensing Letters. Long earned a Ph.D. in Electrical Engineering from the University of Southern California.

Karen Masters

Co-Chair

KAREN MASTERS is a professor in astronomy and physics at Haverford College. Masters seeks to use large surveys (both in optical and radio wavelengths) to understand how galaxies in our Universe form and evolve. Masters is a frequent 1.4 GHz/21cm line observer at the Green Bank Observatory, and has also been awarded time at JVLA and GMRT. Masters is the principal investigator (previously project scientist) for the Galaxy Zoo project (www.galaxyzoo.org) - a citizen science activity which crowdsources the morphology of galaxies. Masters was previously the spokesperson for the fourth phase of the Sloan Digital Sky Survey (SDSS-IV; www.sdss.org). Masters was a co-chair of the AAS (American Astronomical Society) Education Committee, has been on the AAS Nominating Committee, and served on the Royal Astronomical Society Patrick Moore and Annie Maunder Medals panel. Previously, Masters was on the faculty and a postdoc at Portsmouth University in the UK and at the Center for Astrophysics/Haverford College Observatory. Masters earned a Ph.D. in astronomy from Cornell University.

Hector Arce

Member

HÉCTOR ARCE is a professor of astronomy at Yale University. Prior to joining Yale University, Arce was an NSF Astronomy and Astrophysics postdoctoral fellow at the American Museum of Natural History in New York and a postdoctoral researcher in the Owens Valley Radio Observatory millimeter array group at Caltech in Pasadena. Arce’s research interests include star formation; feedback from young stellar objects, molecular clouds, and cores; and the physical and chemical processes in the interstellar medium. Arce mostly uses radio, millimeter, and submillimeter telescopes for research. Arce served on several radio/millimeter/submillimeter proposal review committees, the Arecibo Observatory users and scientific advisory committee, and the Panel on Radio, Millimeter, and Submillimeter Observations from the Ground for the 2020 National Academies Decadal Survey on Astronomy and Astrophysics. Arce is an NSF CAREER award recipient. Arce earned a Ph.D. in astronomy from Harvard University.

Reyhan Baktur

Member

REYHAN BAKTUR is an associate professor at the department of Electrical and Computer Engineering at Utah State University (USU). Baktur’s research interests include antennas and microwave engineering with a focus on antenna design for CubeSats; optically transparent antennas; multifunctional integrated antennas, sensors, and microwave circuits. Baktur is also the faculty advisor for the USU’s Student CubeSats team, where the current mission’s main payload is her transparent antenna, which is set to fly in 2026. Baktur is affiliated with the Center for Space Engineering at USU and the Space Dynamics Laboratory (the university affiliated research center) and collaborates with NASA Goddard Space Flight Center. Baktur is an Institute of Electrical and Electronics Engineers (IEEE) Antennas and Propagation (APS) Distinguished Lecturer of 2022-2024, Administrative Committee member of IEEE APS, and is active in the U.S. National Committee of the International Union of Radio Science, serving as the Commission B chair and was the inaugural chair for the Women in Radio Science. Baktur is the recipient of IEEE APS Dudley Award for Undergraduate Teaching in 2014, several departmental and university level awards at USU, and Keynote or invited speakers to several IEEE conferences or IEEE sponsored international conferences. Baktur earned a Ph.D. in electrical engineering from Clemson University.

Shamibrata Chatterjee

Member

SHAMIBRATA CHATTERJEE is an associate professor of astronomy at Cornell University. Chatter-jee has been a principal research scientist at the Cornell Center for Astrophysics and Planetary Sci-ence, and was a University Fellow at the University of Sydney and a Jansky Fellow at the Harvard-Smithsonian Center for Astrophysics and the National Radio Astronomy Observatory. Chatterjee's research involves neutron stars in their many manifestations. As part of the North American Nano-hertz Observatory for Gravitational Waves (NANOGrav), Chatterjee is involved in building a Galaxy-scale detector for low frequency gravitational waves by the precision timing of millisecond pulsars. Chatterjee led the first localization of a fast radio burst (FRB) source, and is part of the CHIME-FRB collaboration that has now discovered thousands of FRBs and is localizing them with very long base-line interferometry using the CHIME Outriggers; and was part of the Event Horizon Telescope col-laboration that was awarded the Breakthrough Prize in Fundamental Physics in 2020. Chatterjee earned a Ph.D. in Astronomy at Cornell University.

