

MORNING SESSION (29th May, 2013)

(Main Hall) Chairman: dr. Diana Meilutytė-Barauskienė	
8.30-9.00	Registration
9.00-9.20	Welcome
9.20-9.45	Axel Winter (ITER Organisation, France). ITER & nuclear fusion: Energy source for the future
9.45-10.10	Dalius Klyvis (AGA, Lithuania). AGA contributes to environmentally friendly energy application in the Baltic Sea area.
10.10-10.35	Jurga Lazauskienė (Lithuanian Geological Survey under the Ministry of Environment Vilnius University, Lithuania). Unconventional hydrocarbons potential in Lithuania

10.35-11.00 Coffee break

SECTION A (29th May, 2013)

2. RENEWABLE ENERGY SOURCES	
Section A1 (Main hall) Chairman: dr. Diana Meilutytė-Barauskienė	
11.00-11.20	T. O. Antoshchuk (The Gas Institute of National Academy of Sciences of Ukraine, Ukraine). Investigation of biomass gasifier to produce heat and electricity for industrial applications in Ukraine. Official reviewer: N. Striūgas
11.20-11.40	R. Džiugaitė-Tumėnienė, V. Jankauskas (Vilnius Gediminas Technical University, Lithuania). Integration and optimization of renewable energy sources in a low energy house. Official reviewer: E. F. Dzenajavičienė
11.40-12.00	P. Dumitriu, A. Mirzac, T. Potlog (Moldova State University, Moldova), N. Maticiuc (Tallinn University of Technology, Estonia). CdTe thin film solar cells with nanocrystalline ZnSe buffer layer. Official reviewer: L. Marcinauskas
12.00-12.20	K. Januševičius, E. Jaraminienė (Vilnius Gediminas Technical University, Lithuania). Parametric study of the solar assisted heat pump performance. Official reviewer: E. Perednis
12.20-12.40	P. Šipkovs, M. Vanags (Institute of Physical Energetics, Latvia), A. Snegirjovs (Riga Technical University, Latvia). Photovoltaic batteries with modified glazing. Official reviewer: A. Jonaitis

12.40-13.40 Lunch

2. RENEWABLE ENERGY SOURCES	
Section A2 (Main hall) Chairman: dr. Diana Meilutytė-Barauskienė	
13.40-14.00	K. Vagolinš, G. Frīdenbergs, P. Šipkovs (Riga Technical University, Latvia). The GHG emissions model study for straw fired boilers. Official reviewer: E. F. Dzenajavičienė
14.00-14.20	T. Vonžodas, M. Valantinavičius (Lithuanian Energy Institute, Lithuania). Investigation of solid biofuel powered boilers – performance, efficiency and emissions. Official reviewer: I. Kliopova
14.20-14.40	V. Žėkas, V. Martinaitis (Vilnius Gediminas Technical University, Lithuania). Exergy assessment of air flow in the site of the building. Official reviewer: V. Kveselis

14.40-15.00	A. P. Tsitovich, A. A. Khartonik (Luikov Heat & Mass Transfer Institute, Belarus). Experimental investigation of solid sorption cooler with improved low temperature sorber by micro heat pipe effect. Official reviewer: G. Streckienė
15.00-15.20	P. Seniūnas (Lithuanian Energy Institute, Lithuania). Review of renewable energy sources use in Lithuania's energy sector. Official reviewer: A. Malakauskaitė

