



3D Mapping, Modeling and Surface Reconstruction

**A Special Track of the
5th International Symposium on Visual Computing (ISVC09)**

<http://www.isvc.net>

Scope:

Three dimensional mapping, modeling and surface recognition from calibrated and uncalibrated images is an active field with many applications in human computer interaction, autonomous navigation, and surveillance. More recently, these discoveries have received particular interest in space exploration where advances in 3D computer vision are revolutionizing the field of planetary mapping by automating time-consuming, manually intensive data processing techniques. As such, advances in computer vision are the key to unlocking the full potential of terabytes of raw imagery that is being collected by orbiting and landed robotic missions. As NASA and other space agencies direct their attention toward human landing on the Moon and continued robotic exploration of Mars, planetary mapping and modeling plays a pivotal role in astronaut training, landing site selection, and robot navigation. The purpose of this track is to advance the current state of the art of 3D mapping, modeling and surface reconstruction and its wide range of applications.

Topics:

The topics of interest include but are not limited to the following areas:

- Stereo image processing
- Surface characterization
- Bundle adjustment
- Robust estimation methods
- Photoclinometry and photometric stereo reconstruction
- Statistical methods for 3D vision
- Surface reconstruction from uncalibrated images
- Multi-modal image reconstruction

- Camera calibration

Paper Submission Procedure:

Papers submitted to ISVC 2009 Special Track must not have been previously published and must not be currently under consideration for publication elsewhere. Manuscripts should be submitted in camera-ready format and should not exceed **12 pages**, including figures and tables (see <http://www.isvc.net> for details). All papers accepted will appear in the symposium proceedings which will be published by Springer-Verlag in the **Lecture Notes in Computer Science (LNCS)** series.



Important Dates:

Paper submissions	July 10, 2009
Notification of acceptance	August 31, 2009
Final camera ready paper	September 14, 2009
Advance Registration	September 14, 2009
ISVC09 Symposium	November 30 - December 2, 2009

Organizers:

Ara V. Nefian, Carnegie Mellon University/ NASA Ames Research Center, Moffett Field, CA, USA, ara.nefian@sv.cmu.edu

Michael Broxton, Carnegie Mellon University/ NASA Ames Research Center, Moffett Field, CA, USA, michael.broxton@nasa.gov

Andres Huertas, NASA Jet propulsion Lab, Pasadena, CA, USA, andres.huertas@jpl.nasa.gov

Committee:

Matthew Hancher, NASA Ames Research Center, CA, USA

Laurence Edwards, NASA Ames Research Center, CA, USA

Gary Bradski, Willow Garage, CA, USA

Avideh Zakhor, UC Berkeley, CA, USA

Andrea Cavallaro, University Queen Mary, London, UK

Jean-Yves Bouguet, Google, CA, USA