

REGISTRATIONS CLOSE SOON!

- **Clinical Management of Upper Limb Amputees Course**
- **Lower Limb Prosthetics & Amputee Rehabilitation Course**

See Coming Events section (PTO) for details

Progress on the world's first entirely rapid prototyped prosthesis

As reported in last month's *TechLINK*, an entire prosthesis made from ABS plastic using rapid prototyping techniques has been constructed and was this month fitted to the patient.

The prosthesis consisted of the patient's socket, a reverse cosmesis of the opposite leg and the alignment all being merged into one file before that data was "constructed".

The fitting was a success, which is no real surprise as the prosthesis is a copy of a successfully fitted device. This trial does confirm however that there are no variations in the construction process that may influence the clinical outcome.

The prosthesis and material will now undergo structural tests to establish if the strength of the material is comparable to the published data.



Figure 1 - The clinical trial. The white ABS is easily coloured with automotive spray paint and note the cosmesis which is matched in three dimensions.

OPRA - Osseointegration update!

A "Clinical Pack" is now available for Australian prosthetic clinics. This briefly describes the process and complications with regards to osseointegration in the rehabilitation of amputees. It is available for download from the OPRA website (follow the links from the **REHABTech** home page. Requires Adobe Reader .pdf file). The website also contains information about the progress of the two patients who are undergoing this method of rehabilitation.

Please address correspondence to: The Editor- **Tech LINK**
c/o REHAB Tech, 260-294 Kooyong Road, Caulfield Vic 3162, Australia.
Telephone: +61 3 9528 1960, Facsimile: + 61 3 9528 1077, e-mail: REHAB.Tech@eng.monash.edu.au
INTERNET - <http://www.monash.edu.au/rehabtech/>

Step Counter Project (continued from *TechLINK* Issue 69 February, 2000)

There are a number of projects and possibilities with regards to measuring steps and loads in prosthetic devices. Many designs exist and there are also many organisations within Australia and overseas doing developmental work in this area.

This aspect of the step counter project was based on the prototype designed and built by a Swinburne University student last year, Van Lac La. The project investigates the suitability of this type of instrument in the field of rehabilitation and the accuracy of the prototype compared to a commercially available step counter, Pedometer. Although both step counters were quite accurate, the prototype seems to be more stable in this particular application. In summary this project found that accurate step counters can be very useful instruments in this field of rehabilitation for amputees, but as it currently stands, this prototype is still too big and too heavy to become a permanent part of the prosthesis as initially suggested. More research is also required into the building process of the prototype for it to become reproducible and user friendly.

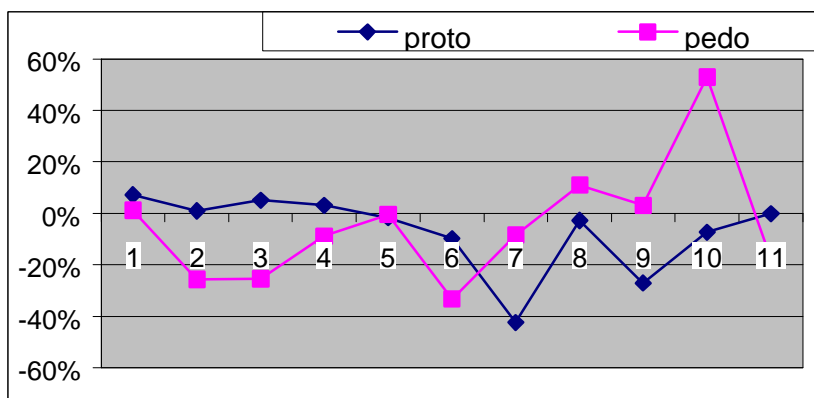


Figure 2 - Daily percentage error for one subject.

COMING EVENTS

19 January, 2001	<i>Clinical Management of Upper Limb Amputees Course</i>	<i>Registration Closes</i> <i>Contact REHAB Tech</i>
22 nd January, 2001	Lower Limb Prosthetics & Amputee Rehabilitation Course	Registration Closes Contact REHAB Tech
19 th - 23 rd February 2001	Lower Limb Prosthetics & Amputee Rehabilitation Course	
26 th February - 2 nd March 2001	<i>Clinical Management of Upper Limb Amputees Course</i>	
1 st - 6 th July 2001	10 th World Congress of the International Society for Prosthetics and Orthotics, Glasgow, Scotland ispo@meetingmakers.co.uk	

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