CONFERENCE FOR
WIND POWER DRIVES

# CWD 2027

Aachen 16th – 17th of March

DRIVETRAIN AND SYSTEMS
ENGINEERING CONFERENCE

# DSEC 2027

Aachen 16th – 17th of March

# Call for Papers now open!

**CWD 2027** covers the entire electromechanical drivetrain of wind turbines, offering an in-depth view into subsystems and ideas for making wind energy more sustainable.

**DSEC 2027** (formerly ATK) addresses topics related to drivetrain technology and machine elements, focusing on (virtual) development methods using systems engineering. Since AI is changing everyday life in engineering, we are also seeking publications on how AI enables advancements to established engineering methods.

**Submission deadline:**
13 April, 2026

**Accepted submissions:**
Research papers*
Application papers

**Submit abstracts at:**
cwd-dsec.de

**Speaker fee:**
375€ plus VAT

*To be peer reviewed and published in Springer Journal (Engineering Research)

FVA Software & Service

CWD Center for Wind Power Drives

CENTER SYSTEMS ENGINEERING

# C|WD 2027 Topics

## Powertrain components
- Main bearing
- Planetary plain bearing
- Gearbox
- Generator
- Power electronics

## Lifetime extension and monitoring systems

## Noise, vibration, and harshness

## Digitalization and AI

## Technological contributions to sustainability
- Circular economy
- Generator technologies (solenoids and windings)
- Green steel and heat treatments

## Vertical integration vs. cooperative systems engineering
- Holistic and probabilistic design
- Reliability-based design

FVA Software & Service

CWD Center for Wind Power Drives
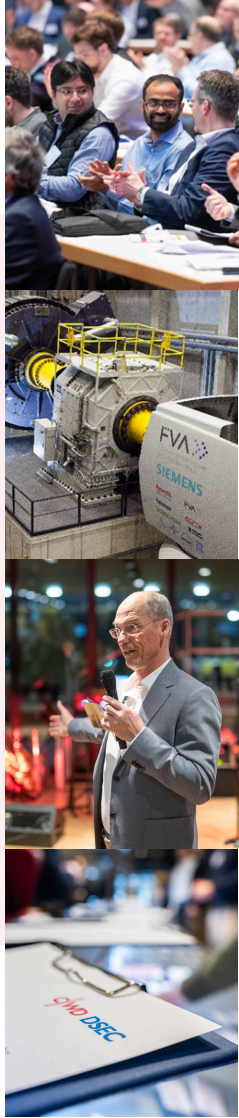
CENTER SYSTEMS ENGINEERING

# DSEC 2027  Topics

## Systems engineering

- MBSE model generation and analysis
- Automated product development processes
- Accessibility of models and model-based workflows in engineering platforms
- Cross-domain systems engineering
- Integrating software engineering into MBSE for mechatronic systems
- Connecting virtual and digital twins
- Model classification and re-use

## Drivetrain technology

- Noise, vibration, and harshness
- Hydrogen fuel cell drives
- Hydrogen combustion engines
- Electrification and hybrid drivetrains
- Predictive maintenance and condition monitoring
- Testing and validation
- Implications of electrification on drivetrain systems engineering

## Machine elements

- Multi-scale tribological modeling and simulation
- Model-based tribological design
- Sensor-integrating and smart machine elements
- Current passage in machine elements
- Sustainable lubricants
- Superlubricity