DESERTEC Thesis Award

Investing in young academics is crucial for a sustainable and prosperous development of renewable energy in North Africa and the Middle East. The DESERTEC Thesis Award recognizes outstanding academic work in the field of renewable energy in the deserts of this region.

More than fifty students and young researchers from Europe, North Africa and the Middle East applied for the first DESERTEC Thesis Award. The jury, comprising experts from the DESERTEC Foundation, DESERTEC University Network and Dii, selected four top papers from Arabic and European countries.

The winners were awarded by Mouldi Miled, co-founder and executive director of the DESERTEC University Network, Paul van Son, CEO of Dii, as well as Dr. Thiemo Gropp, Director of the DESERTEC Foundation, during Dii's conference on the 3rd November 2011 in Cairo.

1st MENA Award:

Mohammad Hassouna, German University of Cairo, Egypt

Topic: Optimal placement of wind and solar parks in Egypt – An optimization model and solution for short and long term decision making.

This paper develops a decision support system for optimal investment and placement of renewable energy parks in Egypt. The main challenge and novelty of the approach lies in the modelling and accounts for both short and long term planning.

Born in Egypt, Mohammad Hassouna is currently enrolled as a Master student at the German University in Cairo in the field of Computer Science and Engineering. Since September 2010, Mr. Hassouna has been working as teaching assistant in the same field at the German University of Cairo.

2nd MENA Award:

Farouk Chellali, Centre for the Development of Renewable Energies (CDER), Algeria

Topic: A study of the stochastic and the cyclic behaviour of wind in Algeria

This paper draws the attention to Algeria's wind potential. In this work, the author carries out a study of the stochastic as well as the cyclical behaviour of wind in Algeria. This study can be applied, above all, in energy production planning but also urbanism, transportation or agriculture.

Mr. Chellali finished his Doctor program in electronics from the National Polytechnics School in Algiers (ENP) in 2011. From 2003 until now, Mr. Chellali has been working as researcher at the centre for the development of renewable energies (CDER) in Algeria.

1st European Award:

Johan Lilliestam and Saskia Ellenbeck, Potsdam Institute for Climate Impact Research (PIK), Sweden and Germany

Topic: Energy security and renewable electricity trade – Will Desertec make Europe vulnerable to the "energy weapon"?

Europe's energy security is a valid concern regarding power from the deserts. The general question is: Will Desertec make Europe vulnerable to extortion if it relies on North Africa for its power supply? The paper´s authors look at this question in detail and find that Europe, through various projects in numerous energy exporter countries, will diversify its energy supply and thereby reduce the risk of delivery delays.

Johan Lilliestam is currently writing his PhD in environmental sciences and policy at the Central European University in Budapest, Hungary. He also works as junior scientist at the Potsdam Institute for Climate Impact Research (PIK) in Germany and at the International Institute for Applied Systems Analysis (IIASA) in Austria.

Saskia Ellenbeck studied Political Sciences at the University of Aachen and Potsdam, Germany and graduated in September 2009. Since 2010, she has been working at the Landtag NRW (parliament of North Rhine-Westphalia, Germany) as policy advisor for a member of parliament.

2nd European Award:

Kerstin Damerau, International Institute for Applied Systems Analysis (IIASA), Austria

Topic: Costs of reducing water use of concentrating solar power to sustainable levels: Scenarios for North Africa

Besides wind energy and photovoltaic, CSP will play an important role for the development of renewable energy in North Africa and the Middle East. However, the majority of today's CSP plants also require a considerable amount of water, primarily for cooling purposes. The paper shows among others that dry cooling systems, as well as alternative water supplies, would allow for sustainable operation.

Kerstin Damerau joined IIASA's Risk, Policy and Vulnerability Program (RPV) as a Research Assistant in 2009 and is currently enrolled as a PhD student at the University of Natural Resources and Applied Life Sciences (BOKU), Vienna.

The authors of a further 6 papers were selected by the jury to receive free entrance to the conference:

Alberto Cuellar, University of Oldenburg
Water consumption in a parabolic trough solar power plant – Cooling option for reducing water needs

Lukas Streiff & Antoine Artiganave, Harvard University
Don't stop thinking about tomorrow: Barriers to trans-Mediterranean trade in solar energy and what the European Commission can do to lower them

Lars Andersen, Hertie School of Governance
The use of public finance instruments to reduce risks and barriers to private low-carbon investments in developing countries – Case study Desertec

Mohamed Labadi, University of Saad Dahlab of Blida
Assessment of wind energy resources in Algeria

Moustapha Shaaban, Cairo University
Examination of impacts that desert power generation has on EUMENA countries

Dina Abdel-Fattah, University of Amsterdam
Local participation in decision making in wind energy projects – Case study of Turkey