

2nd INTERNATIONAL SUMMER SCHOOL "ENERGY"



July 17 - 19, 2017
University of Siegen
Germany

ENERGY
- TECHNOLOGIES - ECONOMY - SOCIETY

The 2nd International Summer School offers the chance for students and young researchers to become aware of the fast growing energy demands and to tackle the problems inevitably going hand in hand. Thematic areas are policies and strategies, technologies of energy systems and education. A further focus is on non-renewable versus renewable energy and energy saving strategies.



Polytechnic
University of
Tirana



Energieverein
Siegen-Wittgenstein e.V.

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Erasmus+ Programme
of the European Union



PROJECT OBJECTIVES AND CONCEPT

Future energy supply demands a tremendous change in infrastructure worldwide. The development of new power generating utilities and net concepts requires a energy policy that carefully balances economical, environmental and social impact. New technical specifications for realisation may evolve. Private/public partnerships can resolve economical issues and project realisation, but at the same time public interests must be addressed by governments, backed scientifically by institutions such as universities or other research establishments.

The overall objectives of the summer school are

- Creating an international forum for an open discussion on energy issues
- Addressing and comparing energy policies, strategies and mitigation/adaption instruments
- Demonstrating technological methods and solutions (non-renewable/renewable solutions)
- Defining the future role of academia in energy engineering with a special focus on technology, planning and project management, human resource development, continuous education
- Engaging students as researchers
- Strengthening and extending the international networks between universities

PARTNERS and ACKNOWLEDGEMENT

- University of Siegen, Germany with its Centre for International Capacity Development (CICD); Prof. Dr. Th. Carolus; Prof. Dr. Thomas Seeger, Prof. Dr. Krumm
- Polytechnic University of Tirana, Albania ; Prof. Dr. A. Londo
- University of Minnesota, Duluth Campus, Prof. Dr. Alison Hoxie
- Klimaschutzbeauftragter der Stadt Siegen und Geschäftsführer Energieverein Siegen-Wittgenstein e.V., Paul Hartmann
- Gesellschaft der Freunde und Förderer der Universität Siegen e.V.
- Rektorat der Universität Siegen
- RothaarWind GmbH & Co KG, Günter Pulte
- AWG Abfallwirtschaftsgesellschaft mbH Wuppertal
- European Commission with its ERASMUS+ programme

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VENUE

University of Siegen, Artur-Woll-Haus (AE), Am Eichenhang 50, 57076 Siegen

PROGRAM

The 2nd International summer school comprises three days.

Day 1 and 2 are dedicated to

- Presentations of research and student projects
- Laboratory visits at the University of Siegen.

Day 3 gives the participants the opportunity to visit two large facilities:

- The thermal waste treatment and power plant of the AWG Abfallwirtschaftsgesellschaft mbH in the City of Wuppertal (140 km south of Siegen)
- Wind park in Hilchenbach/Siegen (see attached map) of RothaarWind GmbH & Co KG with five large wind turbines

PROGRAM (Version 3)

Time	Monday, July 17	Tuesday, July 18
09:00	Opening Session <i>Carolus, Lamani, Hartmann, ...</i>	Session 4 <i>Chair: A. Dorri</i>
	Session 1 <i>Chair: A. Lamani, Albania</i>	Hoxie, A.: Wind turbine research at the University of Minnesota
09:15	Hartmann, P.: Municipal measures for reducing global warming - Examples in the city of Siegen	Volkmer, K., Manegar, F., Stahl, K.: Wind turbine research at the University of Siegen
09:30	Dorri, A.: Energy audit	Schorle, L.: Prediction of noise from large scale turbines
09:45	Alcani, M, Dorri, A.: Municipal waste treatment and thermal treatment for energy generation - a case study in the city of Tirana	Kaufmann, N.: Hydraulic turbines for harvesting tidal current energy
10:00	Plenary discussion of Session 1	Plenary Discussion of Session 4
10:30 - 11:00 Coffee Break		Coffee Break
	Session 2: <i>Chair: T. Carolus, Germany</i>	Session 5 <i>Chair: Alison Hoxie, USA</i>
11:00	Bamberger, K.: Efficient fans and blowers: Aerodynamic optimization for meeting the European regulations	Coughlin, B.: Combustion and atomization of biofuels
11:15	Gjeta, A.: Case study: Parametrical study of volutes for centrifugal fans	Hoxie, A.: Solar energy and storage
11:30	Feldmann, C.: Sound quality of heating, ventilating and airconditioning systems: Psychoacoustic assessment of fans	Shira, A, Lamani, A.: The use of photovoltaics for production of electricity in Albania
11:45	Plenary discussion of Session 2	Plenary Discussion of Session 5
12:15 - 13:30 Poster Session Student Project No. 1 and Lunch		Poster Session Student Project No. 2 and Lunch
	Session 3: Student Project No. 1 <i>Chair/Cochair: Irsi Gezhilli/Max Schüssler</i>	Session 6: Student Project No. 2 <i>Chair/Cochair: Xhilda Muca/Manuel Gipperich</i>
14:00	Small buoyant airborne wind turbine	Solar driven fan unit for a solar dryer
14:30	Plenary discussion of Session 3	Plenary discussion of Session 6
15:15-16. :30	Visit of the laboratory Prof. Krumm/Uni Siegen: Brennstoffgranulaterzeugung; Wirbelschichtfeuerung; Katalysator-Testanlage	Visit of the laboratory Prof. Seeger/Uni Siegen: Combustion and internal combustion engines

Wednesday, July 19
<p>Guided facility tour through the Thermal waste treatment and power plant in Wuppertal <i>Chair: Kaufmann</i></p> <p>Note: 09.00: Bus leaves at the upper Paul-Bonatz-parking lot for Wuppertal</p> <p>At around 18.00 the bus will bring the participants to the wind park Hilchenbach/Siegen</p>
<p>18.00 Concluding session and fair-well party at wind turbine no. 1 in the wind park Hilchenbach/Siegen</p>

1) Address of Thermal waste treatment and power plant

AWG Abfallwirtschaftsgesellschaft mbH Wuppertal
Frau Diana Boiko
Korzert 15
D-42349 Wuppertal
www.awg.wuppertal.de

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2) Map wind park Hilchenbach/Siegen

