

# ARTIFICIAL VISION 2013

THE INTERNATIONAL  
SYMPOSIUM  
ON VISUAL  
PROSTHETICS

November, 8<sup>th</sup> – 9<sup>th</sup>, 2013 Aachen, Germany

CALL FOR

ABSTRACTS and

PROGRAMME OUTLINE

Center for Technology  
Aachen Europaplatz  
[www.artificial-vision.org](http://www.artificial-vision.org)

CALL FOR ABSTRACTS  
Deadline:  
**August 16<sup>th</sup>, 2013**

**RWTH**AACHEN  
UNIVERSITY

 **JÜLICH**  
FORSCHUNGSZENTRUM

Based on several interdisciplinary research programs launched worldwide some 20 years ago, devices have been designed, constructed, assembled, tested, re-designed, re-tested, and now fabricated and approved for human application to bring back vision in blind people. The first patients are already crossing streets using a visual prosthesis. It is the goal of this international symposium, to bring together scientists and researchers working in this field presenting their research results and discussing ideas and thoughts to advance concepts and devices. Although the scientific community is excited about what has been achieved so far, there must be a discussion about measures to further improve the outcomes of current available technology and the future of visual prosthetics facing technology advances on one hand and biology driven approaches such as stem cells or gene therapy on the other hand. This symposium is actually meant as a workshop rather than a congress. Discussions should be a major part of it.

The Artificial Vision 2013 meeting is the third meeting of its kind in Germany. The first two meetings took place in 2006 and 2009 in Bonn, the city of the Retina Implant Foundation. The meeting now moves to Aachen, one of the German cores where Life Sciences successfully meet Technology and Engineering. RWTH Aachen University is one of the leading Universities of Technology in Europe and Medicine and Technology is one of its major profile areas.



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.

A handwritten signature in blue ink, appearing to read 'P. Walter', with a stylized flourish at the end.

**Peter Walter**

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

- Date** Friday, November 8<sup>th</sup>, 2013, 15:00 h – 18:00 h  
▼  
Saturday, November 9<sup>th</sup>, 2013, 09:30 h – 16:00 h
- Venue** **Center for Technology Europaplatz**  
Dennewartstr. 25-27, 52068 Aachen, Germany
- Homepage and Online Registration** [www.artificial-vision.org](http://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 / 808-8191, Fax: +49 241 / 808-2047  
E-Mail: [pwalter@ukaachen.de](mailto:pwalter@ukaachen.de)
- Organization** **Congress-Organisation Gerling GmbH**  
Werftstraße 23, 40549 Düsseldorf, Germany  
Phone: +49 211 / 592244, Fax: +49 211 / 593560  
E-Mail: [info@congresse.de](mailto:info@congresse.de), Internet: [www.congresse.de](http://www.congresse.de)
- Official Language** English
- Hotel Booking** See hotel list on the registration form  
(printed or online: [www.artificial-vision.org](http://www.artificial-vision.org))
- Social Event** **Conference Dinner**  
Friday, November 8<sup>th</sup> 2013, 20:00h  
Hotel Kasteel Bloemendal  
Bloemendalstraat 150, 6291 CM Vaals  
The Netherland  
(Bus transfer from the congress venue)



## ATTENDANCE FEE

Registration	Until August 31 <sup>st</sup>	After August 31 <sup>st</sup>	On site
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.  
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 at 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 2<sup>nd</sup>, 2013. In any case an administration fee of EUR 20,- has to be paid.

After this dates, 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](http://www.artificial-vision.org)

Deadline for Abstract submission: August 16<sup>th</sup>, 2013

**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 sub-retinal device was implantated 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  $\mu$ 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.

**Friday, November, 8<sup>th</sup>, 2013**

- 15:00 h**      **The Meeting starts. Opening Remarks.**  
Notes will be given by representatives of the German Federal Research Ministry, the German National Research Council DFG, the Province of Northrhine-Westfalia, the City of Aachen, and RWTH Aachen University.

**Session I****Degeneration within the Visual System –  
from genes to loss of function**

This session should summarize available information on anatomical and functional changes associated with retinal dystrophies or degenerations in animal models and in humans at various levels of the visual system –, in the retina but also in the visual cortex and the retinocortical pathways.

**Session II****Technology for Stimulation of the Visual System –  
from electrodes to systems**

This session should provide us with information on technological means to efficiently stimulate retinal or cortical tissue.

- 20:00 h**      **Conference Dinner**

**Saturday, November, 9<sup>th</sup>, 2013**

- 09:30 h**      **The Meeting continues.**

**Session III****Preclinical Tests –  
from concepts to experimental implantation**

In this session presenters are asked to report on biocompatibility tests, in-vitro or in-vivo experiments using non-approved devices or modules.

- 12:00 h**      **Lunch Break**

**Session IV****Clinical Tests – from Concepts to Products**

In this session we want to learn about clinical trials with premarket products or products already approved. What is the outcome after implantation of visual prostheses and what can we learn from this?

**Session V****New Ideas – from products back to thoughts –  
thinking the future**

What will be the future of visual prostheses? How can we improve the outcome with current technology and what is waiting behind the door?

- 16:00 h**      **The Meeting ends. Closure Remarks. Farewell.**

## International Airports / High Speed Train System (more or less)

**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, 1.5 1/2 h).

**From Cologne Airport.** Take the A59, then change to A599 followed by A4 towards Aachen. Then A544 direction Europaplatz (approx. 82 km, 1.2 h).



## Meeting address

Technologiezentrum Europaplatz. Dennewartstr. 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 2<sup>nd</sup>, 2013. 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**<sup>2013</sup>

**Social event:**

**Conference Dinner** (Friday, November 8<sup>th</sup>, 2013) \_\_\_\_\_ 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: \_\_\_\_\_

**Hotel reservation:**

Arrival date

Departure date

**Mercure Hotel Aachen Europaplatz\*\*\*\*S**

www.mercure.com

(next to the Center for Technology)

SR: € 84.00 | DR: € 94.00  
incl. breakfast

**Please tick:**

Single room (SR)

Double room (DR)

**Cancellation deadline: 10<sup>th</sup> September, 2013**

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**

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**C**ongress-  
**O**rganisation  
**G**erling GmbH  
Wertstraße 23  
40549 Düsseldorf  
GERMANY