



# The Fourth **COSPAR Symposium**

Small Satellites for Sustainable Science and Development

November 4 - 8, 2019 | Daniel Hotel, Herzliya, Israel



# POSTERS

# MONDAY, NOVEMBER 4, 2019

## Poster Session A.1, B.1, PCB.1

- 1. Synthesis array RF imaging detectors in LEO formation flying satellites**  
Shanmugha Sundaram G A, [Pradeep Kumar K A](#), Rajagopalan T  
*Amrita Vishwa Vidyapeetham University, Coimbatore, TN, India*
- 2. Regional Soil Environment Pollution Monitoring by the Hyperspectral Small Satellite YD-1**  
Le Wu<sup>1,2,3</sup>, [Yanbing Wang](#)<sup>1,2,3</sup>, Jie Yu<sup>1,2,3</sup>, Jing Zhang<sup>1,2,3</sup>  
<sup>1</sup>*Capital Normal University, Beijing, Beijing, China*  
<sup>2</sup>*Capital Normal University, Beijing, Beijing, China*  
<sup>3</sup>*Capital Normal University, Beijing, Beijing, China*
- 3. Sun Direction Estimation Using Coarse Sun Sensor Measurements Considering the Earth'S Albedo Interference on Nanosatellites**  
Demet Cilden-Guler, [Zerefsan Kaymaz](#), Chingiz Hajiyev  
*Istanbul Technical University, Istanbul, Turkey*
- 4. Analysis of climatic characteristics on the Crimea peninsula using the satellites**  
[Alexandr Volvach](#), Galina Kurbasova, Larisa Volvach  
*CrAO, Ukraine*
- 5. Fourier Transform Spectrometer for Narrow Lines**  
Erez Ribak, [B. Martin Levine](#)  
*Technion - Israel Institute of Technology, Haifa, Israel*
- 6. New diagnostics to measure the density and wave processes in the ionospheric plasma on board of microsatellite «TRABANT»**  
[Alexander Kostrov](#)<sup>1</sup>, Alexander Galka<sup>1</sup>, Dmitry Yanin<sup>1</sup>, Mikhail Malyshev<sup>1</sup>, Stanislav Klimov<sup>2</sup>, Denis Novikov<sup>2</sup>  
<sup>1</sup>*Institute of Applied Physics of the Russian Academy of Sciences, Nizhny Novgorod, Russia*  
<sup>2</sup>*Space Research Institute of the RAS, Moscow, Russia*
- 7. Analysis of LEO satellite constellation for positioning**  
[Xingchi He](#), Urs Hugentobler  
*Technical University of Munich, Munich, Bavaria, Germany*
- 8. Performance Analysis of O-QPSK with various types of Amplifier non-linearities in Inter- satellites Communications Links**  
[kishore pasi](#)  
*Research Scholar, bangalore, Karnataka, India*
- 9. Integration of Feature Selection Techniques for Satellite Image Classification**  
[Kuldeep](#)  
*Bennett University, Greater Noida, Uttar Pradesh, India*

**10. Considerations in Selecting Li-Ion COTS Cells for Nano-satellite Applications**

Jonathan Sassen, Meital Iarnitzky, Alex Stepansky  
*Epsilon-Electric Fuel Ltd, Beit Shemesh, Israel*

**11. Exploring Earth's Atmospheric Escape with Small Satellites**

Leon Ofman<sup>1,2,3</sup>, Thomas Earle Moore<sup>1</sup>, Alex Glocer<sup>1</sup>

<sup>1</sup>*NASA GSFC, Greenbelt, Maryland, USA*

<sup>2</sup>*Catholic University of America, Washington, District of Columbia, USA*

<sup>3</sup>*Tel Aviv University, Tel Aviv, Israel*

**12. Small Satellites for Deep Space Scientific Missions**

Samuel Frampton, Nigel Bannister, Richard Ambrosi  
*University of Leicester, Leicester, Leicestershire, UK*

