

#MCH23 Schedule

Time	WEDNESDAY, APRIL 19 TALKS
8:30 – 9:00	Registration & Introduction
	SESSION 1 - Explainable and Physics-Informed Machine Learning
9:00 – 9:40	MCH23-32 (Invited) Michele Piana - Artificial intelligence for space weather forecasting: data-driven and physics-informed approaches in research and operational settings (ONLINE)
	SESSION 2 - Machine Learning / Computer Vision Techniques
9:40 – 10:00	MCH23-24 Vanessa Mercea - A Machine Learning Enhanced Approach for Automated Sunquake Detection in Acoustic Emission Maps
10:00 – 10:20	MCH23-22 Francesco Pio Ramunno - Modeling Solar Images from SDO/AIA with Denoising Diffusion Models
10:20 – 10:40	MCH23-16 Manuel Luna - Towards a technique for automatic detection and characterisation of oscillations in solar filaments
10:40 – 11:20	Coffee break
11:20 – 11:40	MCH23-14 Connor O'Brien - Non-Deterministic Models of Solar Wind Propagation from L1 to the Earth
11:40 – 12:00	MCH23-12 Jeremiah Scully - Mitigation of Radio Frequency Interference in Solar Radio observations using Generative Adversarial Networks (ONLINE)
12:00 – 12:20	MCH23-53 Matthew Lennard - Fast Feature Recovery for Flux Emergence Forecasting in the Photosphere using Neural Networks
12:20 – 12:40	MCH23-01 Juan Esteban Agudelo Ortiz - Deep Learning Techniques Implementation for the Generation of Stokes Parameters and Atmospheric Parameters in the Solar Context
12:40 – 14:20	Lunch - <i>M Restaurant</i>
14:20 – 14:40	MCH23-27 Talha Siddique - A Cluster of Machine Learning Enabled Magnetometer System For Online Training And Prediction of Geomagnetic Disturbances (ONLINE)
14:40 – 15:00	MCH23-47 Gonzalo Cucho-Padin - Three-dimensional reconstruction of ion flux in the Earth's northern cusp based on artificial neural networks (ONLINE)
15:00 – 15:20	MCH23-45 Daniel Carpenter - A Customized Distance Metric for Explainable In-Situ Solar Wind Clustering (ONLINE)
15:20 – 15:40	MCH23-30 (RETRACTED) Andong Hu - Multi-Hour-Ahead Geoelectric Fields Forecast Using Multi-fidelity Machine Learning Method
15:40 – 16:00	Coffee break
16:00 – 16:20	
16:20 – 17:00	MCH23-58 (Invited) Enrico Camporeale - Data-Driven Discovery of Fokker-Planck Equation for the Earth's Radiation Belts Electrons Using Physics-Informed Neural Networks (ONLINE)
	SESSION 3 - Machine Learning / Computer Vision Applications in Heliophysics
17:00 – 17:20	MCH23-20 (RETRACTED) Philippe Garnier - Martian bow shock detection with machine learning
17:20 – 17:40	MCH23-06 Ricardo Gafeira - PCA-NN model for TEC with space weather parameters as predictors: tuning of NN algorithms and input parameters
17:40 – 18:00	MCH23-31 Benoit Tremblay - SuNeRFs: The Sun as a (fully-resolved) Star (ONLINE)
18:00 – 20:00	Reception

#MCH23 Schedule

Time	THURSDAY, APRIL 20 TALKS
9:00 – 9:40	MCH23-18 (Invited) Athanasios Papaioannou - Predicting Solar Activity (flares, CMEs & SEPs) using Machine-Learning (ONLINE)
9:40 – 10:00	MCH23-15 Hanne Baeke - Classification of Solar Flares using Data Analysis and Clustering of Active Regions
10:00 – 10:20	MCH23-46 Hemapriya Raju - Dynamic time based eruptive flare prediction using machine learning (ONLINE)
10:20 – 10:40	MCH23-42 Mohamed Nedal - Predicting the Solar Energetic Proton Integral Flux with Deep Learning Models
10:40 – 11:20	Coffee break
11:20 – 11:40	MCH23-11 Suhaila Binti M Buhari - Equatorial Plasma Bubble Prediction Model Using Satellite Data (ONLINE)
11:40 – 12:00	MCH23-17 Spiridon Kasapis - Turning Noise into Data: Characterization of the Van Allen Radiation Belt Using SDO Spikes Data (ONLINE)
12:00 – 12:20	MCH23-05 Pearse Murphy - Automatic recognition of solar radio bursts in NenuFAR observations
12:20 – 12:40	MCH23-39 (RETRACTED) Akhil Gunessee - Can a deep learning approach of detecting solar radio bursts perform better than the interquartile range threshold outlier detection method?
12:40 – 14:20	Lunch - Restaurant Vienna
14:20 – 14:40	MCH23-62 Mario Fernandez - deARCE solar burst detection system applied to unlabeled e-Callisto data (ONLINE)
14:40 – 15:00	MCH23-25 Andrea Diercke - A Universal Method for Solar Filament Detection from H-alpha Observations using Semi-supervised Deep Learning
15:00 – 15:20	MCH23-52 Aparna Venkataramanasastry - Automatic Detection of Interplanetary Coronal Mass Ejections (ONLINE)
15:20 – 15:40	MCH23-23 Alin Paraschiv - Predicting the Geoeffectiveness of CMEs Using Machine Learning
15:40 – 16:00	Coffee break
16:00 – 18:30	Poster Session
18:30 – 19:00	
19:00 – 21:00	Conference Dinner - M Salon

