COSPAR Outstanding Paper Award for Young Scientists 2022

Presented at the

44th COSPAR Scientific Assembly
Athens, Greece, 16 – 24 July 2022

COSPAR Scientific Commission A	**Lijuan Chen (China)** *A surface reflectance correction model to improve the retrieval of MISR aerosol optical depth supported by MODIS data* *ASR* 67/2
	Florence Marti (France) *Altimetry-based sea level trends along the coasts of Western Africa* *ASR* 68/2
	Indrajit Chowdhuri (India) *Flood susceptibility mapping by ensemble evidential belief function and binomial logistic regression model on river basin of eastern India* *ASR 65/5*
	Muhammad Sarfraz Khan (South Korea) *Inter-comparison of evapotranspiration datasets over heterogeneous landscapes across Australia* *ASR* 66/3
	Babita Jangir (India) *Influence of eddies and tropical cyclone heat potential on intensity changes of tropical cyclones in the North Indian Ocean* *ASR* 68/2
	Tadea Veng (Denmark) *Consolidating sea level acceleration estimates from satellite altimetry* *ASR* 68/2

	K.C. Arun Kumar (India) *Integrated drought monitoring index: A tool to monitor agricultural drought by using time series datasets of space-based earth observation satellites* *ASR* 67/1
COSPAR Scientific Commission B	**Vladislav Zubko (Russia)** *Analysis of mission opportunities to Sedna in 2029–2034* *ASR* 68/7
	Andrea Viale (United Kingdom) *Excavation of artificial caverns inside asteroids by leveraging rotational self-energy* *ASR* 67/12
	Neil Bassett (USA) *Characterizing the radio quiet region behind the lunar farside for low radio frequency experiments* *ASR* 66/6
COSPAR Scientific Commission C	**Jon Bruno Alvarez (Spain)** *A realistic simulation framework to evaluate ionospheric tomography* *ASR* 65/3
	Ting Lan (China) *A comparative study of decision tree, random forest, and convolutional neural network for spread-F identification* *ASR* 65/8
	Yuliya Kurdyaeva (Russia) *Thermospheric disturbances caused by the propagation of acoustic-gravity waves from the lower atmosphere during a solar eclipse* *ASR* 68/3
	Andre Luiz Almeida Silva (Brazil) *Evaluation of the dusk and early nighttime Total Electron Content modeling over the eastern Brazilian region during a solar maximum period* *ASR* 67/5
	Munawar Shah (Pakistan) *Seismo ionospheric anomalies in Turkey associated with Mw ≥ 6.0 earthquakes detected by GPS stations and GIM TEC* *ASR* 65/11

	Sai Gowtam Valluri (India/USA) *An aided Abel inversion technique assisted by artificial neural network-based background ionospheric model for near real-time correction of FORMOSAT-7/COSMIC-2 data* *ASR* 68/7
	Duvvu Lissa (India) *Ionospheric response to the 26 August 2018 geomagnetic storm using GPS-TEC observations along 80° E and 120° E Longitudes in the Asian Sector* *ASR* 66/6
	Ian J. Cohen (USA) *Rocket Investigation of Current Closure in the Ionosphere (RICCI): A novel application of CubeSats from a sounding rocket platform* *ASR* 66/1
COSPAR Scientific Commission D	**Alessia De Iuliis (Italy)** *Sailing with solar and planetary radiation pressure* *ASR* 67/9
	Shaoyu Lyu (China) *Optimal stereoscopic angle for reconstructing solar wind inhomogeneous structures* *ASR* 66/9
COSPAR Scientific Commission E	**Cecilia Mac Cormack (Argentina)** *Scaling laws of quiet-Sun coronal loops* *ASR* 65/6
	Asheesh Bhargawa (India) *Elucidation of some solar parameters observed during solar cycles 21 – 24* *ASR* 68/6
COSPAR Scientific Commission F	**Edward Greg Huang (USA)** *Simulating galactic cosmic ray effects: Synergy modeling of murine tumor prevalence after exposure to two one-ion beams in rapid sequence* *LSSR* 25
	Andy Kwok (USA) *Altered rodent gait characteristics after ~35 days in orbit aboard the* International Space Station *LSSR* 24

	Ashley Susan Nemec-Bakk (USA) *Mitigation of late cardiovascular effects of oxygen ion radiation by γ-tocotrienol in a mouse model* *LSSR* 21
COSPAR Scientific Commission G	**Haotian Fan (China)** *Effects of the peak magnetic field position on Hall thruster discharge characteristics* *ASR* 66/8
	Italo Pinto Rodrigues (Brazil) *Modeling satellite battery aging for an operational satellite simulator* *ASR* 67/6
Panel on Potentially Environmentally Detrimental Activities in Space (PEDAS)	**Nathan Reiland (USA)** *Assessing and Minimizing Collisions in Satellite Mega-Constellations* *ASR* 67/11
	Minghe Shan (The Netherlands) *An analysis of the flexibility modeling of a net for space debris removal* *ASR* 65/3
	Shaylah Mutschler (USA) *A Partially Orthogonal EnKF approach to atmospheric density estimation using orbital debris* *ASR* 65/8
	Yunfeng Yu (China) *Prospects of de-tumbling large space debris using a two-satellite electro-magnetic formation* *ASR* 67/6
Panel on Innovative Solutions (PoIS)	**Marco Grasso (Italy)** *Design of an end-to-end demonstration mission of a Formation-Flying Synthetic Aperture Radar (FF-SAR) based on microsatellites* *ASR* 67/11
	Rohith Reddy Sanaga (USA) *Probability hypothesis density filter with uncertainty in the probability of detection* *ASR* 67/5

Panel on Technical Problems Related to Scientific Ballooning (PSB)	**Hangyue Zhang (China)** *Numerical simulation of the dynamic launching process for high-altitude balloons* *ASR 68/9*
Technical Panel on Satellite Dynamics (PSD)	**Kenza K. Boudad (USA)** *Dynamics of Synodic Resonant Near Rectilinear Halo Orbits in the Bicircular Four-Body Problem* *ASR* 66/9
	Andrea Caruso (Italy) *Optimal Solar Sail Trajectory Approximation with Finite Fourier Series* *ASR* 67/9
	Anaïs Delépaut (The Netherlands) *Use of GNSS for lunar missions and plans for lunar in-orbit development* *ASR* 66/12
	Haibo Ge (Germany) *LEO constellation optimization for Leo enhanced global navigation satellite system (LeGNSS)* *ASR* 66/3
	Johannes Kröger (Germany) *Multi-frequency multi-GNSS receiver antenna calibration at IfE: concept - calibration results – validation* *ASR* 68/12
	Corinne Lippe (USA) *Spacecraft swarm dynamics and control about asteroids* *ASR* 67/11
	Dimitrios V. Psychas (The Netherlands) *Precision analysis of partial ambiguity resolution-enabled PPP using multi-GNSS and multi-frequency signals* *ASR* 66/9
	Fabian Schiemenz (Germany) *Propagation of grid-scale density model uncertainty to orbital uncertainties* *ASR* 65/1

	Maksim Shirobokov (Russia) *On the design of a space telescope orbit around the Sun-Venus L2 point* *ASR* 65/6
	Kewei Xia (South Korea) *Guaranteed performance based adaptive attitude tracking of spacecraft with control constraints* *ASR* 65/3
	Chihang Yang (China) *Analysis of a neural-network-based adaptive controller for deep-space formation flying* *ASR* 68/1
Panel on Space Weather (PSW)	**V. Lanabere (Brazil)** Space weather service activities and initiatives at LAMP (Argentinean Space Weather Laboratory group) *ASR 65/09*