

# ARTIFICIAL INTELLIGENCE IN COMPUTER VISION AND REMOTE SENSING

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## ABSTRACT

The artificial intelligence (AI) industry will be worth \$93bn in 2023, up 12% from 2022, according to GlobalData's 2023 TMT Predictions. AI has been one of the most anticipated of emerging technologies as it has the ability to greatly accelerate and enhance other technologies including robotics, quantum computing and the internet of things (IoT). In a tech sentiment poll carried out by GlobalData in the third business quarter of 2022, 57% of respondents said that AI will live up to all its promises. The US and China lead globally on the volume of AI patents filed from 2016 to 2022. The global race to fund, develop, and acquire artificial intelligence (AI) technologies and start-ups is intensifying, with commercial uses for AI proliferating in advanced and emerging economies alike. AI can increase gross domestic product (GDP) growth in both advanced countries and emerging markets. Yet with the exceptions of China and India, emerging markets have received only a modest share of global investment in this advanced technology, despite the fact that they may benefit more from AI implementation than advanced economies.

This mini symposium aims to bring together researchers and industry practitioners in the domain of AI applications from the field of Computer Vision and Remote Sensing and provide a forum to present and discuss research done and future possibilities of applications and cooperation in the mentioned fields.

The symposium will provide a forum for participants to present and discuss their research, exchange ideas, and network with colleagues from academia and industry. We believe that this symposium will contribute to advancing the state of the art in AI for computer vision and remote sensing and lead to innovative and practical solutions for real-world problems.

The event represents a continuation of the 1st mini-symposium on Artificial Intelligence and Entrepreneurship of the First Serbian International Conference on Applied Artificial Intelligence AAI 2022,

held in Kragujevac, Serbia, in May of 2022, but with the change in scope towards applications of AI in Computer Vision and Remote Sensing.

As such, the topics of interest include, but are not limited to:

- Computer vision
- Remote sensing
- Deep learning architecture for computer vision and remote sensing
- Machine learning for computer vision and remote sensing
- Synthetic remote sensing data generation
- Super-resolution in the spectral and spatial domain
- Unsupervised feature learning for remote sensing and computer vision
- Hyperspectral and multispectral image processing
- Feature extraction and learning from spatio-temporal data
- Semantic classification of UAV / aerial and satellite images and videos
- Self-, weakly, and unsupervised approaches for learning with spatial data
- Multi-resolution, multi-temporal, multi-sensor, multi-modal processing
- Fusion of machine learning and physical models