

ARTIFICIAL VISION 2015

THE INTERNATIONAL
SYMPOSIUM
ON VISUAL
PROSTHETICS



November, 27th – 28th, 2015 Aachen, Germany

CALL FOR

ABSTRACTS and

PROGRAMME OUTLINE

Center for Technology
Aachen Europaplatz
www.artificial-vision.org

CALL FOR ABSTRACTS
Deadline:
August 28th, 2015

RWTHAACHEN
UNIVERSITY

 **JÜLICH**
FORSCHUNGSZENTRUM

Worldwide about 150 blind patients received electronic Retina Implant Systems. Currently two products are approved for the use in humans, but more prototypes are in development and a few have been implanted in patients. Electronic visual implants are complex and highly integrated microsystems and many innovations representing cutting edge technologies are used for their fabrication process. However, as we learn from working with patients being implanted with such systems many open questions remain and need to be addressed to improve the outcome of such systems. The fourth International Symposium on Artificial Vision is planned to address these open questions with enough time in a very relaxed and friendly atmosphere. This meeting will provide an interdisciplinary platform for specialists in Ophthalmology, Visual and Neuroscience, Electrical Engineering, Material Science, Computer Science, and Rehabilitation to exchange their thoughts and to learn from each other. Topics among others are mechanisms of degeneration in the visual system and their influence on cellular networks, principles of cell stimulation, electrode – cell interface, design and hardware for electronic visual implants, microsystems fabrication, surgery for electronic implants, biocompatibility, preclinical functional tests, recruitment of patients, patient reported outcomes and measurement of Artificial Vision.

The meeting will take place in Aachen, Germany, the city of RWTH Aachen University, which is one of the leading technical universities in Europe, a place where Natural and Life Sciences, Medicine, and Engineering and Technology are strongly connected. Aachen can be reached easily via the airports of Düsseldorf, Cologne, Frankfurt, Amsterdam or Bruxelles, or by train connections.



My colleagues Wilfried Mokwa from RWTH University Aachen, Frank Müller and Andreas Offenhäusser from the Research Center Jülich and I, we cordially invite you to come to Aachen and join us in discussing present aspects and thinking about the future of visual prosthetics.

Peter Walter

Department of Ophthalmology,
University Hospital Aachen
RWTH Aachen University, Medical Faculty

- Date** Friday, November 27th, 2015, 14:00 h - 18:30 h
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 Saturday, November 28th, 2015, 09:30 h – 16:00 h
- Venue** **Center for Technology Europaplatz**
 Dennewartstraße 25-27, 52068 Aachen, Germany
- Homepage and Online Registration** www.artificial-vision.org
- Scientific programme and further information** **Prof. Dr. Peter Walter**
 Department of Ophthalmology, University Hospital Aachen
 RWTH Aachen University, Medical Faculty
 Pauwelsstraße 30
 52074 Aachen, Germany
 Phone: +49 241 / 808-81 91, Fax: +49 241 / 808-20 47
 E-Mail: pwalter@ukaachen.de
- Organization** **Congress-Organisation Gerling GmbH**
 Wertstraße 23
 40549 Düsseldorf, Germany
 Phone: +49 211 / 59 22 44, Fax: +49 211 / 59 35 60
 E-Mail: info@congresse.de, Internet: www.congresse.de
- Official Language** English
- Hotel Booking** See hotel on the registration form
 (printed or online: www.artificial-vision.org)
- Social Event** **Conference Dinner**
 Friday, November 27th, 2015, 20:00h



Kasteel Vaalsbroek
 Vaalsbroek 1, 6291 NH Vaals
 (Bus transfer from the congress venue)



ATTENDANCE FEE

Registration	Until September 19 th	After September 19 th	Onsite
International Symposium attendance fee	EUR 180,-	EUR 200,-	EUR 220,-
Reduced rate for PhD students and residents*	EUR 100,-	EUR 120,-	EUR 140,-

*Trainees must supply a letter of verification as proof of training. The letter has to be sent to the congress organization prior to the meeting.

