

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



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ABN 78 256 253 854

NEWSLETTER NOVEMBER 2001

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Affiliations

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



Christmas Dinner Wednesday 12 December 2001

**Earl of Leicester Hotel
85 Leicester Street, Parkside**

**Drinks from 6.00 p.m.
Dinner at 7.00 p.m.
Cost \$7.50 per head**

Our major social function for the year is with us again. The Earl will again be our hosts. The Christmas dinner has always been a very enjoyable occasion and the highlight of our social calendar, so mark this date in your diary.

This year the dinner will have a special significance as we say farewell to Medical Applications. Medical Applications have been long time supporters of the SMBE and have played a significant role in the Australian biomedical industry and profession.

This year we will have a significant door prize in the form of a DVD player, which has been offered courtesy of Medical Applications.

To assist with the catering arrangements, could you please send the following slip to **Kerry at Helicon Technology** (along with a cheque/money order made out to the SMBE (Inc) SA.)

Numbers are limited so get your reply in quick as "first in best dressed" will apply if need be.

RSVP - Friday 7 December 2001

Name _____ No. attending _____

A cheque / money order for \$_____ is enclosed.

Please return as follows: **Kerry Nelson
Helicon Technology
Unit 6 181 Gilles Street
ADELAIDE SA 5000**



**The Biomedical Engineering and
Mechanical and Manufacturing
Engineering Branches, SA**
Present

**TWO STEPS FORWARD, ONE
STEP BACK. THE ROLE OF THE
DESIGN ENGINEER IN
ORTHOPAEDICS.**

SPEAKER: Mr Dan Barker

Department of Orthopaedics,
Flinders University

DATE: Tuesday 27th November 2001

VENUE: Room 434, Engineering

Building, Flinders University
(Off Car Park 15)

TIME: 6:00pm (Light refreshments from
5:30pm)

Summary

In his talk, Dan Barker will explain the role of the engineer in orthopaedics and discuss the many challenges involved in design engineering for the human body. He will show that, although new implant design has been a common feature of joint replacement surgery, there is relatively little science compared to other engineering disciplines. Reasons for this will be presented and future needs will be identified. Using examples of real life projects, he will go through the design process of artificial joints, starting with the identification of the clinical problem through to specific manufacturing requirements and finally enabling the implant to be ready for surgical implantation through appropriate pre-clinical tests. The use of mechanical, mathematical and radiological technologies will be highlighted.

Dan Barker is a structural engineer who graduated with Honours from the Department of Civil and Environmental Engineering, Adelaide University in 1991. He then undertook a part time Masters in Engineering Science, which was awarded in 1996, during which time he worked as a consulting engineer in various projects. The Masters was in the field of orthopaedic biomechanics focusing on artificial hip joints. In 1997 he enrolled as a Ph.D. candidate in the School of Medicine, Flinders University. His Ph.D. project has involved the design, testing and manufacturing of a novel artificial joint for the finger. Their group has patented the design and they are about to begin clinical trials. He has recently returned from a year in Sweden at the University of Lund designing a novel artificial knee joint, which has now been patented.

All members, students and other interested parties welcome.

Annual General Meeting

Our AGM was held at the Repatriation General Hospital on August 28 and was attended by some 30 people. Other than the usual business some items are worthwhile mentioning.

John Kirby has decided to step down as treasurer. John is our longest serving council member having been treasurer for 16 continuous years. The efforts that John and his wife Linda have put in over that time has instilled confidence in all councilors and office bearers who have worked with him. In recognition of all of that John was awarded honorary membership of the Society. John will continue his role as the Society's webmaster.

James Higham was presented with the Drager/SMBE Encouragement Award for his paper on the design of an automated pump for esophageal motility studies.

Some photos of the AGM are at the end of the newsletter.

At the council elections the following were elected.

| | |
|----------------|-----------------|
| Vice President | Chris Jeffs |
| Treasurer | Greg Smith |
| Councilors | Tony Carlisle |
| | Olivia Pallotta |

The council welcomes Olivia as a new member to the council.

The formal part of the meeting was followed by a talk on wines and winemaking by one of our members, Bryan Reynolds. Bryan discussed the various techniques and skills used in winemaking and discussed some of the wines from his

Toondilla winery. Bryan bought a selection of his wines to the meeting and they were enjoyed by all at the dinner that preceded the AGM.

If you would like to purchase some of Bryan's wines his contact details along with the wines currently available are below.

Phone 8443 6477 work (9 to 5) Mon-Fri
8383 6408 home after 8pm
0438 693 146 mobile 24 hrs or message.

| | |
|-------------------------------|--------------|
| Cabernet Sauvignon | 10 a bottle. |
| Petit Verdot | 10 a bottle |
| Goro (dry white)nice & fruity | \$8 a bottle |
| Plum Cabernet (dry red) | \$8 a bottle |
| Tramminer (limited amount) | \$8 a bottle |
| Semillon | |

Free delivery to any suburb.