**13. Design of the Martian far-IR ORE Spectrometer MIRORES**

Jakub Ciazela<sup>1</sup>, Jaroslav Bakala<sup>1</sup>, Jaromir Barylak<sup>1</sup>, Marta Ciazela<sup>1</sup>, Mirosław Kowalinski<sup>1</sup>, Stefan Plocieniak<sup>1</sup>, Joanna Gurgurewicz<sup>1</sup>, Daniel Mege<sup>1</sup>, Bartosz Pieterek<sup>2</sup>, Zaneta Szaforz<sup>1</sup>, Pierre-Antoine Tesson<sup>1</sup>, Marco Giuranna<sup>3</sup>, Franco Pirajno<sup>4</sup>

<sup>1</sup>*Polish Academy of Sciences, Warsaw, Poland, Poland*

<sup>2</sup>*Adam Mickiewicz University, Poznań, Poland*

<sup>3</sup>*Istituto Nazionale di Astrofisica, Roma, Italy*

<sup>4</sup>*The University of Western Australia, Perth, Australia*08:00

**14. Application of Inpainting Technique for Reconstruction of Partially Detected Features Derived from the Algorithm of Automatic Extraction of Dark Slope Streaks**

Erivaldo Da Silva, Ana Figueira, Cruz Breno  
*São Paulo State University, Presidente Prudente, São Paulo, Brazil*

**15. Mobile Research Station For Exploration Of Moon (Morsem) : A Preliminary Design For Lunar Habitat**

Adhithiyam Neduncheran, Dhananjay Notnani, Mehul Paul, Utsav Nangalia, Ugur Guven  
*University of Petroleum and Energy Studies, Dehradun, Uttarakhand, India*

**16. Lex Mercatoria Deal-making Between Small Spacecraft in The Outer Solar System**

David Hyland-Wood<sup>1,3</sup>, Chris Lewicki<sup>2</sup>, Christopher Hare<sup>3</sup>, Peter Robinson<sup>1,3</sup>, Brett Henderson<sup>3</sup>

<sup>1</sup>*The University of Queensland, Brisbane, Queensland, Australia*

<sup>2</sup>*ConsenSys AG, Redmond, Washington, USA*

<sup>3</sup>*ConsenSys AG, Brisbane, Queensland, Australia*

**17. Dynamical Averaging Maps to Study Orbits Around Callisto**

Josué Cardoso dos Santos<sup>1,2</sup>, Antônio Prado<sup>2</sup>, Jean P. S. Carvalho<sup>3</sup>, Rodolpho Vilhena de Moraes<sup>4</sup>

<sup>1</sup>Israel Institute of Technology - Technion, Haifa, Israel

<sup>2</sup>National Institute for Space Research - INPE, São José dos Campos, São Paulo, Brazil

<sup>3</sup>Federal University of Recôncavo da Bahia - UFRB, Feira de Santana, Bahia, Brazil

<sup>4</sup>Federal University of São Paulo - UNIFESP, São José dos Campos, São Paulo, Brazil

**18. Evaluation of Different Filtering Techniques in The Detection of Impact Crater In High-Resolution Images of The Surface of Mars**

Erivaldo Da Silva<sup>1</sup>, Renan Oliveira<sup>1</sup>, Samara Azevedo<sup>3</sup>, Miriam Pedrosa<sup>2</sup>

<sup>1</sup>São Paulo State University, Presidente Prudente, SÃO PAULO, Brazil

<sup>2</sup>AIR FORCE ACADEMY - AFA, PIRASSUNUNGA, SÃO PAULO, Brazil

<sup>3</sup>FEDERAL UNIVERSITY OF ITAJUBA, Itajubá, Minas Gerais, Brazil

**19. Earth as an Exoplanet: Thermal Emission and Time Variability using Spatially Resolved MODIS Data**

Jean-Noël Mettler<sup>1,2</sup>, Sascha Quanz<sup>2</sup>, Ravit Helled<sup>1</sup>

<sup>1</sup>University of Zurich, Switzerland

<sup>2</sup>Swiss Federal Institute of Technology (ETH Zurich), Switzerland

**20. The Latest Results of CSES Mission**

Zeren Zhima, Xuhui Shen, Jianping Huang

Institute of Crustal Dynamics, China Earthquake Administration, Beijing, Beijing, China

