



**Join us next year!!**

BRUSSELS HAND/UPPER LIMB  
INTERNATIONAL SYMPOSIUM

*20<sup>th</sup> year*

**ADVANCES IN PROSTHETICS AND  
SURGICAL RECONSTRUCTIONS  
FOR HAND/UPPER EXTREMITY  
AMPUTEES**

[www.brusselshandsymposium.eu](http://www.brusselshandsymposium.eu)

Genval  
Brussels, Belgium  
January 27-28, 2012





# SCIENTIFIC CONTENT

Already twenty years! The first annual Brussels/Genval Upper Limb Symposium, held in May 1992, was on Advances in Hand and Wrist Biomechanics. Since this first meeting, the Château du Lac at Genval has hosted, each spring or beginning of the year, the Brussels Hand/Upper Limb Symposium, dedicated to a specific interdisciplinary topic involving the hand and the upper limb. Each meeting has been attended by 80-150 participants from 15-25 different countries. One of these symposia (in 2007) was on composite tissue allotransplantation. We discussed on that occasion, the current and future indications of vascularized (for example, hand transplantation) and non-vascularized (bone, tendon and nerve) allografts, including basic research on immune regulation and ethical issues. Indeed, many progresses have been made these last five years in the field of vascularized tissue allotransplantation, including in better understanding rejection phenomena and decreasing the immunosuppressive regimen; successful upper-elbow transplantation has now been achieved; the majority of hand-transplanted patients have regained good function and some sensibility, and consider their daily life as almost completely restored to normal. These successes give much hope to amputees, whether congenital, posttraumatic (and unfortunately the number of such patients tends to increase due to the world wars), or because of other causes.

But, most amputees will never benefit from transplantation. Many advances have been made in other aspects of treatment of these patients, these include restoring, by surgical means, an acceptable stump and/or reconstructing a functional pinch, for example by stump lengthening, or partial or total toe transfer. Progresses have also been made in controlling phantom pains. However, it is in prosthetics that the novelties are the most spectacular. Bone anchoring may avoid the usual socket problems, and advances in osseointegration open new perspectives in prosthetics, whether cosmetic or functional. New lightweight, yet quite complex, myoelectric prostheses are developed, even allowing independent finger motion. With these advances in mechatronics, the major problem becomes the control of the prosthesis by the patient, including of position and especially force applied by each finger. New dedicated computing technologies will allow machine learning of specific tasks, based on relatively simple electromyographic signals.

Another concept is to have the prosthesis self-adapting to the object shape, by means of sensors. But the problem of the available myoelectric signals remains crucial. One can increase the number of signals by selective muscle neurotizations, and as an added effect this procedure seems to provide to the amputee some proprioceptive sensibility. Very soon, one can expect that the myoelectric prostheses will become brain-controlled, which needs precise understanding of the central movement execution pattern and special implantable electrodes: progresses are now made in the understanding of the local field potentials in the brain cortex. Another major limitation of course remains the training of the amputee him/herself. Progresses have been made in postoperative physiotherapy, and in the evaluation of the functional results, including of regained dexterity.

The causes of abandoning of the prosthesis by the amputee, which remains frequent at mid term including in bilateral amputations, will as well be the matter of discussions. Specific problems concern congenital amputations; the tendency is presently relatively early prosthetic fitting, like at the lower extremity. Finally, we should remember that the majority of upper extremity amputations affect neither patients living in developing countries, who cannot afford expensive myoelectric prostheses, nor transplantation under immunosuppression. Progresses in low-cost conventional “body-powered” prostheses will also be discussed during the symposium.

