In a Nutshell

Key facts about the Programs

Experts

Learn from World Leading Experts in Renewables

Career

Boost your career with a Master of Science next to your Job

Network

Meet your peers and start networking

Knowledge

Gain a general understanding of Renewable Energies, or focus on Wind or Solar

Who we are

Fraunhofer Academy

Jutta Haubenreich
Education Management
Fraunhofer Academy

Master Renewable Energy Online

Andreas Günther
Program Coordinator
University of Oldenburg

Online M.Sc. Wind Energy Systems

Dr. André Bisevic
Program Coordinator
Fraunhofer IWES Kassel

Online M.Sc. Wind Energy Systems

Julia Mergner
Course Management
University of Kassel

M.Sc. Solar Energy Engineering

Philipp Bucher
Program Coordinator
University of Freiburg
In cooperation with Fraunhofer ISE Freiburg

Fraunhofer ACADEMY

Fraunhofer: the largest organization for applied research in Europe

The Fraunhofer-Gesellschaft undertakes applied research of direct utility to private and public enterprise and of wide benefit to society.

24,500 staff

69 institutes and research units

Fraunhofer ACADEMY

Fraunhofer

Researcher

Research and development on behalf of industry and state

Inventor

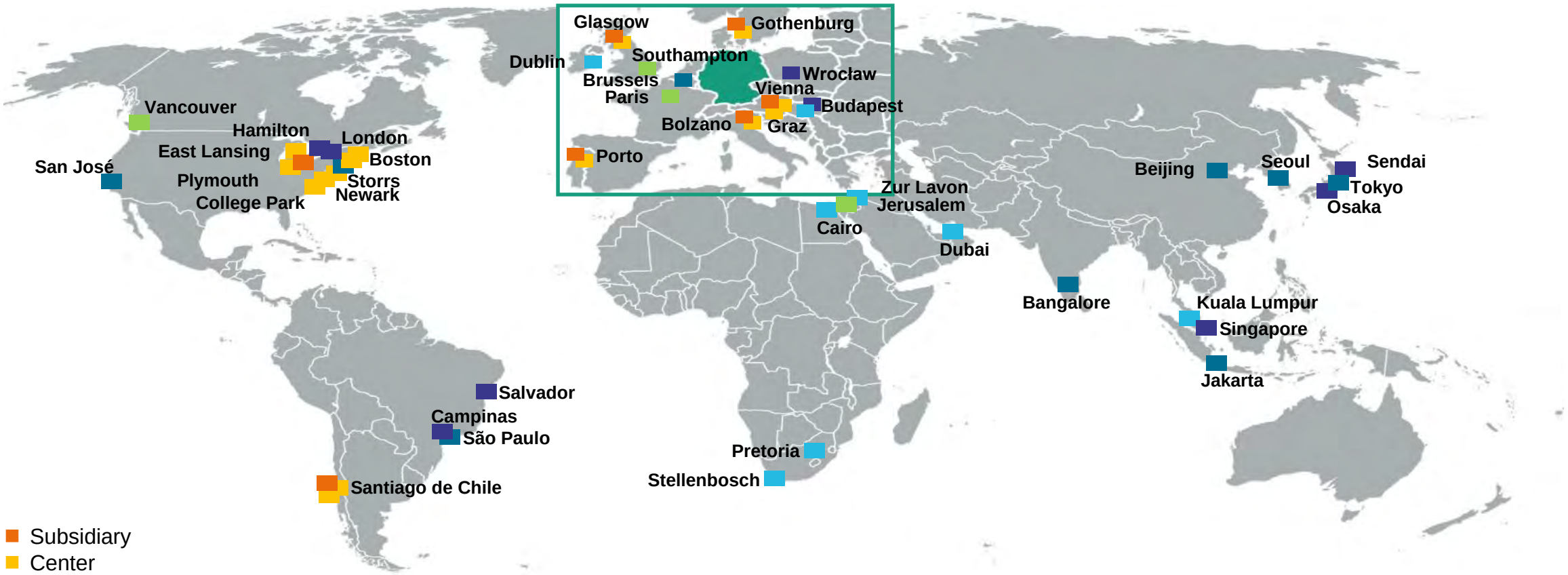
mp3 music format,
white LED, high-resolution thermal camera

