Location of the Workshop:

Physics Laboratory I, Seminary Building, Room 214.
Department of Physics and Process Control
Szent István University
Páter K. u. 1., Gödöllő, H-2100 Hungary

SZENT ISTVÁN UNIVERSITY GÖDÖLLŐ

Department of Physics and Process Control

23rd WORKSHOP ON

ENERGY AND ENVIRONMENT

PROGRAM

November 30 - December 1, 2017

Gödöllő, Hungary

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Program

November 30 (Thursday)

14.30-17.00 Registration
Visiting the Department of Physics and Process Control
Visiting the solar installations

December 1 (Friday)

09.00-09.10 Opening the Workshop by:

Prof. I. Farkas — Head of Mechanical Engineering PhD School, Institute for Environmental Engineering Systems, Szent István University, Gödöllő, Hungary

Prof. L. Kátai — Dean of Faculty of Mechanical Engineering, Szent István University, Gödöllő, Hungary

Session 1 — *Chairmen: Prof. K. Gottschalk, Dr. I. Seres*

09.10-09.25 I. Farkas: New initiatives in the use of solar thermal energy

09.25-09.40 K. Gottschalk and R. Pecenka: A thermodynamic model for open-air drying of wood chips

09.40-09.50 I. Seres, I. Kocsány and I. Farkas: The first experiences with the operation of a transparent photovoltaic system

09.50-10.00 I. Haber and G. Bencsik: City climate measurement and simulation for smart city applications

10.00-10.10 H. Zsiborács, P. Weihs, H. Trimmel, S. Oswald, C. Gützer, I. Farkas, G. Pintér, B. Pályi: A thermal model for amorphous silicon photovoltaic technology

10.10-10.20 Sz. Bődi, P. Víg and I. Farkas: Application of thermal resistance network models for solar energy systems

10.20-10.30 B. Bagi and P. Víg: Examination of self-cleaning coatings at solar modules

10.30-10.40 Á.I. Soltész: Compost-based bioenergetic system - construction and operation experiences

10.40-11.10 COFFE BREAK

Session 2 — *Chairmen: Prof. P. Weihs, Dr. Cs. Mészáros*

11.10-11.25 M. Revesz, P. Weihs, H. Trimmel, S. Oswald, A. Schneider, S. Zamini: Investigation of higher albedo on BIPV performance and human thermal comfort

11.25-11.35 Cs. Mészáros and Á. Bálint: Projective symmetry analysis of collective elementary excitations of chain-type organic molecules relevant for solar cells

11.35-11.45 M.A. Al-Neama and I. Farkas: Daily efficiency estimation of forced convection solar air heater

11.45-11.55 J. Tóth and I.Farkas: Simulink-based study of a solar thermal system

11.55-12.05 W.M.A. Elmagid and I. Keppler: Mathematical model of the solar updraft chimney

12.05-12.15 I.R. Nikolényi: Influence of external magnetic field on solar cell relevant quasi-one dimensional materials

12.15-12.25 D. Atsu, I. Seres and I. Farkas: Performance evaluation of solar photovoltaic module under real conditions

12.25-12.35 A. Barczi and G. Géczi: Forwarding the wastewater treatment - treatment and the society

12.35-14.00 LUNCH BREAK

Session 3 — *Chairmen: Prof. I. Farkas, Dr. A. Kovács*

14.00-14.15 A. Kovács: Some application of infrared thermo-camera from agricultural basic research to testing grain dryers

14.15-14.25 Gy. Ruda: Energetic reserves of the built environment

14.25-14.35 Z. Kapros: Different methods for the prime energy factor of the Hungarian electricity system

14.35-14.45 A. Dhaundiyal, M.M. Hanon, S.B. Singh: Approximation for parabolic ramping of temperature

14.45-14.55 Kh.E. Zehouani and A. Boukhari: Study of Rayleigh Benard convection by Lattice Boltzmann method

14.55-15.05 P. Hermanucz, G. Géczi, I. Barótfi: Analysis of multi resources heat pump

15.05-15.15 S. Bartha, L.C. Duarte, F. Carvaheiro, B. Vajda: Integrated farm-based biorefinery model, developed for rural villages

15.15-15.25 D. Rusirawan, D. Suhaya, I. Farkas: Study of a solar chimney power plant

15.25-15.35 CLOSING