

CBS Winter School



Monday, January 27, 2025

Tuesday, January 28, 2025

please note that there might still be slight variations in schedule even during the week

8:30 am – 9:00 am **Registration** *Foyer* International Department of the KIT Schlossplatz 19 76131 Karlsruhe

All sessions will take place in the **Marie Skłodowska Curie Room** (Room 201) on the second floor of the International Department of the KIT

> 9:00 – 9:45am Welcome Session Parents Welcome

10:00 am – 1:30 pm Lecture and Workshop

Sustainable Business Process Managament and Process Mining

Bring your laptops!

meet in ID Courtyard at 12:00 to walk over together 1:30 - 3 pm Lunch at KIT Mensa Adenauerring 7

76131 Karlsruhe

3:00 – 5:30 pm **KIT Campus and City Rally** meet in the Foyer Karlsruhe City and KIT Campus locations

6:00 – 7:30 pm

meet in the Foyer at 6:00 Welcome Dinner

Charles Oxford Waldstr. 30 Parents Welcome to join (at their own expense) at "Grown Up Table" meet in the Foyer meet in ID Foyer at 9:30 am **Excursions**

take private coach to

Mercedes-Benz Museum Mercedesstraße 100 70372 Stuttgart

please note that all backpacks must be locked away during the visit

Visit: 10:30 am - 1:00 pm



A packed lunch will be provided for you to tak on the trip. There also is a museum snack shop and caffé at the Mercedes-Benz Museum, but it is quite costly. You might want to bring along some extra water and snacks.

meet punctually at 1:00pm in front of Mercedes-Benz Museum

take private coach to

Wörth Daimler Trucks Mercedesstraße 1 76744 Wörth am Rhein

Visit: 2:45 pm - 4:15 pm

return to Karlsruhe is expected around 5 pm





Wednesday, January 29, 2025

9:45 am Announcement of Winners of Campus and City Rally

10:00 a.m – 1:00 pm

Lecture and Workshop

Electromotor and Generator: Hands-On Engineering Workshop

Electromagnetic Induction Magnetic Fields and Force Torque and Mechanical Power AC and DC Electricity Circuit Design and Load Matching Efficiency and Energy Loss Material Science Control Systems Applications of Electromotors and Generators

meet in Foyer at 1:00 to walk over together 1:15 – 2:30 pm Lunch at KIT Mensa

> Adenauerring 7 76131 Karlsruhe



2:45 - 5:45 pm

Lecture and Workshop

Crank Hands-On Cell Phone Charger Challenge

Energy Conversion Electromagnetic Induction Mechanical Advantage Circuit Design Power and Efficiency Human Factors Engineering Energy Storage Sustainability and Renewable Energy Material Science

Thursday, January 30, 2025

9:00 am

Presentation of the B.Sc. in Mechanical Engineering (International) and the CBS College Program Parents Welcome

meet in the Foyer at 10:15 am

Excursion to the ZKM Zentrum für Kunst und Medien

The Zentrum für Kunst und Medien in Karlsruhe showcases the innovative use of technology in art and provides insight into the societal impacts of technology.



go directly from ZKM to KIT for Lunch at KIT Mensa Adenauerring 7 76131 Karlsruhe

2:30 pm – 4:00 pm Lecture Principles of Mechanical Engineering

> 4:15 pm – 5:45 pm **Workshop**

Design Processes

This workshop will talk about things like the steps engineers take to design and create mechanical systems, how to solve real-world problems with creative thinking, and the basics of tools like gears, I evers, and CAD software. You'll also learn how to prototype ideas, test designs, and explore how engineering makes a difference in sustainability and everyday life.





Friday, January 31, 2025

9:00 am – 12:45 pm Workshop

Sustainable Solutions: Stirling Engine Build Session

This workshop will be about building and understanding a Stirling engine, a fascinating heat engine that converts temperature differences into mechanical motion. You'll learn about the principles of thermodynamics, experiment with heat and energy transfer, and assemble your own working model. It's a hands-on session that combines science, engineering, and creativity to explore how heat can power motion

12:45 pm - 1:00 pm Clean up all students are required to help clean up

meet in ID Courtyard at 1:00 pm to walk over together 1:00 pm – 2:30 pm

> Lunch at KIT Mensa Adenauerring 7 76131 Karlsruhe

> > 2:00 pm – 3:30 pm

Lecture

Computer Aided Engineering

3:45 pm – 5:00 pm

Final Discussion Round

Mechanical Engineering, Sustaiability, and the Futurel



Notes