

# COMMISSION F NEWSLETTER

WAVE PROPAGATION AND REMOTE SENSING

NOVEMBER 2017

V. CHANDRASEKAR – CHAIR, COMMISSION F

VOL., ISSUE I



## WELCOMING THE NEW TRIENNIUM

Greetings, and welcome to the premiere of what we aspire to be a series of semi-annual news updates involving events and proceedings within the Radio Science community. This month, we commence by acknowledging a new triennium for the International Union of Radio Science (URSI), which is accompanied by several new leadership positions and members of the newly formed Technical Advisory Committee for Commission F. Commission F members collaborate on wave propagation and remote sensing of atmospheres, surfaces, and subsurfaces on an international basis. Thus, we acknowledge their contributions to the field of Radio Science by providing some brief background information on each member. These profiles provide an academic reference for each new committee member and also highlight the diverse international community that the International Union of Radio Science has created.

## NEW MEMBER INTRODUCTIONS

Each individual has accomplished numerous achievements within their field of expertise and therefore we are extremely grateful to have them represent the Radio Science community and further benefit the study of wave propagation and remote sensing.

### DR. V. CHANDRASEKAR CHAIR – USA

Dr. Chandra received both his Masters and PhD in Electrical Engineering from Colorado State University, where he continues to conduct research and educate students as a University Distinguished Professor of Electrical and Computer Engineering. Dr. Chandra specializes in Signal Processing and Radar Systems and also conducts research on image processing, neural network applications, and large scale system simulation. Additionally, he is the co-author of two textbooks, *Polarimetric and Dopplar*

*Weather Radar* (by Cambridge University Press) and  
*Probability and Random Processes* (by McGraw Hill).



DR. V. CHANDRASEKAR



DR. SIMONETTA PALOSCIA  
PAST CHAIR – ITALY

Dr. Simonetta Paloscia is the Associate Editor of the International Journal of Remote Sensing (IEEE JSTARS) and European Journal of Remote Sensing. She has been an IEEE fellow since 2012 and has been chair of URSI Commission F since 2014. Since 1996, she has been the principal investigator for algorithms development of soil moisture and vegetation biomass retrieval. Dr. Paloscia has been with the National Research Council (CNR) since 1984, and her research currently concerns the study of microwave emission and scattering on soil and vegetation.



DR. SIMONETTA PALOSCIA



DR. TULLIO JOSEPH TANZI  
VICE CHAIR – FRANCE

After a career in the military developing Underwater Warfare Systems, Tullio Joseph Tanzi joined academia in 1998. He began teaching at École Nationale Supérieure des Mines de Paris at the Centre for research on Crisis and Risks (CRC) in Sophia Antipolis until 2002. From 2002 to 2005 he was a professor at École Nationale Supérieure des Télécommunications de Bretagne, Institut des Applications Avancées de l'Internet, and head of ITS. He has been a professor at Télécom ParisTech, within the Mines Télécom Institute, since 2005, where his research focuses on telecommunications and risk management. Currently, Dr. Tanzi is also a member of the Standing Publications Committee for URSI, the Chair for the French division of URSI's Commission F, and Chair of ISPRS ICWG III/Iva: Disaster Assessment, Monitoring and Management Workgroup.



DR. TULLIO TANZI



DR. MOTOHARU SASAKI  
**EARLY CAREER REPRESENTATIVE**  
JAPAN

Dr. Motoharu Sasaki was born in Japan and received both his M.E. and PhD in informational science and electrical engineering from Kyushu University in Fukuoka, Japan. In 2009, he joined NTT Access Network Service Systems Laboratories in Yokosuka, Japan. He has since continued to engage in propagation modeling for various wireless communication systems.



DR. MOTOHARU SASAKI

DR. MEHEMET KURUM  
**EARLY CAREER REPRESENTATIVE**  
TURKEY

Dr. Mehmet Kurum received both an M.S. and a Ph.D. in Electrical Engineering from George Washington University (GWU), in Washington, D.C. After completing his Ph.D., he was awarded a postdoctoral position at the Hydrological Sciences Laboratory (HSL) for NASA's Goddard Space Flight Centre (GSFC) in Greenbelt, Maryland. In August 2016, he joined the department of Electrical and Computer Engineering at Mississippi State University as an assistant professor. His academic and research fields of interest include microwave and millimeter wave remote sensing, RF sensors and systems,

radiation and scattering theory, antennas and computational electromagnetics, subsurface/subcanopy sensing and imaging, and GNSS reflectometry.



DR. MEHMET KURUM



**TECHNICAL ADVISORY  
COMMITTEE ADDITIONAL  
MEMBERS:**

DR. MOTOYUKI SATO  
JAPAN

Dr. Motoyuki Sato received his PhD in Information Engineering from Tohoku University in Sendai, Japan. He has been a full professor at Tohoku University since 1997. His current research interests include transient electromagnetics and antennas, radar polarimetry, ground penetrating radar (GPR), borehole radar, electromagnetic induction sensing, and interferometric and polarimetric SAR.