**21. Microchannel Thermalization Inlet Design to Reduce the Chemical Effects Caused by Hypervelocity Conditions During Satellite Observations in Space Exploration**

Abraham Lehi De la Cruz Hernandez<sup>1</sup>, Brandon M. Turner<sup>1</sup>, Anupriya Anupriya<sup>1</sup>,

Sandra Osborn-Staker<sup>1</sup>, Parker Crowther<sup>2</sup>, Logan R Sweet<sup>2</sup>, Eric T. Sevy<sup>1</sup>,

Daniel E. Austin<sup>1</sup>

<sup>1</sup>Brigham Young University, Provo, UT, USA

<sup>2</sup>Brigham Young University-Idaho, Rexburg, Idaho, USA

**22. Indicator of Biological Activity of Extraterrestrial Microorganisms of Space Objects from Outer Space**

Gali Garipov<sup>1</sup>, M.I. Panasyuk<sup>2</sup>, S.I. Svertilov<sup>2</sup>, I.V. Konyukhov<sup>3</sup>, S.I. Pogosyan<sup>3</sup>, A.B. Rubin<sup>3</sup>

<sup>1</sup>Moscow State University, 119234 Moscow, Moscow, Russia

<sup>2</sup>Moscow State University, 119234 Moscow, Moscow, Russia

<sup>3</sup>Moscow State University, 119234 Moscow, Moscow, Russia

**23. The SOLARIS Solar Polar Mission: A Small Spacecraft on a Big Mission**

Don Hassler<sup>1</sup>, Jeff Newmark<sup>2</sup>, Sarah Gibson<sup>3</sup>

<sup>1</sup>Southwest Research Institute, Boulder, Colorado, USA

<sup>2</sup>NASA Goddard Space Flight Center, Greenbelt, Maryland, USA

<sup>3</sup>High Altitude Observatory / NCAR, Boulder, Colorado, USA

**24. Earth Like Life Support – Small Sat Testing of Biological Regeneration Under Artificial Gravity, For Protection of Humans in Space**

Mauricio Rocha

*ITA, São José dos Campos, SP, Brazil*

**25. HERA LIDAR Instrument Development**

Paulo Gordo<sup>1,2</sup>, David Seixas<sup>2</sup>, Bruno Couto<sup>1</sup>, Antonio Amorim<sup>1</sup>, Belegante Livio<sup>3</sup>, Rui Melicio<sup>4</sup>, Arlindo Marques<sup>5</sup>, Tiago Sousa<sup>5</sup>, Costa Pinto<sup>5</sup>, Georgios Tzeremes<sup>6</sup>, Patrick Michel<sup>7</sup>, Michael Küppers<sup>8</sup>, Ian Carnelli<sup>9</sup>

<sup>1</sup>*Faculdade de Ciências Universidade de Lisboa, Lisbon, Portugal*

<sup>2</sup>*ARMILAR Lda, Lisbon, Portugal*

<sup>3</sup>*National Institute of R&D, Romania*

<sup>4</sup>*ICT, Universidade de Évora, Evora, Portugal*

<sup>5</sup>*EFACEC, Porto, Portugal*

<sup>6</sup>*ESA, Noordwijk, Netherlands*

<sup>7</sup>*Université Côte d'Azur, Nice, France*

<sup>8</sup>*ESA, Madrid, Spain*

<sup>9</sup>*ESA, Paris, France*

**26. Developing A Curriculum in Space Science and Technology for Undergraduate Students at The Two-Year Level**

M. Chantale Damas<sup>1</sup>, Chigomezyo Ngwira<sup>2</sup>

<sup>1</sup>*Queensborough Community College of the City University of New York (CUNY), Bayside, New York, USA*

<sup>2</sup>*Atmospheric & Space Technology Research Associates (ASTRA), Boulder, Colorado, USA*

