



**IV International Conference
Contemporary Problem of Thermal Engineering 2016
September 13 - 16, 2016, Katowice, Poland**

Conference Schedule

September 13th, 2016 (Tuesday)

16:00 - 20:00 **Registration** (QUBUS Hotel - Conference Centre)
20:00 - 22:00 **Welcome reception** (QUBUS Hotel - Sky Bar)

September 14th, 2016 (Wednesday)

08:00 - 19:00 **Registration** (QUBUS Hotel - Conference Centre Lobby)
08:30 - 09:00 **Opening ceremony** (Conference Centre - Plenary Room)
09:00 - 10:00 **Invited Lecture #1** (Conference Centre - Plenary Room)
Prof. C.A. Frangopoulos, School of Naval Architecture and Marine Engineering, National Technical University of Athens, Greece
 INTERTEMPORAL AND DYNAMIC OPTIMIZATION OF SYNTHESIS, DESIGN AND OPERATION OF ENERGY SYSTEMS
10:00 - 11:00 **Invited Lecture #2** (Conference Centre - Plenary Room)
Prof. G. Manfrida, Dipartimento di Ingegneria Industriale, Università degli Studi di Firenze, Italy
 EXPANDER TECHNOLOGIES FOR THERMAL DISTRIBUTED POWER GENERATION: A REVIEW
11:00 - 11:20 **Coffee break** (QUBUS Hotel - Conference Centre Lobby)
11:20 - 13:00 **Parallel sessions #1** (Conference Centre - Rooms A, B and C)

Room A

ID029	Tesch S., Morosuk T., Tsatsaronis G.	COMPARATIVE EXERGY ANALYSIS OF AN IMPROVED SYSTEM FOR THE REGASIFICATION OF LNG INTEGRATED INTO AN AIR SEPARATION PROCESS
ID157	Flórez-Orrego D., Oliveira Junior S.	EXERGY ASSESSMENT OF SINGLE AND DUAL PRESSURE AMMONIA PRODUCTION PLANTS
ID038	Voloshchuk V., Ochkov V.	NEW GENERATION OF COMPUTER-AIDED TOOLS FOR EXERGETIC ANALYSIS OF THERMAL SYSTEMS
ID046	Voloshchuk V.	EFFECT OF VARIATION OF OPERATIONAL REGIMES IN BUILDING ENVIRONMENT ON RESULTS OF APPLICATION OF EXERGY-BASED METHODS

Room B

ID173	Stanek W., Czarnowska L., Gazda W.	THERMO-ECOLOGICAL COST OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES
ID088	Rusin A., Wojaczek A.	THE IMPACT OF INCREASED OPERATION CYCLICITY ON THE RELIABILITY OF POWER UNITS AND THE ENTIRE ELECTRIC POWER SYSTEM
ID177	Rogus R., Czarnowska L., Stanek W.	NUCLEAR WASTE MANAGEMENT IN THE PERSPECTIVE OF POWER PLANT'S LIFE CYCLE ASSESSMENT
ID178	Wieczorek R., Czarnowska L., Stanek W.	THERMOECONOMIC ANALYSIS OF NUCLEAR POWER PLANT
ID158	Jędrzejewski J., Hanuszkiewicz-Drapała M.	ANALYSES OF THE EFFICIENCY OF A HIGH-TEMPERATURE GAS-COOLED NUCLEAR REACTOR (HTGR) GENERATING HEAT FOR THE SULPHUR-IODINE CYCLE

Room C

ID083	Kubica R., Mokrosz W., Szłek A.	IMPROVING ENERGY AND ENVIRONMENTAL PERFORMANCE OF COAL FUELLED BOILERS - A NEW TYPE CENTRIFUGAL DUST SEPARATOR WITH EXTERNAL FLUE RECYCLE
ID161	Trafczyński M., Markowski M., Alabrudzinski S., Urbaniec K.	THE INFLUENCE OF FOULING ON THE DYNAMICS OF A HEAT EXCHANGER NETWORK
ID035	Szega M.	AN IMPROVEMENT OF MEASUREMENTS RELIABILITY IN THERMAL PROCESSES BY APPLICATION OF THE ADVANCED DATA RECONCILIATION METHOD WITH THE USE OF FUZZY UNCERTAINTIES OF MEASUREMENTS
ID169	Buliński Z., Szczygieł I., Krysinski T., Gładysz P., Czarnowska L.	PERFORMANCE ANALYSIS OF THE SMALL SCALE ALPHA-TYPE STIRLING ENGINE USING CFD TOOLS