15.20-15.40 Coffee break

2. RENEWABLE ENERGY SOURCES		7. MATERIALS SCIENCES AND TECHNOLOGY	
Section A3 (Main hall)			
Chairman: dr. Asta Narkūnienė/dr. Diana Meilutytė-Barauskienė			
15.40-16.00	A. Putnina, S. Kukle (Riga Technical University, Latvia), J. Gravitis (Latvian State Institute of Wood Chemistry, Latvia). An environmentally friendly method for microfibrillated cellulose extraction from hemp. Official reviewer: V. Vaitkevičienė		
16.00-16.20	R. P. Deksnys, A. Stankevičius (Kaunas University of Technology, Lithuania). Investigation of solar photovoltaic and wind power generation. Official reviewer: M. Krakauskas		
16.20-16.40	A. Fitriani, A. Purnomo (Semarang State University, Indonesia). Utilization of Tanjung (mimusops elengi) fruits as a renewable energy source for the future. Official reviewer: K. Venclauskas		
16.40-17.00	I. G. Inculet (Moldova State University, Moldova). Window layer thickness influence on the photoelectrical properties of ZnSe-CdTe heterostructures. Official reviewer: V. Stankus		
17.00-17.20	S. M. Danilova-Tretiak, L.E. Evseeva, S.A. Tanaeva (A. V. Luikov Heat and Mass Transfer Institute, Belarus). Thermal conductivity of conventional Cfrps and CNT-nanocomposites under alternating heat impact. Official reviewer: R. Kalpokaitė-Dičkuvienė		

17.20-17.40 Coffee break

4. ENERGY EFFICIENCY AND RELIABILITY	
Section A4 (Main hall)	
Chairman: dr. Diana Meilutytė-Barauskienė	
17.40-18.00	G. Plavenieks, A. Lesinskis (Riga Technical University, Latvia). Analysis of using double by-pass in the air handling unit's with counter flow heat exchangers. Official reviewer: A. Stankevičius
18.00-18.20	K. Grinbergs (Institute of Physical Energetic, Latvia), P. Shipkovs (Riga Technical University, Latvia). Heat rate optimization opportunities. Official reviewer: E. Biekšienė
18.20-18.40	V. Jurkans, J. Blums (Riga Technical University, Latvia). Improving the efficiency of Peltier cooling with recuperative power Management. Official reviewer: V. Motuzienė

19.00 Conference dinner (canteen)

SECTION B (29th May, 2013)

8. INVESTIGATIONS OF COMBUSTION AND PLASMA PROCESSES	
Section B1 (Room AK-202) Chairman: dr. Agnė Bertašienė	
11.00-11.20	U. M. Bahach, S. V. Vasilevich, M. V. Malko (Institute of Energy, Belarus). Numerical and experimental studies of biomass pyrolysis. Official reviewer: N. Striūgas
11.20-11.40	A. Tamošiūnas, P. Valatkevičius, V. Grigaitienė, V. Valinčius (Lithuanian Energy Institute, Lithuania). Characteristics of water vapor plasma torch used in thermal plasma reforming. Official reviewer: L. Pranevičius
11.40-12.00	V. I. Ignatenko, S.I. Shabunja, V. V. Martynenko (A. V. Luikov Heat and Mass Transfer Institute, Belarus). Development of algorithms for simulation of iron rod combustion in oxygen with the detachment of the drop. Official reviewer: R. Navakas
12.00-12.20	R. Paulauskas, A. Džiugys, N. Striūgas (Lithuanian Energy Institute, Lithuania). Numerical models of wood pellet shrinking on pyrolysis. Official reviewer: E. Kazakevičius
12.20-12.40	K. Zakarauskas, N. Striūgas, G. Stravinskas (Lithuanian Energy Institute, Lithuania). Optimization of thermal decomposition process of biomass pyrolysis tars for the production of high calorific gases. Official reviewer: L. Miknius

12.40-13.40 Lunch

8. INVESTIGATIONS OF COMBUSTION AND PLASMA PROCESSES	3. SMART ENERGY NETWORKS
Section B2 (Room AK-202) Chairman: Darius Laurinavičius	
13.40-14.00	A. Saliamonas, N. Striūgas, R. Navakas (Lithuanian Energy Institute, Lithuania). Optimization of combustion process by characterization of the flame parameters using chemiluminescence phenomenon. Official reviewer: K. Buinevičius
14.00-14.20	D. Ališauskas, R. P. Deksnys (Kaunas University of Technology, Lithuania). Investigation of efficiency of power balancing in the power system of the variable speed pumped storage unit. Official reviewer: M. Krakauskas
14.20-14.40	O. Kochukov, A. Mutule (Institute of Physical Energetic, Latvia). Tasks of transmission planning in competitive energy market. Official reviewer: A. Pažėraitė
14.40-15.00	A. Lvovs, A. Obushevs, A. Mutule (Institute of Physical Energetics, Latvia). Development of the model for small scale asynchronous generator connection impact assessment on distribution network. Official reviewer: A. Klementavičius
15.00-15.20	A. Obushevs, I. Oleinikova (Institute of Physical Energetics, Latvia). AC and DC optimal power flow models for long-term development planning. Official reviewer: S. Kadiša

15.20-15.40 Coffee break

SECTION B (CONT.)

