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## SMBE, EA CBME & IEEE EMBS Evening Lecture with Professor Paul McMenam

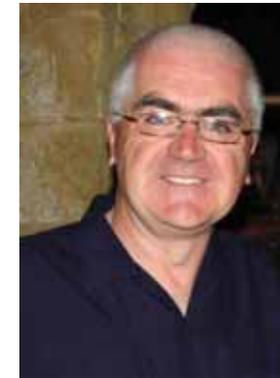
### Innovations In Replication of Human Anatomical Dissections by 3D Printing: uses in Education and Research

#### ABSTRACT

The teaching of anatomy has been the subject of much controversy, dating back to the days of the grave robbers and more recently in the debate about the value of employing human cadavers in the medical teaching. Cultural and religious sensitivities are major obstacles to cadaver based teaching in many countries around the globe. In these countries teachers are faced with two alternatives – artificial plastic models that lack anatomical detail and accuracy or very expensive plastinated human cadaver parts imported from other countries. We have developed a complete range of high resolution colour anatomical 3D prints based on specimens that have been either CT scanned or laser scanned and the data rendered in 3D software before printing. Our 'Monash 3D Printed Normal Anatomy Series' has recently been completed and is suitable for use in any setting (hospitals, classrooms, doctor's surgeries, universities, libraries etc) in any country worldwide.

#### SPEAKER

Paul has been involved in teaching anatomical sciences to medical students, science students and a range of postgraduate surgical and medical specialists for around 35 years. After completing a degree in Zoology at Glasgow University, Scotland, where he studied the question of silent flight in owls he went on to do a PhD focussing on the anatomy of the eye and the pathology of glaucoma. In 1983 he undertook a professional training in medical anatomy (M.Sc. [Med. Sci]) after which he migrated to Perth, where he took up a lectureship in anatomy at The University of Western Australia (1987). Paul was appointed to full Professor in 2003 and obtained his D.Sc. (Medicine) in 2010. He continues to have an active laboratory studying a range of eye diseases including uveitis, macular degeneration and childhood blindness and has published around 140 papers and one textbook. In 2010 he took up the post of 'Director of The Centre for Human Anatomy Education' in the Faculty of Medicine, Nursing and Health Sciences at Monash University, Melbourne. Paul is passionate about teaching and has been the recipient of numerous teaching accolades including 'The Premier's Award for Excellence in Teaching' (Western Australia) in 2007. He has pioneered new approaches to teaching such as body painting and in the last 2 years he has, along with his team at the Centre, pioneered a unique method of creating 3D prints of human anatomy, based on clinical radiographic data and scanned cadaveric specimens, with the aim of bringing these unique anatomy learning resources to medical schools, hospitals and teaching institutions around the world. By mid-2015 he and his team at Monash University will have essentially completed a 3D printed replica of the human body. In his presentation he will tell of this recent project and discuss the future for 3D printing in science and medical education.



#### EVENING LECTURE

**Venue:** Engineering House,  
21 Bedford Street, North  
Melbourne

**Time:** 5:30pm refreshments  
for 6:00pm start

**Date:** Tuesday, 16th June  
2015

To register, click [here](#)

There is no admittance fee for EA,  
IEEE or SMBE members.

Note: Engineers Australia members are eligible to claim CPD for attending this event.

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