

**15th Conference of HelAS**  
5-8 July 2021 - Virtually

Last update: 21-May-21

**Oral Contributions** 124

Title	First Author Name	Institution	Abstract Title
<b>Session 1: Heliophysics and the Solar System</b>			<b>28</b>
Mr.	Aminalragia-Giamini Sigiava	NKUA, SPARC	Solar Energetic Particle Event occurrence prediction using Solar Flare Soft X-ray measurements and Machine Learning
Dr.	Archontis Vasileios	University of St. Andrews	Magnetic flux emergence and eruptive activity in the Sun
Dr.	Avdellidou Chrysa	Nice Observatory	Identification and characterisation of asteroid families.
Dr.	Balasis Georgios	National Observatory of Athens/IAASARS	Information Theory Perspectives for Geospace Research
Dr.	Chintzoglou Georgios	Lockheed Martin Solar and Astrophysics Lab	A Mechanism Driving Recurrent Eruptive Activity on the Sun
Prof.	Daglis Ioannis	University of Athens	Improving nowcasting and forecasting of the Sun-to-Belts space weather chain through the H2020 SafeSpace project
Mr.	Dakanalis Ioannis	National Observatory of Athens/IAASARS	Automated Chromospheric Swirl Detection method: evaluation and results
Dr.	Dimitrakoudis Stavros	University of Alberta	North-South Interhemispheric Asymmetry in Geomagnetic Disturbance (GMD) and Pc5 wave power: Solar Cycle and MLT Variations
Dr.	Georgoulis Manolis	Academy of Athens, RCAAM	Solar Flare Forecasting: a Brief How-To, Including Progress and Challenges
Dr.	Gontikakis Costis	Academy of Athens, RCAAM	A study of the solar transition region using IRIS observations of a solar flare
Dr.	Karamelas Konstantinos	Northumbria University	Decay-less coronal loop oscillations as self-oscillatory processes
Dr.	Katsavrias Christos	University of Athens	On the generation of Pi2 pulsations due to plasma flow patterns around magnetosheath jets
Dr.	Kontogiannis Ioannis	Leibniz-Institute for Astrophysics Potsdam	High-resolution spectroscopy of a minifilament eruption
Ms.	Lavasa Eleni	University of Athens	Solar Energetic Particle event forecasting with the use of Machine Learning techniques
Dr.	Liakos Alexios	National Observatory of Athens/IAASARS	NELIOTA: A status update
Dr.	Malandraki Olga	National Observatory of Athens/IAASARS	Energetic particle observations near the Sun by Solar Orbiter and Parker Solar Probe
Dr.	Moraitis Kostas	University of Ioannina	Relative field line helicity of active region 11158
Ms.	Nasi Afroditi	University of Athens	Coordinated observations of the effect of consecutive HSS pulses on relativistic electron enhancement
Dr.	Paouris Evangelos	National Observatory of Athens/IAASARS	A Comparison of the Effective Acceleration Model with ENLIL and DBEM Models: Further testing with heliospheric imaging observations
Mr.	Papadimitriou Constantinos	National Observatory of Athens/IAASARS	Indices of geomagnetic activity derived from space-born magnetic data from the Swarm mission
Dr.	Papaioannou Athanasios	National Observatory of Athens/IAASARS	The Probabilistic Solar Particle Event foRecasting (PROSPER) Model
Mr.	Raptis Savvas	KTH - Royal Institute of Technology	Magnetosheath Jets Close to the Bow Shock: Generation Mechanisms Using MMS Fast and Burst Data
Dr.	Solomonidou Anezina	Caltech / JPL	A chemical composition map for Titan's surface
Dr.	Toliou Athanasia	Lulea University of Technology	Minimum perihelion distances and associated dwell times for NEAs
Prof.	Tsiganis Kleomenis	University of Thessaloniki	Solar system science in the era of asteroid exploration
Dr.	Tsirvoulis Georgios	Lulea University of Technology	Space simulator of the near-Sun environment
Dr.	Tziotziou Kostas	National Observatory of Athens/IAASARS	The vortical Sun at small scales
Mr.	Zhuleku Eugene	Max Planck Institute for Solar System Research	Relating coronal X-ray emission of the Sun and stars to surface magnetic flux in 3D MHD models

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<b>Session 2: Extragalactic Astronomy and Astrophysics</b>			<b>27</b>