Entrepreneur

Research volume:
approx. €2.1 billion annually

Fraunhofer ACADEMY

Fraunhofer worldwide

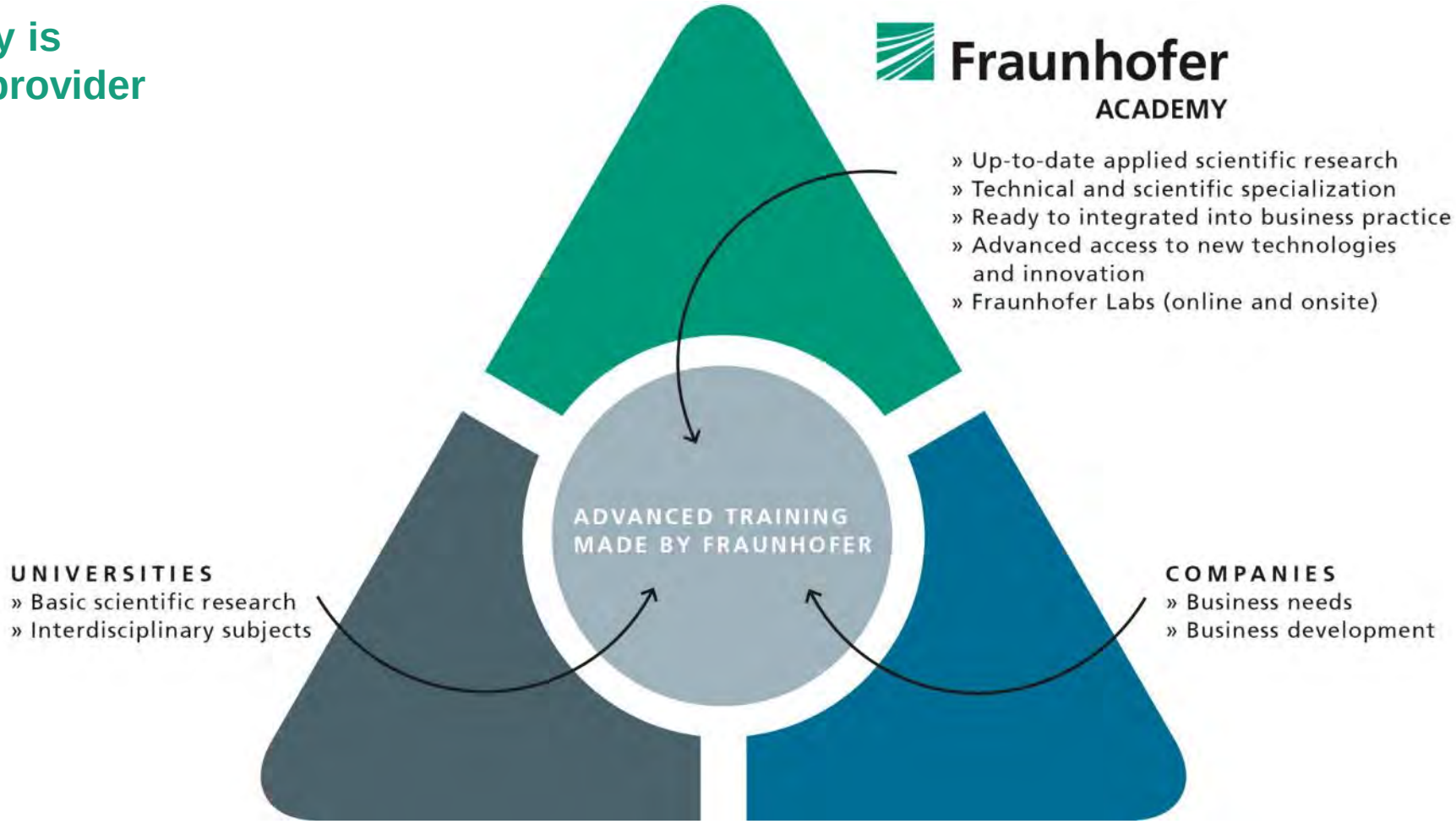


- Subsidiary
- Center
- Project Center
- ICON / Strategic Cooperation
- Representative / Marketing Office
- Senior Advisor

Fraunhofer ACADEMY

Fraunhofer Academy – Advanced Training with Fraunhofer

The Fraunhofer Academy is Fraunhofer's specialist provider of advanced training.

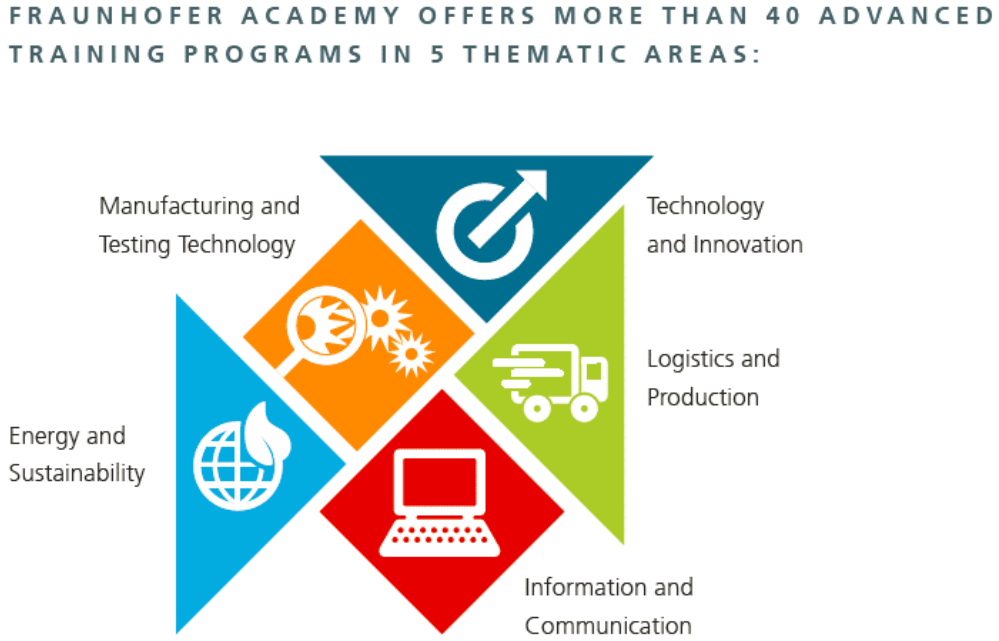


Fraunhofer ACADEMY

Fraunhofer Academy – Advanced Training with Fraunhofer

- Part-time study programs, certificate courses and multi-day seminars

- Courses in 5 different areas of Fraunhofer expertise



http://www.academy.fraunhofer.de/en

Fraunhofer ACADEMY

OVERVIEW

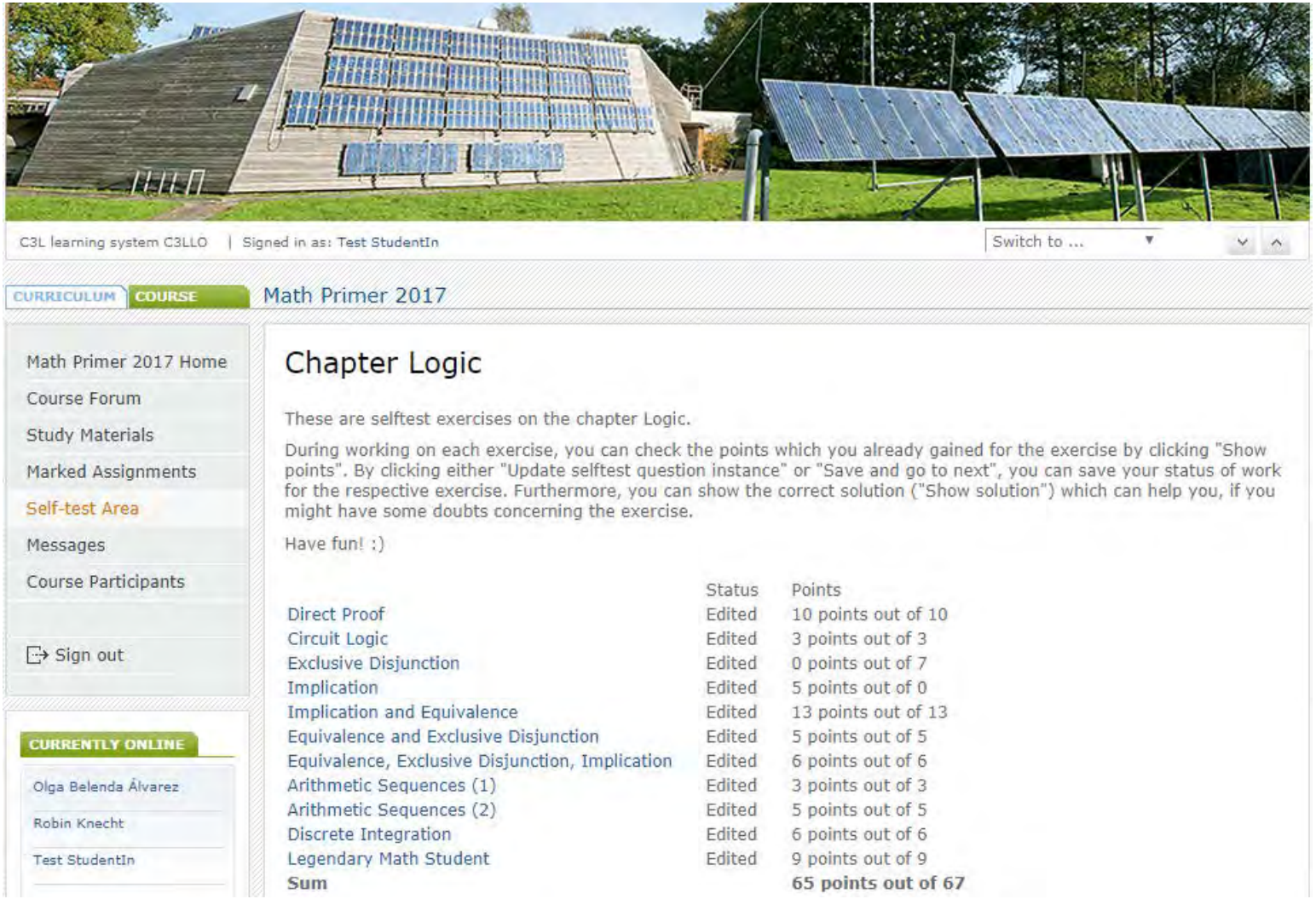
- Presenters
  - Online M.Sc. Solar Energy Engineering, University of Freiburg & Fraunhofer ISE
  - Online M.Sc. Wind Energy Systems, University of Kassel & Fraunhofer IEE
  - M.Sc. Renewable Energy Online, University of Oldenburg

