

Location of the Workshop:

Engineering Informatics Centre (Room MIK 25)
Institute of Technology
Hungarian University of Agriculture and Life Sciences
Páter K. u. 1., Gödöllő, H-2100 Hungary
Google maps: 47.59254220146795, 19.3648069886929

Google Meet link:
<https://meet.google.com/uhy-jrfr-ppm>



HUNGARIAN UNIVERSITY OF AGRICULTURE AND LIFE SCIENCES

30th WORKSHOP ON

ENERGY AND ENVIRONMENT

PROGRAM

December 12-13, 2024

Gödöllő, Hungary

Program**December 12 (Thursday)**

14.30-17.00 Registration
Visiting the Department of Physics
Visiting the solar installations

December 13 (Friday)

08.30-08.45 Opening the Workshop by:

Prof. I. Farkas	Founding Chairman of the Workshop Hungarian University of Agriculture and Life Sciences, Gödöllő, Hungary
Prof. I. Szabó	Vice rector for Education and International Relations Hungarian University of Agriculture and Life Sciences, Gödöllő, Hungary
Prof. L. Kátai	Deputy director of Institute of Technology Hungarian University of Agriculture and Life Sciences, Gödöllő, Hungary
Dr. L. Székely	Director of Institute of Mathematics and Basic Science Hungarian University of Agriculture and Life Sciences, Gödöllő, Hungary

Session 1**Chairmen: Prof. I. Farkas
Prof. L. Kátai**

08.45-09.00 I. Farkas: RECENT ADVANCES IN THE FIELD OF PHOTOVOLTAIC TECHNOLOGIES

09.00-09.10 P. Weihs, S.Thaler, K. Berger, J. Eitzinger, A. Mahnaz, V. Shala-Mayrhofer and S. Zamini: RADIATION LIMITED YIELD POTENTIAL OF MAIN CROPS UNDER SELECTED APV-DESIGN TYPES - A CASE STUDY FROM SPECIFIC SITE IN AUSTRIA

09.10-09.20 S. Bartha, F. Carvalheiro, L.C. Duarte, N. Antal: EFFICIENT ADDED VALUE PRODUCT EXTRACTION AND XYLITOL PRODUCTION FROM ENERGY WILLOW – A SUSTAINABLE BIOREFINERY APPROACH

09.20-09.30 Maytham H. Machi, I. Farkas, and J. Buzás: MATHEMATICAL MODELLING AND EXPERIMENTAL VALIDATION OF DOUBLE-PASS SOLAR AIR COLLECTORS

09.30-09.40 X. Wang, B. Batbold, D. Zhengqi, Cs. Mészáros, Á. Bálint: TESTING THE NITRATE CONTENT OF FRUIT AND VEGETABLES AVAILABLE IN DIFFERENT SHOPS

09.40-09.50 H. Kidane, J. Buzás, and I. Farkas: MODELING THE DRYING KINETICS OF GOLDEN APPLE IN SOLAR SYSTEMS USING THIN LAYER EQUATIONS

09.50-10.00 T. Negash, I. Seres, I. Farkas: SOLAR PV FORECASTING USING DEEP NEURAL NETWORK

10.00-10.10 L. Hartawan, N. Nugraha, M. Iqbal, D. Rusirawan and I. Farkas: GREENHOUSE TEMPERATURE AND HUMIDITY MONITORING SYSTEM BASED IoT and ESP-NOW PROTOCOL

10.10-10.20 N.D. Anggraeni, I. Seres, and I. Farkas: THE SIGNIFICANCE OF ASSESSING THE PERFORMANCE OF SEMI-TRANSPARENT PHOTOVOLTAICS IN AGRICULTURE

10.20-10.30 A. Altaye, P. Víg, I. Farkas: IMPACT OF INPUT PARAMETERS ON ANN POWER PREDICTION PERFORMANCE FOR PHOTOVOLTAIC SYSTEMS

10.30-10.40 M. Rátkai, G. Géczy, R. Kicsiny, and L. Székely: EXPERIMENTS AND NEW PHYSICALLY-BASED MATHEMATICAL MODEL FOR A RECENTLY INVENTED SOLAR POT

10.40-11.00 *COFFE BREAK*

Session 2**Chairmen: Prof. D. Rusirawan
Dr. P. Víg**

11.00-11.10 P. Víg: SPECTRUM ANALYSIS OF LIGHT REFLECTED FROM SOLAR CELL

11.10-11.20 D.I. Permana, D. Rusirawan and I. Farkas: ARTIFICIAL NEURAL NETWORKS ANALYSIS IN EXPERIMENTAL ORC RESULTS

