

Revolutionary ideas in the field of compressors considering

- \* mobile application,
- \* refrigeration technology,
- \* process gas industry
- \* turbo compressor application

have been developed and investigated in the recent past.

The focus of the 1<sup>st</sup> Innovation Day of Compressor Technology is on specific innovations considering e.g. lubrication, materials and gas bearings as well as on the transferability between small scale solutions and large scale compressor technology.

The major goal is the use of synergy effects of all branches that deal with compressor technology.

The number of participants is limited due to the premises.

Registrations will be considered with respect to the date of their receipt.

The participation in the 1<sup>st</sup> Innovation Day of Compressor Technology is free of charge.

For your participation please use the form under the link until October 16<sup>th</sup>, 2017:

[1<sup>st</sup> Innovation Day of Compressor Technology](#)



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<https://tu-dresden.de/ing/maschinenwesen/iet/kkt>

# 1<sup>st</sup> Innovation Day of Compressor Technology

Synergies of Compressor Technologies

October 20<sup>th</sup>, 2017  
Dülfer-Saal  
Technische Universität Dresden  
Dülferstraße, 01069 Dresden

## Thursday, October 19<sup>th</sup>, 2017

Beginning: 6:30 pm

Welcome Reception with Lab tour at the Bitzer  
Chair of Refrigeration, Cryogenics and  
Compressor Technology

Welcome:  
Prof. Dr.-Ing. Ullrich Hesse

Location: Evening event: TU Dresden, Alte Mensa,  
Westsaal. Use the entry from Helmholtzstraße.

## Friday, October 20<sup>th</sup>, 2017

9:00 am Reception Desk

09:30 am Welcome  
Prof. Dr.-Ing. Ullrich Hesse, Bitzer  
Chair of Refrigeration, Cryogenics  
and Compressor Technology, TU  
Dresden

Location: TU Dresden, Dülfer-Saal/Alte Mensa.  
Use the entry from Dülferstraße

### Part 1: LUBRICATION - (UN)NECESSARY EVIL?

9:45 am **Influence of Lubricants in  
Refrigeration and Process Gas  
Compressors**  
Tobias Göpfert, TU Dresden

10:20 am **Refrigerant Injection in Scroll and  
Screw Compressors**  
Dr. Heinz Jürgensen, Bitzer

10:55 am **Water Injection in Screw  
Compressors**  
Piotr Skibinski, RELO GmbH Verdichter

11:30 am **Oil Free Compression in Domestic  
Household Refrigerators**  
Prof. Cláudio Melo, POLO - Research  
Laboratories for Emerging Technologies  
in Cooling and Thermophysics

12:05 pm **Spindelverdichter für Ölfreie  
Verdichtung von R-718**  
Dr. Ralf Steffens, Ingenieurbüro

12:40 – 1:40 pm Lunch Break

### Part 2: PERFORMANCE IMPROVEMENT TECHNOLOGIES FOR COMPRESSION AND EXPANSION MACHINES

1:40 pm **Performance improvement with VVR  
for Residential Scroll Compressors**  
Dr. Bachir Bella, Emerson Commercial &  
Residential Solutions

2:15 pm **Investigation on Poppet Valves for  
Compressors and Expansion  
Machines** Christian Stöckel, TU Dresden

2:50 – 3:10 pm Coffee Break

### Part 3: TURBO COMPRESSORS – THE FUTURE OF OILFREE COMPRESSION?!

3:15 pm **Turbo Compressors in Refrigeration  
Technology**  
David Williamson, Director, Europe and  
Middle East, Danfoss Turbocor  
Compressors

3:50 pm **Gas Bearings for Turbo Compressors**  
Prof. Jürg Schiffmann, École  
Polytechnique Fédérale de Lausanne

4:25 pm **WRAP-UP**  
Prof. Dr.-Ing. Ullrich Hesse, TU-Dresden