The primary goals of the Brussels/Genval annual upper limb Symposium – 20<sup>th</sup> anniversary session in 2012, gathering together in a first-class resort close to Brussels, are to promote the exchange of ideas, to establish guidelines on a consensual basis, and to foster collaborative investigations among various specialists; experts from different fields (the previous Symposia have been attended by orthopaedic, plastic, paediatric and general surgeons, anatomists, physiotherapists, rheumatologists, anaesthesiologists, pain specialists, radiologists, nuclear medicine scientists, immunologists, pathologists, engineers and basic scientists exchange their experiences). Much time will be set aside for the discussions. In addition to invited lectures, free papers in limited number are accepted for presentation (see “Call for Papers” announcement).

## SPECIFIC AIMS:

- To summarize the current progresses in stump and pinch reconstruction after congenital or traumatic finger/hand/upper extremity amputation, including by partial or total hand/upper arm transplantation; to evaluate new prosthetic concepts, including comfort and cosmetic aspects, adapted physiotherapy and evaluation of the results;
- To discuss basic research, and new developments in immune regulation towards hand transplantation, in neurosciences as applied to amputees, and in prosthetics;
- To assess the innovative prosthetic techniques from the patient's perspectives, and to compare these innovations to conventional devices and to the perspectives of upper extremity transplantation;
- To formulate, on these bases, recommendations to the medical community;
- To discuss unsolved problems and possible solutions;
- To explore future directions of research

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# CALL FOR PAPERS

Submission guidelines can be found at  
[www.brusselshandsymposium.eu](http://www.brusselshandsymposium.eu)

## September 15, 2011

Deadline for submission of abstracts.

All abstracts submitted will be acknowledged.

## October 15, 2011

Notification of acceptance or rejection of papers.

## REGISTRATION FEES

	Before November 1	After November 1
Regular Delegate (1)	470	500
Resident/Student (2)	350	350
Physiotherapist/Nurse	350	350
<i>Optional: touristic visit and banquet (Jan. 27, 2012) (3)</i>	100	100

(1) Fees include meeting attendance, congress bag with the abstract book and all related documents (certificates of payment and attendance, badge etc.), lunches, welcome reception. Not included: hotel accommodation, meals except 2 lunches, access to sports facilities. Acknowledgement of registration and receipt of fees will be sent soon after the registration form and full payment are received. Upon request, a letter of invitation will be sent. Payments should be made free of all bank charges and commissions.

The organizers cannot be held responsible for any personal injury, loss, damage, accident to private property, or additional expenses incurred as a result of delays or changes in air, rail, sea, road or other services, strikes, sickness, weather, war, sports and other causes. Luggage is at owners risk throughout unless insured.

(2) Please include a certificate signed by head of department.

(3) Included: coach transport Genval-restaurant, touristic visit, and dinner in a typical Belgian restaurant.

## CANCELLATION

In the event of cancellation, a full refund (less € 100 as a handling fee) of the registration fees may be obtained, provided that written notification is received by December 15, 2011. A 50 % refund will be made for cancellations received by January 15, 2012. No refunds will be made thereafter.

# SYMPOSIUM INFORMATION



## Symposium Venue

Château du Lac,  
Avenue du Lac 87  
1332 Genvall  
Belgium

## ACCOMMODATION

### **Château du Lac (5 stars hotel) (Venue)**

15 km south of Brussels. An invigorating and sophisticated ambience, exquisite décor, fine cuisine. Free access available at the 'John Harris Fitness Centre' for participants accommodated at the Château.

Indicative rate: single 195 €/night with breakfast.

#### Address:

Château du Lac, avenue du Lac, 87, B-1332 Genvall, Belgium

Tel.: + 32 2 655 71 11 – Fax + 32 2 655 74 44

E-mail: seminars.cdl@martinshotels.com

When contacting the hotel, please indicate that you are attending the "Hand/Upper Limb

Symposium" to receive the reduced rate for the dates January 26 through January 29.

Participants can also be accommodated at the hotel "**Le Lido**"; a 3 stars hotel located about 2 km from the Château du Lac (no transport will be provided).

Indicative rate: single 160 €/night with breakfast.

#### Address:

Le Lido, 20, rue de Limal Sart, B-1332 Rixensart, Belgium

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