

The Society for Medical &  
Biological Engineering  
S.A.  
Incorporated



PO Box 19, Woodville, SA 5011  
<http://www.smbe.asn.au>  
ABN 78 256 253 854

# NEWSLETTER

## JULY 2005

### President

Anne-Louise Smith, FMC  
☎ 82046083, [anne-louise.smith@fmc.sa.gov.au](mailto:anne-louise.smith@fmc.sa.gov.au)

### Immediate Past President

Adrian Richards, NWAHS  
☎ 82226533, [adrian.richards@nwahs.sa.gov.au](mailto:adrian.richards@nwahs.sa.gov.au)

### Vice President

Ray Liddle, RAH  
☎, [rliddle@bme.rah.sa.gov.au](mailto:rliddle@bme.rah.sa.gov.au)

### Secretary/Newsletter editor

Robin Woolford, FMC  
☎ 82045242, Fax 82045840  
[robin.woolford@fmc.sa.gov.au](mailto:robin.woolford@fmc.sa.gov.au)

### Treasurer

Greg Smith, Helicon Technology  
☎ 82232000, [greg@helicon.com.au](mailto:greg@helicon.com.au)

### Councillors

Rhys Winn, W&CH  
☎, [winnr@mail.wch.sa.gov.au](mailto:winnr@mail.wch.sa.gov.au)

Tony Carlisle, FMC  
☎ 8204 4981, [tony.carlisle@fmc.sa.gov.au](mailto:tony.carlisle@fmc.sa.gov.au)

Daniel Fletcher, NWAHS  
☎ 82227330, [daniel.fletcher@nwahs.sa.gov.au](mailto:daniel.fletcher@nwahs.sa.gov.au)

Darren Kohlhausen, Draeger Australia  
☎ 0412 111829,  
[darren.kohlhausen@draeger.com.au](mailto:darren.kohlhausen@draeger.com.au)

Olivia Pallotta, FMC  
☎ 82045403, [olivia.pallotta@fmc.sa.gov.au](mailto:olivia.pallotta@fmc.sa.gov.au)

### Affiliations

*Australian Federation for Medical and Biological  
Engineering*  
*International Federation for Medical and Biological  
Engineering*

## CSIRO Manufacturing & Infrastructure Technology (CMIT)

**Date:** Tuesday, 26<sup>th</sup> July 2005  
**Venue:** CMIT CRC Conference Centre  
Leeds Crescent, Woodville North,  
South Australia  
Parking opposite Building 2  
(assembly area for Bldg 2 on map)  
**Time:** 5:30pm for refreshments, talks  
starting at 6:00pm  
**RSVP:** Robin Woolford  
[robin.woolford@fmc.sa.gov.au](mailto:robin.woolford@fmc.sa.gov.au)  
Ph: 8204 5242

This is an opportunity to hear about some of the work being done at CSIRO in the area of biomedical engineering. The talks will be followed by a short tour of the premises for those interested.

### Dr Mike Painter:

#### **Stress Shielding in Orthopedic Implantation & Implant Design**

Arthritis and osteoarthritis major disease contribute to disability and loss of quality of life in the ageing. Number of sufferers from arthritis in US almost the same as population of Australia. Implantation – joint replacement, is often the only treatment and way of maintaining quality of joint. The orthopedic implant market is estimated to double in next 30 years.

If implantation takes place at age about 45-55 the average service life of current hip implant systems is less than expected patient life span and there are medical, technical and financial concerns with repeated implantation or revision surgery.

Stress shielding, the disruption of stress distribution between bone and implant, is one phenomena that contributes to implant failure

This presentation outlines the problem and shows how advanced numerical simulation combined with materials engineering can address the issue.

### Dr Richard Morgans:

#### **Self Repairing Structures – Fact or Fiction**

We currently have a small research team dedicated to a new research initiative which is exploring the development of self healing or adaptive properties within man-made metallic based materials. This presentation provides an introduction to the topic self healing materials and describes some of our preliminary research strategies.

