

International Workshop on Solar and Bio Energy Systems

Radiant light and heat from the sun has been harnessed by humans since ancient times using a range of ever-evolving technologies. Solar radiation, along with secondary solar-powered resources such as wind and wave power, hydroelectricity and biomass, account for most of the available renewable energy on earth. Only a minuscule fraction of the available solar energy is used.

Solar powered electrical generation relies on heat engines and photovoltaic. Solar energy uses are limited only by human ingenuity. A partial list of solar applications includes space heating and cooling through solar architecture, potable water via distillation and disinfection, day lighting solar hot water, solar cooking, and high temperature process heat for industrial purposes. To harvest the solar energy, the most common way is to use solar panels.

Another source of renewable energy available from materials derived from biological sources like wood, bio waste, straw, manure, sugarcane, and many other byproducts. By 2010, there was 35GW of globally installed bioenergy capacity for electricity generation. In its most narrow sense it is a synonym to biofuel, which is fuel derived from biological sources.

In Pakistan, potential for almost all types of renewable energies exists. These types include solar (PV and thermal), wind, biogas, gasification, microhydel/canal fall, biodiesel production, biomass/waste to energy production, geothermal, tidal/ocean energies, etc. On an average solar global insolation of 5–7 kWh/m²/day exists in the country over more than 95% of its area.



The objective of the Workshop is to train students and researchers through teaching and innovative ideas of presenters in the field of Solar and Bio Energy which includes; equipping them with technical knowledge and skills required for the design, operation, maintenance and evaluation of power and mechanical systems; to develop skills required to design, develop and modify indigenous solar and renewable energy technologies; to integrate academic learning with practice orientated experience and internship for career planning.

WORKSHOP SCHEDULE November 24th, 2011 (Thursday), New Senate Hall, UAF

Time	Event / Session
	Inaugural Session
09:00 am	Registration/Arrival of guests
09:05 am	Arrival of the Chief Guest Mr. Rab Nawaz, Secretary Energy Department
09:10 am	Recitation from the Holy Quran and Naat-e-Rasool (SAW)
09:20 am	Welcome address by Prof. Dr. Iqrar Ahmad Khan, Vice Chancellor, UAF
09:40 am	Key note address by Mr. Wolfgang Scheffler, Chief Executive, Solare Brucke Organization, Germany
10:00 am	Address by the Chief Guest Mr. Rab Nawaz, Secretary Energy Department
10:15 am	Vote of thanks by Rai Niaz Ahmad, Dean, Faculty of Agri. Engg. & Tech. UAF
10:30am	Refreshment (STC Hall)
11:00 am	Inauguration of the project and practical demonstration of solar food processing using Scheffler Technology
	Technical Session (Chair: Mr. Wolfgang Scheffler)
12:00 pm	Overview on spread and applications of Scheffler Reflectors (to outline the scope of the technology) by Heike Hoedt, Solare Brucke, Germany
12:30 pm	Bio Power as Alternative Energy resource for rural community by Dr. Muhammad Ashraf, AAE, AMRI, Faisalabad
12:50 pm	Energy Saving Opportunities by Dr. Jahangir Khan Sial and Dr. Zahid Mehmood Khan, BZU, Multan
01:10 pm	Medium temperature applications in post harvest and food processing using Solar Energy by Dr. Anjum Munir, Assistant Professor, Department of Farm Machinery & Power, UAF
01:30pm	Performance evaluation of a box type solar oven of by Dr. Yasir Jamil, Assistant Professor, Department of Physics, UAF
02:00 pm	Lunch Break
03:00 pm	Energy conservation approaches in agriculture by Dr. Muhammad Iqbal, Chairman Department of Farm Machinery and Power, UAF
03:20 pm	Design development of Solar Water Distiller by Professor Dr. Manzoor Ahmad, Department of Farm Machinery and Power, UAF
03:50 pm	Potential and role of renewable energy resources in mitigating the energy crisis of Pakistan by Dr. Muhammad Ghaffar Doggar
04:10 pm	Solar date drying technology in Pakistan by Dr. Munir Ahmad, ABEI, PARC, Islamabad
04:30 pm	Tea Break

International Solar Workshop Organizing Committee

1. Prof. Dr. Iqrar Ahmad Khan, Vice Chancellor, University of Agriculture, Faisalabad.
2. Prof. Dr. Rai Niaz, Dean, Faculty of Agricultural Engineering, UAF.
3. Prof. Dr. Muhammad Ashfaq, Dean Faculty of Agriculture, UAF
4. Prof. Dr. Muhammad Ashraf, Dean Faculty of Sciences, UAF
5. Prof. Dr. Laeeq Akbar Lodhi, Dean Veterinary Sciences, UAF
6. Prof. Dr. Muhammad Sarwar, Dean Faculty of Animal Husbandry, UAF
7. Prof. Dr. Muhammad Iqbal Zafar, Dean Faculty of Agricultural Economics and Rural Sociology, UAF
8. Prof. Dr. Asif Ali, Director, ORIC, UAF
9. Prof. Dr. Muhmmad Iqbal, Chairman, Dept. of Farm Machinery & Power, UAF.
10. Prof. Dr. Muhammad Younas, Chairman Deptt. of Live Stock Management, UAF
11. Prof. Dr. Manzoor Ahmad, Dept. of FMP, UAF
12. Dr. Anjum Munir, Assistant Prof, Dept. of FMP, UAF
13. Dr. Abdul Nasir, Assistant Prof., Dept. of SEE, UAF
14. Muhammad Usman Ghani, PhD Agri. Engg. Student, FMP, UAF
15. Zuhair Qamar, M.Sc (Hons.) Agri. Engg Student, FMP, UAF.
16. Muhammad Tayyab, M.Sc (Hons.) Agri. Engg Student, FMP, UAF.
17. Zawar Hussain, M.Sc (Hons.) Agri. Engg Student, FMP, UAF.
18. Mr. Faizan Majeed MSc (Hons) Agri. Engg Student, FMP, UAF.
19. Mr. Arslan Afzal MSc (Hons) Agri. Engg Student, FMP, UAF.

Please feel free to ask for further details on participation
(Individual, company stalls, and exhibition proposals):

Dr. Anjum Munir

Chief Organizer/Project Investigator

Email: anjum.munir@uaf.edu.pk

Phone: +92(41) 9200161-70 Ext: 3002

Mobile: +92-3009667687



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INTERNATIONAL WORKSHOP ON SOLAR AND BIOENERGY SYSTEMS

24th November 2011

ICDD – PROJECT
“VALUE ADDITION TO AGRICULTURAL PRODUCTS USING
SOLAR ENERGY”

DEPARTMENT OF FARM MACHINERY AND POWER
FACULTY OF AGRICULTURAL ENGINEERING & TECHNOLOGY
UNIVERSITY OF AGRICULTURE
FAISALABAD – PAKISTAN