Special Track: **Artificial Intelligence in Aerial and Orbital Imagery**

19ᵗʰ International Symposium on Visual Computing
Lake Tahoe, NV, USA
October 21-23, 2024
https://www.isvc.net/

Scope

Arificial inteligence and computer vision play a major role in both Earth bound applications as well as space exploration. On Earth, usage of high resolution and large coverage maps includes climate monitoring, resource utilization, fire and floods detection, agriculture and forestry. High resolution mapping from orbital imagery also supports topographic feature detection on Solar System planets including Moon and Mars. These application support in turn scientific discovery about planetary formation and support current and future space exploration missions, Steady increase in camera resolution and parallel computing over the past decade enabled creation of planetary maps at unprecedented coverage and resolution.

The purpose of this special track is to gather novel techniques for artificial intelligence and high resolution/large scale mapping that would enable the technologies of the future and support various terrestrial and planetary applications.

The authors of all accepted papers in the special track will be invited to submit an extended version of their work for review and possible publication in a Special Issue of the Remote Sensing journal published by Multidisciplinary Digital Publishing Institute (MDPI)

Topics

Topics of interest include but are not limited to:

- 3D stereo reconstruction from orbital and aerial imagery
- Shape from shading, shape from silhouette reconstruction
- Automatic detection and 3D reconstruction of vehicle, building, people
- Automatic detection of natural feature including craters, boulders, flood, forest) detection,
- Feature matching and automatic localization within orbital/aerial imagery.

Organizers

Ara V. Nefian, KBR at NASA Ames Research Center
Larry Edwards, NASA Ames Research Center
Gary Bradski, OpenCV founder
Mark Shirley, NASA Ames Research Center

Important Dates

Same as ISVC deadlines, see http://www.isvc.net/

Paper Submission Instructions

Same as ISVC paper submission instructions, see http://www.isvc.net/index.php/paper-submission/