Laura B. Chomiuk

Member

LAURA B. CHOMIUK is a professor of physics and astronomy at Michigan State University (MSU). Previously, Chomiuk was a Jansky Fellow of the National Radio Astronomy Observatory at the Smithsonian Astrophysical Observatory. Chomiuk has far-ranging interests in transient and energetic phenomena, including novae, supernovae, and X-ray binaries, and pursues these phenomena with multi-wavelength observations spanning radio to gamma-ray wavelengths. Chomiuk is a recipient of a Cottrell Scholarship and an NSF CAREER Award, along with an MSU Teacher-Scholar Award. Chomiuk earned a Ph.D. in astronomy from the University of Wisconsin, Madison.

Kshitija Deshpande

Member

KSHITIJA DESHPANDE an associate professor of engineering physics in the Physical Sciences Department at Embry-Riddle Aeronautical University (ERAU). Deshpande was a post-doctoral fellow 2014-2016 at Virginia Tech before joining ERAU. Deshpande's research interests include remote sensing, Global Navigation Satellite System (GNSS), space weather effects, inverse problems, machine learning, mathematical modeling and simulations, and magnetosphere-ionosphere interactions. Deshpande is an International International Union of Radio Science (URSI) Individual Member.. Deshpande is a recipient of NSF's prestigious CAREER award to explore machine learning application in space weather studies using GNSS. Deshpande's educational training is in electromagnetics, radio astronomy and space physics. Deshpande earned a Ph.D. degree in electrical engineering from Virginia Tech, Blacksburg.

Tomas E. Gergely

Member

TOMAS E. GERGELY is an independent consultant who previously served as program manager for Electromagnetic Spectrum Management at the National Science Foundation (NSF) until retirement in 2012. Gergely was responsible for ensuring access of the U.S. scientific community to the radio spectrum, and in particular for the protection of radio astronomy observatories. After retirement, Gergely was retained by the NSF as a part-time expert on radio spectrum issues until the end of December 2014. While at the NSF, Gergely served on U.S. delegations to eight World Radiocommunication Conferences (WARC-87, WARC-92, WRC-95, WRC-97, WRC-00, WRC-03, WRC-07 and WRC-12 and during 2000 - 2012 chaired the U.S. Working Party 7D, the group dealing with radio astronomy within the International Telecommunication Union (ITU). Gergely received NSF's Meritorious Service Award in 2000 for his work on the reallocation of the radio services in the 71-275 GHz range at WRC-00. Gergely earned a Ph.D. in astronomy from the University of Maryland.

Christopher Kidd

Member

CHRISTOPHER KIDD recently retired as a research scientist at the Earth System Science Interdisciplinary Centre, University of Maryland, and NASA’s Goddard Space Flight Center. Kidd’s research interests focus on the global measurement of precipitation, primarily from multi-satellite, multi-sensor passive microwave observations. Kidd’s work has encompassed a number of key international missions, including the Tropical Rainfall Measuring Mission (TRMM) and the Global Precipitation Measurement (GPM) mission. Kidd has worked on a number of mission proposals including ESA’s European Contribution to the GPM, and is involved in the development of new missions. Kidd earned a Ph.D. in geography from the University of Bristol (UK).

David G. Lubar

Member

DAVID G. LUBAR recently retired as the senior project leader – Radio Frequency (RF) Engineering, Civil Spectrum Management, Civil Systems Group of The Aerospace Corporation. Lubar has provided spectrum management support for two of NOAA’s program offices for major environmental satellite systems for over a decade. Lubar has >40 years of engineering experience, including past positions at Raythe-on Company, Hughes Aircraft Company, and Martin-Marietta Aerospace. Lubar’s support for remote sensing from space over the past 20 years includes being a founding member of the Committee on Frequency Allocation, American Meteorological Society; past NOAA delegate since 2007 to the Space Frequency Coordination Group for the world’s civil space agencies; past member of U.S. Working Party 7D and International Telecommunication Union (ITU) Study Group 7B – Science Systems – Space Radiocommunications and author of numerous papers or panel speakers for the Institute of Electrical and Electronics Engineers International Geoscience and Remote Sensing Symposium (IEEE IGARSS) and American Meteorological Society (AMS). Lubar testified in 2021 for the House Science, Space and Technology Committee regarding spectrum for meteorological satellites. Lubar is a member of both the IEEE Frequency Allocation for Remote Sensing (FARS) committee, and the American Meteorological Society (AMS). The AMS awarded Lubar a special award for career spec-trum efforts. Lubar is on the board of the National Spectrum Management Association. Lubar earned a Masters of Engineering in Engineering Management from the University of Colorado-Boulder.