Dr.	Audibert Anelise	National Observatory of Athens/IAASARS	Molecular Gas Content in the CO ALMA Radio-source Catalogue
Dr.	Barrera Ballesteros Jorge K.	Institute of Astronomy, UNAM	The EDGE-CALIFA survey: self-regulation of star formation at kpc scales
Dr.	Bisbas Thomas	University of Cologne	[CII] synthetic observations of dwarf galaxy mergers
Dr.	Camps Farina Artemi	Institute of Astronomy, UNAM	Evolution of the Chemical Enrichment and Mass Metallicity Relation for local galaxies
Dr.	Casadio Carolina	Institute of Astrophysics - FORTH	SMILE: Search for Milli-Lenses
Mr.	Charalampopoulos Panos	DTU Space	A detailed spectroscopic study of Tidal Disruption Events
Mr.	Chaturvedi Avinash	European Southern Observatory	Kinematical signatures of interactions between Fornax cluster galaxies
Prof.	Dasyra Kalliopi	National and Kapodistrian University of Athens	How the passage of a radio jet changes the pressure, mass, and other properties of dense gas clouds: the case for shocks vs. cosmic rays
Dr.	Diaz-Santos Tanio	Institute of Astrophysics - FORTH	Hot Dust Obscured Galaxies and the Most Luminous Galaxy Known as seen by ALMA
Ms.	Drigga Eleftheria	University of Thessaloniki	Properties of Active Galactic Nuclei in galaxy clusters
Ms.	Fotopoulou Constantina	Max Planck Institute for Astrophysics	Cold clouds in a very high resolution simulated dwarf starburst
Dr.	Georgakakis Antonis	National Observatory of Athens/IAASARS	Forward Modelling the Ensemble Variability of AGN populations
Dr.	Harsoula Mirella	Academy of Athens, RCAAM	The building blocks of the spiral arms in galaxies
Dr.	Hatziminaoglou Evanthia	ESO - Garching	Towards an Atacama Large Aperture Submillimeter Array (AtLAST)
Dr.	Katsianis Antonios	Shanghai Jiao Tong University	What we know and what we do not know for galaxy star formation rates
Dr.	Kolokythas Konstantinos	North-West University (NWU)	A glimpse on MeerKAT's first discoveries in clusters: Diffuse radio emission in MeerKAT Galaxy Cluster Legacy Survey (MGCLS)
Mr.	Koulouridis Elias	IAASARS/NOA	The X-CLASS survey: A catalogue of 1646 X-ray-selected galaxy clusters up to $z \approx 0.15$
Dr.	Masoura Vasileia	National Observatory of Athens / IAASARS	Stellar populations in high-redshift galaxies and their role in the dust heating
Dr.	Myserlis Ioannis	IRAM	An underlying universal magnetic field component in the halos of spiral galaxies
Mr.	Papachristou Michalis	Univ. of Athens & National Observatory of Athens	CO kinematics unveil outflows likely driven by a young jet in the warped disk of NGC6328
Mr.	Paspaliaris Evangelos	IAASARS - NOA & AUTH	The physical properties of (U)LIRGs and their place in the local Universe
Dr.	Patsis Panos	Academy of Athens, RCAAM	Orbital patterns supporting X-shaped galactic bulges
Mr.	Psomas Iason	University of Athens	Examining the properties of the BNS Merger GW170817 and their implications on the maximum mass using a Bayesian MCMC approach.
Prof.	Rigopoulou Dimitra	University of Oxford	The ISM properties of Ultraluminous IR galaxies through cosmic time
Dr.	Vardoulaki Eleni	Thuringer Landessternwarte Tautenburg	The effect of the large-scale environment to FR-type radio AGN in the COSMOS field
Dr.	Zezas Andreas	University of Crete & FORTH	Galactic activity diagnostics based on WISE photometry and machine learning methods
Ms.	Zouloumi Konstantina	Univ. of Athens & RCAAM, Academy of Athens	Manifold spirals in an N-body model with two pattern speeds

**Session 3: Cosmology and Relativistic Astrophysics** 33

Mr.	Acharya Sriyashri	Indian Institute of Technology Indore	Impact of Kink Instability on the Emission Signatures of AGN Jets
Prof.	Anastopoulos Charis	University of Patras	Singular solutions to the Tolman-Oppenheimer-Volkoff equation: classification and properties
Dr.	Blinov Dmitry	Institute of Astrophysics - FORTH	Revealing the mechanism behind optical polarization plane rotations in blazars
Mr.	Boula Stella	University of Athens	A two-zone emission model for Blazars and the role of Accretion Disk MHD winds
Dr.	Caballero Nicolaos	KIAA-PKU	The current state of Pulsar Timing Array search for a Gravitational-wave Background
Dr.	Charisi Maria	Vanderbilt University	Supermassive black hole binaries—gravitational-wave limits and prospects for multi-messenger detections
Mr.	Chatzis Margaritis	University of Crete	Radio emission from high-mass X-ray binaries with strongly magnetized neutron stars
Mr.	Chira Maria	Univ. of Thessaloniki & National Obs. of Athens	Using a Simulated Annealing algorithm to identify coherent cosmological structures.
Dr.	Dihingia Indu Kalpa	IIT Indore	Jets, disc-winds, and oscillations around Kerr black hole
Mr.	Dimitropoulos Ioannis	University of Athens	Sgr A* flares, an electromagnetic signal and more