- Target Group: Students...
  - ...who want to study independent from time and location
  - ...who are already working as engineers
  - ...who want to study besides job and family

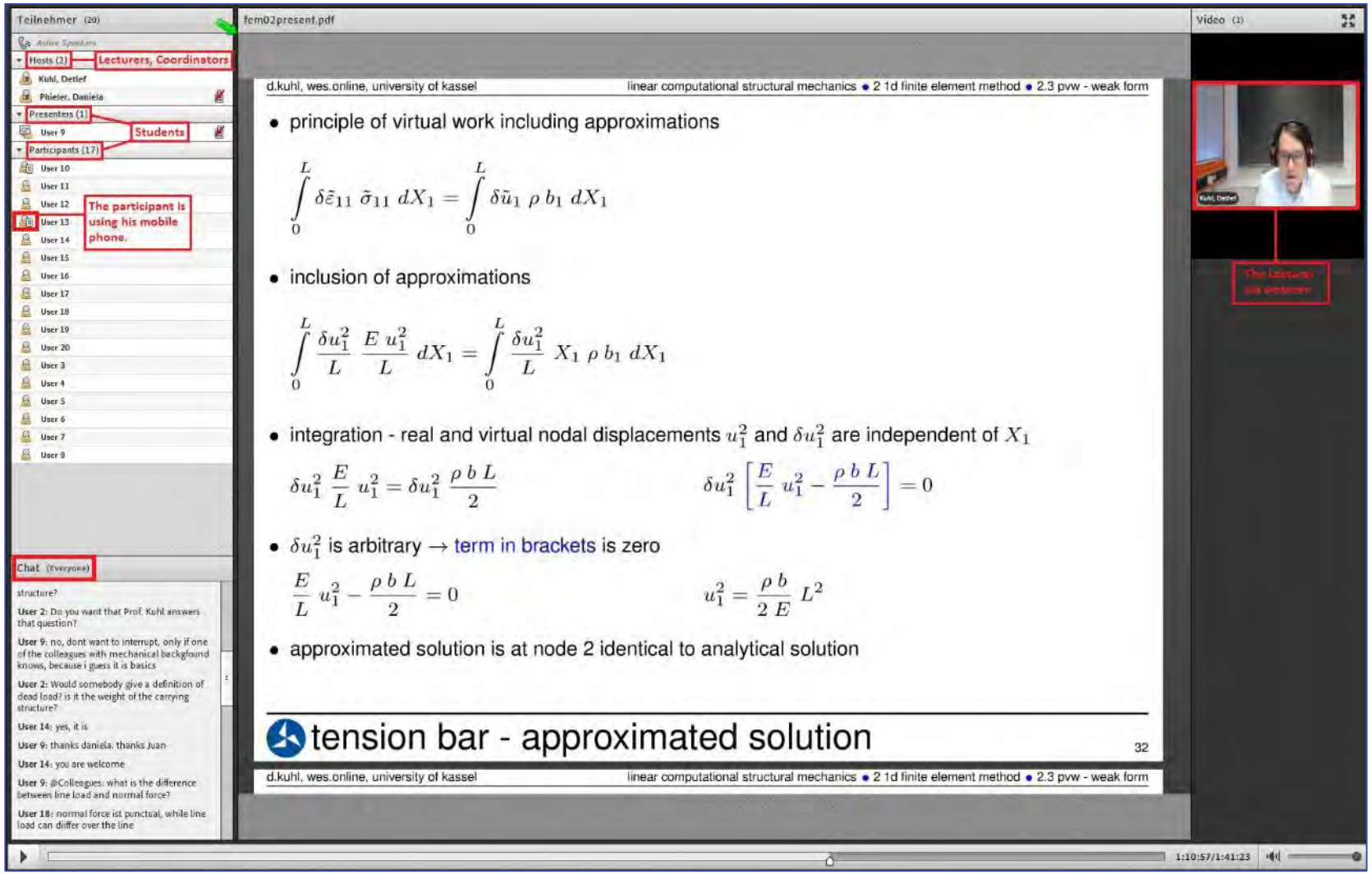
C3LLO - ONLINE LEARNING MANAGEMENT SYSTEM

Virtual Campus:

- Study Materials
- Assignments
- Self Tests
- Scores
- Forums
- Blogs
- Etherpads
- Virtual Classroom