3. SMART ENERGY NETWORKS		4. ENERGY EFFICIENCY AND RELIABILITY	
Section B3 (Room AK-202) Chairman: dr. Aleksandr Lvovs			
15.40-16.00	<u>N. Radziukynienė</u> (Lithuanian Energy Institute, Lithuania). Multi-criteria effectiveness evaluation methodology for the analysis of switchyard modernization problem. Official reviewer: Č. Christauskas		
16.00-16.20	Yen-Huai Ma, <u>Chen-Hsuan Chang</u>, Chueh-Cheng Wu, Sy-Ruen Huang, Yu-Hua Mo, Chen-Yeon Chu (Feng Chia University, Taiwan). Fault identification in micro-hydro power generator based on the short-time fourier transform. Official reviewer: R. Alzbutas		
16.20-16.40	<u>P. Bruzgevičius</u>, V. Stankevičius, A. Burlingis, K. Banionis, D. Pupeikis (Kaunas University of Technology, Lithuania). The influence of the fourier number on the calculation accuracy of dynamic thermal transmission in multi-layer enclosures. Official reviewer: V. Kveselis		
16.40-17.00	<u>I. Gornevs</u>, J. Blums (Riga Technical University, Latvia). Investigation of electromagnetic harvester with flat structure and low voltage rectifier. Official reviewer: Ž. Nakutis		
17.00-17.20	<u>T. Iešmantas</u>, R. Alzbutas (Lithuanian Energy Institute, Lithuania). Methodology for gas transmission network age-dependent reliability assessment considering variation of incident criteria. Official reviewer: N. Listopadskis		

17.20-17.40 Coffee break

4. ENERGY EFFICIENCY AND RELIABILITY	
Section A4 (Main hall) Chairman: dr. Diana Meilutytė-Barauskienė	
17.40-18.40	See Section A.

19.00 Conference dinner (canteen)

SECTION C (29th May, 2013)

9. GLOBAL CHANGE AND ECOSYSTEMS		5. KNOWLEDGE FOR ENERGY POLICY MAKING	
Section C1 (Library) Chairman: Tadas Kaliatka			
11.00-11.20	T. Bauzha, L. Gorbachova (Ukrainian Hydrometeorological Institute, Ukraine). Features of maximum discharges change of mountain rivers in the Carpathian region: a case study of the water courses in the upper part of the Rika river basin. Official reviewer: D. Šarauskienė		
11.20-11.40	A. Jurgelėnaitė (Lithuanian Energy Institute, Lithuania). Long-term variations of the heat runoff transferred by the rivers Nemunas and Merkys. Official reviewer: Ž. Stasiškienė		
11.40-12.00	O. Koshkina, L. Gorbachova (Ukrainian Hydrometeorological Institute, Ukraine). Hydro-genetic research methods of the main factors of the spring flood in the Desna River basin. Official reviewer: J. Kažys		
12.00-12.20	A. V. Epik (National Academy of Sciences of Ukraine, Ukraine). Abatement cost analysis for greenhouse gas emission reductions in Ukraine. Official reviewer: I. Konstantinavičiūtė		
12.20-12.40	L. Rimšaitė (Mykolas Romeris University, Lithuania). Third European Union energy package implementation problems: intercourse between full ownership unbundling and foreign investment protection. Official reviewer: S. Milčiuvienė		

