

# GAS BEARING WORKSHOP

14.04.15 - INDUSTRIE-CLUB DÜSSELDORF

**GAS BEARING TECHNOLOGY IS ESSENTIAL TO FULFILL A NUMBER OF PRECISION ENGINEERING TASKS. THE WORKSHOP INTENDS TO PRESENT AND TO DISCUSS A REPRESENTATIVE STATE OF THE ART OF GAS BEARINGS IN THE NETHERLANDS, BELGIUM AND GERMANY.**

It shall bring together,

- manufacturers and vendors of gas bearing components
- companies employing gas bearings
- companies that supply gas bearing based machine tools
- scientists and researchers who are working on gas bearings.

Within a one-day workshop the state of the art as well as the requirements from an application point of view will be presented in short talks and discussions. There will be time for informal talks. The workshop wants to establish a network of gas bearing engineers with the goal to intensify the communication and cooperation between manufacturers, users and scientists.

## INVITATION TO THE GAS BEARING WORKSHOP

Gas Bearings are important components or integral technology of most advanced precision instruments and machines. This workshop invites all engineers, scientists, system architects and users of Gas Bearings to share the state of the art. This will be presented from different angles of view by experienced manufactures and scientists. There will be extensive opportunity to get in touch with colleagues and experts from different countries. The workshop intends to establish a forum for the Gas Bearing Community.

Wolfram Runge, chairman of the 2015 Gas Bearing Workshop

## GOAL

- exchange of state of the art knowledge:
  - Industry:
    - (new) applications of gas bearing
    - new industrial developments in gas bearings
  - research
- with topics such as:
  - linear, rotating, planar
  - static, dynamic behaviour
  - positioning in/with gas bearings
  - system integration

## SPEAKERS

Hans Eitzenberger, Eitzenberger GmbH, Wessobrunn

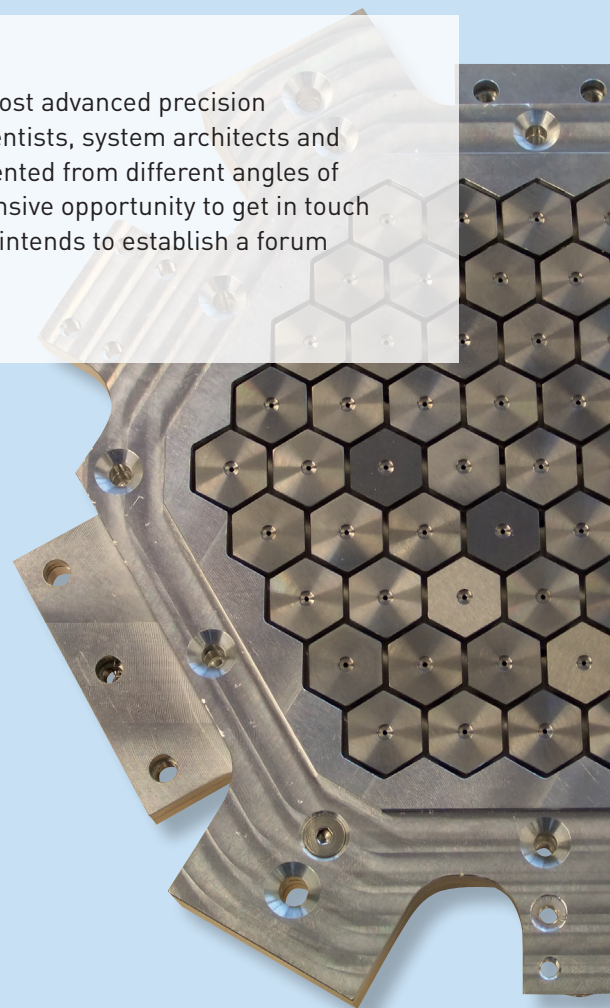
Michael Muth, Aerolas GmbH, Unterhaching

Kai Schmidt, LT Ultra GmbH, Herdwangen-Schönach

Tobias Waumans, Leuven Air Bearings

Julien van Kuilenburg, Philips Innovation Services, Eindhoven

Nils Heidler, Fraunhofer-Institut für Angewandte Optik und Feinmechanik, Jena



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## PROGRAM

09.30 - 10.00	Informal welcome reception
10.00 - 10.20	Welcome by Ton Lansink, Consul General of the Kingdom of the Netherlands in Germany
10.20 - 10.30	Opening Address by Chairman Wolfram Runge
10.30 - 11.00	Farid Al-Bender: History and future perspectives of gas bearings
11.00 - 12.50	<b>Session 1</b> Michael Muth: Innovative Air Bearings Based on Laser Drilled Micro Nozzles
11.30 - 11.50	Break Nils Heidler: Investigations on Aerostatic Journal Gas Bearing Elements for Vacuum Applications Hans Eitzenberger: System Design of Gas Bearing Precision Stages
12.50 - 13.50	Lunch
13.50 - 14.50	<b>Session 2</b> Tobias Waumans: Error motion of gas bearings: definition, measurement challenges and data analysis Kai Schmidt: The Use of Gas Bearings in Ultra Precision Machining
14.50 - 15.20	Break
15.20 - 16.20	<b>Session 3: Special Topics</b> Ron van Ostayen: Contact-less positioning of thin substrates using air bearing technology Julien van Kuilenburg: On the seizure resistance of aerostatics bearings
16.20 - 16.30	Wrapup / follow up
16.30 - 17.30	Informal drinks

## PROGRAM COMMITTEE

Wolfram Runge, Beuth Hochschule für Technik Berlin (General Chair)  
Jos Gunging, Avans University of Applied Science Breda (Chairman Program Committee)  
Farid Al-Bender, KU Leuven  
René Theska, Technische Universität Ilmenau  
Ron A.J. van Ostayen, Delft University of Technology

## ORGANIZING COMMITTEE

Ronald Schnabel, VDE/VDI GMM  
Eric R. Samson, Senior Policy Advisor Bilateral Cooperation & Innovation, Consulate General of the Kingdom of the Netherlands

The workshop is supported and facilitated by the Consulate-General of the Kingdom of the Netherlands in Düsseldorf. One of the aims of the Consulate-General is to support Dutch and German cooperation.

For more information please contact Lucie Gerresheim, Tel. +49-211-17930124,  
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## REGISTRATION

Registration via [www.gas-bearing-workshop.com](http://www.gas-bearing-workshop.com). Registration fee € 190 Euro/person.

For more information please contact:

VDE/VDI-Society Microelectronics, Microsystems and Precision Engineering (GMM)

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Tel.: +49 (0)69 / 63 08 - 227 / 330, E-Mail: [gmm@vde.com](mailto:gmm@vde.com)

## EVENT LOCATION

Industrie-Club Düsseldorf, Elberfelder Straße 6, 40213 Düsseldorf, Germany

## ORGANIZING INSTITUTIONS

