

## International Student Exchange 2016 – 2019

### Student Feedback Questionnaire

The purpose of this questionnaire is to evaluate the lessons learned of the AIR international student exchange.

By filling out this feedback report, you agree that your picture and experience will be published on the homepage of the AIR project. <http://www.air-project.org/>

Name of student:	Tobias Ramm
Gender:	Male
Age:	29
Degree:	M.Sc. Energy Systems
Hosting university:	University of Zimbabwe
Sending university:	University of Applied Science Ingolstadt
Period of exchange:	21.08. – 02.09.2017
Field of study/major:	Renewable Energy, District Heating Grids
Field of interest during exchange:	Renewable Energy, Solar energy, hydro power
Further graduation plans (e.g. PhD program):	PhD

Please tick the appropriate box	I strongly agree	I agree	I neither agree nor disagree	I disagree	I strongly disagree
<b>Program</b>					
I gained insights into the practical implementation of RE in the host country (sight visits etc.)	x				
I gained knowhow in field of my study		x			
The courses were helpful for my further research				x	
The agenda was well structured		x			
<b>Organization</b>					
The journey preparations were well organized		x			
The support during the exchange was good	x				
The post processing of the exchange was well organized		x			
The reimbursement process	x				

was satisfactory					
The accommodation was pleasant	X				
Local transportation was well organized	X				
I socialized with local students		X			
I recommend the exchange	X				
Others:	<p><i>What would you like to be changed/ be improved for the future?</i> Extend the exchange to a longer period and maybe shift some activities/lecturing/presentations to an earlier point, so that there is more time to discuss at the end.</p> <p><i>Did you experience any difficulties during your exchange?</i> I didn't experience any difficulties during exchange.</p>				

I stayed for the period of two weeks at the University of Zimbabwe (UZ), located in Harare. I lived in walking distance to the university at a private place and highly recommend it, because beside my time at the university I got additional insights into the life in Zimbabwe.

My stay at UZ was mainly at the Department of Mechanical Engineering and organized by Engineer Luxmore Madiye who supported me during my stay and guided me through the different activities. I also got an own office where I prepared my lectures and proofread a Master's thesis.

After a first introduction at the department, where I got to meet the different members, we made a tour through the different laboratories and the department. My activities during the two weeks were the following:

- Attending of putting thermosiphon systems in operation**  
The testing and comparing of three different thermosiphon systems is a project sponsored by ZERA with the aim to give advice which system they promote in a bigger scale for the installation at private households. A resource analysis was already done in a first step of the project.
- Visiting the Harare Agriculture Show**  
Together with Eng. Madiye I visited the Harare Agriculture Show. As the name indicates, the main subject of the expo is farming and surrounding topics, but also technical and energy related topics were addressed. We focused on these exhibitors and had interesting conversations for instance with the electrical energy supplier and a company who is selling different types of small scale PV-systems.
- Mechanical Engineering Board Meeting**  
I attended the merit of the Mechanical Engineering Board, which allowed me to get an interesting insight of the organizational structure.
- Attending wind lecture**  
I attended some lectures of the Master's course Wind Energy. During my stay the first part of the lecture was taught, which focused on the analysis of the wind energy potential.

- **Excursion to PV powered tollgate**  
With Eng. Madiye and Eng. Hove we visited a PV with battery operated toll gate. We got a tour through the gate and saw the installed panels on the gate as well as the inverters, the control, battery and back-up system. The company operates similar other tollgates in Zimbabwe und South Africa.
- **Delivered lectures to the topic Renewable Energies in Germany**  
I delivered two lectures (one for Bachelor and one for Master students) to the status of Renewable Energies in Germany and gave a brief review of the different technologies and applications in that field.
- **Excursion run-off-the-river hydropower stations**  
With Eng. Madiye, I did an overnight trip to the Eastern Highlands. We visited a former student of him who operates six run off-river-power plants with a designed output power of 27.5 MW. He showed us the largest one and explained us the technical details as well as the impact to the local residents.
- **Tourist program**  
At the end of my stay, we visited the Lion & Cheetah Park to see typical Zimbabwean wild life and had some delicious braai (barbecue) later in the evening.

I really enjoyed my time in Zimbabwe. It was a very good and interesting experience and I would highly recommend it.

I had some interesting technical discussions regarding opportunities, problems and project ideas with members of the university as well as with some students.

Unfortunately, the time ran out very fast in the end. A longer exchange period could be helpful to get a deeper insight and be a productive part at the host university.



Fig. 1 - Visit of the PV powered tollgate



Fig. 2 – Installation of the solar thermal testing systems



Fig. 3 - Visit of the run-off-river hydro power station (generator house)