12.40-13.40 Lunch

5. KNOWLEDGE FOR ENERGY POLICY MAKING			
Section C2 (Library) Chairman: Laura Rimšaitė			
13.40-14.00	A. A. Mikhalevich, S. N. Nikitsin, V. A. Tkachou (Institute of Power Engineering National Academy of Sciences, Belarus). Scenarios of development of the Belarusian electricity generation system in context of fuel balance diversification and greenhouse gases emission reduction. Official reviewer: D. Tarvydas		
14.00-14.20	G. Česnakas, A. Čepinskytė (Vytautas Magnus University, Lithuania). Global Energy Security Level Assessment Index: Introduction and Application. Official reviewer: V. Matuzas		
14.20-14.40	C. M. Liu, C. Y. Chu, S. Y. Wu, Y. C. Li, Y. P. Chou (Feng Chia University, Taiwan). The economic and energy evaluation of bio-hydrogen and bio-methane production by aspen plus. Official reviewer: J. Savickas		
14.40-15.00	L. Murauskaitė (Lithuanian Energy Institute, Lithuania). The significance of district heating for the promotion of renewable energy sources demand. Official reviewer: V. Grybauskienė		
15.00-15.20	S. C. Nwanya (University of Nigeria, Nigeria), O. V. Ekechukwu (National Universities Commission, Nigeria). The energy performance of hospital buildings in Nigeria. Official reviewer: I. Konstantinavičiūtė		

15.20-15.40 Coffee break

SECTION C (CONT.)

5. KNOWLEDGE FOR ENERGY POLICY MAKING	
Section C3 (Library)	
Chairman: Lina Murauskaitė	
15.40-16.00	K. Biekša (Lithuanian Energy Institute, Lithuania). Sustainable development of regional energy system using process network synthesis method. Official reviewer: Ž. Simanavičienė
16.00-16.20	Z. Gachechiladze (Georgia Technical University, Georgia). Electricity competitive market development and regional trading perspective for Georgia. Official reviewer: A. Pažėraitė
16.20-16.40	B. Jokšas (Lithuanian Energy Institute, Lithuania), I. Žutautaitė (Vytautas Magnus University, Lithuania). Model for criticality assessment of energy infrastructure. Official reviewer: D. Biekša
16.40-17.00	L. Martišauskas (Lithuanian Energy Institute, Lithuania). Analysis of energy system vulnerability due to threats realisation.
17.00-17.20	R. Mikučionienė, V. Martinaitis (Vilnius Gediminas Technical University, Lithuania). Criteria for evaluation of energy efficiency measures in the management of building energetic characteristics. Official reviewer: R. Gatautis

17.20-17.40 Coffee break

4. ENERGY EFFICIENCY AND RELIABILITY	
Section A4 (Main hall)	
Chairman: dr. Diana Meilutytė-Barauskienė	
17.40-18.40	See Section A.

19.00 Conference dinner (canteen)

DAY 2
SECTION A (30th May, 2013)

7. MATERIALS SCIENCES AND TECHNOLOGY	
A1 (Main Hall) Chairman: dr. Diana Meilutyte-Barauskieniė	
9.00-9.20	T. Unt , M. Kriisa, A. Mere, M.Krunks (Tallinn University of Technology, Estonia). Optical properties of sprayed ZNO thin films. Official reviewer: V. Grigaitienė
9.20-9.40	S. I. Dmitriev , P.S. Grinchuk, N.V. Pavljukovich (A. V. Luikov Heat and Mass Transfer Institute, Belarus). Experimental results and mathematical model for the process of carbon black production in high temperature flow reactor. Official reviewer: N. Striugas
9.40-10.00	P. S. Grinchuk , M. V. Kiyashko (A. V. Luikov Heat and Mass Transfer Institute, Belarus). Carbon nanotubes and nanofibers synthesis by chemical vapor deposition in reactor with close gap between catalytic walls. Official reviewer: L. Marcinauskas
10.00-10.20	J. Soon , M. Krunks, V. Mikli (Tallinn University of Technology, Estonia). Properties of nio thin films prepared by chemical spray pyrolysis. Official reviewer: D. Milcius
10.20-10.40	S. Lagzdina , A. Sutka, G. Mezinskis (Riga Technical University, Latvia), J. Kleperis (University of Latvia, Latvia). Influence of the precipitation conditions on the morphology, phase purity and physical properties of magnetite nanomaterials. Official reviewer: R. Levinskas