**27. Small Satellites for Capacity-Building and Educational Purposes – Historical Overview**

Hannes Mayer

*Karl-Franzens-University Graz, Graz, Styria, Austria*

**28. What Makes A Space Engineer: Can We Develop Engineering Habits of Mind in A High School Satellite Project?**

Ram Tamir<sup>1</sup>, Shimrit Maman<sup>2</sup>, Orit Ben Zvi Assaraf<sup>1</sup>

<sup>1</sup>*Ben-Gurion University of the Negev, Israel*

<sup>2</sup>*Ben-Gurion University of the Negev, Israel*

**29. Miniaturization of An Ion Trap Mass Spectrometer for Cubesat Missions**

Daniel Austin, Ailin Li, Yuan Tian

*Brigham Young University, Provo, UT, US*

**TUESDAY, NOVEMBER 5, 2019**

**Poster sessions for A.2, A.5, B.2, and D.1**

- 1. Modelization of ALPHIE Thruster with Classical and Disruptive Approaches**  
J. M. Donoso Vargas, J. González and L. Conde  
*Departamento de Física Aplicada. Escuela Técnica Superior de Ingeniería Aeronáutica y del Espacio. Universidad Politécnica de Madrid, Spain.*
- 2. Imaging the solar wind in 3D with the PUNCH constellation of small satellites**  
Craig E. DeForest<sup>1</sup>, Amir Caspi<sup>1</sup>, Robin C. Colaninno<sup>2</sup>, Sarah E. Gibson<sup>3</sup>, Alan M. Henry<sup>1</sup>, Glenn T. Laurent<sup>1</sup>, Ronnie Killough<sup>1</sup>, and the PUNCH Team  
<sup>1</sup>*Southwest Research Institute*  
<sup>2</sup>*Naval Research Laboratory*  
<sup>3</sup>*High Altitude Observatory, National Center for Atmospheric Research*
- 3. A Fine Scale Mapping of Mangrove Sites in Benin, West Africa**  
Corine Sinsin<sup>1,2</sup>, Belarmain Fandohan<sup>1,3</sup>, Kolawole Valere Salako<sup>1</sup>, Romain Glele Kakaï  
<sup>1</sup>*Laboratory of Biomathematics and forest estimations, Benin*  
<sup>2</sup>*Centre d'Excellence Africain pour la biodiversité et l'agriculture durable, Ivory Coast*  
<sup>3</sup>*Ecole de foresterie et du bois, Benin*
- 4. Saleh Amplifier and Doppler Effect on PSK modulated signals in Inter-Satellite Communication**  
Kishore Pasi  
*Research Scholar, bangalore, Karnataka, India*
- 5. Busansat: Ocean Nanosatellites Development Program of Busan Metropolitan City in Korea**  
Seongick CHO  
*Korea Institute of Ocean Science & Technology, Busan, South Korea*  
*Yonsei University, Seoul, South Korea*
- 6. UV – LWIR options for CubeSats**  
David Harrison, Kevin Downing  
*Materion Precision Optics, Westford, Ma, USA*
- 7. Geomagnetically Induction effects related to impulsive Space Weather events at low latitudes**  
N'guessan Kouassi, Vafi Doumbia  
*Université Félix Houphouët Boigny, Abidjan, ABIDJAN, Ivory Coast*
- 8. The Homoclinic and Heteroclinic Connections of Planar Symmetric Resonant Orbits in the Restricted Three-Body Earth-Moon System**  
Chao Peng, Hao Zhang  
*Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences, Beijing, Beijing, China*

**9. Progress and Global Trends in Space of 2018**

Shijie GUO

*Chinese Academy of Sciences, Beijing, China*

*University of Chinese Academy of Sciences, Beijing, China*

**10. Concept Study of a Small Compton Polarimeter to Fly On a Cubesat**

Yi-Chi Chang<sup>1</sup>, Chien-Ying Yang<sup>1</sup>, Hung-Hsiang Liang<sup>1</sup>, Che-Yen Chu<sup>1</sup>, Jeng-Lun Chiu<sup>2</sup>, Chih-Hsun Lin<sup>3</sup>, Philippe Laurent<sup>5</sup>, Hsiang-Kuang Chang<sup>1,4</sup>