13:00 - 14:00 **Lunch** (QUBUS Hotel - Restaurant)

14:00 - 15:40 **Parallel sessions #2** (Conference Centre - Rooms A, B and C)

Room A

ID132	D'Amico F., Pallis P., Leontaritis A., Karellas S., Kakalis N., Rech S., Lazzaretto A.	SEMI-EMPIRICAL MODEL OF A MULTI-DIAPHRAGM PUMP IN AN ORGANIC RANKINE CYCLE TEST RIG
ID162	Plis M., Rusinowski H.	PREDICTIVE ADAPTIVE MODEL OF PG 9171E GAS TURBINE INCLUDING CONTROL ALGORITHMS
ID124	Piekarczyk W., Stanek W., Gosiewski K., Gładysz P.	COOLING, HEAT AND POWER FROM VENTILATION AIR METHANE IN THE LIGHT OF ENERGY END EXERGY ANALYSIS
ID168	Piekarczyk W., Kostowski W.	EXERGY ANALYSIS OF A BIOMASS-BASED TRIGENERATION UNIT UNDER VARIABLE REFERENCE TEMPERATURE
ID039	Blumberg T., Morosuk T., Tsatsaronis G.	EXERGY-BASED EVALUATION OF METHANOL PRODUCTION FROM NATURAL GAS

Room B

ID036	Smołka K., Dykas S., Rulik S.	A COMPARATIVE ANALYSIS OF THE PERFORMANCE OF A STEAM-GAS SYSTEM OF A VELOX-TYPE CYCLE AND A GAS-STEAM POWER STATION USING A WASTE-HEAT BOILER
ID055	Lepszy S., Chmielniak T., Mońka P.	TECHNICAL AND ECONOMIC ANALYSIS OF ENERGY STORAGE SYSTEM USING HYDROGEN UNDERGROUND RESERVOIRS WITH COVERING OF PEAK ELECTRICITY DEMAND
ID091	Stanek W., Mendecka B., Lombardi L.	ENVIRONMENTAL ASSESSMENT OF THE WIND TURBINE SYSTEMS BASED ON THERMO-ECOLOGICAL COST
ID077	Keshavarzian S., Rocco M.V., Gardumi F., Colombo E.	PRACTICAL APPROACHES FOR THE APPLICATION OF EXERGY COST THEORY TO ENERGY CONVERSION SYSTEMS

Room C

ID121	Cortes-Rodríguez E.F., Fukushima N.A., Palacios- Bereche R., Ensinas A.V., Nebra S.A.	VINASSE CONCENTRATION AND JUICE EVAPORATION SYSTEM INTEGRATED TO THE CONVENTIONAL ETHANOL PRODUCTION PROCESS FROM SUGARCANE – HEAT INTEGRATION AND IMPACTS IN COGENERATION SYSTEM
ID025	Ziębik A., Gładysz P.	SYSTEM EFFECTS OF PRIMARY ENERGY REDUCTION CONNECTED WITH OPERATION OF THE CHP PLANTS
ID040	Jaskólski M., Reński A., Minkiewicz T.	THERMODYNAMIC AND ECONOMIC ANALYSIS OF NUCLEAR POWER UNIT OPERATING IN PARTIAL COGENERATION MODE TO PRODUCE ELECTRICITY AND DISTRICT HEAT
ID076	Szega M., Żymełka P.	THERMODYNAMIC AND ECONOMIC ANALYSIS OF THE PRODUCTION OF ELECTRICITY, HEAT AND COLD IN THE CHP UNIT WITH THE ABSORPTION CHILLERS
ID147	Barbosa Y.M., da Silva J.A., Oliveira Junior S., Torres E.A.	UTILITIES PLANT SELECTION FOR FPSO

15:40 - 17:00 **Coffee break** (QUBUS Hotel - Conference Centre Lobby)

15:40 - 17:00 **Poster Session** (Conference Centre - Plenary Room)

