



2007 Graduation Ceremony



The group of 2007 graduates who attended the ceremony in October

The La Trobe University Faculty of Health Sciences Semester Two Graduation Ceremony took place on Friday, the 19th of October. Thirteen prosthetics and orthotics students were awarded their Bachelors degrees and other students had their degrees confirmed in absentia. This is the third graduation for the National Centre for Prosthetics and Orthotics (NCPO) this year, with

one group graduating at La Trobe in first semester, another group receiving their awards in Phnom Penh, Cambodia and the third also here at La Trobe in October. It has been an eventful year and all the staff at the NCPO would like to congratulate all of the graduates on receiving their awards and wish them success in their future professional careers.

Desperately Seeking P&O Volunteers

The NCPO is seeking more volunteers for our teaching programs. We are looking for volunteers who use prostheses or orthoses and are able to be cast and fitted with devices by our students. If you are a person who has a prosthesis or an orthosis and would like to help, we need you. If you know someone who uses a prosthesis or orthosis, you might like to ask them to become a volunteer into the La Trobe University NCPO program.

Volunteers who are able to give 3 – 9 hours per week for a few weeks per year can really help with the teaching program. Many of our existing volunteers find the ses-

sions useful and enjoy the opportunity to interact with our students and other people in the program.

To get more information and find out how to participate, telephone Barbara at the Health Science Clinic on 9479 5831 during working hours, and she will send you a volunteer brochure.

We would like to thank our Prosthetic and Orthotic volunteers for the wonderful assistance they have provided throughout 2007



The NCPO News would like to wish all our readers
a Merry Christmas and a safe and happy holiday season



Curriculum Update

The proposal for the new Masters Degree submitted to the Faculty of Health Sciences in August 2007 has been approved. The NCPO staff have now commenced the next stage of curriculum development. Various Departmental, Divisional and Faculty committees are addressing many associated issues such as educational pedagogy and delivery modes; articulation with honours and higher degrees; transitional arrangements for implementation over the first four years and resource implications.

The first cab off the rank is the raft of issues related to the implementation of the first year of the new program. As this is a first year common for most clinical schools there continues to be very fruitful discussion between the Health Studies schools, instrumental in teaching the majority of the new first year subjects, and each of the clinical schools. While the content, teaching modes and methods are being bedded down for first year, is-

issues related to the transition of students into the new curriculum are being addressed. These transition issues include dealing with students who wish to defer starting their studies or those who wish to intermit their current studies. It also includes the progression of those who do not pass units and how those students can be given the option of re-sitting such units in the new program. Once the first year subjects are finalised, we will be able to build the detail of the second, third and fourth years of the new program.

This is an exciting time at the NCPO with such a wonderful opportunity to further develop the education programs offered and lead the education of P&O clinicians in an increasingly international environment. It will not be without a lot of hard work from all staff but the potential benefits to the profession and ultimately to the community will be significant.

POSS News: Ball Report

On Wednesday September 12th students and other guests met at Albert by the Lake Reception Centre for the 2007 POSS annual ball. Everyone was dressed in their best dresses or suits and with a 'Splash of sparkle' the ball began. A few highlights of the night were the raffle (which everyone was keen to win), the live music and the best dressed awards from each year level nominated by the respective representative, including Steelo with his silver sequin sparkle vest. All eyes will be out next year

to see who can top Steelo's dress efforts of the past few years. POSS would like to thank all of our sponsors for this year's ball in particular Ossur and Otto Bock who provided the band and the security respectively. Finally the representatives, Luke Lorenzin, Rhiannon Assetta and Gaby Aro need to be thanked for the large amount of effort that they put into the ball and all other events held in 2007. Everyone enjoyed the night and we are already looking forward to the ball in 2008.

What's Happening in Clinical Education

2nd Year Placements

2nd year P&O students commenced their three week clinical placements on Monday 12th November, with the second block concluding on Friday 21st December. Thank you to all facilities who have agreed to provide this invaluable clinical experience to our students at what is a busy time for facilities.

"Thank You" Function for all Clinical Supervisor's

The Division of Allied Health hosted a function for all clinical supervisors on Thursday December 6th, 2007 at La Trobe University. This provided us with the opportunity to say "Thank-You" to all clinical supervisors for their support of our clinical education programs and the clinical experience they provided to our students.

Invitations were sent to all clinical supervisors involved in the NCPO Clinical Education program.

For any enquires regarding Clinical Education at the NCPO, please contact Angela Scardamaglia on T: (03) 9479 5037 or A.Scardamaglia@latrobe.edu.au.



Staff Research - Partial Foot Prosthetics

In August-September, Dr Michael Dillon was in residence as a Visiting Professor at the Northwestern University Prosthetics Research Laboratory and Rehabilitation Engineering Research Program (NUPRL & RERP). While at Northwestern University Dr Dillon began his six month sabbatical in which he hopes to conduct a series of investigations into the gait of persons with partial foot amputations along with Research Assistant Professors Stefania Fatone (a graduate of the NCPO) and Andrew Hansen.