General news

Our newest council member, Olivia Pallotta, has recently won several awards including the IEAust Young Biomedical Engineers Award for her paper on a Portable Gait Laboratory. Our congratulations to Olivia for this and other awards. Some information on her project may be found at <http://www.yea.au.com/News/Olivia.html>

On a sadder note one of our previous members, Willem van Maan, was killed in a gyrocopter crash in mid September. Willem came to biomedical engineering following a career in the Royal Dutch Airforce and NATA testing with Gerard Industries. Willem spent some time at the Women's and Children's Hospital, assisting with general biomedical engineering work associated with amalgamation of the Queen Victoria Hospital and Adelaide Children's Hospital.

In recent time Willem held the position of Manager Technical Services with Vamatec.

Willem will be remembered in different ways by membership. Chris Jeffs remembers Willem as "the ever cautious practitioner, thorough in action and diligent in intent. A social creature who was well accepted by staff at the WCH."

Willem had a passion for flying. He was an accredited ultralight pilot flying out of Murray Bridge and was doing a conversion to gyro's as it was closer to home and cheaper. His instructor was also a casualty in the same accident. Our sympathies to Willem's family and wife, Petra.

PROFESSIONAL DEVELOPMENT - HAVE YOU HAD YOURS TODAY?

Article in separate document

EPSM 2001 - Perth

In the face of adversity our annual conference in Perth was hailed by all as a resounding success. Despite the best efforts of terrorists and the failing of Ansett, attendance was well up with only around a dozen people needing to cancel at the last minute. This did involve traveling by train or driving for some people, but where there is a will there is a way!!

A high standard of keynote speakers really set the scene, with the opening address being a notable example. Dr Terry Peters of Canada described in some detail the work that he has been involved with utilising a range of modeling techniques to facilitate robotic surgery. Their ultimate aim (and they are not all that far from achieving it) is to perform minimally invasive coronary artery bypass surgery using robotic techniques that synchronise the movement of the instruments to the beat by beat motion of the heart. Impressive to say the least.

The Clinical Engineering program adopted a slightly different format this year to what has been seen traditionally. Along with a few formal paper sessions a number of workshops were run that were aimed at being instructional in a number of key or emerging areas. These included;

IT and networking fundamentals

This covered some key concepts particularly network related that practicing BME professionals need to understand in this day and age.

Picture Archiving and Communications Systems (PACS)

Building on the workshop above this prepared BME's to become involved in what may be a new frontier for them, the filmless Imaging Department.

Testing of laparoscopic instruments

This was the final in the national series of workshops that was initially instigated her in SA in 1999.

Patient Safety

This was quite a highlight, discussing this high profile issue. Representatives of the Australian Council for Quality and Safety in Healthcare, the Australian Patient Safety Foundation, TGA and the air safety industry provided much thought provoking insight into what role we all can and should be playing in reducing adverse events amongst our patients.

The good news is that this will most likely be coming to Adelaide in the first quarter of 2002, bigger and better!

In terms of proffered papers the entries for the Yong Biomedical Engineers award were a highlight also. Good news was the winner of that award, our new councilor Olivia Pallotta. She gets to travel, courtesy of IEAust, to an international conference to present her work. Congratulations!!

As usual much discussion and networking took place outside of the formal sessions. The keynote speakers, Ted Cohen and Yadin David shared their knowledge and experiences freely, making many acquaintances whilst doing so. A dinner at the prestigious Royal Perth Yacht club, once home to THAT cup, was a rare opportunity also not to be missed. Future conferences were planned, including next years EPSM in New Zealand as well as the BIG one, World Congress 2003 in Sydney.

Drager/SMBE(SA) Biomedical Engineering Encouragement Award

Nominations are being sought for this very worthwhile award for 2001.

PHILOSOPHY

This annual award is to be made as a means of acknowledging and encouraging excellence amongst Biomedical Engineering practitioners.

PROCESS

The recipient shall be selected by the council of the SMBE (SA) and a representative of Drager Australia from amongst candidates who shall:

Be nominated by a peer who deems them worthy of such recognition, and,

Author a short technical or topical article on a subject either nominated by themselves or chosen from a list provided by the council for publication in its newsletter.

THE AWARD

The award shall comprise a funded visit to the annual SMBE (NSW) technicians seminar.

CONDITIONS

Open to all BME practitioners, from within SA and the NT, be they SMBE members or not. The recipient must be in a position to attend the seminar, in either their own or employers time. The award may be forfeited if this requirement cannot be fulfilled. The nomination by a peer must give a clear indication or evidence of the nominees abilities, skills, motivation or commitment that, in their mind, sets them apart and makes them deserving of particular recognition.

Individuals holding position on the council of the SMBE (SA) at the time of judging are ineligible for consideration.

All entrants are eligible for minor awards of complimentary SMBE (SA) membership for a one year period.

The SMBE (SA) council reserves the right to not make the award whether the submitted articles have been published or not.

Advertising rates

| | |
|------------------------|-------------------------|
| Full page\$100.00 | ½ page\$50.00 |
| ¼ page\$25.00 | Business card . \$25.00 |

CONFERENCE CALENDAR

Information on the above is available from the editor or president

E. & O. E.



Adrian presenting honorary membership to John Kirby.



Adrian presenting Drager award to James Higham



Bryan Reynolds, our guest speaker



Some AGM happy snaps.