Dr Joe Cavallaro:

### **Modifying Ti surfaces for Biomedical Applications**

This brief presentation is divided into two sections. In the first the definition of "surface" as applied to biomedical implants and devices is discussed in terms of material requirements and in the second part titanium is discussed in terms of its biocompatibility, and a brief overview of surface modifications of this choice material is presented.

## **Annual General Meeting** *Featuring the Toyota Prius*

**Guest speaker: Craig Stewart**

What technology is used to give the hybrid Toyota Prius such fuel economy?

City 4.6 L/100 km, highway 4.2 L/100 km  
(according to Govt tests)

Find out what is under the bonnet and have a look for yourself.

**Date:** Tuesday, 9<sup>th</sup> August 2005

**Venue:** Einstein's Cafe

Building 16 (the Old Railway Shed),  
Cnr Little Queen St & Little Winwood St  
Uni Adl Research Park, Thebarton  
Parking available at end of Stirling St.

**Time:** 5:30pm Refreshments  
6:30pm AGM  
7:00pm Guest speaker

**RSVP:** Numbers are limited so RSVP now  
Robin Woolford  
([robin.woolford@fmc.sa.gov.au](mailto:robin.woolford@fmc.sa.gov.au))  
Ph: 8204 5242

**Cost:** Members FREE, guests also free.

### **Constitution changes**

At the 2004 AGM we discussed a proposed change to the constitution to allow multiple council members from the same institution.

The proposed changes were rejected at this meeting due to concern that there may be a situation where a quorum for a council meeting would not be achieved.

This was discussed at council several times throughout the year and a new proposal is to be placed before the members.

The proposal is to delete the last sentence of clause 9.3 to remove the restriction on multiple

council members from the same institution. Council believe that the normal process of nomination, discussion and election of council members at the AGM would ensure the appropriate balance of the council.

The new proposal will be discussed at the AGM.

