

22nd Annual International Conference on Mechatronics and Machine Vision in Practice (M2VIP 2015)

Toowoomba, Australia
7 – 9 December 2015

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PROGRAMME

Monday 7 December

6:00pm Drinks and snacks at 10, Glencoe Court, 5 km due East from the University and on the edge of the Great Dividing Range.

Tuesday 8 December

9:00am *Arrival and pre-ordering of lunch.*

The conference is being held in lecture room C204 - across the main quadrangle opposite to the refectory, close to 'Subway'.

9:15am Session 1:

- Welcome by the Senior Deputy Vice-Chancellor
- 13 Real-Time 3D Mapping of Biopsy Fiducial Points using Two Infrared Cameras 1
- 07 Smart robotic catheter for Endovascular processes 9

10:30am *Morning Tea*

11:00am Session 2:

- 05 Low Cost Cascade Controllers for Non Linear Hydraulically Driven Joints 13
- 10 Schematic Design of an X-ray Based Robotic Welding Inspection System. 21
- 15 Presentation of Mechatronics research in USQ's National Centre for Engineering in Agriculture. N/A

12:30pm *Lunch is available in the Refectory.*

2:00pm Session 3

- Surgical Robotics and the Tissue Environment – presentation by Professor Brett. N/A
- 12 Electro-tactile Feedback System for a Prosthetic Hand 27

3:00pm *Afternoon Tea*

3:30pm Session 4

- 11 Fuzzy-CPG Hybrid Control of a Hip Joint Walking Assist Device Based on Soft Sensing of Muscle Forces 39
- 09 Temporal Difference (TD) Based Critic-Actor Adaptive Control For A Hand Motion Rehabilitation Robot 46

4:30pm *Session close, prepare for evening event*

6.00pm Meet at 10 Glencoe Court (see map).

An Australian barbecue will be accompanied by live entertainment.

Wednesday 9 December

9:30am Session 5

- 04 A drilling technology discriminating mediums to cut ahead on the tool path 57
- 14 3D shape sensing of elongated objects using Fibre Bragg Gratings 62

10:30am Morning Tea

11:00am Session 6:

- 08 State of the art and key technology of soft-bodied robots 75
- 06 Single Player Tracking in Multiple Sports Videos 97
- Group discussion, proposals for collaboration.

12:30pm Lunch

2:00pm Session 7

- 16 Presentation of Vision research at the National Centre for Engineering in Agriculture. N/A
- After a presentation, delegates will be taken a few hundred metres to see the research in action.

During the visit: Afternoon Tea at the NCEA

Conclusion of programme