The first of these investigations stemmed from a recent systematic review into the biomechanics of partial foot amputee gait (Dillon et al. 2007) that identified peculiarities in ankle kinematic data between investigations of walking in shod and barefoot conditions. Investigations of barefoot walking reported relatively normal or reduced ankle dorsiflexion (Garbalosa et al. 1996; Boyd et al. 1999; Tang et al. 2004) in comparison to studies involving footwear and below-ankle prosthetic-orthotic intervention where the dorsiflexion range was exaggerated (Dillon 2001; Tang et al. 2004) "Better understanding these discrepancies is an important first step in improving the accuracy of the measurements that form the basis of our understanding of partial foot amputee gait," Dr. Dillon said. Using a mechanical model of leg, ankle and various partial feet, comparisons of ankle kinematics were undertaken between a standard marker-based measurement system and a potentiometer mounted in the mechanical ankle. Results from this investigation showed that at, or proximal to, the transmetatarsal level standard marker sets (i.e., Helen Hayes) overestimated the ankle dorsiflexion range in a manner similar to that described in the published literature. These measurement errors seem to stem from deformation of the prosthetic forefoot causing relative motion between markers defining the foot segment. These errors were resolved with the use of custom marker sets that did not rely on the use of the heel and/or toe markers typically used to evaluate normal non-amputee gait. This work has been accepted for publication in the *Journal of Rehabilitation Research and Development*.

Other investigations remain ongoing. As an illustrative example, work is being undertaken to provide a stronger understanding of the subtle gait adaptations that occur between various prosthetic/orthotic interventions. "Most of our understanding about the differences (in gait) between various prosthetic and orthotic interventions stems from observational studies using independent groups. These types of studies are not really designed to elucidate the differences between interventions – particularly when the adaptations are subtle," said Dr. Dillon. In collaboration with both Northwestern University and clinicians

at Scheck and Siress Prosthetics, Orthotics, & Pedorthics, Chicago IL, it is hoped that these new insights will provide a stronger basis for the prescription of different prosthetic and orthotic interventions commonly available to persons with partial foot amputation.

For more information please contact Dr. Michael Dillon – Ph +61 3 9479 5889; email: Michael.Dillon@latrobe.edu.au

These investigations are, in part, supported through funds from the National Institute on Disability and Rehabilitation Research of the United States Department of Education under grant H133E030030. The opinions in this publication are those of the grantee and do not necessarily reflect those of the Department of Education. The author acknowledges the use of the VA Chicago Motion Analysis Research Laboratory of the Jesse Brown VA Medical Center, Chicago, IL. USA.

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ISPO Fellowship for NCPO Staff Member

NCPO staff member Margaret Hodge has been made a 'Fellow' of the International Society of Prosthetics and Orthotics (ISPO). This accolade is well deserved and a tribute to Margaret's work over many years in national and international roles.

The ISPO Australia National Member Society (ANMS) president Dr Friedbert Kohler said that "...While it is not possible to delineate all your activities a small proportion should be mentioned including your efforts to:

Initiate, convene, contribute to and ensure the success of several advanced instructional courses

Convene and provide major support to ISPO ANMS Annual Scientific Meetings as well as providing invaluable behind the scenes assistance even when not officially on the convening committee for over twenty years

Achieve a growth in activities culminating in a record attendance at the annual scientific meeting at the end of your presidency of ISPO ANMS."

Margaret has made a significant contribution to improving the standard of all aspects of the Society nationally and is now bringing her high standards of professionalism to the international board

Thanks to Our Transtibial Prosthetics Volunteers



Transtibial Prosthetics volunteers enjoy the social atmosphere at the end of semester BBQ.

The Transtibial Prosthetic Volunteers have assisted our students to improve their learning and been able to participate in not only the undergraduate teaching program, but also assisted in some of the research that our students and staff have undertaken. This year the program involved the students completing 3 projects that involved fitting the amputee volunteers. The end of year BBQ for the students and volunteers in the Transtibial Prosthetics program this year, was without Mr Alex Ellingsen, one of our longest serving Transtibial volunteers. He was unable to participate because he was in hospital having his other leg amputated but said, "please don't forget to contact me in 2008 because by then I'll be up and about." We wouldn't forget to ask Alex to come into the program. The new 2008 group of 2nd year students will then have the benefit of Alex's experience.

All the NCPO staff and students wish Alex well in his recovery.



Long time NCPO Volunteer Alex Ellingsen. (Photo taken last year)



Thanks to Ossur for Their Support



Fiona Barnett from Ossur Asia-Pacific (Far Left) with a group of 2007 Transtibial prosthetics students

In 2007, we again had extensive support from OSSUR who contributed components including catalogues, IceX kits, prosthetic liners, feet and knee mechanisms to our program. Also, Ossur Asia/Pacific facilitated participation of Fiona Barnett in the undergraduate teaching program as they have in past years. Fiona assisted by providing undergraduate teaching of the Hydrostatic casting process used in both the IceX sockets and plaster casts using the Icecast Bladder system. Fiona gave lectures to

the students on Hydrostatic Socket designs and Energy Storage and Return prosthetic feet. Finally Fiona also assessed the student Hydrostatic socket projects and was a co-marker of the students Oral presentations of their assignment topics. The NCPO really appreciates the contribution of Ossur to the teaching program. The NCPO P&O course would not have gained the high international standing it enjoys without the active support and participation of our volunteers and sponsors.

Orthotic Volunteers Urgently Required

To continue our plea from the first page, volunteers are required for teaching of applied lower limb orthotics. In particular, any volunteers requiring AFO's are in high demand. Volunteers are required to attend for 2 x 3 hour sessions and will be assessed, cast and fitted with an

AFO by students under staff supervision. Transport can be provided or re-imbursment offered for travel expenses to attend sessions. For more information please contact Anthony Francis on 9479 5864 or by email:

a.francis@latrobe.edu.au

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