<sup>1</sup>*National Tsing Hua University, Hsinchu, Taiwan*

<sup>2</sup>*National Space Organization, Hsinchu, Taiwan*

<sup>3</sup>*Academia Sinica, Taipei, Taiwan*

<sup>4</sup>*National Tsing Hua University, Hsinchu, Taiwan*

<sup>5</sup>*CEA Saclay, Gif sur Yvette, France*

**11. Understanding the Origin and Evolution of Earth's Biosphere via CubeSats**

Idan Ginsburg<sup>1</sup>, Dimitar Sasselov<sup>1</sup>, Jaesub Hong<sup>1</sup>, Bradford Snios<sup>2</sup>, Richard Binzel<sup>3</sup>, Gary Melnick<sup>2</sup>

<sup>1</sup>*Harvard University, USA*

<sup>2</sup>*SAO, USA*

<sup>3</sup>*MIT, USA*

**12. Extrasolar Space Exploration by A Torus-Shaped Solar Sail Accelerated Via Thermal Desorption of Coating**

Roman Kezerashvili<sup>1</sup>, Olga Starinova<sup>2</sup>, Alexander Chekashov<sup>3</sup>, Dylan Slocki<sup>4</sup>

<sup>1</sup>*New York City College of Technology, City University of New York, Brooklyn, NY, USA*

<sup>2</sup>*Samara National Research University, Samara, Russia*

<sup>3</sup>*Samara National Research University, Samara, Russia*

<sup>4</sup>*University at Buffalo, Buffalo, NY, USA*

**13. Do Not Lose Your Satellite! The Reliability of Cubesat Radio Link And Electronics Design: System Analysis, Problems, And Proposed Decisions**

Mikhail Ryazanskiy

*Bar Ilan Institute for Nanotechnology and Advanced Materials, Ramat-Gan, Israel*

**14. Solar Sail Dynamics: Bifurcations of Artificial Equilibrium Points and Possible Applications**

Maisa Terra<sup>1</sup>, Priscilla Sousa-Silva<sup>2</sup>

<sup>1</sup>*Technological Institute of Aeronautics, São José dos Campos, São Paulo, Brazil*

<sup>2</sup>*Unesp, São João da Boa Vista, SP, Brazil*

**15. Attitude Stabilization of Nanosatellite With Movable Module on Retractable Beams**

Anton Doroshin, Alexander Eremenko

*Samara National Research University, Samara, Samara Region, Russia*

- 16. Chaotic Behavior of CubeSat with Deployable Side Panels Under an Action of Aerodynamic and Gravitational Torques**  
Vladimir Aslanov  
 Samara National Research University, Samara, Russia
- 17. Solar Powered- Ion Propulsion driven CubeSat for exploration of Ultima Thule**  
Vipul Mani, Ramesh Kumar, Ugur Guven  
 University of Petroleum and Energy Studies, Dehradun, Uttarakhand, India
- 18. Filter Wheel Assembly Development using a Piezo-Ceramic Module/h5**  
Heesu Yang, Seonghwan Choi, Jihun Kim, Jongyeob Park, Ji-Hye Baek, Yeon-Han Kim  
 Korea Astronomy and Space Science institute, Yuseong-gu, Daejeon, South Korea
- 19. Extreme Solar Flares on the Archival Data about Proton Events**  
Leonty Miroshnichenko  
 IZMIRAN, Moscow, Troitsk, Russia  
 SINP MSU, Moscow, Russia, Russia
- 20. Investigation of Solar Flare Effects on GPS TEC and their positional dependence at Low, Mid and High Latitudes**  
Azad Ahmad Mansoori<sup>1</sup>, Pramod Kumar Purohit<sup>2</sup>  
<sup>1</sup>Government Post Graduate College, Bina, Bina, Madhya Pradesh, India  
<sup>2</sup>National Institute Of Technical Teachers Training And Research, Bhopal, Bhopal, Madhya Pradesh, India
- 21. Intercomparison of Polar ionospheric behavior at Arctic and Antarctic region and analysis of polar ionospheric scintillation**  
Arun Kumar Singh, Rupesh M.Das, Shailendra Saini  
 NPL-New Delhi, India, New Delhi, Delhi, India
- 22. Czech Contribution to Solar and Heliospheric Research from Space**  
Frantisek Farnik, Petr Heinzel  
 Astronomical Institute of the Czech Academy of Sciences, Ondrejov, Czech Republic
- 23. Magnetic Holes as Measured By Two Converging Spacecraft**  
Aleksandr Potapov  
 Institute of Solar-Terrestrial Physics SB RAS, Irkutsk, Russia
- 24. A Useful Catalog of Space Weather Research**  
Ganghua Lin  
 National Astronomical Observatories, Chinese Academy of Sciences
- 25. Enabling Ionospheric Tomography with Downlink To Tm/Tc Station in the Czech Republic**  
Jaroslav Urbar, Jaroslav Chum, Vladimir Truhlik, Jiri Simunek, Frantisek Hruska, Jakub Horky, Jiri Base, Daniel Kouba  
 Institute of Atmospheric Physics of the Czech Academy of Sciences, Prague, Czech Republic