Plenary Room

ID044	Avallone E., Mioralli P., Scalon V., Padilha A.	THERMAL PYRANOMETER USING THE ARDUINO PLATFORM FOR DATA ACQUISITION
ID070	Orzechowski T., Tyburczyk A.	HEAT TRANSFER ON FINS WITH ANISOTROPIC COATING
ID085	Chmielniak T., Łukowicz H., Pilarz P.	THERMAL FLEXIBILITY OF A TURBINE SET OPERATING IN A TWIN-BOILER SYSTEM
ID093	Porzuczek J.	ELECTRICAL IMPEDANCE TOMOGRAPHY METHOD FOR MONITORING OF DRYING THE AGRICULTURAL CROPS
ID100	Madejski P., Janda T., Taler J., Nabagło D., Węzik R., Mazur M.	ANALYSIS OF FOULING DEGREE OF HEATING SURFACES IN A PULVERIZED COAL FIRED BOILER
ID101	Grabowski M., Urbaniec K., Wernik J., Wołosz K.	ANALYSIS OF FOULING DEGREE OF HEATING SURFACES IN A PULVERIZED COAL FIRED BOILER

ID117	Eliasz J., Terelak-Tymczyna A.	THE CONCEPT AND METHODS OF DETERMINING ENERGY BASLINE
ID122	Zwarycz-Makles K., Kuczyński K.	MODELING AND SIMULATION OF SIX-BED SILICA GEL-WATER ADSORPTION HEAT PUMP
ID123	Zwarycz-Makles K., Majorkowska-Mech D.	NUMERICAL GEAR'S AND RUNGE-KUTTA DISCRETIZATION METHODS IN DIFFERENTIAL EQUATIONS OF ADSORPTION IN ADSORPTION HEAT PUMP
ID127	Zarzycki R., Panowski M.	ANALYSIS OF THE FLUE GAS PREPARATION PROCESS FOR THE PURPOSES OF CARBON DIOXIDE SEPARATION USING THE ADSORPTION METHODS
ID129	Zarzycki R., Bis Z.	MODELLING OF COAL DUST GASIFICATION USING THE WATER STEAM IN A CYCLONE FURNACE
ID135	Sztekler K.	THE THERMOELECTRIC GENERATORS USE FOR WASTE HEAT UTILIZATION FROM THE COMBINED HEAT AND POWER PLANTS
ID160	Petela K., Manfrida G., Szlęk A.	ADVANTAGES OF VARIABLE DRIVING TEMPERATUREŃ IN SOLAR ABSORPTION CHILLER
ID170	Świerzewski M., Gładysz P.	BIOMASS-FIRED CHP PLANTS - ENERGY, ECONOMIC AND ECOLOGICAL ASSESSMENT - POLAND CASE STUDY
ID176	Czop M., Pikoń K.	USE OF CASING SOIL FROM SPENT MUSHROOM COMPOST FOR ENERGY RECOVERY PURPOSES IN POLAND

17:00 - 18:40 **Parallel sessions #3** (Conference Centre - Rooms A, B and C)

Room A

ID116	Bujalski W., Rosiński K.	ANALYSIS OF OPERATION OF LARGE-SCALE CHP PLANT EQUIPPED WITH HEAT ACCUMULATOR
ID081	Pavičević M., Novosel T., Pukšec T., Duić N.	HEAT STORAGE SIZING AND OPTIMIZATION FOR DISTRICT HEATING FROM AN ENERGY PLANNING PERSPECTIVE
ID058	Vendé P.E., Trinquet F., Lacour S., Delahaye A., Fournaison L.	INFLUENCE OF POSITION AND ORIENTATION OF WATER SPRAYING ON THE EFFICIENCY OF A HEAT EXCHANGER
ID062	Sayadi S., Tsatsaronis G., Morosuk T.	EXERGY-BASED CONTROL STRATEGIES FOR HVAC SYSTEMS