10.40-11.00 Coffee break

A2 (Main Hall) Chairman: dr. Asta Narkunienė/dr. Diana Meilutyte-Barauskieniė	
11.00-12.00	Prof. Romas Viskanta (Purdue University, USA). Challenges for Thermal Engineers in the 21 st Century

12.00-13.00 Lunch

13.00-15.00	Visit to Scientific Labs (groups are collected on the 1st floor)
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DAY 2
SECTION B (30th May, 2013)

6. INVESTIGATIONS IN THE FIELDS OF THERMAL PHYSICS, FLUID MECHANICS AND METROLOGY	
B1 (Room AK-202) Chairman: Tomas lešmantas	
9.00-9.20	<u>Y. A. Baranyshyn</u> (A. V. Luikov Heat and Mass Transfer Institute, Belarus) . Numerical simulation of the non-isothermal growth of carbon nanoparticles from experimental data of soot formation at ethylene pyrolysis in the shock tube. Official reviewer: V. Grigaitienė
9.20-9.40	<u>D. Laurinavičius</u> (Lithuanian Energy Institute, Lithuania) . Water temperature profiles in stratified condensing two phase flow.
9.40-10.00	<u>G. Frīdenbergs, A. Lešinskis</u> (Riga Technical University, Latvia) . Supply water parameters influence on IEAC thermal performance. Official reviewer: V. Misevičiūtė
10.00-10.20	<u>A. A. Brin</u> (A. V. Luikov Heat and Mass Transfer Institute, Belarus) . Evaporative cooling of water in a natural draft cross-flow cooling tower. Official reviewer: R. Poškas

10.40-11.00 Coffee break

A2 (Main Hall) Chairman: dr. Asta Narkūnienė/dr. Diana Meilutytė-Barauskienė	
11.00-12.00	<i>Prof. Romas Viskanta (Purdue University, USA)</i> . Challenges for Thermal Engineers in the 21 st Century.

12.00-13.00 Lunch

13.00-15.00	Visit to Scientific Labs (groups are collected on the 1st floor)
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DAY 2
SECTION C (30th May, 2013)

10. FUSION ENERGY		11. NUCLEAR FISSION AND RADIATION PROTECTION	
C1 (Library) Chairman: Andrius Saliamonas			
9.00-9.20	T. Kaliatka (Lithuanian Energy Institute, Lithuania). Analysis of Thermal Hydraulic Processes during different operation modes of Wendelstein 7-X. Official reviewer: J. Gylys		
9.20-9.40	V. Barkauskas, A. Plukis (Center for Physical Sciences and Technology, Lithuania). Preparation of effective cross-section libraries for calculation of spent nuclear fuel inventory of RBMK type reactors. Official reviewer: A. Tonkūnas		
9.40-10.00	D. Justinavičius (Lithuanian Energy Institute, Lithuania). Influence of porous medium permeability on gas migration in the disposal tunnel of conceptual geological repository. Official reviewer: D. Adlienė		
10.00-10.20	A. Šutas (Lithuanian Energy Institute, Lithuania). The modelling of heat transfer processes in the dry storage spent fuel containers using RELAP5 code. Official reviewer: A. Adomavičius		

10.40-11.00 Coffee break

A2 (Main Hall) Chairman: dr. Diana Meilutytė-Barauskienė	
11.00-12.00	Prof. Romas Viskanta (Purdue University, USA). Challenges for Thermal Engineers in the 21 st Century.

