ESA EO Φ-week

Preliminary Programme Overview. Status 02.09.2019

note: Keynote Speeches 20' ; Oral Presentations 15'

MONDAY 09 September 2019

12.00	Registration
13.30	Opening Session
18.30	Icebreaker

Day 2 - TUESDAY 10 SEPT

AI4EO (1) - 09.15-10.50h

KEYNOTE	**Bianca Hoersch**	**ESA**	**Artificial Intelligence @ESA – Game Changer for Space**
	Marc Rußwurm	Technical University Of Munich	Cloud-Robust Segmentation of Remote Sensing Imagery with Convolutional LSTMs
	Francesco Lattari	Politecnico Di Milano	Deep Learning for SAR Image Despeckling
	Georgios Balasis	National Observatory Of Athens	A Machine Learning Approach for Automated ULF Wave Recognition
	Mihai Datcu	DLR	Explainable Deep Learning for SAR Data
	Aida Alvera Acarate	GHER, University Of Liege	DINCAE: reconstruction of missing satellite data with a convolutional auto-encoder
10:50	COFFEE BREAK		

AI4EO (2) - 11.30-13.05h

KEYNOTE	**Markus Reichstein**	**Max-planck-institute For Biogeochemistry**	**Understanding the Earth System with machine learning and system-based modelling**
	Marian Neagul	West University of Timisoara	Hugin - A machine Learning Experimentation Tool for Earth Observation. Applications for Forestry
	Carsten Brockmann	Brockmann Consult GmbH	Inversion of Radiative Transfer by ML in Ocean Colour Retrieval
	Ana Del Aguila	DLR	AI4RTM: Artificial Intelligence for Radiative Transfer Models
	Begum Demir	Technische Universität Berlin	BigEarthNet: A New Large-Scale Sentinel-2 Benchmark Archive to Drive Deep Learning Studies for Earth Observation
	Nuno Cesar De Sa	Leiden University	Integrating multi-sensor Remote Sensing, field and spectroscopy for multitemporal estimation of grassland biophysical parameters under grazing pressure
	DISCUSSION		
13:30	LUNCH		

AI4EO (3) - 14.30-16.05h

KEYNOTE	**Alison Lowndes**	**NVIDIA**	**Obtaining & accelerating insight from downstream data with GPUs**
	Alistair Francis	UCL	An Assessment of Deep-Learning Based Cloud Masking for Sentinel-2 with CloudFCN
	Nicolas Longepe	CLS	On the use of Deep Learning for ocean SAR image classification and segmentation
	Thomas Kræmer	Uit The Arctic University Of Norway	Iceberg detection in Sentinel-1 Extra Wide swath images: deep learning vs. statistical methods
	Md Saimoom Ferdous	Memorial University Of Newfoundland	Electromagnetic Backscatter Modelling of Icebergs: Validation through C-Band SAR Classifiers
	David Malmgren-Hansen	Technical University Of Denmark	Automating satellite-based ice charting using AI
16:05	COFFEE BREAK		

AI4EO (4) - 16.30-18.15h

KEYNOTE	**Francisco Doblas-Reyes**	**Barcelona Supercomputing Centre**	**Global Climate and Air Quality Research for Services and Operations**
	Jakub Nalepa	KP Labs	Automated segmentation of hyperspectral satellite images using machine learning: how to deal with limited (or lacking) ground-truth data?
	Jonathan Reay	GMV	BIGMIG: Exploring the Application of Deep Recurrent and Convolutional Neural Networks to EO Data for Migration Prevention.
	Moataz Ahmed	ICHEC	Data Augmentation Techniques for Satellite Image Super Resolution using Deep Learning
	Alexis Letulier	European Union Satellite Centre	Artificial Intelligence for Space and Security Applications
	DISCUSSION, CONCLUSIONS OF THE DAY		
18:15	**e-poster**		

