

SCOSTEP 2020 DISTINGUISHED YOUNG SCIENTIST AWARD



SCOSTEP is pleased to announce that the **2020 Distinguished Young Scientist Award** is given to

Dr. Mateja Dumbović

Hvar Observatory, University of Zagreb, Croatia

Citation: For outstanding contributions to solar, solar-terrestrial and space weather physics; and for ambitious efforts and services for the scientific community.

Dr. Mateja Dumbović has performed significant scientific studies on different aspects of solar-terrestrial sciences, covering both observational and theoretical approaches. Her most important contributions are on the modeling and observational study of cosmic ray modulations and Forbush decreases caused by coronal mass ejections (CMEs) and co-rotating interacting regions (CIRs), on drag-based modeling of the interplanetary CME propagation and on their geo-effectivity. These various important aspects of solar and space weather physics have been addressed by Dr. Dumbović in thorough and multi-variant approaches, including observations analysis and in-situ and remote sensing data by theoretical modeling, and by developing tools relevant for space weather forecasting. In her young career, she has already published 26 papers (8 as first author) in high-impact international peer-reviewed journals.

Dr. Dumbović did her undergraduate and PhD studies at the University of Zagreb under the supervision of Prof. Bojan Vršnak. Within her PhD study, which she defended in 2015, she was closely involved in the EU project COMESEP (CORonal Mass Ejections and Solar Energetic Particles: forecasting the space weather impact), where she provided important scientific contributions on statistically modelling the geo-effectivity of coronal mass ejections, and implementing these results as one of the COMESEP warning tools. Based on her PhD, she was awarded the L'Oréal-UNESCO national fellowship "For Women in Science". She was co-developer of the drag-based model (DBM) for the interplanetary propagation of CMEs, which she later enhanced toward ensemble modeling (DBEM). The DBEM model is now implemented and running as an online forecast tool within ESA's Space Situational Awareness Space Weather Program.

After her PhD, Dr. Dumbović was awarded a prestigious Marie Skłodowska Curie Actions individual fellowship of the EU H2020 program, to perform a project on "Forbush decrease model for expanding CMEs affecting Earth and Mars (ForbMod) at the University of Graz, Austria.

In addition to her scientific contributions, Dr. Dumbović is active in community engagement in the field of solar-terrestrial sciences as a frequent peer-reviewer in a number of prestigious journals and as a member of 3 NASA review panels. The community engagement efforts are also evident in her activities to organize various international conferences as a member of the LOC and SOC, including the SCOSTEP/VarSITI/ISEST Workshops (International Study of Earth-affecting Solar Transients) in Hvar in the years 2013 and 2018. She was also an observing scientist of the day for the MiniMax24/ISEST campaign of the SCOSTEP VarSITI (2014-2018) and PRESTO (2020-2024) scientific programs. It is with admiration and honor that we present the 2020 SCOSTEP Distinguished Young Scientist Award to Dr. Mateja Dumbović.