**26. Performance Analysis of Global Empirical Ionospheric Models with GPS and Ionosonde Recordings over Lower-Midlatitude Cyprus Region**

SAMPAD KUMAR PANDA<sup>1</sup>, Haris Haralambous<sup>2</sup>, Kanaka Durga Reddybattula<sup>3</sup>

<sup>1</sup>Koneru Lakshmaiah Education Foundation, Guntur, Andhra Pradesh, India

<sup>2</sup>Frederick University, Nicosia, Cyprus, Nicosia, Nicosia, Cyprus

<sup>3</sup>Koneru Lakshmaiah Education Foundation, Guntur, Andhra Pradesh, India

**27. The Impact of Space Weather on Satellites Operation in Near-Earth Space Environment**

Victor U. J. Nwankwo

Anchor Unversity, Lagos, Nigeria

**28. Geomagnetic Storms and their Reflection in Terms of Ionospheric Perturbations**

Bhupendra Malvi<sup>1</sup>, Sharad C Tripathi<sup>2</sup>, Pramod Kumar Purohit<sup>3</sup>

<sup>1</sup>Barkatullah University - 462026, BHOPAL, Madhya Pradesh, India

<sup>2</sup>VIT Bhopal University, 466114, Sehore, Madhya Pradesh, India

<sup>3</sup>National Institute of Technical Teachers' Training and Research, Shamla Hills - 462002, Bhopal, Madhya Pradesh, India

**29. Characteristics of ducting of EMIC Waves Observed by Low Earth Orbit Satellites and Multiple Ground Networks**

Junga Hwang<sup>1,2</sup>, Hyangpyo Kim<sup>1,2</sup>, Jaeheung Park<sup>1,2</sup>, Yukinaga Miyashita<sup>1</sup>, Kazuo Shiokawa<sup>3</sup>, Ian Mann<sup>4</sup>, Tero Raita<sup>5</sup>, Jaejin Lee<sup>1,2</sup>

<sup>1</sup>KASI, South Korea

<sup>2</sup>Korea University of Science and Technology, South Korea

<sup>3</sup>Institute for Space-Earth Environmental Research, Nagoya University, Japan

<sup>4</sup>University of Alberta, South Korea

<sup>5</sup>University of Oulu, Finland

**30. Plasma Parameter Determination in D and E layers of ionosphere using data of far IR radiation spectrum**

Lev Eppelbaum<sup>1</sup>, Gennady Golubkov<sup>2</sup>, S.K. Chakrabarti<sup>3</sup>, A.V. Dmitriyev<sup>4</sup>, Y.A. Dyakov<sup>2</sup>, I.V. Karpov<sup>5</sup>, Michael Manzhelii<sup>6</sup>, S.S. Nabiye<sup>7</sup>, Maxim Golubkov<sup>2</sup>, S. Sasmal<sup>8</sup>