DR. MOTOYUKI SATO



DR. LUCA BALDINI  
ITALY

Dr. Luca Baldini received his degree in Electrical Engineering for the University of Florence in 1988, and subsequently acquired his PhD there in 1994. He was appointed as a professor in Remote Sensing at the University of Siena from 1994 to 2001 and taught Signal Theory at the University of Florence. From 1995 to 2001, he worked as a consultant for governments, academia, and businesses by managing research and development projects regarding environmental monitoring technology, telecommunication services, and vocational training. In 2001, he obtained a permanent position as a researcher at the National Research Council of Italy and the Institute of Atmospheric Sciences and Climate in Rome. Since 2009, Dr. Baldini has been involved in NASA's PMM (Precipitation Measuring Missions) science team. Currently, he is the co-Chief Editor of the Journal of Atmospheric and Ocean Technology.



DR. LUCA BALDINI



DR. ANIMESH MAITRA  
INDIA

Dr. Animesh Maitra is a professor at the Institute of Radio Physics and Electronics at the University of Calcutta in Kolkata, India. He is the Indian National Chair of URSI Commission F and he received the URSI Young Scientist award at the General Assembly in Tel Aviv in 1987. He is currently leading a research group that has set up an elaborate experimental facility to study earth-space propagation, precipitation, rain cloud systems, and aerosol and atmospheric electricity.



DR. ANIMESH MAITRA



**2018 URSI ATLANTIC RADIO SCIENCE CONFERENCE (2018 AT-RASC)**  
28 MAY – 1 JUNE 2018, EXPOMELONERAS CONVENTION CENTRE, GRAN CANARIA  
**SUBMISSION DEADLINE: JANUARY 10, 2018**

- F.1 Propagation measurements/models for fixed and mobile links
  - F.1.1 Measurements of fixed and mobile channels
  - F.1.2 Propagation models
  - F.1.3 Multipath/mitigation
  - F.1.4 Fixed terrestrial links: measurements and design strategies
  - F.1.5 Surface/atmosphere interaction
  - F.1.6 Dispersion/delay
  - F.1.7 Effects of natural/man-made structures
  - F.1.8 Outdoor to indoor propagation
  - F.1.9 Multi link MIMO channels
  - F.1.10 UWB channel characteristics
  - F.1.11 Small cell propagation
- F.2 Remote sensing of the Earth/planets by radio waves
  - F.2.1 Passive sensing at millimeter wavelengths
  - F.2.2 Interferometry and SAR
  - F.2.3 Sensing of snow in open and forested environments
  - F.2.4 Remote sensing of precipitation
  - F.2.5 Atmospheric sensing
  - F.2.6 Sensing of soil moisture and biomass
  - F.2.7 Ocean and ice sensing
  - F.2.8 Urban environments
  - F.2.9 Radio Frequency Interference (RFI)
  - F.2.10 Underground imaging
- F.3 Propagation and remote sensing in complex and random media
- F.4 Other
- F.5 Special sessions
  - S-F1 - Remote sensing of precipitation  
Organizers: V. Chandra, L. Baldini
  - S-F2 - Microwave remote sensing of vegetated and snow-covered soils  
Organizers: S. Paloscia, M. Kurum, P. Pampaloni, M. Hallikainen, R. Lang
  - S-F3 - Microwave remote sensing of soil moisture  
Organizers: Y. Kerr, S.Yueh, D. LeVine
  - S-F4 - Next generation radar methods and application in context of disaster management  
Organizers: M. Chandra, T. Tanzi



S-F5 – Optical wave propagation and applications

Organizer: C. Capsoni

S-F6 – Propagation measurements and models

Organizers: C. Capsoni, A. Maitra

S-F7 – RFI and passive microwave remote sensing

Organizers: P. de Matthaëis, D. LeVine

S-F8 – Remote sensing from nanosatellites

Organizers: S. Reising, J. Praks

ANY ADDITIONAL INFORMATION REGARDING AT-RASC AND ITS PROGRAMS CAN  
BE OBTAINED FROM [HTTP://WWW.ATRASC.COM/HOMEPAGE.PHP](http://www.atrasc.com/homepage.php) .



Please feel free to share stories/activities/photos for future publications in the newsletter. If you wish to send any photos, please include a brief caption and the name of the person whom should be credited. Please send any of these items to **Marina Cifelli**, Newsletter Administrator for URSI Commission – F at [mcifelli@rams.colostate.edu](mailto:mcifelli@rams.colostate.edu). I hope everyone finds the newsletter both informative and intriguing, your comments and suggestions are most welcome!