VIRTUAL CLASSROOM – ADOBE CONNECT



(VOLUNTARY) ON CAMPUS PHASES

UNI FREIBURG

DAAD Webinar
30.10.2018
Philipp Bucher

Solar Energy Engineering

Continuing Education

Study Online
Learn from the best German solar experts

Boost your Career
Become Part of the Solar Community

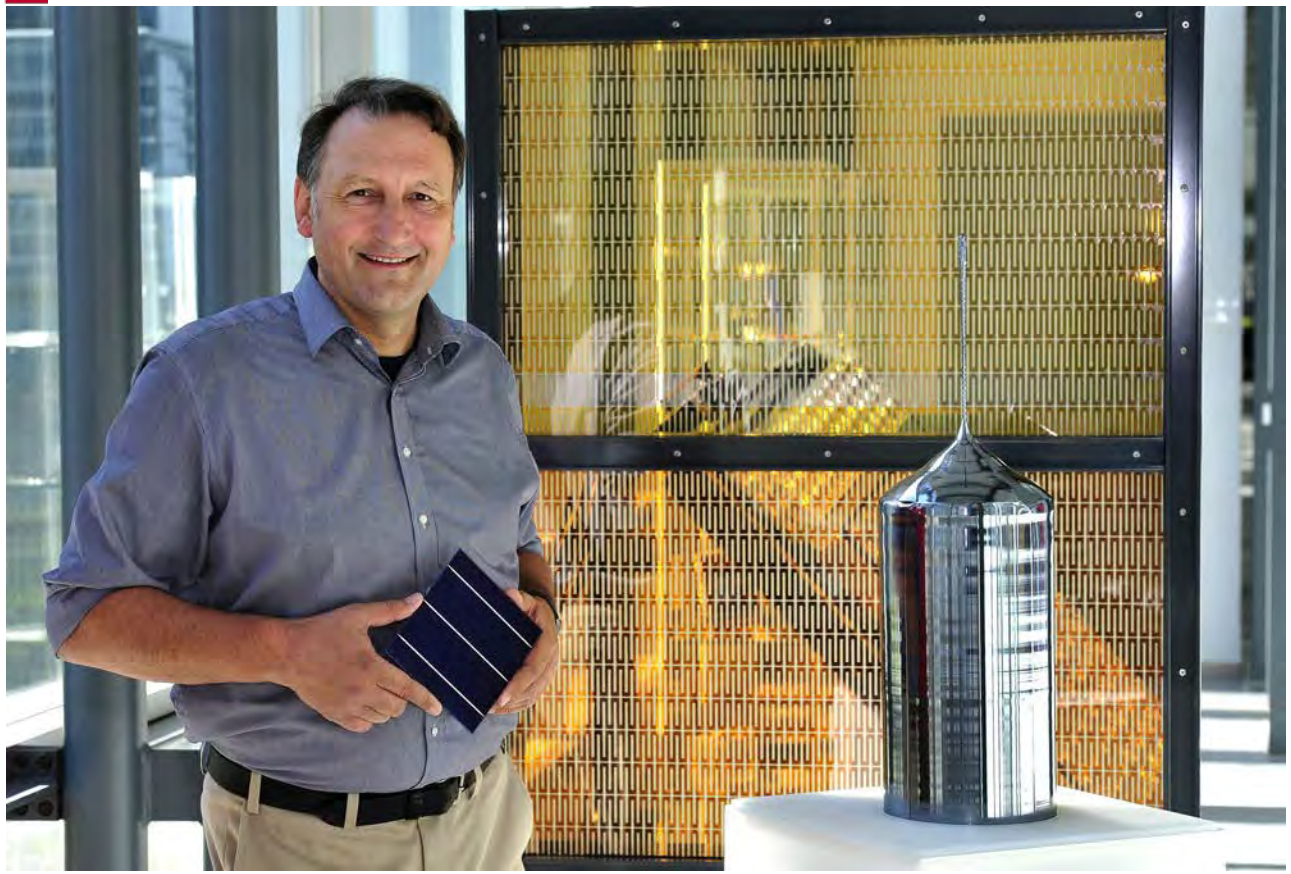
In scientific cooperation with:

Fraunhofer ISE

Introduction

In scientific cooperation with:

Fraunhofer ISE



Prof. Stefan Glunz, Head of the Program

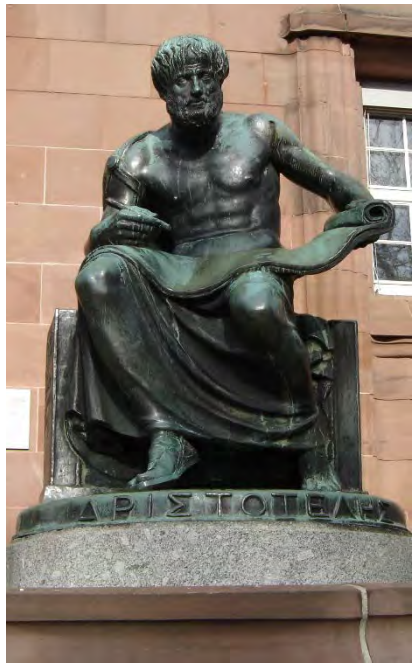
Philipp Bucher
Program manager

Who we are

In scientific cooperation with:

Fraunhofer ISE

One of the leading Universities in Germany



University of Freiburg

The largest solar energy research institute in Europe

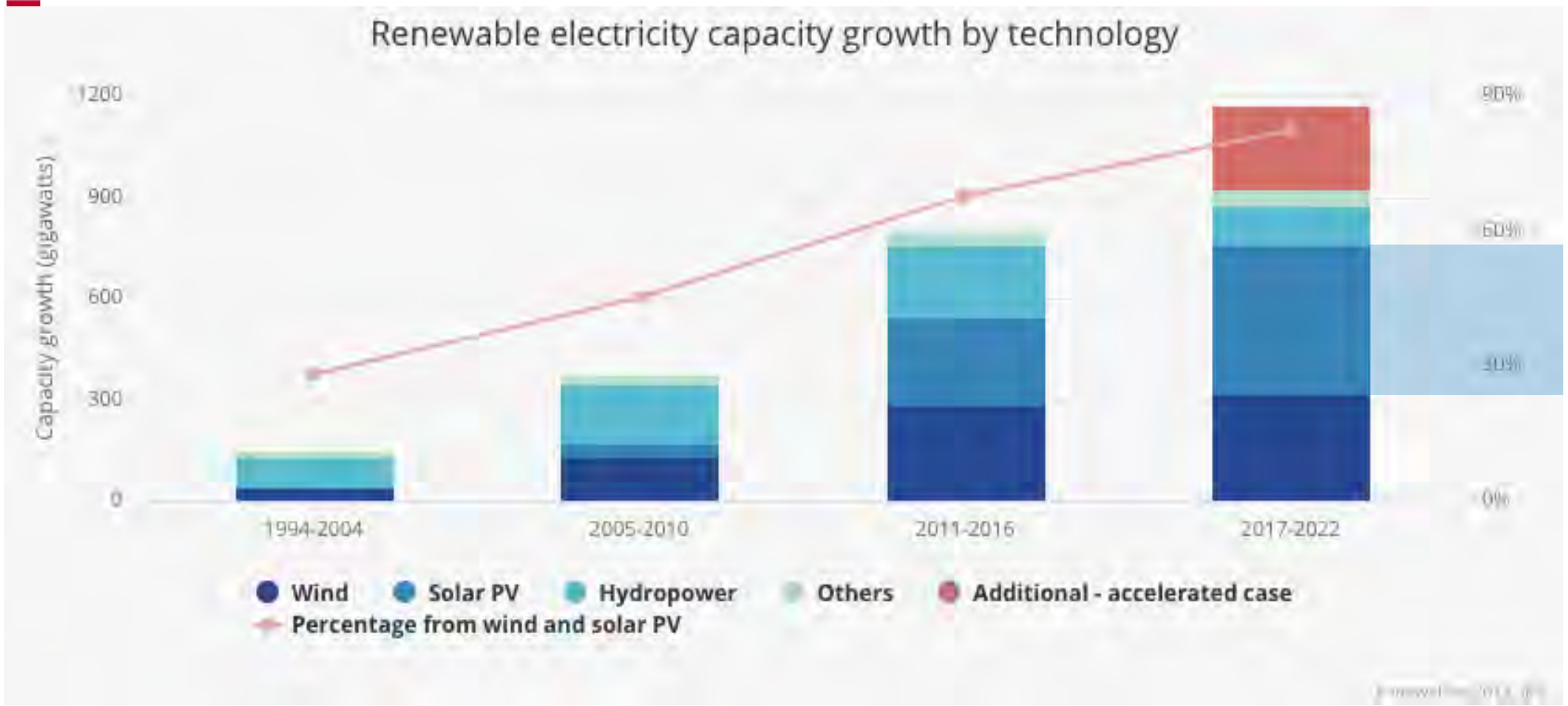
Fraunhofer ISE

Fraunhofer Institute for Solar Energy Systems (ISE)

Growth of global solar energy market

In scientific cooperation with:

Fraunhofer ISE



} PV

Market growth globally: companies need qualified workforce

→ MSc in solar energy engineering

Renewables Report (OECD/IEA, 2017)

UNI FREIBURG

MSc. Solar Energy Engineering

In scientific cooperation with:

Fraunhofer ISE

Study Online - next to your job
From all around the world

Voluntary Campus Phases
In Freiburg

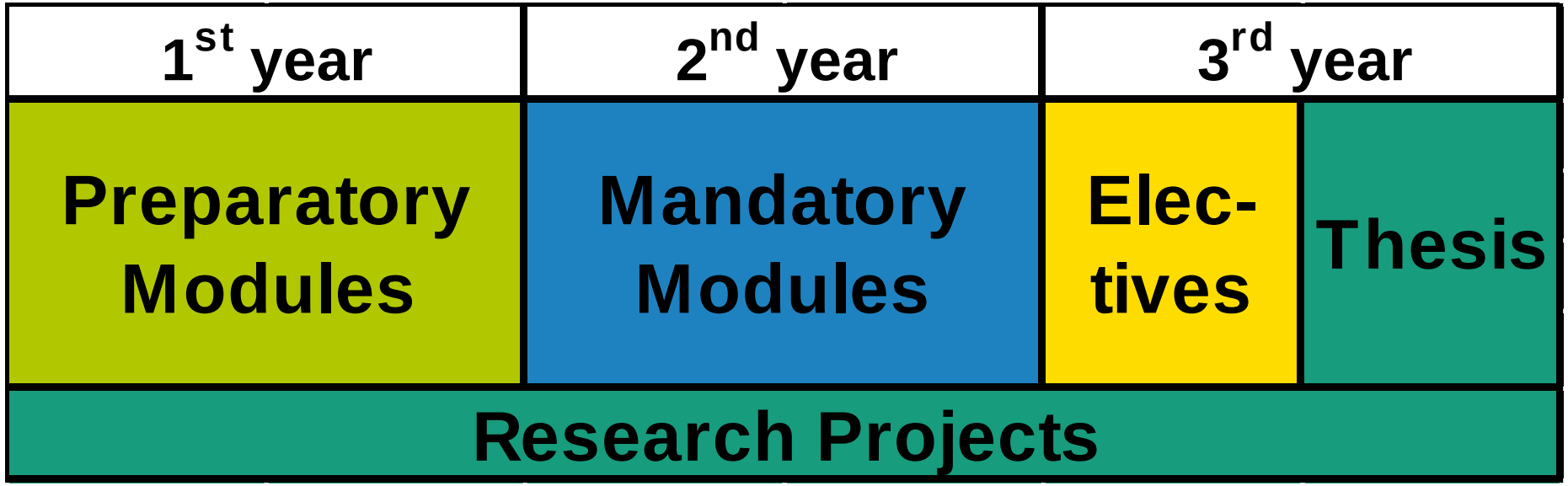
E-Lectures
Online Meetings

Networking
Lab Internships

Curriculum

In scientific cooperation with:

Fraunhofer ISE



Exams: From all around the world – close to your residency!

Application and Eligibility

In scientific cooperation with:

Fraunhofer ISE

You need

- **Bachelor** in Math, Engineering, Science or any related field.
- **English** language skills (level B2)
- **Professional Experience** of at least one year

Apply until July 31st each year

- **Start date:** mid October each year
- **Program fee:** approx. 3800 Euro per Semester
- **Exams** in study centers close to your residency or online

Interested?

In scientific cooperation with:

Fraunhofer ISE

“What I liked best was the quality of the e-lectures. I found it extremely well structured! It is the first time that I’ve worked with e-lectures, so it’s a new experience.“

Milan, now at SolarCity

Ronald, Entrepreneur

“The solution lies in renewable energies and photovoltaics. Some of the concepts we are studying are completely new to me and they are amazing.“

Contact us

www.studysolar.uni-freiburg.de

UNIKASSEL VERSITÄT

Fraunhofer IEE

ONLINE M.SC. WIND ENERGY SYSTEMS

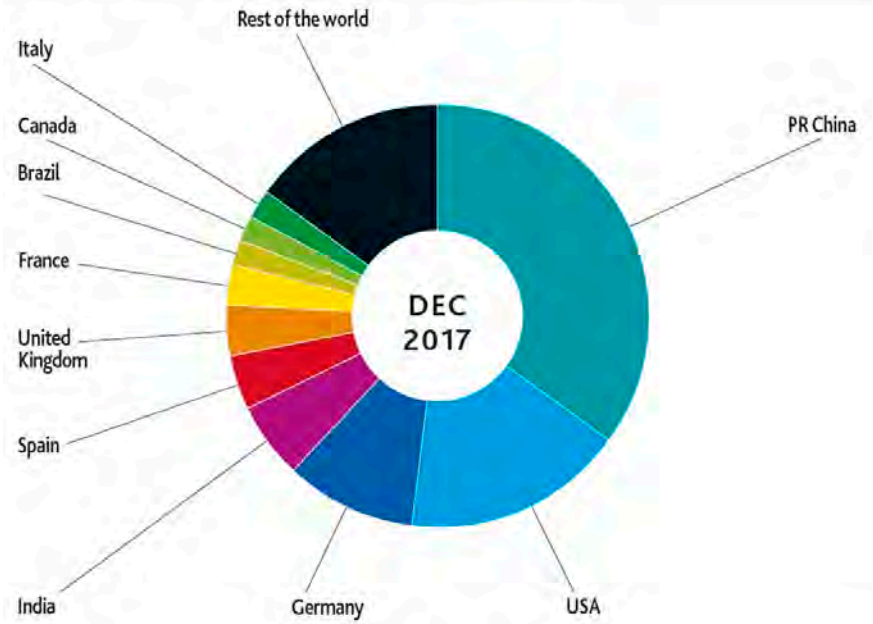
Info Session on October 2018

WHY TO STUDY WIND ENERGY?

