

## 8th World Congress of ISPO: A View

---

### **Dudley S. Childress, PhD**

*Northwestern University, Chicago, IL 60611*

*Venue:* The 8th triennial world congress of the International Society for Prosthetics and Orthotics (ISPO) was held in Melbourne, Australia, April 2–7, 1995. It was the first ISPO World Congress in the Southern Hemisphere. Melbourne, the capital of Victoria, is a delightful city on the Yarra River. Its most notable difference from other modern cities is its commitment to trams for public transportation. Trams, as Congress participants found out, are an efficient, clean, and charming means for urban travel along Melbourne's tree-lined streets amid her Victorian architecture. Melbourne is perhaps the most European-like of all the cities in Australia. Like other cities of Australia, it has flora of great beauty in its many parks and the Royal Botanical Garden is an exceptional place in the central city. The Governor's house is located on the Garden grounds and many Congress delegates were received by the Governor of Victoria at a beautiful reception there. As well as being an important business and sports center of Australia, Melbourne is also an important educational and cultural city of the South Pacific. Australia's National Centre for Prosthetics and Orthotics (now a part of La Trobe University) is in Melbourne. Melbourne's former Central Development Unit has expanded and is now the Monash University Rehabilitation Technology Research Unit. This facility has played an important role in prosthetics and orthotics since the end of World War II.

The ISPO event, in collaboration with INTERBOR and coincident with the Society's Silver Jubilee, was held at the World Congress Centre Melbourne, a new convention hall located on the Yarra near the southwestern corner of the city proper. The site proved to be a superb venue for the World Congress. More than a thousand participants from approximately 70 countries took part in the event and they were treated to an excellent program that was supplemented by enjoyable and interesting social occasions.

*Organizers:* The 8th World Congress was hosted by the Australian National Society of ISPO, with the New Zealand Artificial Limb Board associated as a sponsor. Valma E. Angliss, a well-known and highly regarded physical therapist from Melbourne, was the Secretary General of the Congress. She did an absolutely magnificent job of



### **Dudley S. Childress, Ph.D.**

*Director, Northwestern University,  
Prosthetics Research Laboratory, Chicago, IL;  
Director of Prosthetic Research, VA Medical Center,  
Lakeside, Chicago, IL*

organizing the Congress. The world community in prosthetics and orthotics can be grateful for her labor and dedication and for the work and dedication of so many other Australians and New Zealanders who made the Congress a great success. The event was in good hands. Of course, many other people played important roles in the meeting, particularly Mel Stills, C.O., of the USA, who had served as President of ISPO for the last 3 years, and Seishi Sawamura, M.D., of Japan, the Melbourne Congress convenor, and the new president of ISPO.

*Highlights:* It is always difficult to select highlights of a meeting. The most obscure paper of some practically unknown investigator, may in fact be the most important contribution of the meeting. Only time can reveal "opals" of this kind among the diggings of a World Congress.

However, obvious highlights can be spotted. Some were:

