

# TWO TRAINING SESSIONS

## ON FEBRUARY 16TH AT ACTUATOR 2021

---

### PIEZOELECTRIC ACTUATORS

#### Introductory course

Dr. Frank CLAEYSEN

#### Basic knowledges

- Basics on piezoelectric materials bulk and MLA
- Piezo materials for actuators
- Constitutive laws / Equivalent electric circuit

#### Review of piezoelectric actuators

- Review of direct and amplified piezoelectric actuators
- Piezo mechanisms
- Exercises

#### Review of piezoelectric motors

- Piezoelectric motors
- Resonant structure
- Tribology of piezoelectric motors

#### Practises

### LINEAR MAGNETIC ACTUATORS

#### Introductory course

Mr. Gérald AIGOUY

#### Basics of magnetism for actuators

- Magnetic effects and laws
- Magnetic forces
- Magnetic materials

#### Linear magnetic actuators

- The different kinds of linear actuators
- Design and performance of:
  - Moving coil actuators,
  - Moving magnet actuators,
  - Moving iron actuators.
- Introduction to other magnetic actuators:
  - MRF,
  - ...

#### Practises

## ACTUATOR 20

International Conference and Exhibition  
on New Actuators and Drive Systems



#### Contact and registration

CEDRAT TECHNOLOGIES: Mrs. Sandrine HUGI  
training.ct@cedrat-tec.com  
+33 (0)4 56 58 04 00  
www.cedrat-technologies.com

#### Venue

February 16, 2021, from 9 am to 5 pm  
Congress Center Rosengarten  
Rosengartenplatz 2, 68161 Mannheim

#### Who should attend

Engineers in a research department  
Electronics and mechanical engineers

#### Participation fee

550€ for participants from industry  
480€ for participants from university  
Including documentation, coffee and lunch breaks