<sup>1</sup>Tel Aviv University, Tel Aviv, Israel

<sup>2</sup>Russian Academy of Sciences, Moscow, Russia

<sup>3</sup>Indian Center for Space Physics, Kolkata, India

<sup>4</sup>National Central University, Jhongli, Taiwan

<sup>5</sup>WB IZMIRAN, Kaliningrad, Russia

<sup>6</sup>Russian Academy of Sciences, Moscow, Russia

<sup>7</sup>National Research Center "Kurchatov Institute", Moscow, Russia

<sup>8</sup>Indian Center for Space Physics, Kolkata, India

**31. Effect of Viscosity on Propagation of MHD Waves in Astrophysical Plasma**

Alemayehu Mengesha Cherkos

Institute of Geophysics Space Science and Astronomy, Addis Ababa University

**32. Solar Wind Plasma Flows and Their Space Weather Aspects**

Subhash Chandra Kaushik<sup>1</sup>, Sonia Kaushik<sup>2</sup>

<sup>1</sup>GAPGC, Datia, Madhya Pradesh, India

<sup>2</sup>Jiwaji University, Gwalior, Madhya Pradesh, India

**33. SWx TREC: A Community Resource for Integrative Space Weather Data Access and Mission, Model, and Algorithm R2O Promotion**

Christopher Pankratz, Thomas Berger, Thomas Baltzer, James Craft, Greg Lucas,  
Daniel Baker, Jennifer Knuth

University of Colorado, Boulder, Colorado, USA

# THURSDAY, NOVEMBER 7, 2019

## Poster sessions for A.3, A.4, E.1, PRBEM.1

- 1. Balkan-Mediterranean Real Time Severe Weather Service and Possible Synergies**  
Haris Haralambous, Christina Oikonomou  
*Frederick Research Center, Nicosia, Pallouriotissa, Cyprus*
- 2. FPGA Implementation for High Throughput Small Satellite Applications**  
Jagannath Paudyal<sup>1</sup>, Sunita Parajuli<sup>1</sup>  
<sup>1</sup>*Tribhuvan University, kathmandu, bagmati, Nepal*
- 3. Small Satellites for Benchmark Measurements of Aerosol Transport Parameters**  
Andrei Vedernikov, Sergey Beresnev<sup>2</sup>, Andrei Vedernikov<sup>1</sup>  
<sup>1</sup>*Université Libre de Bruxelles, Brussels, Belgium*  
<sup>2</sup>*Ural Federal University, Ekaterinburg, Russia*
- 4. Cloud Development from Simulated CLOUDS Stereo-Images**  
Paolo Dandini<sup>1</sup>, Paolo Dandini<sup>1</sup>, Céline Cornet<sup>1</sup>, Didier Ricard<sup>2</sup>, Renaud Binet<sup>3</sup>,  
Christine Lac<sup>2</sup>, Clément Strauss<sup>2</sup>  
<sup>1</sup>*Laboratoire d'Optique Atmosphérique, Université de Lille/CNRS, Villeneuve d'Ascq, France*  
<sup>2</sup>*CNRM, Météo-France-CNRS, Toulouse, France*  
<sup>3</sup>*CNES, Centre National d'études Spatiales, Toulouse, France*
- 5. Novel Imaging Spectropolarimetry and its Application in Remote Sensing**  
Chunmin Zhang, Dingyi Wang, Tingkui Mu, Tingyu Yan, Zhengyi Chen, Zeyu Chen,  
Yanqiang Wang, Yifan He  
*Xi'an Jiaotong University, Xi'an, Shaanxi, China*
- 6. Predicting Key Vegetation Parameters from Multi-source Remote Sensing Data**  
Dawei Xu<sup>1</sup>, Xu Wang<sup>1</sup>, Fei Li<sup>2</sup>, Jiquan Chen<sup>2</sup>, Changliang Shao<sup>1</sup>, Xiaoping Xin<sup>1</sup>  
<sup>1</sup>*Dawei Xu, Beijing, Beijing, China*  
<sup>2</sup>*Fei Li, Michigan, Michigan, USA*
- 7. Vegetation Indices from VEN $\mu$ S and Sentinel-2 at Corn and Soybeans in Southwestern Michigan, USA**  
Pietro Sciusco<sup>1,2</sup>, Jiquan Chen<sup>1,2</sup>, Ranjeet John<sup>3</sup>, Zutao Ouyang<sup>2</sup>, David Reed<sup>2</sup>,  
Gabriela Shirkey<sup>1,2</sup>  
<sup>1</sup>*Michigan State University, East Lansing, MI, USA*  
<sup>2</sup>*Michigan State University, East Lansing, MI, USA*  
<sup>3</sup>*University of South Dakota, Vermillion, SD, USA*
- 8. Identification of algae/cyanobacteria bloom in inland water bodies**  
Miroslav Píkl<sup>1</sup>, František Zemek<sup>1</sup>, Jindřich Duras<sup>2</sup>  
<sup>1</sup>*Global Change Research Institute CAS, Czech Republic*  
<sup>2</sup>*Povodí Vltavy, s.p., Czech Republic*