The attendance fee covers the costs for coffee breaks, lunch, and the conference dinner (accompanying person EUR 50,-). Incl. VAT and excl. foreign transfer fees

- Payment** by bank transfer (bank details are quoted on your confirmation and invoice. Please do not transfer money without noting your invoice number!) or by credit card: VISA, AMERICAN EXPRESS, MASTERCARD

Important notes for participants

The attendance fee covers the costs for coffee breaks, lunch and the conference dinner. If you register late or on-site we cannot guarantee for lunch and participation in the social program.

You are encouraged to apply for the meeting either online, by mail or by fax.

Cancellation for the symposium has to be made via mail or via fax (+49 211 / 59 35 60) by November 21st, 2015. In any case an administration fee of EUR 20,- has to be paid.

After this date no refunds can be made.

Changes, errors and misprints excepted.

CME POINTS

The Symposium is registered at the Ärztekammer Nordrhein providing CME points for the German Continuing Medical Education System. Please bring your bar code labels and we will register you for CME point documentation.

An equivalent certificate of attendance will be given to you upon on-site registration.

CALL FOR ABSTRACTS**Abstract submission**

Please submit your abstract online:

www.artificial-vision.org

Deadline for abstract submission: August 28th, 2015

Layout

Your abstract must not exceed 2000 letters in total (including blanks) and), it must be written in Times New Roman 10 point with single line spacing. Start with the title, authors, and affiliation(s) followed by a blank line followed by a standard abstract structure (objective, materials & methods, results, discussion). In case of external or institutional funding please acknowledge the sponsor.

Example**The thresholds for retinal stimulation in blind RP subjects.**

Franz Reuter, Julia Sachtweh, Reinhard Meier

Department of Ophthalmology, Island City, Elsewhere

Objective. To describe the stimulation thresholds for subretinal stimulation using platinum red electrodes embedded into new insulation materials.

Materials and Methods. In six blind RP patients a new subretinal device was implanted and cortical potentials were recorded upon electrical retinal stimulation. Cortical potentials were determined using a new response isolation algorithm developed by Meier et al. The cortical responses were correlated with stimulus parameters.

Results. In all six patients the implantation was done successfully. All patients had visual percepts. In all patients cortical potentials can be recorded and the the stimulus duration necessary to obtain a response was 67 ms cathodic first with an mean amplitude of 435 μ V.

Discussion. The stimulation at threshold was well within the non-toxic range for tissue stimulation and no patient had any adverse events.

Acknowledgment. This work was supported by ABC grant 874987.

The goal of the International Symposium on Visual Prosthetics – Artificial Vision 2015 is to provide a platform for researchers and clinicians to meet, to present and to discuss the latest advances and achievements in the field of providing vision with electronic implants to the blind. The symposium will cover all aspects of Artificial Vision such as

- mechanisms of degeneration in the visual system
- principles of electrical stimulation in the visual system
- interfaces to the visual system: electrodes
- stimulation and recording devices: complex implants
- preclinical tests: biocompatibility and proof of concept studies
- clinical experiences: patient selection, surgery, and functional outcomes
- new ideas and visions

PRELIMINARY PROGRAMME STRUCTURE

Friday, November 27th, 2015

- 13:00 – 14:00 h **Come together reception**
- 14:00 h **The meeting starts. Opening remarks.**
- 14:30 h **Session I**
Mechanisms of degeneration in the visual system
- 16:00 h **Session II**
Principles of electrical stimulation in the visual system
- 17:30 h **Session III**
Interfaces to the visual system – electrodes
- 18:30 h **End of day I**
- 20:00 h **Conference dinner**

Saturday, November 28th, 2015

- 9:30 h **Session IV**
System design and fabrication
- 11:00 h **Session V**
Preclinical studies, biocompatibility, surgery
- 12:30 h **Lunch break**
- 13:30 h **Session VI**
Clinical outcome measuring Artificial Vision
- 15:00 h **Session VII**
Outlook and new projects
- 16:00 h **The meeting ends. Closure remarks – farewell reception.**

International Airports . High Speed Train System

From Frankfurt. Take the ICE High Speed train from Frankfurt Airport Station to Cologne Main Station (approx. 1 h) and continue to Aachen Main Station (approx. 45 – 60 min).