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Mr.	Florou Ioulia	University of Athens	An expanding hadronic supercritical model for gamma-ray burst emission
Prof.	Gourgouliatos Konstantinos N.	University of Patras	Plastic Flows in Neutron Star Crusts
Mr.	Iosif Panagiotis	University of Thessaloniki	Insights into binary neutron star merger remnants with equilibrium modelling
Mr.	Kalomenopoulos Marios	University of Edinburgh	Clustering effects on GWs Dark Sirens determination of $H_0$
Mr.	Kantzas Dimitrios	University of Amsterdam	Black-hole X-ray binaries in the new era of $\gamma$ -ray astronomy
Mr.	Kerasiotti Stefania	University of Athens	Modeling of Polarized Synchrotron Radiation in GRBs
Dr.	Kiehlmann Sebastian	Institute of Astrophysics - FORTH	Rotations of the polarization angle in blazars
Mr.	Korkidis Giorgos	Univ. of Crete & IA-FORTH	Turnaround radius of galaxy clusters in N-body simulations
Dr	Koutoulidis Lazaros	NOA	CLUSTERING OF X-RAY SELECTED AGN IN THE LOCAL UNIVERSE
Prof.	Kylafis Nikos	Univ. of Crete & IA-FORTH	The "corona" in black-hole X-ray binaries: what is it?
Dr.	Liodakis Ioannis	Finnish center for Astronomy with ESO	Origin of the optical emission in Tidal Disruption Events through polarization
Mr.	Lioutas Georgios	GSI Helmholtzzentrum für Schwerionenforschung	Gravitational wave frequency deviations in universal relations of isolated neutron stars and postmerger remnants
Mr.	Migkas Konstantinos	University of Bonn	Is the local Universe anisotropic? Galaxy clusters seem to think so
Mr.	Mpisketzis Vassilis	University of Athens	Plasmoid formation in 3D GRMHD simulations
Dr.	Myserlis Ioannis	IRAM	F-GAMMA / QUIVER : Full-Stokes, multi-frequency radio monitoring of Fermi blazars
Dr.	Nathanail Antonios	Academy of Athens & University of Athens	Estimating the Hubble constant with gravitational waves and afterglow observations from neutron star mergers
Prof.	Papadopoulos Demetrios	University of Thessaloniki	Spinning Particles In McVittie Spce Time
Dr.	Pelgrims Vincent	Institute of Astrophysics - FORTH	Evidence for line-of-sight frequency decorrelation of polarized dust emission in Planck data
Dr.	Pnigouras Pantelis	Sapienza University of Rome	Gravitational-wave-driven tidal secular instability in neutron star binaries
Mr.	Romanopoulos Stelios	Univ. of Crete & IA-FORTH	What if new physics sets in above 50 TeV? Cosmic-ray air-shower simulations with increased cross-section and multiplicity
Mr.	Sinnis Charalampos	University of Athens	Stability analysis of relativistic magnetized astrophysical jets
Mr.	Soultanis Theodoros	Heidelberg Institute for Theoretical Studies	Semi-analytic model of the spectral properties of gravitational waves from neutron star merger remnants
Mr.	Stathopoulos Stamatios Ilias	University of Athens	Multimessenger emission from hadronic X-ray Blazar Flares

**Session 4: Stars, Planets and the Interstellar Medium**

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Dr.	Aguilera-Dena David R.	Institute of Astrophysics - FORTH	Evolution of helium stars at different metallicities: classification, populations, supernovae and compact remnants
Dr.	Akras Stavros	National Observatory of Athens/IAASARS	Machine learning as a tool for discovering Symbiotic Stars
Dr.	Anastasopoulou Konstantina	INAF Osservatorio astronomico di Brera	Very hot plasma in the central degrees of the Milky-Way? An XMM-Newton view
Mr.	Antoniadis-Karnavas Alexandros	Instituto de Astrofísica e Ciências do Espaço	ODUSSEAS: a machine learning tool to derive effective temperature and metallicity for M dwarf stars
Dr.	Bisbas Thomas	University of Cologne	Photodissociation region diagnostics across galactic environments
Mr.	Chanlaridis Savvas	Univ. of Crete & IA-FORTH	Type Ia supernovae from non-accreting progenitors