**9. Quantifying particle background and GRB induced signal in Low Earth Orbit for the CAMELOT CubSsat mission with Geant4 simulations**

Gabor Galgoczi<sup>1,2</sup>, Masanori Ohno<sup>1,3</sup>, Norbert Werner<sup>1,3,11</sup>, Jakub Ripa<sup>1,9</sup>, Andras Pal<sup>10</sup>, Laszlo Kiss<sup>10</sup>, Yasushi Fukazawa<sup>3</sup>, Tsunefumi Mizuno<sup>3</sup>, Hiromitsu Takahashi<sup>3</sup>, Koji Tanaka<sup>3</sup>, Nagomi Uchida<sup>3</sup>, Kento Torigoe<sup>3</sup>, Zsolt Frei<sup>1</sup>, Norbert Tarcai<sup>4</sup>, Kazuhiro Nakazawa<sup>5</sup>, Teruaki Enoto<sup>6</sup>, Hirokazu Odaka<sup>7</sup>, Yuto Ichinohe<sup>8</sup>

<sup>1</sup>Eötvös University, Hungary

<sup>2</sup>Wigner RCP, Hungary

<sup>3</sup>Hiroshima University, Japan

<sup>4</sup>C3S LLC, Hungary

<sup>5</sup>Nagoya U., Japan

<sup>6</sup>Kyoto University, Japan

<sup>7</sup>The University of Tokyo, Japan

<sup>8</sup>Rikkyo University, Japan

<sup>9</sup>Charles University, Czech Republic

<sup>10</sup>Konkoly Observatory, Hungary

<sup>11</sup>Masaryk University, Czech Republic

**10. Prototype design of LIDAR techniques based Artificial Small satellite system for Future Space Mission**

sathiyavel C

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**11. The First High-Resolution near-UV solar Spectrum**

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**12. Segmented Space Telescope**

Erez Ribak, B. Martin Levine

Technion - Israel Institute of Technology, Haifa, Israel

**13. Mission Pointing Optimisation Of Twin Satellite System for All-Sky Burst Monitoring**

Xingbo Han, Jinpei Yu, Wen Chen, Fei Li, Jianfeng Deng, Zhiming Cai, Keke Zhang  
Innovation Academy for Microsatellites of CAS, Shanghai, Shanghai, China

**14. High-Energy Solar X-ray Spectroscopy with the IMPRESS CubeSat**

Amir Caspi<sup>1</sup>, Lindsay Glesener<sup>2</sup>, Demoz Gebre-Egziabher<sup>3</sup>, David Smith<sup>4</sup>, John Sample<sup>5</sup>, Trevor Knuth<sup>2</sup>, Athanasios Pantazides<sup>3</sup>, Kail Laughlin<sup>3</sup>

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**15. DO MIRA\_ep Cubesat Detectors Allow to Distinguish Between Electron and Proton Contribution: A Geant4 Modeling Approach**

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Ruslan Antypenko<sup>3</sup>, Volodymyr Adamenko<sup>3</sup>, Nikita Yezerskyi<sup>3</sup>, Mirosław Kowaliński<sup>1</sup>,  
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**16. Review of Observations about the Van Allen Belts**

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