#MCH23 Schedule

Time	THURSDAY, APRIL 20 - POSTER SESSION QUICK PRESENTATIONS
16:00 – 16:10	MCH23-03 James Wanliss - Forecasting Space Weather with Physics-Based Input and Temporal Convolutional Neural Networks
16:10 – 16:20	MCH23-02 Milo Buitrago-Casas - A real-time solar flare alert system for early flare physics studies: Exploratory data analysis (ONLINE)
16:20 – 16:30	MCH23-60 Grégoire Francisco - Insight on Flare Forecast with Explainable Deep Learning
16:30 – 16:40	MCH23-19 Christoph Schirninger - Deep learning image-burst stacking for post-processing of high-resolution ground-based solar observations
16:40 – 16:50	MCH23-38 Adeline Paiement - Removing cloud shadows from ground-based solar imagery
16:50 – 17:00	MCH23-40 Niels Sayez - Segmentation, grouping and classification of sunspots from ground-based observations using deep learning methods
17:00 – 17:10	MCH23-36 Iaroslav Gorbachev - Application of Deep Learning techniques for Stokes inversions using the Milne-Eddington approximation based on GRIS data
17:10 – 17:20	MCH23-49 Susan Palacios Salcedo - Automatic classification of Range-Time-Intensity maps of Equatorial Spread-F (ONLINE)
17:20 – 17:30	MCH23-10 Julio Hernandez Camero - Building a Coronal Mass Ejection source region catalogue for Machine Learning based space weather forecasting
17:30 – 17:40	MCH23-21 Maike Bauer - Automated CME detection and tracking in HI
17:40 – 17:50	MCH23-34 Valeria Sieyra - Understanding CME deflections
17:50 – 18:00	MCH23-28 Saida Milena Díaz Castillo - Exploring U-net + LSTM networks for classification and segmentation of evolving granular structures
18:00 – 18:10	MCH23-35 Daniel Collin - Forecasting solar wind speed from solar EUV images
18:10 – 18:20	MCH23-44 Aatiya Ali - Understanding Predictability of Solar Proton Events from GOES statistical features and MHD coronal models (ONLINE)
18:20 – 18:30	MCH23-55 Kamen Kozarev - Improving LOFAR Solar Radio Imaging Observations With Machine Learning

#MCH23 Schedule

Time	FRIDAY, APRIL 21 TALKS
9:00 – 9:40	MCH23-29 (Invited) Robert Jarolim - Physics informed neural networks and application to solar magnetic field simulations
9:40 – 10:00	MCH23-33 Senthamizh Pavai Valliappan - Performance analysis of AI generated solar farside magnetograms in EUHFORIA
10:00 – 10:20	MCH23-50 Jorge Amaya - Parametrization of solar active regions using Variational Autoencoders (ONLINE)
10:20 – 10:40	MCH23-13 Hannah T. Rüdiger - Automatic Detection of Interplanetary Coronal Mass Ejections
10:40 – 11:20	Coffee break
11:20 – 11:40	MCH23-07 Felix Nakotey Minta - Forecasting the Transit Time of Earth-directed Halo CMEs Using Artificial Neural Network: A case study application of GCS forward-modelling technique
11:40 – 12:00	MCH23-37 Harshita Gandhi - Probing the True Nature of CMEs using GCS-based Large Statistics of Multi-viewpoint Observations
12:00 – 12:20	MCH23-57 Henrik Eklund - Artificial neural network based spatio-temporal deconvolver for refinement of solar images (ONLINE)
12:20 – 12:40	MCH23-51 Slava Bourgeois - Machine Learning/Mathematical Morphology coupling for solar features detection
12:40 – 14:20	Lunch - <i>M Salon</i>
	SESSION 4 - Machine Learning- and Computer Vision-Based Tools
14:20 – 15:00	MCH23-26 (Invited) Alexander Engell - SPRINTS: A Machine Learning Ecosystem for Forecasting Solar-Driven Events and Scientific Event Crowdsourcing (ONLINE)
15:00 – 15:20	MCH23-54 Manolis Georgoulis - Benchmark Datasets for Solar Weather Forecasting Applications
15:20 – 15:40	MCH23-48 Oleg Stepanyuk - Advanced Multi-Instrument Image Processing and Feature Tracking for Remote CME Characterization with Convolutional Neural Network
15:40 – 16:20	Coffee break
16:20 – 16:40	MCH23-59 Mattia Mancini - Making LOFAR Data Accessible to the Solar and Space Weather Community
16:40 – 17:00	MCH23-61 Shane Maloney - ARCAFF Project Early Results
17:00 – 17:20	MCH23-56 Christopher Prior - ARTop: a program to calculate novel topology-based predictive metrics of active region magnetic field structure (ONLINE)
17:20 – 17:40	MCH23-41 Simon Mackovjak - Feasibility study of data-driven Autonomous Service for Prediction of Ionospheric Scintillations (ASPIS) (ONLINE)
17:40 – 18:00	MCH23-43 Ekaterina Verner - The Very First NASA AI/ML Crowdsourcing Challenge Results Using SOHO/LASCO Data (ONLINE)
18:00 – 18:30	Discussion and Farewell