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Dr.	Chiotellis Alexandros	National Observatory of Athens / IAASARS	On the Origin of Mixed Morphology Supernova Remnants
Mr.	De Wit Stephan	National Observatory of Athens / IAASARS	Spectral analysis of evolved massive stars in the SMC and LMC
Ms.	Derlopa Sophia	National Observatory of Athens / IAASARS	Revealing the complex 3D morphology of the Planetary Nebula NGC 2818
Dr.	Dionatos Odysseas	University of Vienna	Novel Evolutionary Model for the Early stages of Stars with Intelligent Systems (NEMESIS)
Prof.	Gal-Yam Avishay	Weizmann Institute	Observing stars as they explode: new results and future prospects
Prof.	Gazeas Kosmas	University of Athens	Contact Binaries Towards Merging - CoBiToM project
Dr.	Georgakarakos Nikolaos	NYUAD	Dynamically Informed Habitable Zones in Circumbinary Planetary Systems
Prof.	Kalas Paul	UC Berkeley	A Planet Nine Analog Gravitationally Sculpting the Outer Structure of the HD 106906 Planetary System
Mr.	Karydis Dionysios	University of Thessaloniki	Computing 3D Periodic Orbits around an ellipsoid and any irregular-shaped asteroid
Ms.	Kokori Anastasia	UCL- CSED	The ExoClock Project: an open integrated platform for maintaining the Ariel target ephemerides with contributions from the public
Ms.	Konstantinou Anna	Univ. of Crete & IA-FORTH	Polarization power spectra and dust cloud morphology
Dr.	Kopsacheili Maria	Univ. of Crete & IA-FORTH	Multi-wavelength Study of Supernova Remnants
Mr.	Kyritsis Elias	Univ. of Crete & IA-FORTH	A new automated tool for the spectral classification of OB stars
Ms.	Lalounta Eleni	University of Patras	Progenitors of Red novae
Dr.	Leonidaki Ioanna	Institute of Astrophysics - FORTH	Investigating the evolutionary paths of Supernova Remnants through their multi-wavelength emission
Dr.	Liakos Alexios	National Observatory of Athens/IAASARS	The EngAstros project: Enhanced modelling and Asteroseismology of $\delta$ -Scuti stars in close binary systems
Dr.	Maravelias Grigoris	IAASARS-NOA & IA-FORTH	Studying evolved massive stars in nearby galaxies using a photometric machine-learning classifier
Dr.	Millas Dimitrios	UCL	Compressibility of the Jovian magnetosphere
Dr.	Panopoulou Georgia	Caltech	Galactic spurs of synchrotron emission: new distance constraints
Ms.	Psaradaki Ioanna	University of Michigan	Mineralogy of interstellar dust: What can we learn from the X-rays?
Ms.	Savvidou Sofia	MPIA, Heidelberg	The growth of super-Earths: the importance of a self-consistent treatment of disc structures and pebble accretion
Mr.	Skalidis Raphael	Univ. of Crete & IA-FORTH	High-accuracy estimation of magnetic field strength in the interstellar medium from dust polarization
Mr.	Souropanis Dimitris	Univ. of Athens & National Observatory of Athens	Linking the properties of accreting white dwarfs with the ionization state of their ambient medium
Ms.	Spetsieri Zoi-Tzogia	IAASARS, National Observatory of Athens	Discovery of an optical cocoon tail behind the post-AGB HD 185806
Dr.	Tsiaras Angelos	UCL - CSED	Population Studies of exoplanets in the 2020s: Building on the legacy of HST
Mr.	Tsouros Alexandros	Univ. of Crete & IA-FORTH	Magnetic field tomography in the interstellar medium using advanced statistical tools
Dr.	Vasilopoulos Georgios	Yale University	To beam or not to beam? ULX pulsars hold the answer.
Dr.	Veras Dimitri	University of Warwick	The entry geometry and velocity of planetary debris into the Roche sphere of a white dwarf
Dr.	Yang Ming	National Observatory of Athens/IAASARS	Evolved Massive Stars in the Magellanic Clouds
Dr.	Zapartas Manos	University of Geneva	Binary population synthesis with POSYDON: a next-generation code that employs detailed stellar structure and binary evolution calculations