11.20-11.30 M. Usman, J. Buzás and I. Farkas: ORGANIC RANKINE CYCLE DRIVEN BY A SOLAR THERMAL SYSTEM

11.30-11.40 G. Pinter, A.S. Irshad, A. Mikhaylov: INNOVATIVE INTEGRATION OF FLOATING PHOTOVOLTAIC SYSTEMS WITH HYDROPOWER

11.40-11.50 Rifansyah, D.I. Permana, D. Rusirawan, I. Farkas: ORGANIC RANKINE CYCLE SYSTEM WITH REFRIGERANT FLUID R-134A: EVALUATION OF AN EXISTING EXPERIMENTAL FACILITY

11.50-12.00 G.N. Farros, U.A. AlBayumi, and D. Rusirawan, I. Farkas: THERMAL EFFECTS EVALUATION ON PHOTOVOLTAIC MODULES

12.00-12.10 I. Mutaqin, U.A. Albayumi, D. Rusirawan and I. Farkas: THERMAL MODEL OF PHOTOVOLTAIC MODULES: REALIZATION OF EXPERIMENTAL FACILITY USING ARDUINO MICROCONTROLLER

12.10-12.20 D.G. Subagio, Y. Radiansah, A. Rajani, R.A. Subekti, A. Fudholi, K.H. Sanjaya, H.M. Saputra, M.A. Putra, D. Rusirawan: A PORTABLE SOLAR-POWERED TELESCOPIC LAMP: DEVELOPMENT OF PROTOTYPE

12.20-12.30 M.D.A. Muluk, L. Lidyawati, D. Rusirawan, and I. Farkas: EVALUATING THE ACCURACY OF SARIMA MODELS FOR SOLAR ENERGY PRODUCTION IN PV SYSTEM

12.30-12.40 M.D. Royandi, T. M. Hasibuan, N. Nugraha, D. Rusirawan, F. Hadiatna, D. Fauziah, I. Farkas: STUDY COMPARISON OF CHARACTERISTICS OF 50 Wp MONOCRYSTALLINE PHOTOVOLTAICS WITH AND WITHOUT COATING: INITIAL EXPERIMENT

12.40-12.50 D.S. Manopo, U.A. Albayumi, D. Rusirawan, I. Farkas: AGRIVOLTAIC SYSTEMS: APPLICATION PURPOSE AND ITS CONTROL

12.50-14.00 *LUNCH BREAK*

Session 3

**Chairmen: Dr. I. Seres
Dr. S. Bartha**

14.00-14.10 A. Horel, Zs. Csaba, M. Magó and I. Seres: IDENTIFYING GREEN AREAS BY "SATELITE" IMAGE ANALYSIS

14.10-14.20 I.R. Nikolényi, Z. Gémesi: EDUCATIONAL EXPERIENCES ON THE LATEST RESULTS IN THE METROLOGY OF ALPHA EMITTING MATERIALS

14.20-14.30 S. Bartha and N. Antal: ECOLOGICAL STATE OF THE ARTE STUDY OF THE WATER QUALITY OF "ROMANIAN LAKE PADURENI-BESENYŐI TÓ" – EUTROPHICATION

14.30-14.40 A.S. Ardi, D. Rusirawan, I. Farkas: A WASTE TO ENERGY: PERSPECTIVE AND PROSPECTIVE

14.40-14.50 M.F. Hanif, D. Rusirawan and M. Božikova: IMPACT OF THERMAL ENERGY ON SOLAR MODULE EFFICIENCY

14.50-15.00 QuanKun Zhu, I. Farkas and J. Buzás: PERFORMANCE ANALYSIS OF SINGLE-PASS SOLAR AIR COLLECTOR USING COMSOL SOFTWARE

15.00-15.10 F. Touaref, I. Seres and I. Farkas: CYLINDRO-PARABOLIC COLLECTOR: THERMAL AND DESALINATION ENHANCEMENTS

15.10-15.20 Z.M. Azkiya, A. Taufik, and D. Rusirawan: RELIABILITY AND MAINTENANCE OF GAS TURBINE VALVES: A REVIEW

15.20-15.30 D.M. Fadillah, D. Rusirawan, and A. Taufik: RELIABILITY AND MAINTENANCE PLAN OF GAS TURBINE BLADE: AN OVERVIEW AND LESSON LEARNED

15.30-15.40 Fernando, D. Rusirawan and A. Taufik: RELIABILITY ANALYSIS OF FRANCIS TURBINES: PRELIMINARY STUDY

15.40-15.50 M.A. Febrianto, D. Rusirawan: HEATLESS TECHNOLOGY IN STEEL PAINTING PROCESS: AN OVERVIEW

15.50-16.00 *CLOSING*