Name:
Rajeev Jyoti

Photo:

Awards:
IEEE IC Technologist of the Year 2020

Brief Bio:

He received the M.Sc. (Physics) and M.Tech. degree in Microwave Electronics from Delhi University, Delhi. He is a top ranker in M Tech of Delhi University. He started his professional carrier in the development of antennas systems for communication & Microwave remote sensing satellites at the Space Applications Centre (SAC), Indian Space Research Organization (ISRO). Currently he is serving as the Distinguished Scientist & Deputy Director of Microwave Remote Sensors Area (MRSA). He has been leading the team which is responsible for the development of S Band Sweep SAR payload for DUAL band NASA-ISRO SAR. Recently he led the team which accomplished the development of India's first constellation of 3 satellites of X band RADAR Imaging payload for Disaster applications. Other significant contributions are dual band L&S SAR and Ku band RADAR Altimeters for Chandryaan-2 and Scatterometers, RISAT1 SAR imaging payload for ISRO programs. During his 33 years of illustrious engineering and research carrier, he has developed many new technologies for space & ground antennas. He has contributed significantly to the design, analysis and development of numerous state-of-art antennas technologies namely gridded antennas, multiple beam antennas, Corrugated feeds & phased array microstrip/ helical antennas for communication (INSAT/GSAT), Microwave Remote Sensing & Indian Navigation (IRNSS) satellites. He has served as Group Director of Antenna Group & Deputy Project Director of India's first RADAR Imaging Satellite (RISAT 1). As DPD, he has been responsible for commissioning of ISRO's first Compact Antenna Test Range. He has 14 patents & >170 papers. He is the recipient of IETE RajMitra Award-2008, ISRO performance excellence-2016, ISRO Individual Merit award-2012. He was awarded ISRO Team award-2012 for RISAT 1 Payload Design, Realisation and data Products & ISRO Team Leadership awards for his contribution in Antennas development for ISRO space programs. He was awarded United Nation Long term fellowship in ESA, ESTEC. Currently he is serving as Member of IEEE APS industry Initiative Committee, IEEE MTTs Education Committee, IEEE MTTs Aerospace Technical Committee, Vice President of ISSE- National Committee, Chairman of Indian Society of Remote Sensing (ISRS) Ahmedabad Chapter. He is Associate Editor of IEEE APS Magazine & IETE journal. He is a Fellow Member of IETE, Senior member of IEEE and Founder Chair of the Joint Chapter of IEEE AP & MTT, Ahmedabad.

Achievement for which the award was given:

The prime contribution is the research and development of antenna systems for building National communication transponders, microwave radar, and navigation spacecraft for ISRO programme. The

research work carried out by me has resulted into the development of innovative indigenous dual gridded shaped antenna system, multilayer antenna, feeds for Unfurlable antenna, feeds for Ku /Ka band High-through-Put multiple beam satellites antennas and single aperture Ku /Ka band tracking 6 ports feeds with multi-polarisation and high cross polarisation discrimination. These antenna technologies have also been transferred to Indian Industries for indigenisation. I have been instrumental in the development of +170 indigenous antenna systems for more 32 ISRO communication, Navigational and microwave remote sensing payloads. As the leader of antenna systems development, I as, principal investigator, have collaborated successfully antenna technology and research with more than 18 Indian universities on behalf of ISRO organisation. Some of my patents and technical papers published in referred journals have been highly cited. An innovative wide band shared aperture dual L & S band 12 layers multilayer antenna was also developed for SAR Lunar mission (Chandryaan II) which demonstrates excellent full polarimetric SAR Images of lunar surface contribution in the field of planetary mission. I have also been responsible for the development of innovative compact Ku-Ka Direct broadcasting band six ports feed with single aperture tracking feed in a single large earth station for Hylas (INTELSAT) as an import substitute which could be resulted into huge saving in foreign exchange. Accomplished missions are the development of constellation of 3 satellites of X band SAR (RISAT 2B series) for disaster management and Ka band Radar Altimeter for Chandryaan Lander. Successfully delivered state of art payloads which are building block for space infrastructure of ISRO Earth Observations satellite. i.e. S band SAR for NASA-ISRO SAR, S band airborne SAR, and Ku band Scatterometer and L/S dual band SAR for Lunar Orbiter.