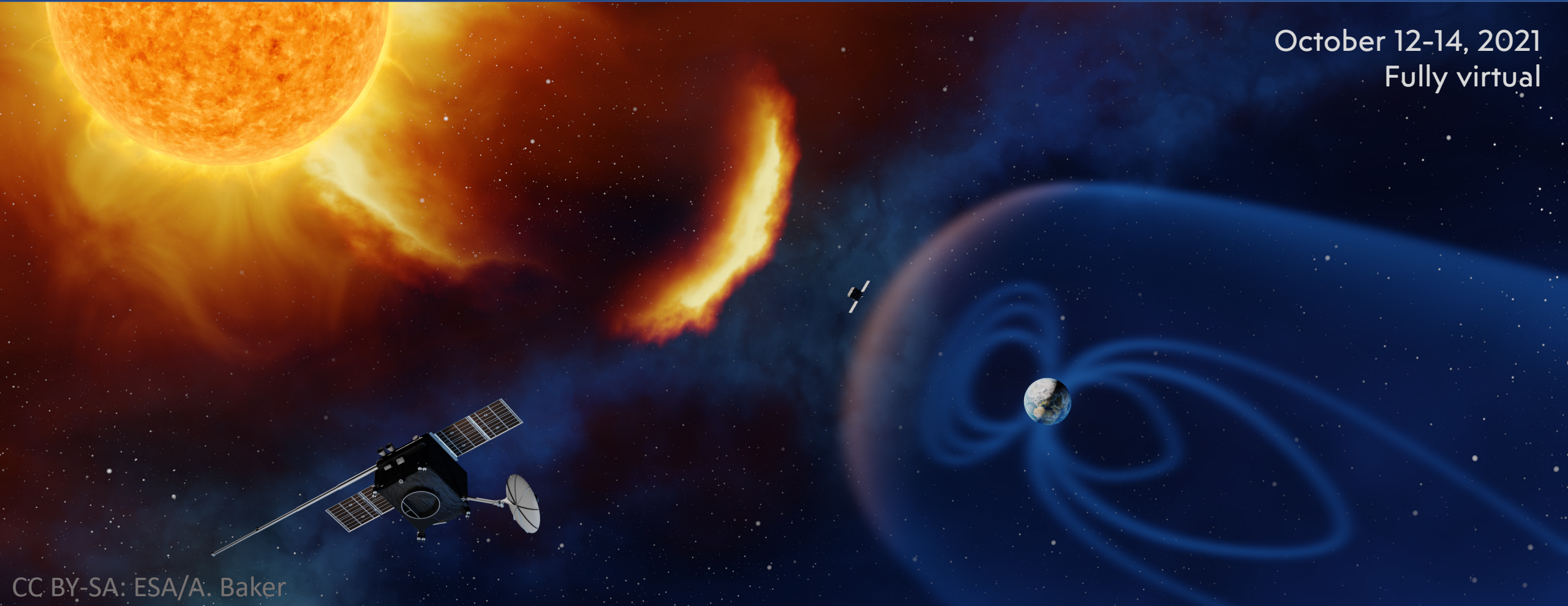# Space Weather
Workshop

IEEE WISEE 2021
9th Annual International Conference on
Wireless for Space and Extreme Environments

October 12-14, 2021
Fully virtual

WORKSHOP FINAL PROGRAM

U.R.S.I.

IEEE Canada
REGION 1
IEEE
RFID Council on RFID Bridging the physical to the digital

REGULAR CONTRIBUTIONS

October 13, 2021 | 19:00 – 21:00, CEST (10:00 - 12:00, PDT – 13:00 - 15, EST)

19:00   **Estimation of Single Event Upset (SEU) Rates Inside the SAA During the Geomagnetic Storm Event of 15 May 2005**
Kirolosse M. Girgis
Kyushu University, Japan & Cairo University, Egypt

19:10   **During the Period 1995-1999 Latitudinal, Seasonal and Diurnal Variation of Ion and Electron Temperatures Ratio Above the Indian Region Measured by SROSS-C2 Satellite**
Pooja Sharma
Manav Rachana University, India

19:20   **Forecasting the Total Electron Content TEC of the Ionosphere Using Space Weather Parameters**
Olga Maltseva
Institute for Physics & Southern Federal University, Russia

19:30   **Making VLF Data Tractable for Space Weather Monitoring**
David Wenzel
German Aerospace Center, Germany

REGULAR CONTRIBUTIONS

October 13, 2021 | 19:00 – 21:00, CEST (10:00 - 12:00, PDT – 13:00 - 15, EST)

19:40 **IONORING: Monitoring and Modelling the Total Electron Content Over Italy in Real-Time**
Claudio Cesaroni
Istituto Nazionale di Geofisica e Vulcanologia, Italy

19:50 **Identification of Ionospheric Resonant Scale-Dependent Modes Forced by Space Weather Events**
Jaroslav Urbar
Istituto Nazionale di Geofisica e Vulcanologia, Italy

20:00 **Detecting Phase Scintillation at High Latitudes Using Ionospheric Scintillation Monitoring Records and Machine Learning Techniques**
Rayan Iman
Politecnico di Torino, Italy

20:10 **Comparative Study of Different Deep Learning Techniques for Global Total Electron Content Forecasting**
Jorge H. Namour
Universidad Nacional de Tucuman, Argentina

REGULAR CONTRIBUTIONS

October 13, 2021 | 19:00 – 21:00, CEST (10:00 - 12:00, PDT – 13:00 - 15, EST)

20:20   **Characterization of Ionospheric Scintillation Events in High Latitudes From 5 Different Geomagnetic Storm Cases With Machine Learning**
Anna-Marie Bals
Embry-Riddle Aeronautical University, Germany

20:30   **Probabilistic Short-Wave Fadeout Detection in SuperDARN Time Series Observations**
Shibaji Chakraborty
Virginia Tech, USA

20:40   **Effect of Shield Wires on GICs**
Rute Rodrigues Santos
University of Coimbra, Portugal

20:50   **Q & A and wrap-up**

INVITED TALKS

October 14, 2021 | 19:00 – 21:00, CEST (10:00 - 12:00, PDT – 13:00 - 15, EST)

19:00 **Recent Advances in Forecasting the Arrival Time and Speed of Coronal Mass Ejections**
Mateja Dumbovic
Hvar Observatory, Faculty of Geodesy, University of Zagreb, Croatia

19:30 **Space Weather Effects on Navigation, Communication and Remote Sensing**
Jens Berdermann
German Aerospace Center, Germany

20:00 **Establishing a Space Weather Service for Civil Aviation - Turbulence and Tenacity**
Robert A. Steenburgh
National Oceanic and Atmospheric Administration, Space Weather Prediction Center, USA

20:30 **Panel discussion**