

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**

24<sup>th</sup> WORKSHOP ON

**ENERGY AND ENVIRONMENT**

PROGRAM

December 6-7, 2018

Gödöllő, Hungary

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**Program**

**December 6 (Thursday)**

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

**December 7 (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. Kátaí Dean of Faculty of Mechanical Engineering  
Szent István University, Gödöllő, Hungary  
*Session 1* *Chairmen: Prof. I. Farkas  
Dr. D. Rusirawan*  
09.10-09.25 I. Farkas: New achievements in solar PV industry  
09.25-09.40 D. Rusirawan and I. Farkas: Characteristics comparison of the first and the second generation of photovoltaic module technologies – a perspective for Indonesian weathers  
09.40-09.50 L. Szulyovszky and Gy. Ruda: Controlling harmful building materials and radiation in environmental economy  
09.50-10.00 Z. Kapros: Engineering-oriented approach for the general definition of small-scale systems  
10.00-10.10 M.A. Al-Neama and I. Farkas: Air mass flow rate effect on the performance of double-pass solar air heater  
10.10-10.20 I.R. Nikolényi, Cs. Mészáros and Á. Bálint: Theoretical study of conjugated polymers for solar cell applications  
10.20-10.50 COFFE BREAK  
*Session 2* *Chairmen: Dr. I. Seres  
Dr. L. Hartawan*  
10.50-11.05 L. Hartawan, T. Shantika, D. Rusirawan and I. Farkas: Wireless monitoring system for mobile hybrid PV – PICO hydro power plant using nRF24L01 and Arduino  
11.05-11.15 I. Seres and I. Kocsány: Experiences with the operation of a small size transparent photovoltaic system

11.15-11.25 S. Gubán and P. Víg: Heat storage at high temperature with phase change materials  
11.25-11.35 B. Bokor, D. Eryener, H. Akhan and L. Kajtár: Cooling load reduction with transpired solar collectors  
11.35-11.45 H. Zsiborács, G. Pintér, N. Hegedűsné Baranyai: Photovoltaic capacity change in the future based on EU CO scenarios in EU  
11.45-11.55 Sz. Bódi, P. Víg and I. Farkas: Use of paraffin wax and water for heat storage in solar systems  
11.55-12.05 G. Bencsik, I. E. Háber and I. Farkas: Preparing climate data and city model for computational fluid dynamics simulation  
12.05-13.30 LUNCH BREAK  
*Session 3* *Chairmen: Prof. I. Farkas  
Dr. P. Víg*  
13.30-13.40 A. Szilágyi, I. Farkas, I. Seres: Application of evaporation cooling with solar energy  
13.40-13.50 J. Tóth and I. Farkas: Implementing database support for SIMULINK applied for solar thermal systems  
13.50-14.00 W.M.A Elmagid, I. Keppler and I. Molnár: Blade calculation for turbine working solar chimney updraft tower  
14.00-14.10 D. Alok and L. Tóth: A New methodology for solving biomass pyrolysis problem  
14.10-14.20 D. Atsu, I. Seres and I. Farkas: Investigation of the thermal behaviour of solar PV modules  
14.20-14.30 G. Habtay and I. Farkas: Effect of types of chimney in an indirect passive solar dryer  
14.30-14.40 M. Haekal, D. Rusirawan and I. Farkas: Design of wind turbine blade under Indonesian wind conditions  
14.40-15.00 COFFE BREAK  
*Session 4* *Chairmen: Dr. S. Bartha  
Dr. Cs. Mészáros*  
15.00-15.15 S. Bartha, F. Carvalheiro, P. Moniz, L.C. Duarte: Selective fractionation of energy crops within the biorefinery  
15.15-15.25 A. Barczy, G. Géczi: Analysis of energy reed growing on wastewater  
15.25-15.35 P. Hermanucz, G. Géczi, I. Barótfi: Analysis of multi resources heat pump  
15.35-15.45 Z. Patonai and G. Géczi: Waste management of a temporary facility  
15.45-16.00 CLOSING