Global Wind Energy Industry

- above 50 GW in 2017, with Europe, India and the offshore sector having record years
- 3.7% of electricity consumption is covered by wind industry

TOP 10 CUMULATIVE CAPACITY DEC 2017



Country	MW	% Share
PR China	188,392	35
USA	89,077	17
Germany	56,132	10
India	32,848	6
Spain	23,170	4
United Kingdom	18,872	4
France	13,759	3
Brazil	12,763	2
Canada	12,239	2
Italy	9,479	2
Rest of the world	82,391	15
Total TO P10	**456,732**	**85**
World Total	**539,123**	**100**

Source: GWEC

UNIVERSITY OF KASSEL

Environmental University

- Founded in 1971
- Current enrollment: ca. 23.696 students
- Practically orientated learning and research
- Environmental profile:
  - Responsibilities and challenges of balancing the needs of mankind with the preservation of the environment
  - Environmental study and research programs.

Environmental topics of science, e.g.:

- Sustainable materials flow systems
- Biomass as a material and an energy source
- Environmentally-conscious planning
- Integrated water management
- Regenerative energy systems and energy efficiency
- Wind energy systems

→ Online M.Sc. Wind Energy Systems

FRAUNHOFER INSTITUTE FOR ENERGY ECONOMICS AND ENERGY SYSTEM TECHNOLOGY

The Institute

- The Fraunhofer IEE in Kassel researches for the national and international transformation of energy supply systems.
  - Personal: approx. 350
  - Annual budget: approx. 22 Mio EUR
  - Director: Prof. Dr. Clemens Hoffmann

Business Areas

- **Energy Economics**
  - Analysis and consulting for energy economics
  - Energy meteorology information systems
  - Virtual power plants
  - Wind resource assessment with LiDAR
  - Training and knowledge transfer
- **Energy System Technology**
  - Grid planning and operation
  - Power electronics and device technology
  - Hardware in the loop systems
  - Dezentralized energy management
  - Systems engineering
  - Measuring and testing

LECTURER OF THE MASTER'S PROGRAM

University

- University of Kassel
- Cologne University of Applied Sciences

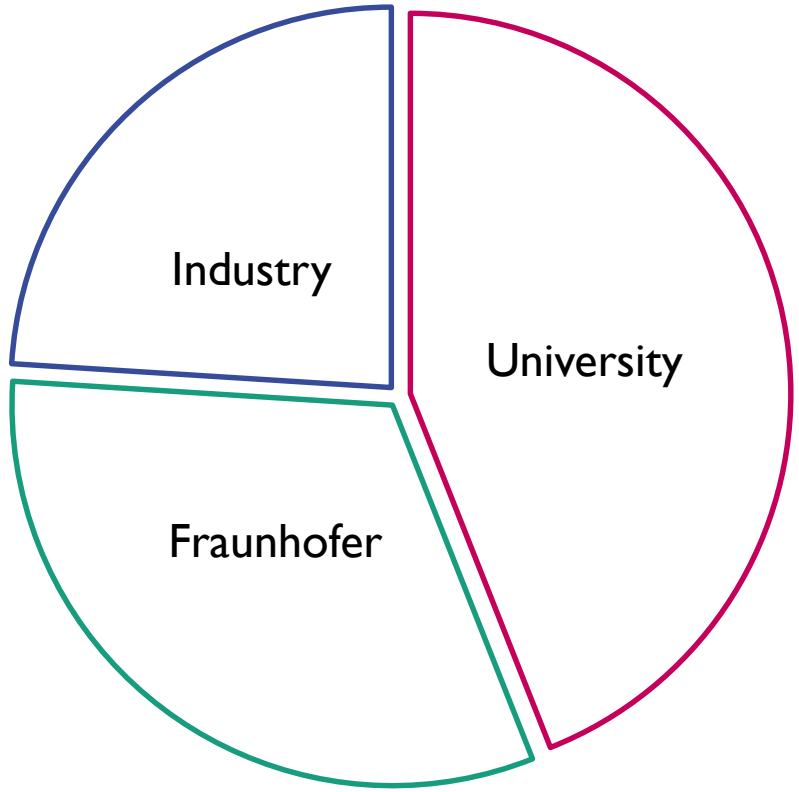
Research Institutes

- Fraunhofer Institute for Energy Economics and Energy System Technology (IEE)
- Fraunhofer Institute for Wind Energy and Energy System Technology (IWES)

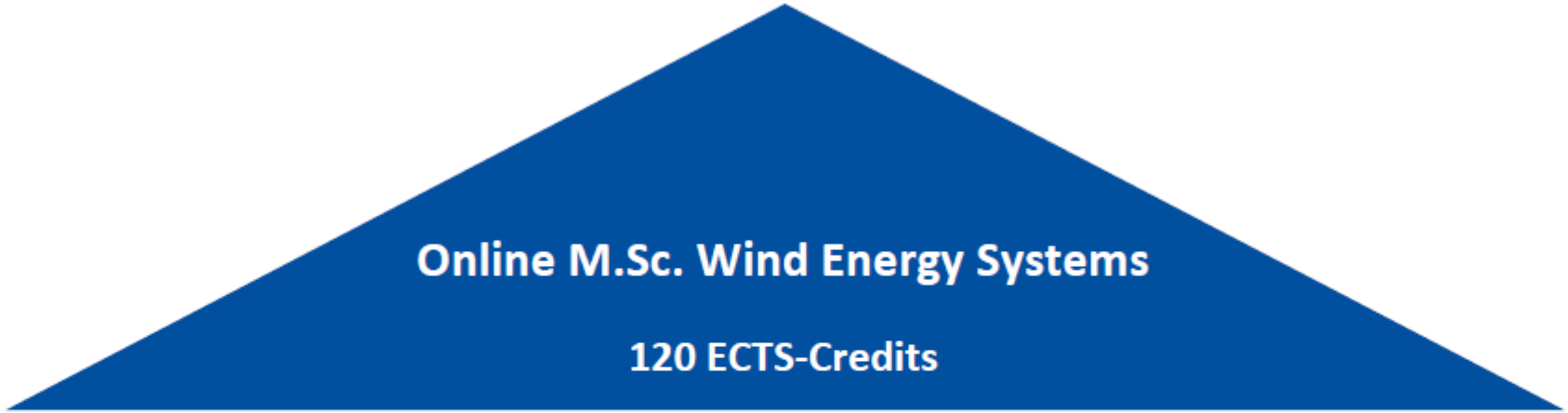
Industry

- SMA Technology
- Vortex Energy
- GLS Bank
- Dikei Abogados

Teaching alliance for your career



CURRICULUM



Master-Thesis	30 ECTS-Credits
Specializations / Additive Key-Competences	60 ECTS-Credits
Fundamentals of Mathematics and Engineering for Wind Energy Systems	30 ECTS-Credits