Day 3 - WEDNESDAY 11 SEPT

AI4EO (5) - 9.15-10.50h

KEYNOTE	**Danielle Wood**	**Mit Media Lab**	**The Role of Space Technology to Support Sustainable Development**
	Thomas Stark	Technical University Munich	Towards global slum mapping from space: Detecting urban poverty using a transfer learned fully convolutional network
	Victor Maus	Vienna University Of Economics And Business	Satellite Earth Observations for Impact Assessment of Global Supply Chains
	Jose Manuel Delgado Blasco	Rhea S.p.a.	Free commercial Cloud and EO services: the OCRE project opens the gates to the research community
	Matthieu Molinier	VTT	Unsupervised LSTM-AE and Harmonic Models for Improving Timeliness of Forest Logging Notifications With Dense Satellite Image Time Series
	Liliana Castillo Villamor	Amigrow	AMIGROW: Multi-sourced data analytics for smarter and more sustainable agriculture
10:50	COFFEE BREAK		

AI4EO (6) - 11.30-13.05h			
KEYNOTE	**Gunther Lautenschläger**	**Airbus Defence & Space**	**Sentinel-2, Big Data in Space**
	Marc Lubej	Sinergise	Spatio-Temporal Deep Learning: Application to Land Cover Classification
	Michael Riffler	GEOVILLE	Boosting automatic land cover mapping capacities – improving the performance of deep learning models with new multi-dimensional land cover dynamics indices based on full resolution Sentinel data
	Mónica Estébanez Camarena	TU Delft	Schools and Satellites: A Reliable Rainfall Product for West Africa (SAS)
	Alexis Hannah Smith	Imgeospatial	Automating the IMGeospatial Data Pipeline
	Francesco Lattari	Politecnico Di Milano	Recurrent Neural Networks for Trend Change Detection in InSAR Time Series
	DISCUSSION		
13:30	LUNCH		
AI4EO (7) - 14.30-16.05h			
KEYNOTE	**Julien Cornebise**	**Element AI**	**Artificial Intelligence for at-scale Monitoring of Human Rights and Environment**
	Fabian Kunkel	Unibap AB	Bringing Industrial Edge Computing to Space
	Matt George	Planet	Large Scale Spatio-temporal Analytics from Daily Global Coverage of the Earth's Landmass
	Francois de Vieilleville	Agenium Space	Simplifying Deep Learning networks for on board processing
	Lorenzo Feruglio	AIKO	Deep Learning for Earth Observation: Applications for the Intel Myriad X VPU
	Momchil Iordanov	JRC	Monitoring crop phenology with street-level imagery using computer vision
16:05	COFFEE BREAK		
AI4EO (8) - 16.30-18.05h			
KEYNOTE	**Marco Trombetti**	**Translated**	**Startup Experience Within The AI Sector**
	Kathryn Berger	Agrimetrics	In-season crop mapping using Sentinel-1
	Gustau Camps Vals	Universitat De València	Inferring Causal Relations in Earth Observation: Methods, Applications and a Web-platform
	Antonio Tabasco	GMV	Smart integrated data analysis for agriculture support decision-making and management – Sensing4Farming
	Mathew Yarger	Iota Foundation	The New Age of Collective Sharing: Incentivizing Open Data and Algorithms
	DISCUSSION, CONCLUSIONS OF THE DAY		
18:05	**e-poster**		

