# 3-DAY LECTURE INVITATION

SOUND QUALITY OF AUDIO SYSTEMS Modeling, Measurement & Control

By Dr. Wolfgang Klippel & KLIPPEL engineers March 16-18, 2026

The 2026 lecture on "Sound Quality of Audio Systems" is presented by Dr. Wolfgang Klippel, professor at the Institute of Acoustics and Speech Communication. It will give you a deep understanding of measurement and diagnostic techniques used in telecommunication, automotive, multi-media, and professional applications to design small, light and cost-effective loudspeakers. Linear, nonlinear and time-variant systems with lumped and distributed parameters model the generation of signal distortion. The course makes the relationship between symptoms and physical causes of the distortion more transparent. Practical sections will give each participant further opportunities for learning by doing.





Benefit from the over 30 years of fundamental research by Dr. Klippel and apply this knowledge to your own field of work to improve the way you design and/or manufacture your loudspeaker.

### HIGHLY RECOMMENDED FOR

- Students and teachers of the electro-acoustics
- Engineers of the audio industry active in R&D, manufacturing, quality control

#### **MAIN TOPICS**

- Electro-acoustical modelling
- · Measurements and analysis
- Interpretation and diagnostics
- Digital loudspeaker control

**NEW THIS YEAR:** IEC standards

**WHEN:** March 16-18, 2026 (9:00 - 17:00)

**WHERE:** Dresden University of Technology, Görges-Bau Room GÖR 226, Helmholtzstr. 9, 01069 Dresden, Germany

LANGUAGE: English

**Early Bird Fee**: 450 € (VAT incl.) until Dec 31, 2025 **Regular Participation Fee**: 550 € (VAT incl.)

**For External Students**: 30€ (VAT incl.)

For External University Staff: 60€ (VAT incl.)

Free of charge for students and staff of Dresden University

of Technology!

**FOR MORE INFORMATION & QUESTIONS** 

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## **REGISTER NOW!**

The online registration is open until March 2, 2026.





	Day 1 – March 16, 2026
8:15 - 8:50	Welcome of Attendants
	Lecture Part 1 + Practical Demos Linear Lumped Parameters - Modeling & Measurement
9:00 - 12:00	Coffee Break
	Lecture Part 2 + Practical Demos Distributed Mechanical Modeling with Distributed Parameters - Modal Vibration Analysis & Measurement
12:00 - 13:00	Lunch Break
	Lecture Part 3 + Practical Demos

Interaction

Coffee Break

**Lecture Part 4 + Practical Demos**Diagnostics in Small Signal Domain

Sound Radiation, Measurement and Room



Lecture Part 6 + Practical Demos Nonlinear Modeling

Lecture Part 7 + Practical Demos

Coffee Break

Measurement of Nonlinear Parameters

Lunch Break

Lecture Part 8 + Practical Demos Relationship between Physical Causes and Nonlinear Symptoms

Coffee Break

Lecture Part 9 + Practical Demos
Diagnostics Loudspeaker Nonlinearities

Lecture Part 10 + Practical Demos

Day 3 - March 18, 2026

Diagnostics on Irregular Nonlinear Distortion - Loudspeaker Defects (Rub, Buzz, ...)

Coffee Break

Lecture Part 11 + Practical Demos

Time-Variant Properties (Heating, Ageing, Endurance, Maximum SPL)

Lunch Break

Lecture Part 12 + Practical Demos

Nonlinear Adaptive Control of Loudspeakers
and Headphones

Coffee Break

Lecture Part 13 + Practical Demos

Perceptive and Cognitive Evaluation

Lecture Part 14

Creating Successful Audio Products







13:00 - 17:00

### HOUSE-PARTY AT KLIPPEL HEADQUARTERS Monday, March 16 at 18:00 Mendelssohnallee 30, 01309 Dresden

Do not miss this opportunity for further networking and knowledge exchange with finger food, drinks, and live music. Bring your instrument along for a spontaneous jam session. Explore our in-house exhibition and get to know our engineers. Measure your speaker and interpret the results with KLIPPEL experts.

Everyone is welcome. No prior sign-up required.