12.00-13.00 Lunch

13.00-15.00	Visit to Scientific Labs (groups are collected on the 1st floor)
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DAY 3
SECTION A (31th May, 2013)

7. MATERIALS SCIENCES AND TECHNOLOGY	
A1 (Main Hall) Chairman: dr. Diana Meilutyte-Barauskieni	
9.00-9.20	R. Drunka, J. Grabis (Riga Technical University, Latvia), A. Patmalnieks (University of Latvia, Latvia). Synthesis and photocatalytic properties of modified TiO ₂ nanopores and nanotubes. Official reviewer: M. Lelis
9.20-9.40	E. P. Goncareenco, G. V. Colibaba (Moldova State University, Moldova), E. V. Monaico (Technical University of Moldova, Moldova). Obtaining of the substrates II-VI compounds and solid solutions for nanoporous structures. Official reviewer: R. Levinskas
9.40-10.00	A. Graf (Tallinn University of Technology, Estonia). Investigation of Electrophysical Properties of Cadmium Sulphide Thin Films. Official reviewer: A. Šetkus
10.00-10.20	D. Scortescu, A. Mirzac, V. Fedorov, T. Potlog (Moldova State University, Moldova). Electrophysical properties of the ZnTe/CdTe thin film heterostructures. Official reviewer: Ž. Kavaliauskas
10.20-10.40	G. Oyekoya, I. Oja Acik, M. Krunkis (Tallinn University of Technology, Estonia). Optical and structural properties of TiO ₂ thin films by chemical spray pyrolysis. Official reviewer: B. Abakeviciene

10.40-11.00 Coffee break

1. HYDROGEN AND FUEL CELLS	
A2 (Main Hall) Chairman: dr. Asta Narkunienė/dr. Diana Meilutyte-Barauskieni	
11.00-11.20	M. Kodols, S. Didrihsone, J. Grabis (Riga Technical University, Latvia). Preparation of nanosized Bismuth tungstate and its photocatalytic activity. Official reviewer: L. Marcinauskas
11.20-11.40	D. Petrulionis (Vilnius University, Lithuania). Comprehensive Sintering and conductivity study of 10% Sc ₂ O ₃ and 1% CeO ₂ co-doped ZrO ₂ . Official reviewer: B. Abakeviciene
11.40-12.00	P. Lesnicenoks (Riga Technical University, Latvia), L. Grinberga, J. Kleperis (University of Latvia, Latvia). Explanation The mechanism of hydrogen adsorption in clinoptilolite from thermogravimetric experiments. Official reviewer: D. Milcius

12.00-12.20 Coffee break

Section A3 (Main hall) Chairman: dr. Diana Meilutyte-Barauskieni	
12.20-13.20	FINAL DISCUSSION AND CLOSURE

13.30 Guided tour in city

DAY 3
SECTION B (31th May, 2013)

6. INVESTIGATIONS IN THE FIELDS OF THERMAL PHYSICS, FLUID MECHANICS AND METROLOGY	
B1 (AK-202)	
Chairman: Darius Laurinavičius	
9.00-9.20	J. Ratnieks, S. Gendelis, A. Jakovičs (University of Latvia, Latvia). Stationary heat transfer and airflow simulation for test polygon houses. Official reviewer: K. Banionis
9.20-9.40	A. Tonkonogovas, A. Stankevičius (Lithuanian Energy Institute, Lithuania). Dynamic error of the turbine gas meter at complex flow pulsation laws. Official reviewer: M. Jakubčionis
9.40-10.00	G. Gubceac, F. Paladi, A. Barsuk (State University of Moldova, Moldova). Contributions to the fluid dynamics and phase transitions at low temperatures. Official reviewer: L. Pranevičius
10.00-10.20	M. Trepulis (Kaunas University of Technology, Lithuania). Macro foam convective heat transfer in vertical cylindrical tube. Official reviewer: R. Pabarčius
10.20-10.40	O. Simbirska, S. Alyokhina (A. N. Podgorny Institute for Mechanical Engineering Problems of the National Academy of Sciences, Ukraine). Verification of flow calculation method in the near-disk gaps of high cylinder pressure stage of steam turbine. Official reviewer: M. Šeporaitis

10.40-11.00 Coffee break

1. HYDROGEN AND FUEL CELLS	
A2 (Main Hall)	
Chairman: dr. Diana Meilutytė-Barauskienė	
11.00-12.00	See section A.

12.00-12.20 Coffee break

Section A3 (Main hall)	
Chairman: dr. Diana Meilutytė-Barauskienė	
12.20-13.20	FINAL DISCUSSION AND CLOSURE

13.30 Guided tour in city