ASIIN Accredited Degree Programme 2015-2019

Degree:
Master of Science

Master-Thesis:
University/Research Institute/Industry

Entitle to do a PHD

Practical Phases

Practical week

- 1-week stay in Germany
- connecting with fellow students from around the world
- meet teachers of University of Kassel, Fraunhofer IEE and Fraunhofer IWES
- explore the most important native places of the Online M.Sc. Wind Energy Systems
- visit different companies in the wind energy sector
- visit of the Global Wind Summit
- create a career plan
- earn 3 credit points (key competencies)

Project phases

- to give students the opportunity to gain practical insights into the German wind energy industry
- working in projects at the University of Kassel, the Fraunhofer Institutes IEE and IWES or German firms in the wind energy sector
- earn 6 or 12 credit points

Admission Requirements and Costs of the Master's Program

1. Bachelor's degree, diploma or equivalent degree with at least 180 Credits in the subject fields
   - civil and environmental engineering, mechanical engineering, electrical engineering, physics (or a comparable study program)
2. (Or) in another program with basic subjects from the fields of
   - Mathematics, natural sciences, and achieved at least 60 credits, of which at least 18 credits are in the field of mathematics
3. Letter of motivation (max. two pages)
4. One year of professional experience after finishing the first course of higher education
5. Language skills of level B2 in English.

Study the complete Online M.Sc. Wind Energy Systems (120 Credits)

- Overall €14,000 (each semester €2,000)

  \+ Enrollment fees of University of Kassel (currently €140.70 per semester)

WES.ONLINE CERTIFICATES

Certificates of Advanced Studies

Credits: each 30 ECTS-Credits

Costs: each €6,000

Admission criteria: Bachelor's Degree in a technical or scientific course, e.g. Mechanical Engineering, Electrical Engineering

- Job experience and English language proof is not required!

Website: http://www.uni-kassel.de/uni/studium/wind-energy-system/wesonline-certificates.html

Online M.Sc. Wind Energy Systems

- **Capacity building in the field of wind energy**
- **For natural scientist and engineers**
- **Combine study and work**
  - Part time-work and study simultaneously and balance your studying and family time
  - International master´s degree program with 100% online learning program
- **Student oriented teaching**
- **Become an expert in the field of wind energy:**

Use this knowledge for a career in a company for wind park planning or in a public entity or become an expert for a single component at the development department of one of the worldwide leading producers

THANK YOU FOR YOUR ATTENTION

Online Application for Master Program (until July 15)

www.uni-kassel.de/wes

For further questions after this Online Session contact:

	Course Management	Messenger
	**Dr. André Bisevic** **Fraunhofer IEE** wes@iee.fraunhofer.de **0049-561-7294451**	WeChat
	**Julia Mergner** **University of Kassel** wes@uni-kassel.de **0049-561-8043446**	**0049 15120016078**

CARL VON OSSIETZKY universität OLDENBURG

REO

Renewable Energy Online

Master of Science

DAAD Webinar USA/Canada

October 30, 2018

Andreas Günther

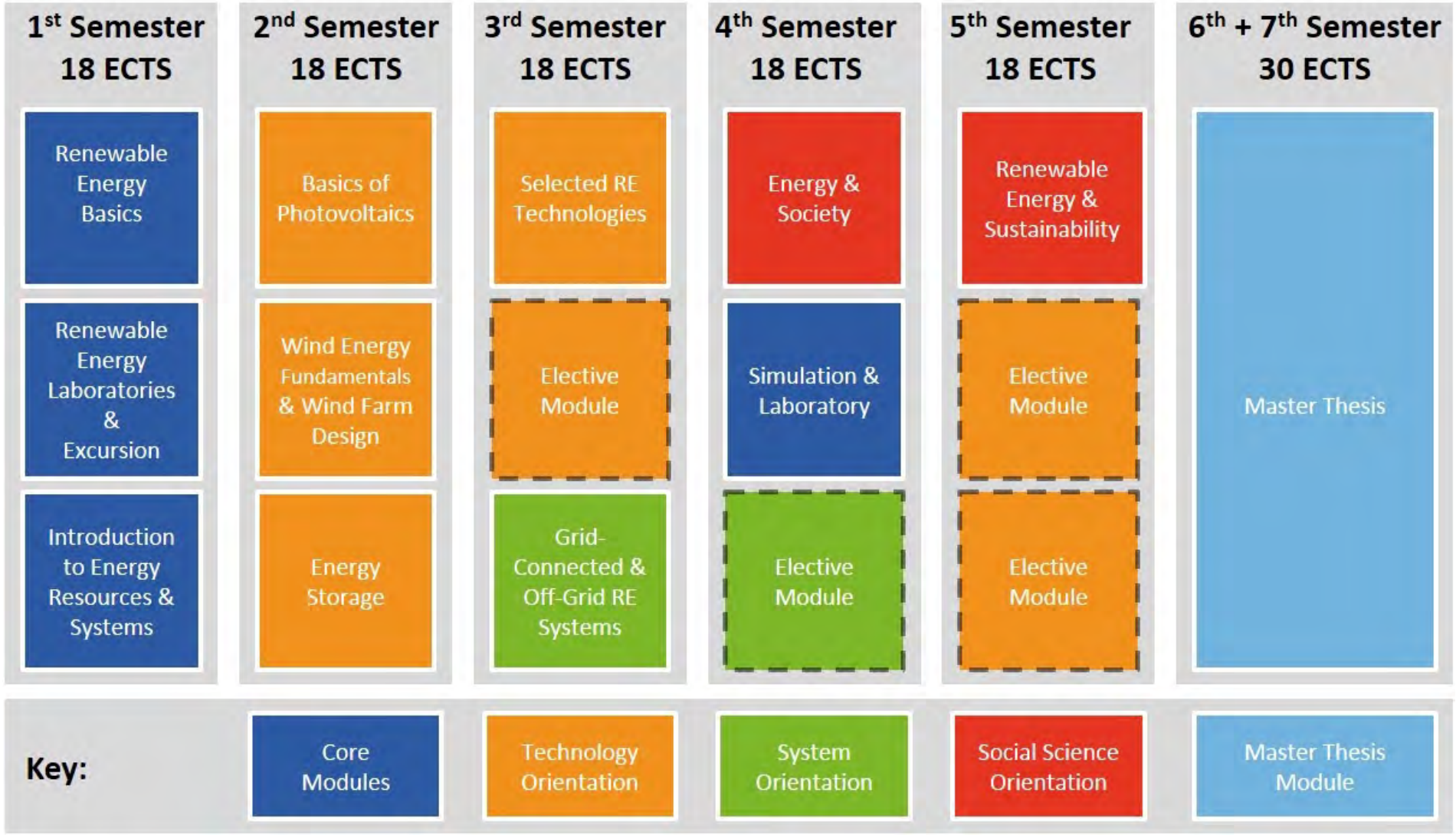
University of Oldenburg

- ~ 15,000 students
- Located in **Northwest Germa**ny
- More than **30 years of experience** in Renewable Energy research and teaching.
- ~ **500 graduates** from Renewable Energy master programmes
- **Energy research** groups: wind energy, photovoltaics, energy meteorology
- **Cooperation** with research institutes, e.g. DLR Institute for Networked Energy Systems, Fraunhofer IWES

