

## Current topics: Mechanical Manufacturing Equipment Industry and Global Crises – where do we go from here? And Power Semiconductors and Quantum Technologies: Applications and Challenges

September 28<sup>th</sup> and 29<sup>th</sup>, 2022 in Hannover at the Cluster of Excellence PhoenixD

**Your safety will be ensured during the event by hygiene and distance measures.**

The VDMA sector groups Micro Technologies and Productronics of the sector association EMINT kindly invite you to this interesting event.

### Key Speakers

The global economy is affected by numerous and constantly new crisis hotspots (war, increasing interest rates, etc.). **Dr. Marco Wagner, Senior Economist at Commerzbank AG**, provides information on how the global economy could develop under these circumstances.

We look forward to welcoming **Dr. Detlef Nagel, Infineon Technologies Dresden GmbH & Co. KG**, who will inform us about trends and challenges in power semiconductors.

Quantum technology will be a key topic: **Dr. Florian Neukart, Terra Quantum**, will give an overview how quantum computing is becoming a key technology in the mobility industry.

**Dr. Nicolas Spethmann**, Physikalisch Technische Bundesanstalt, will explain the concepts and examples of applications in quantum sensor technology.

### Topic Highlights

- Challenges in the global economy - how might the future of the mechanical manufacturing equipment industry look in the short and medium term?
- How quantum computing is becoming a key technology in the mobility industry
- Optics rethought!
- Laser Induced Deep Etching (LIDE) – Paving the way for a broad range of applications

<https://www.vdma.org/microtechnologies>  
<https://www.vdma.org/productronic>

### The Cluster of Excellence PhoenixD

The Cluster of Excellence PhoenixD (Photonics, Optics, and Engineering - Innovation Across Disciplines) pursues the goal of realizing optical systems under consideration of the necessary precision, the degree of integration, the individuality of resource consumption and costs. In doing so, the initiative is based on weaving optics design, optics simulation, new material concepts, and advanced production methods into a single integrated platform to design and manufacture customized and highly functional precision optical systems.

### LPKF Laser & Electronics AG

September 29<sup>th</sup> we will convene at LPKF Laser & Electronics AG, a technology company that manufactures and develops laser systems used in a wide variety of applications in the electronics, solar, automotive and medical technology industries. The panel discussion on quantum technology will be followed by a factory tour.

### Networking Dinner

On the evening of September 28<sup>th</sup> we cordially invite you to our get-together in Grauwinkel's Schloßküche.



Optical table  
Source: Sonja Smalian, PhoenixD

# Program

**Wednesday, Sept. 28<sup>th</sup>**

**Event location:** PhoenixD, Welfengarten 1a, 30167 Hannover, [Link to Maps](#)

- 01:00 – 02:00 pm**    **Registration and lunch** (board members only)
- 02:00 – 04:30 pm**    **Board meetings of the VDMA sector groups Productronics und Micro Technologies** (board members only)
- 03:30 – 04:30 pm**    **Registration at PhoenixD, Welfengarten 1a, 30167 Hannover** (all members)
- 05:00 – 06:30 pm**    **HITec Tour (Hannover Institute of Technology)** (all members)
  - Nuclear fountain (measurement of the acceleration due to gravity with a precision of 18 decimal places)
  - Fiber drawing machine (production of space-qualified laser-active glass fibers)
  - **Einstein-Elevator** (tour of simulation of weightlessness)

**Event location:** Grauwinkels Schlossküche, Alte Herrenhäuser Gärten, 30419 Hannover, [Link to Maps](#)

- 07:00 – 10:00 pm**    **Networking Dinner in the hall „MaVie“ Grauwinkels Schlossküche**

**Thursday, Sept. 29<sup>th</sup>**

**Event location:** LPKF Laser & Electronics AG, Osteriede 7, 30827 Garbsen, [Link to Maps](#)

- 08:15 – 08:45 am**    **Registration**
- 08:45 – 09:00 am**    **Welcoming and introduction of member companies**
  - Volker Pape, Viscom AG, Chairman of the sector group Productronics
  - Dr. Joachim Heck, Ehrfeld Mikrotechnik GmbH, Chairman of the sector group Micro Technologies
  - Prof. Dr. Uwe Morgner, Exzellenzcluster PhoenixD
- 09:00 – 09:30 am**    **Laser Induced Deep Etching (LIDE) – Paving the way for a broad field of applications**  
Dr. Klaus Fiedler, LPKF Laser & Electronics AG
- 09:30 – 10:00 am**    **Optics rethought!**  
Prof. Dr.-Ing. Ludger Overmeyer, Cluster of Excellence PhoenixD
- 10:00 – 10:20 am**    **Coffee break**
- 10:20 – 10:50 am**    **Power semiconductors – trends and requirements**  
Dr. Detlef Nagel, Infineon Technologies Dresden GmbH & Co. KG
- 10:50 – 12:00 am**    **Challenges in the global economy - how might the future of mechanical manufacturing equipment industry look in the short and medium term? (20min impulse speech)**  
Anke Uhlig, VDMA Economics and Statistics
  - World economy hit by pandemic, war and increasing interest rates (20min impulse speech)**  
Dr. Marco Wagner, Commerzbank AG
  - Exchange and discussion (30min)**
- 12:00 – 12:45 am**    **Lunch break**
- 12:45 – 13:15 pm**    **PCB-Design and SMT-Production vs. miniaturization and packing density**  
Ralph Kettler, Balluff GmbH
- 13:15 – 13:45 pm**    **Concepts and examples of applications of quantum sensing**  
Dr. Nicolas Spethmann, Quantentechnologie-Kompetenzzentrum and QUEST Institut für Experimentelle Quantenmetrologie, Physikalisch-Technische Bundesanstalt (PTB)
- 13:45 – 14:15 pm**    **Next Level Performance: How quantum computing is becoming a key technology in the mobility industry**  
Dr. Florian Neukart, Terra Quantum
- 14:15 – 14:30 pm**    **Coffee break**
- 14:35 – 15:35 pm**    **Factory tour**
- 15:35 pm**            **End of the event**



Einstein-Elevator in HITec

We look forward to your participation!

Program might be changed