### **Election of office bearers for 2005 - 2007**

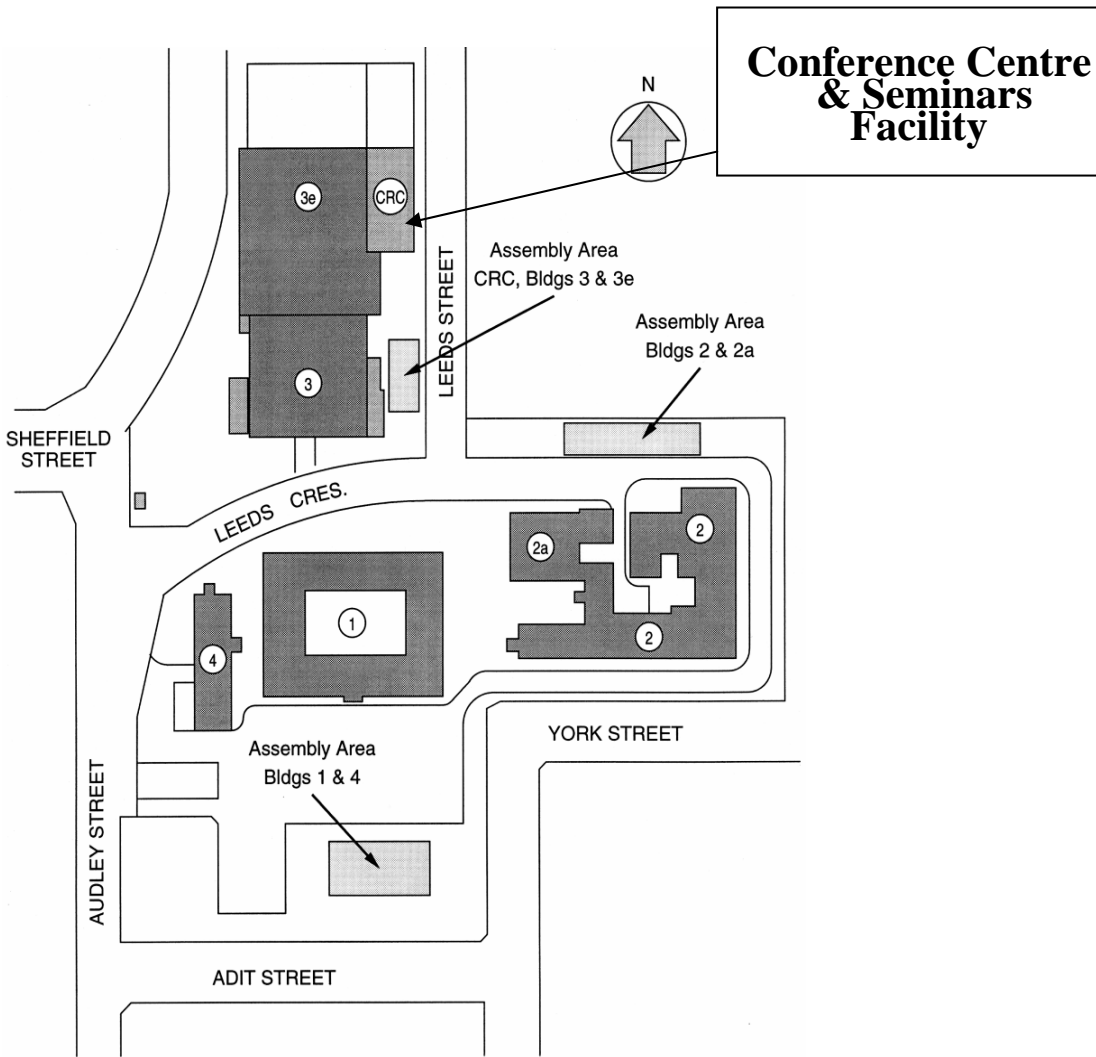
This year the positions of Vice President (Ray Liddle), Treasurer (Greg Smith) and two councillor positions (Olivia Pallotta, Tony Carlisle) become vacant. Due to the recent interstate move of Rhys Winn another councillor position also becomes vacant. This position will be for one year only to allow the two year rotation of council members to be maintained.

Greg Smith will not be re-nominating for treasurer so we are looking for someone who is keen or interested in taking on this role.

Please complete the nomination form at the end of this newsletter and return to the Hon Secretary by the due date.

### **EPSM 2005 Conference**

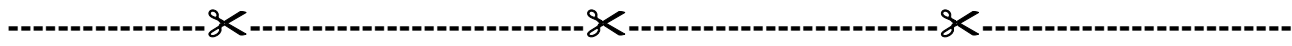
The organisation of the annual conference is well under way with prominent keynote and invited speakers presenting. You will receive a registration brochure with this newsletter but if not log on to [www.epsm.org.au/2005](http://www.epsm.org.au/2005) for full details and online registration. With the inaugural *Australian Biomedical Engineering Conference (ABEC)* incorporated within this conference it is an ideal opportunity for local biomedical engineers and technicians to present a paper or poster of their work or to meet and network with fellow engineers and technicians from Australia and overseas.



**Please be aware of the following during your visit to CMIT:**

**Safety Equipment** - Safety signs and safety directives issued by CSIRO personnel must be complied with at all times. Relevant safety equipment will be provided for visitors where necessary.

**Please note enclosed footwear must be worn on site in all areas.**



**Nomination for Council position 2005/2007**

I .....nominate

..... for the position of Vice President/Treasurer/Councillor

Signed.....nominee .../.../....

Signed.....proposer .../.../....

Signed.....seconded .../.../....

Send to Robin Woolford, Flinders Biomedical Engineering, Flinders Medical Center, Bedford Park, SA 5042 or fax to same on 8204 5840 or email to [robin.Woolford@fmc.sa.gov.au](mailto:robin.Woolford@fmc.sa.gov.au) by 5 August 2005.