REO at a Glance

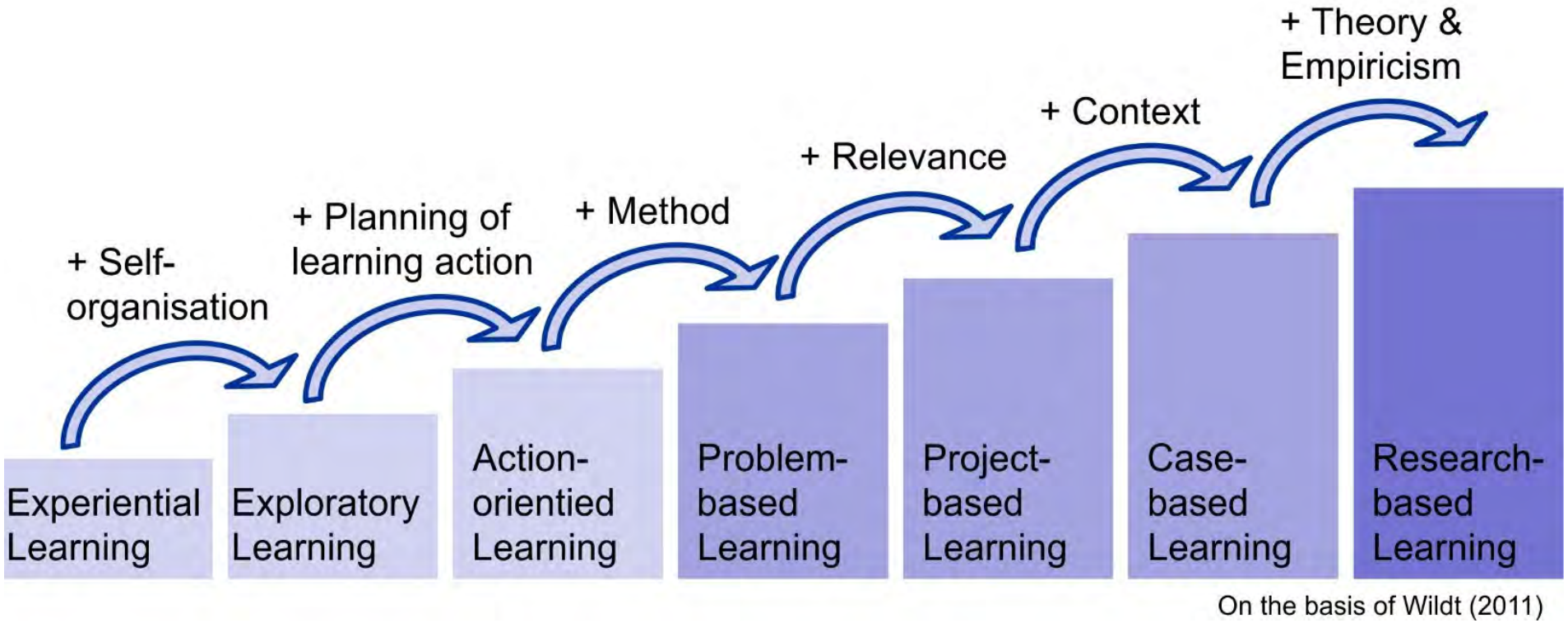
- **Topics:** Renewable Energy Technologies, Energy Systems, Sustainability
- **Target group:** engineers and natural scientists with bachelor degree
- **Blended learning:** Mainly online, two compulsory on-campus phases
- **7 semesters, part-time** (120 ECTS credits)
- **Modular design:** flexibly adaptable to your individual life situation
- Courses start **every October**
- **Application** procedure currently under revision

Curriculum


1st Semester
18 ECTS
Renewable Energy Basics
Renewable Energy Laboratories & Excursion
Introduction to Energy Resources & Systems
2nd Semester
18 ECTS
Basics of Photovoltaics
Wind Energy Fundamentals & Wind Farm Design
Energy Storage
3rd Semester
18 ECTS
Selected RE Technologies
Elective Module
Grid-Connected & Off-Grid RE Systems
4th Semester
18 ECTS
Energy & Society
Simulation & Laboratory
Elective Module
5th Semester
18 ECTS
Renewable Energy & Sustainability
Elective Module
Elective Module
6th + 7th Semester
30 ECTS
Master Thesis
Key:
Core Modules
Technology Orientation
System Orientation
Social Science Orientation
Master Thesis Module

Instructional Design

Concepts of Active and Cooperative Learning



On the basis of Wildt (2011)

Key feature: Close supervision by lecturers and mentors

Fees

Tuition Fees:

- 1,250 EUR per module
- 16 modules -> 20,000 EUR total
- Allowances for module packages: up to 20% -> 16,000 EUR total

Further Expenses:

- Semester Fee (~170 EUR)
- Travel cost for on-campus phases (2 times, two weeks each)

Application

Admission Requirements

- First academic degree (bachelor or adequate degree) from a university
- Minimum one year of professional experience
- English language level B2 according to the Common European Framework of Reference for Languages (or equivalent)

Application

- Application process currently under revision
- Information will be available at https://www.uol.de/reo/application

CARL VON OSSIETZKY universität OLDENBURG

REO

Renewable Energy Online
Master of Science

Thank you for your attention!

www.uol.de/reo

Overview

Key Facts of the Programs

Master of Science **Renewable Energy** Online

University of Oldenburg

Apply until August 31st

Seven semesters part-time

€ 20,000

whole program

Visit Us!

Master of Science **Wind Energy Systems** Online

University of Kassel and Fraunhofer IEE

Apply unitl July 15th

Seven semesters part-time

€ 14,000

whole program

Visit Us!

Master of Science **Solar Energy Engineering** Online

University of Freiburg and Fraunhofer ISE

Apply unitl August 31st

Six semesters part-time

€ 22,000

whole program

Visit Us!