

**ARIDA Workshop*: Innovations in 3D Modelling & Visualisation
of Digital Imagery-Based Spatial Information**

Melbourne, 26 & 27 February 2007

Preliminary Technical Program

(13 January 07)

DAY 1

Registration: 8:30 - 9am

Session 1, Monday, Feb. 26, 9.00 – 10:30am

1. Opening Remarks by Convenor: Prof. Clive Fraser
2. Welcome remarks from ARIDA: Prof. Hirofumi Chikatsu
3. Welcome remarks from the CRCSI/Univ. of Melbourne: Mr Peter Woodgate (CRCSI)
4. Keynote address and system demonstration from Prof. Ian Bishop:
Visualisation to support environmental modelling

Morning Tea: 10:30 – 11:00

Session 2, Monday, 11:00 – 12:30 *Close-Range Photogrammetry*

1. **3D-measuring and modelling system based on a digital camera and PC for wide applications in industrial measurement:** Mr M. Yamada, Topcon Corp., Tokyo
2. **Exploitation of colour in automated close-range photogrammetry:** Mr S. Cronk, Univ. of Melbourne
3. **Re-evaluation of interior orientation parameters of consumer grade digital camera in digital photogrammetry:** Prof. H. Chikatsu, Tokyo Denki Univ., Japan

Lunch, 12:30 – 1:30

Session 3, Monday, 1:30 – 3:00 *High Resolution Satellite Imagery*

1. **Georeferencing and DEM generation from ALOS/PRISM imagery:** Prof. A. Gruen, ETH Zurich, Switzerland
2. **HRSI ge positioning with BARISTA – a case study in Bhutan:** Dr J. Willneff, CRCSI/Univ. of Melbourne
3. **Sensor orientation modelling for ALOS/PRISM & SPOT5:** Dr F. Rottensteiner, CRCSI/Univ. of Melbourne

Afternoon tea, 3:00 – 3:30

Session 4, Monday, 3:30 – 4:30 *Heritage Recording*

1. **3D reconstruction of ancient footprints via laser scanning:** Mr C. Ogleby, Univ. of Melbourne
2. **Archaeological photogrammetry – a case study** (title to be confirmed): Prof. H. Haggren, Helsinki Technical University, Finland

Pre-Tewksbury Lecture Break, 4:30 – 5:45

Tewksbury Public Lecture (5:45 - 6:45) by Prof. Armin Gruen: **Measuring and modelling from digital imagery**

ARIDA Workshop Dinner: 7:00 – 10:30pm, University House, Univ. of Melbourne

DAY 2

Session 5, Tuesday, Feb. 27, 9.00 – 10:30am *Camera Calibration*

1. **Camera calibration of Z/I DMC in the Japanese test field with iWitness:** Prof. S. Murai, Univ. of Tokyo
2. **Ideal situation for camera calibration using amateur digital cameras:** Dr Y. Kunii, JSA, Tokyo
3. **Zoom-dependent camera calibration:** Mr S. Al-Ajlouni, Univ. of Melbourne

Morning tea, 10:30-11:00

Session 6, Tuesday, 11.00 – 12:30am *Industrial Vision Metrology*

1. **Automation in industrial vision metrology:** Prof. C. Fraser, CRCSI/Univ. of Melbourne
2. **Australis case study with multiple scale bars:** Mr Y. Kashiwai, Taisei Kiso Sekkei, Tokyo
3. **Innovative applications of vision metrology:** Mr G. Ganci, GSI, Florida

Lunch, 12:30 – 1:30

Session 7, Tuesday, 1:30 – 3:00 *Surface Extraction & Modelling*

1. **Developments in image-matching for detailed surface reconstruction in close-range photogrammetry:** Dr F. Remondino, ETH Zurich
2. **Efficient generation of CAD data for break-lines using surface flatness:** Dr H. Yokoyama, Tokyo Denki Univ.
3. **Generation of 3D polyline curves in close-range photogrammetry:** Mr T. Weser, CRCSI/Univ. of Melbourne

Afternoon tea, 3:00 – 3:30

Session 8, Tuesday, 3:30 – 5:00 *Measurement Systems*

1. **Multiple human tracking by stereo video camera:** Dr T. Fuse, Univ. of Tokyo
2. **Evaluation of image-based integrated measurement system and its application to topographic survey:** Dr T. Ohdake, Tokyo Denki Univ.
3. **Measurement via an integration of terrestrial laser scanning and panoramic camera imagery:** Prof. A. Gruen, ETH Zurich

Workshop Wrap-up and Closing, 5:00 – 5:30

Post workshop dinner, 6:30 – 11pm, local restaurant in Carlton.

For additional details, contact: Prof. Clive Fraser at c.fraser@unimelb.edu.au

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