

AI4Space Workshop Space & Pseudo Space AI Applications

Date Thursday 7 April 2022
Time 10:00am – 1:00pm (AEST)
Location Owen. J Wordsworth Room
 S Block, Level 12.2
 QUT, Gardens Point Campus (George St, Brisbane)

PROGRAM		
10:00am	Welcome	Clinton Fookes
10:05am	SmartSat/AI4Space RN overview	Andy Koronios
10:10am	TASD overview	Jason Scholz
11:15am	Onboard Machine Learning Presentation	Alina Bialkowski
10:30am	Presentation Session 1 (7 x presentations)	
11:35am	Coffee break	
11:50am	Presentation Session 2 (8 x presentations)	
12:30pm	Working lunch	
1:00pm	Closing remarks	Clinton Fookes

SESSION 1		
Title	Presenter(s)	Organisation
Automated Imagery Analysis for Earth Observation	Tan Cao, Sebastien Wong,	DST
Real-time Earth Observation Data Analytics with Terrestrial Intelligent Sensing for Renewable Energy Prediction using Deep Learning	Jinho Choi, Seng Loke, Thanh Thi Nguyen, Adnan Anwar	Deakin
Deep Learning Based Fire Smoke Detection from Landsat Imagery — Investigating the Impact of Additional Spectral Bands on Prediction Accuracy	Liang Zhao, Jixue Liu, Stefan Peters, Jiuyong Li, Simon Oliver, Norman Mueller	UniSA
Innovation Challenge: Robotic AI-Driven Avatar (RAIDA)	Shehan Fernando, Dharshun Sridharan	Piston Labs
Onboard Hyperspectral AI: Calibration, Panoptic Segmentation, Fine-grained Analysis, and joint space-ground inference	Nariman Habili, Tharindu Fernanda, Clinton Fookes	QUT
Deep Vision Towards the Earth and Universe	Kai Qin	Swinburne
Resilient Satellite Constellation	Ryszard Kowalczyk, Bao Vo	Swinburne, UniSA
Deep Learning for Geospatial Imagery – 2 case studies	Dipak Paudyal	APAC Geospatial
SESSION 2		
Title	Presenter(s)	Organisation
Developed once, deploy everywhere: Automating AI development pipeline	Arnold Wiliem	Sentient Vision System
Dynamic optimization of adaptive resource allocation in satellite constellations	Ryszard Kowalczyk Bao Vo	UniSA Swinburne
TBC	James Buttenshaw	Spiral Blue
Resilience in Space	Kien Nguyen	QUT
AI for Micrometeoroid and Orbital Debris Impact Risk Assessment and Protection	Shannon Ryan, Svetha Venkatesh, Santu Rana	Deakin
Synthetic Constellations- Dynamic quality assured provision of agile satellite services	Ryszard Kowalczyk Bao Vo	UniSA Swinburne
Efficient Subnets for Onboard AI in Space	Jordan Shipard	QUT
Modelling and prediction of GPS time series using the LSTM machine learning approach	Wenzong Gao, Yanming Feng,	QUT