Sidharth Misra

Member

SIDARTH MISRA is a technologist at the NASA Jet Propulsion Laboratory (JPL) in Pasadena, CA. Misra previously worked as a research engineer at the University of Michigan and the Technical University of Denmark. Misra's expertise includes radio frequency interference algorithm development and mitigation and microwave radiometer system development and calibration. Misra has been on the science and calibration teams of several space-borne microwave radiometers such as Aquarius, SMAP, CubeRRT, COWVR, Juno. Misra is currently the Instrument Scientist for the EZIE mission. Misra is also on the Executive Committee of the Institute of Electrical and Electronics Engineers (IEEE) Geoscience and Remote Sensing Society (GRSS) and is vice president of Meetings and Symposia for IEEE GRSS. Misra was also the general co-chair of the International Symposium on Geoscience and Remote Sensing in 2023. Misra is the recipient of several NASA and JPL awards, including the JPL Charles Elachi Early Career Award in 2016, NASA Early Career Award in 2017, NASA Technical Achievement Award in 2019, and a JPL Lew Allen Award in 2020, as well as several NASA Group Achievement Awards. Misra earned a Ph.D. in electrical, electronics, and computer engineering systems from Cornell University.

Isaac Moradi

Member

ISAAC MORADI is a research scientist at the Earth System Science Interdisciplinary Center (ESSIC) and the Artificial Intelligence Interdisciplinary Institute at Maryland (AIM) at the University of Maryland, affiliated with NASA’s Global Modeling and Assimilation Office (GMAO) and NOAA’s National Environmental Satellite, Data, and Information Service.?Moradi brings over 20 years of?expertise?in satellite microwave and radar remote sensing, radiative transfer modeling, numerical weather prediction, machine learning, and data assimilation. Moradi’s primary research focuses on the assimilation of microwave and radar observations, especially from new and planned satellite instruments, including the development of forward models, evaluation of observation modeling errors, and assessment of next-generation Earth-observing systems.?Moradi?currently?serves as an executive member of the American Meteorological Society (AMS) Forecast Improvement Group, a member of the AMS Committees on Radio Frequency Allocations and Atmospheric Radiation, a member of IEEE, AMS, and American Geophysical Union, and has served as Editor and reviewer for leading scientific journals. Moradi earned a Ph.D. in Radio and Space Science from Chalmers University of Technology, Sweden, as well as a Ph.D. in Climatology and Environmental Planning from Khwarizmi University, Iran.

Bang D. Nhan

Member

BANG D. NHAN an assistant scientist in the Electromagnetic Spectrum Management (ESM) Division at the National Radio Astronomy Observatory (NRAO) and was a Jansky Postdoctoral Fellow at the NRAO's Central Development Laboratory (CDL). Nhan is currently assisting the NRAO and the Green Bank Observatory on coordinating tests and observational data sharing with satellite internet service providers to develop a spectrum coexisting framework between the radio observatories and the satellite constellations. Nhan's research interests include developing instrumentation, signal processing, and measurement techniques for different radio astronomy and engineering applications, which may require high dynamic range and low signal-to-noise ratio sensitivity. Nhan is experienced in utilizing computational electromagnetic (CEM) simulation software in conjunction with laboratory measurement (in anechoic chamber and antenna range) to evaluate the EM performance of antenna and RF/microwave systems, along with their EM compatibility (EMC). Nhan has led the effort in developing two broadband antenna prototypes for the NSF-funded Advanced Spectrum Monitor (ASM) system at CDL, designed to operate between 1-60 GHz for spectrum monitoring and direction finding for radio frequency interference (RFI). Nhan earned a Ph.D. in astrophysics from the University of Colorado at Boulder.

Suzanne Staggs

Member

SUZANNE STAGGS (NAS) is the Henry deWolf Smyth Professor of Physics at Princeton University and the co-Director of Simons Observatory. Stagg's research has focused on precision measurements of the temperature anisotropy, polarization, and absolute temperature of the cosmic microwave background, through a series of instruments, most recently as principal investigator of the Atacama Cosmology Telescope. Stagg's current laboratory work centers on the development and production of very large and sensitive cryogenic focal plane detector systems. Staggs is a member of the American Academy of Arts and Sciences and a fellow of the American Physical Society. Staggs earned a Ph.D in physics from Princeton University.