Day 4 - THURSDAY 12 SEPT			
EO Next (1) - 9.15-10.50h			
KEYNOTE	**Marco Esposito**	**Cosine Remote Sensing**	**HyperScout-2: highly integration of hyperspectral and thermal sensing for breakthrough in-space applications**
	Leonardo Amoruso	Planetek Italia S.r.l.	AI Express In-orbit Smart Services for Small Satellite
	Victor Sonck	ML6	The Future of Edge Inference: Edge TPU
	Massimiliano Pastena	ESA	PhiSAT-1 and FSSCat: ESA Earth Observation Directorate NewSpace initiatives
	Alizee Malavart	Surrey Satellite Technology Ltd	DarkCarb: An Innovative Approach to Infrared Imaging
	Charles Black	Sen	A freemium consumer model for Earth Observation? It's time to democratize space for the benefit of all humanity.
10:50	COFFEE BREAK		
EO Next (2) - 11.30-13.05h			
KEYNOTE	**Peter Platzer**	**Spire Global Luxembourg**	**Spire's Terraflop Brain in Spae for In-situ AI**
	Jacqueline Le Moigne	NASA	NASA Earth Science Technology Office (ESTO) Advanced Information Systems Technology Program (AIST) New Observing Strategies (NOS) Testbed
	Davide Castelletti	Capella Space	Capella's hourly-revisit VHR SAR constellation for multi-temporal change detection
	Murray Kerr	DEIMOS	EO-ALERT: A Novel Flight Segment Architecture for EO Satellites Providing Very Low Latency Data Products
	Andrew Hanna	Blacksky	Persistent Revisit Magnified by Machine Learning and the BlackSky Constellation
	Adina Gillespie	GHGSat	Monitoring of Greenhouse Gas Emissions From Facilities at High Resolution With the GHGSat-D Satellite
	DISCUSSION		
13:30	LUNCH		
Research Infrastructure (1) - 14.30-16.05h			
KEYNOTE	**Renaud Allioux**	**Earthcube**	**From 15 years to 2 months of Mapping: How AI pushes the boundaries of image processing**
	Domenico Grandoni	e-geos	CLEOS (Cloud Earth Observation Services), e-GEOS concept of Satellite Data Platform
	Alejandro Mousist	Thales Alenia Space In Spain	EO Scanning with Deep Learning on large areas efficiently
	Alyssa Harris	Development Seed	Minable Metadata as Building Blocks for ATBDs
	Christian Briese	EODC	Enabling access to EO within the European Open Science Cloud
	Bernard Valentin	Space Applications Services	Multiplatform application development and execution
16:05	COFFEE BREAK		

Research Infrastructure (2) - 16.30-18.15h			
KEYNOTE	**Gregory Giuliani**	**University Geneve**	**SWISS Data Cube**
	Peter Baumann	Rasdaman	United We Stand: Datacube Federations for Planetary-Scale Location-Transparent Fusion
	Gunnar Brandt	Brockmann Consult Gmbh	How Virtual Laboratories and Analysis-ready data foster research in Earth System Sciences
	Oliver Baines	University Of Nottingham	Geodiversity: Buffering Arctic Plant Communities Against Rapid Climatic Change? A Use Case for the Earth System Data Lab
	Felix Cremer	Friedrich-Schiller Universität Jena	pyroSAR: a python package to provide Sentinel-1 time series in data cubes
	DISCUSSION, CONCLUSIONS OF THE DAY		
18:15	**e-poster**		

Day 5 - FRIDAY 13 SEPT			
Research Infrastructure (3) - 09.15-10.35h			
KEYNOTE	**Sebastien Dorgan**	**CS**	**Open Source Software, Cloud and Software Define Networks**
	Inge Jonckheere	FAO	The Use of FAO Open Source Tools and Platforms for Capacity Building: Challenges and Way Forward
	Robin Expert	Airbus Ds Geo Intelligence	Airbus Open Innovation Innitiative
	Alyssa Harris	Development Seed	The Multi-Mission Algorithm and Analysis Platform: Sharing Data and Algorithms Across Agencies and Scientists
	Luis De Juan	Capgemini	Resource management of image-processing workflows with Deep Reinforcement Learning
10:35	COFFEE BREAK		
Research Infrastructure (4) - 11.00-12.00h			
	Jayanti Sharma	MDA	Creating an End-to-End SAR Deep Learning Pipeline
	Renne Tergujeff	VTT	Forestry TEP Enables EO Service Providers to Boost Their Operations
	Stefano Natali	Sistema Gmbh	TOP: Your playground for Copernicus atmospheric sciences data
DISCUSSION, SUMMARY OF ALL CONCLUSIONS FROM SESSIONS & SIDE EVENTS			