From Düsseldorf. Take the train from Düsseldorf Airport Station to Aachen Main Station (approx. 1.5 h).

From Cologne. Take the train from Cologne Airport Station to Cologne Main Station (approx. 15 min) and then continue to Aachen Main Station (approx. 45 - 60 min).

From Aachen Main Station take a taxi to Technologiezentrum at Europaplatz

By car

From Frankfurt Airport. You can drive highway A3 to Cologne and then change to A4 direction to Aachen. At AK Aachen please change to A544 direction Aachen Europaplatz (approx. 3 h).

From Düsseldorf Airport. A52 → A61 → A44. Then A544 direction Europaplatz. (approx. 95 km, 1 h)

From Cologne Airport. Take the A59, then change to A599 followed by A4 towards Aachen. Then A544 direction Europaplatz. (approx. 82 km, 1 h)



Meeting address

Technologiezentrum Europaplatz, Dennewartstraße 25-27, 52068 Aachen, Germany.

THE INTERNATIONAL SYMPOSIUM ON VISUAL PROSTHETICS

Title	Name	First name
Institute		
Institute address		
ZIP code	Town	Country
Phone	E-Mail	
Date	Signature	

Important: Please print-type used! You will receive a registration confirmation. Cancellation of your registration has to be made via mail or via fax (+49 211 / 59 35 60) by November 21st, 2015. In any case an administration charge of € 20.00 has to be made. No refunds will be made after this date.

For German participants: **Bitte kleben Sie einen Aufkleber mit Ihrer Fortbildungsnummer (EFN/Barcode) auf die Vorderseite dieser Anmeldung!**

Please tick :

I am interested in this meeting. Please send me the final program

OR

I register **definitely** for **Artificial Vision**²⁰¹⁵

Lunch on Saturday, November 28th, 2015 (included in the conference fee)

yes no (please tick)

Social event:

Conference Dinner (Friday, November 27th, 2015) _____ person/-s

I am a (please tick):

Regular PhD student*, resident* (*presentation of appropriate proof of status required)

Payment (please tick required method):

Bank transfer Credit card: MasterCard VISA American Express

Card No.: _____

Valid: _____ Card Validation Code (3 or 4 digits): _____

Hotel reservation:

Arrival date _____

Departure date _____

Mercure Hotel Aachen Europaplatz****

www.mercure.com

(next to the Center for Technology)

SR: € 117.00 | DR: € 134.00

incl. breakfast

Cancellation deadline: 30th September, 2015

Please tick:

Single room (SR)

Double room (DR)

Special request _____

Service and VAT (value added tax) are included in the room rate. The rooms will be confirmed by Congress-Organisation Gerling GmbH, Düsseldorf, in order of their receipt. To guarantee your requested hotel, reservations should be made as soon as possible.

Please do not reserve your hotel by phone. For cancellation and/or rebooking after confirmation an administration charge of € 20.00 will be made. In case of cancellation of the hotel reservation or if the participation is partly or fully cancelled after the indicated deadline Congress-Organisation Gerling GmbH reserves the right to charge up to 100 % of the agreed accommodation price.

**Congress-
Organisation
Gerling** GmbH

Wertstraße 23 · D-40549 Düsseldorf
Fax: 0211 - 59 35 60

(Stamp)

Please
prepay

For German participants:
BARCODE-AUFKLEBER
EFN-FORTBILDUNGSNUMMER

RÜCKANTWORT

Congress-
Organisation
Gerling GmbH
Wertstraße 23
40549 Düsseldorf
GERMANY