



HEBA – High level rEnewabBle and energy efficiency mAster courses

# Train of Trainers Workshop Hamburg

 $18^{th} - 22^{nd}$  of February, 2019

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## **1** Overview about Participants and Lecturers

In Table 1 the participants of all different Egyptian, Lebanese and Jordanian Partner Universities are listed. Unfortunately, from JUST University, there was no participant sent since the chosen participants didn't receive their Visa.

Table 1: Participants from Egyptian, Lebanese and Jordanian Partner Universities

University	Participant Name		
Arab Academy for Science and Technology and Maritime Transport	Hatem Diab		
recimology and martime transport	Mahmoud Abdelsalam		
American University of Beirut	Mohamad Ahmad		
	Riad Chedid		
	Nesreen Ghaddar		
	Kamel Ghali		
Helwan University	Adel Elsamahy		
	Ahmed Ayman		
	Karam Mohamed		
	Said Elmasry		
Lebanese University	Elias Kinab		
	Clovis Francis		
University of Jordan	Dia Abu-Nadi		

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In Table 2 the agenda of the week including all lecturers from Hamburg University of Technology as well as all external Lecturers from different companies are listed with the topics of their contribution.

Table 2: Agenda of the week

Date	Time	Content	Responsible	
	09:00 - 09:30	Welcome Speech	Martin Kaltschmitt	
	09:30 - 10:30	Biogas (Part 1)	TUHH / IUE	
Mon.	11:00 - 12:30	Biogas (Part 2)		
18/02/2019	13:30 - 15:00	Combustion	Isabel Höfer	
Biomass			TUHH / IUE	
	15:15 – 16:00	Bio-Refinery	Anne Lamp TUHH / IUE	
		Photovoltaics (Components &		
	09:00 - 10:30	plants)	Stefan Müller	
_		Photovoltaics (Operation &	Enerparc	
Tue.	10:45 – 12:15	maintenance)	·	
19/02/2019 Solar Energy	13:15 – 14:45	Solar-thermal electricity provision		
Solar Ellergy	13.13 - 14.43	systems (Components & plants)	Martin Schlecht	
	15:00 - 16:00	Solar thermal electricity provision	Suntrace	
	13.00 10.00	systems (Operation & maintenance)		
	09:00 - 10:30	Offshore Wind Energy (Wind mills &		
		foundations)	Burcu Özdirik	
Wed.	10:45 – 12:15	Offshore Wind Energy (Wind parks &	Siemens	
20/02/2019		operation) Onshore Wind Energy (Wind mills &		
Wind energy	13:15 – 14:45	operation)	Britta Reimers	
		Onshore Wind Energy (Wind parks &	Senvion	
	15:00 - 16:00	operation)		
Thu.		Excursion to Energy Hill	Marvin Scherzinger	
21/02/2019	09:00 - 16:00	Georgswerder	Alexander. Beckendorff	
21/02/2015			TUHH / IUE	
	00.00.11.00	Offshore Wind Energy – Time for	Martin Skiba	
Fr.	09:00 - 11:30	global rollout!	World Forum Offshore	
22/02/2018			Wind e.V. Martin Kaltschmitt	
	11:45 – 12:30	Conclusion and Evaluation	TUHH / IUE	

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# 2 Summary of the Workshop Days

# 2.1 Monday, 18<sup>th</sup> of February, 2019

On Monday, 18<sup>th</sup> of August, 2019 the Train-of-Trainer Workshops started at Hamburg University of Technology. Prof. Kaltschmitt started with a Welcome Speech (Figure 1).



Figure 1: Welcome Speech by Prof. Kaltschmitt

After the Welcome Speech, Prof. Kaltschmitt presented an overview about biogas usage in Germany and Europe as well as biogas technology in general.

Then, M.Sc. Isabel Höfer presented new research insights from the field of biomass combustion, followed by a presentation by M. Sc. Anne Lamp, which focused on biorefinery concepts.

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## 2.2 Tuesday, 19<sup>th</sup> of February, 2019

On Tuesday, Dr. Schlecht and Dr. Müller presented recent developments in the field of photovoltaics and solar thermal energy. Figure 2 shows the participants during the first presentation.



*Figure 2: Participants during the presentation* 

On Tuesday, there was also a mutual dinner at a restaurant in Harburg (Figure 3).







Figure 3: Mutual dinner

#### 2.3 Wednesday, 20<sup>th</sup> of February, 2019

On Wednesday Dr. Özdirik and Dr. Reimers presented recent developments in the field of offshore wind energy and onshore wind energy.





#### 2.4 Thursday, 21<sup>st</sup> of February, 2019

On Thursday, there was an excursion to Energy Hill Georgswerder, where the treatment of toxic waste as well as the renewable energy production by landfill gas, wind energy and photovoltaics was presented. Figure 4 shows the participants at the Information center there. Figure 5 shows the participants in front of the windmill-powered plant there.



Figure 4: Participants at the Information center of Energy Hill Georgswerder

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Figure 5: Participants in front of the windmill-powered plant at Energy Hill Georgswerder

#### 2.5 Friday, 22<sup>nd</sup> of February, 2019

On Friday, Prof. Skiba presented a global rollout for offshore wind energy. Afterwards, Prof. Kaltschmitt wrapped up the week.

# 3 Training Material

All presentations given at TUHH have been collected and are available via following link:

https://cloud.tuhh.de/index.php/s/niXQwLMPKoDNo4X

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## **4** Participant List

All participants had to fill a participant list in order to prove their attendance. The signed list is showed below. In the end, every participant received a certificate of attendance by Prof. Kaltschmitt.

University	Participant Name	Мо	Tue	Wed	Thu	Fri
Arab Academy for Science and	Hatem Diab	HON	Hahun Dut	Huten Dall	than Tet	Haten Dut
Technology and Maritime Transport	Mahmoud Abdelsalam	Hot	fit	Hos	lio.	the
American University of Beirut	Mohamad Ahmad	MUN	ill	al AM	un	
	Riad Chedid	Has	Bili	File	As	
	Nesreen Ghaddar	value	t	1.3	Ling	2-
	Kamel Ghali	M	n	my	un	
Helwan University	Adel Elsamahy	apt	Apr	apt	ar	- Azi
	Ahmed Ayman	Ahmed Ayman	Ahmed	Ahmed	100	A.1
	Karam Mohamed	Karam	Karon	Keram	Ran	Karam
A State	Said Elmasry	Said Elmasy	Seul	Sal	Sil	5 Elm
Jordan University of Science and	Qatada Damra					
Technology	Mohamad Al Widyan					
Lebanese University	Elias Kinab	a	le	An	w	-A-
University	Clovis Francis	N	A	D	1	a
University of Jordan	Dia Abu-Nadi	Dia Abannal	Dia	Bili	L'Abum	dit
Jordan	Mahmoud Irshidat	MOGANNAL	15 Bunnae	110-11	- Cr is with	

Figure 6: Participant List

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