1. The Symposium on Osseointegration in Prosthetic Orthopaedics. This symposium, presented by a Swedish team from Gothenburg, was an outstanding event, because this was the first time that their extensive and impressive preliminary work on direct skeletal attachment had been presented to the broad prosthetics and orthotics community. From an external prosthesis standpoint, their prosthetic extensions of fingers and thumbs were particularly impressive because direct bone attachment provides a rigid connection to the remaining finger or thumb and thereby enables the replacement prosthesis to have considerable function and to be a direct conduit of sensory information to the body (e.g., through forces and vibration). The reports of direct skeletal attachment of upper and lower limb prostheses were also impressive. Direct skeletal attachment has long been considered desirable in prosthetics. The Swedish investigators have gone a long way in demonstrating the feasibility of this approach. Their previous successes with osseointegration of tooth implants, of skull anchors for support of maxillofacial prostheses, and of directly attached bone conduction hearing aids demonstrates that this work has depth and that it is backed up by years of clinical and scientific studies. Attendees who were also at the 1983 World Congress may have noticed similarities between the excitement of this symposium and the excitement engendered in London at the first presentation of CAD/CAM to the prosthetics community.
2. The recognition of Mr. Sepp Heim as the Knud Jansen Lecturer brought into focus the need for improved prosthetic and orthotic (P&O) services worldwide and the important role that education programs play in bringing about these services. A significant aspect of the Congress concerned delivery of appropriate prostheses and orthoses to people in all countries of the world. Mr. Heim's recognition by ISPO and his lecture highlighted this need. The lecture is published in the most recent publication of *Prosthetics and Orthotics International*. Mr. Heim's work in helping to establish P&O educational programs in Tunisia, Togo, Tanzania, and China demonstrates what a big impact a single, effective person can have.
3. The Melbourne meeting demonstrated the increasing future role that Asian countries are likely to have in the development, manufacture, and marketing of P&O products. Besides products from Japan and Taiwan,

products developed in Shanghai, Hong Kong, Beijing, and other locations were shown in the exhibit hall.

4. Congress papers and exhibits showed a continued major trend in prosthetics toward structures that are much more compliant than structures used in the past. A continued trend toward polycentric joints was also evident at the meeting and the combination of these joints with elastic structures to form "bouncy knees" appears to be on the increase. Knees containing computer systems, such as in the "Intelligent Knee," developed in Japan and now being marketed through Endolite, appear to be of increasing importance. An interesting new aspect of the Intelligent Knee is that the prosthetist can "tune" it by remote control, without having to pull down the cosmetic cover to make adjustments.
5. The development of new componentry continues to be ahead of the field's scientific and engineering understanding of how these components function as part of the human-prosthesis or human-orthosis system. Papers and presentations at the meeting illustrated that gait analysis techniques still do not provide as much insight into these human-machine systems as we would hope. An exception appears to be in the surgical management of children with cerebral palsy. The presentations of Dr. James Gage on this topic were well received and were another highlight of the Congress.

*Uniqueness:* One of the unique aspects of ISPO congresses is the admixture of surgeons, physicians, therapists, prosthetists, orthotists, engineers, technicians, and others who come together creatively at this triennial event. This kind of interaction is particularly evident in the upper limb prosthetics sessions, which are more interesting and vibrant at the World Congress than at more narrowly defined professional meetings of the field. In a similar manner, the Congress is one of the few venues where the members of the surgical community come together with the P&O field. There was a strong surgical component in the program. The interdisciplinary nature of the meeting and the international scope of the participants make the Congress unique.

*Awards:* In addition to Sepp Heim's recognition as the Knud Jansen lecturer, Össur Christensson of Iceland received the Brian Blatchford Prize for innovative prosthetics designs. Robert J. Gailey of the USA accepted the Forcheimer Prize for himself and associated authors for the paper "CAT/CAM Socket and Quadrilateral Socket—A Comparison of Energy Cost During

Ambulation," which appeared in *Prosthetics and Orthotics International*.

*Personal Ruminations:* International meetings require a lot of effort on the part of the organizers. They take time to attend and they are costly. Nevertheless, for the time being, they seem to be worth the time, effort, and cost expended. Americans learned after World War II that their prosthetic methods and technologies were inferior at that time to those in Europe, and much of the rapid progress in prosthetics in the USA after the war was partially a result

of visits by USA teams to key facilities in Europe, particularly Germany. To remain a leader in prosthetics and orthotics services for veterans, VA and others must keep abreast of advances worldwide. For this reason, the *Journal of Rehabilitation Research and Development* needs to remain international in its scope of publications, and VA personnel need to attend world congresses of ISPO, whenever possible. The 9th World Congress of ISPO is to be held in Amsterdam, The Netherlands, June 28–July 3, 1996. It promises to be one of the best meetings ever.