Room B

ID115	Wilk M., Magdziarz A.	CONVERSION OF BIOMASS TO CLEAN SOLID FUEL USING HYDROTHERMAL CARBONIZATION
ID155	Staszczuk A., Kuczyński T.	EFFECT OF EXTENDING HOT WEATHER PERIODS ON APPROACH TO FLOOR CONSTRUCTION IN MODERATE CLIMATE RESIDENTIAL BUILDINGS
ID042	Şoriga I., Gheorghian A., Stanciu C., Stanciu D., Alexandru A.	OPTIMUM GREENHOUSE SIZE AND SHAPE FOR MINIMUM YEARLY ENERGY CONSUMPTION
ID053	Erlund R., Zevenhoven R.	THERMAL STORAGE OF (SOLAR) ENERGY BY SORPTION OF WATER IN MAGNESIUM (HYDRO) CARBONATES
ID074	Orzechowski T., Stokowiec K.	HEAT SUPPLY IMPROVEMENT BY SOLAR SYSTEM COOPERATION

Room C

ID041	Wejkowski, Wojnar	RAH-SCR SELECTIVE CATALYTIC REDUCTION IN ROTARY AIR HEATER
ID094	Kruczek T.	ANALYSIS OF THERMAL STATE OF OVERHEAD PIPELINE EXPOSED TO OPEN AIR SPACE
ID023	Pronobis M., Mroczek K., Tymoszek M., Ciukaj S., Wejkowski R., Janda T., Jagodzińska K.	OPTIMUM FINENESS OF COAL IN PULVERISED-FUEL BOILERS
ID024	Nabagło D., Bil T., Janda T., Wojdan K.	COMBUSTION PROCESS ANALYSIS USING THE FLAME SCANNERS IN FRONT-FIRED PULVERIZED COAL BOILER
ID057	Bil T., Wojdan K., Nabagło D., Świrski K.	DETECTION OF MALFUNCTIONS AND ABNORMAL OPERATING CONDITIONS OF A COAL MILL

18:40 - 20:00 **Dinner** (QUBUS Hotel - Restaurant)

September 15th, 2016 (Thursday)

08:00 - 17:00 **Registration** (QUBUS Hotel - Conference Centre)

09:00 - 10:00 **Invited Lecture #3** (Conference Centre - Plenary Room)

Prof. E. Sciubba, Dipartimento di Ingegneria Meccanica e Aerospaziale, Università degli Studi di Roma "La Sapienza", Italy
AN EXERGY-BASED REFORMULATION OF THE HESS-MURRAY LAW

10:00 - 11:00 **Invited Lecture #4** (Conference Centre - Plenary Room)

Prof. G. Tsatsaronis, Institute for Energy Engineering, Technische Universität Berlin, Germany
ADVANCED EXERGY-BASED METHODS USED TO UNDERSTAND AND IMPROVE ENERGY-CONVERSION SYSTEMS

11:00 - 11:20 **Coffee break** (QUBUS Hotel - Conference Centre Lobby)

11:20 - 13:00 **Parallel sessions #4** (Conference Centre - Rooms A, B and C)

Room A

ID171	Gładysz P., Stanek W., Czarnowska L., Langorgen O.	THERMO-ECONOMIC ANALYSIS OF MILD OXYFUEL COMBUSTION POWER PLANT
ID172	Gładysz P., Stanek W., Czarnowska L., Langorgen O.	THERMO-ECOLOGICAL EVALUATION OF MILD OXYFUEL COMBUSTION POWER PLANT
ID150	Zevenhoven R., Virtanen M.	CO ₂ MINERAL SEQUESTRATION INTEGRATED WITH WATER-GAS SHIFT REACTION
ID043	Wróblewski W., Stępczyńska-Drygas K., Bochon K., Dykas S.	ANALYSIS OF A COOLING SYSTEM OF THE ULTRA-SUPERCRITICAL COAL-FIRED POWER UNIT INTEGRATED WITH CO ₂ CAPTURE
ID174	Czarnowska L., Gładysz P., Stanek W.	LOCAL AND GLOBAL IMPACT OF EMISSION RELEASED TO AIR FROM AN INTEGRATED MILD OXYFUEL COMBUSTION POWER PLANT

Room B

ID111	Badur J., Feidt M., Ziółkowski P.	WITHOUT HEAT AND WORK – FURTHER REMARKS ON THE GYFTOPOULOS-BERETTA EXPOSITION OF THERMODYNAMICS
ID109	Badur J., Kowalczyk T., Ziółkowski P.	THE ROLE OF THE UNCOMPENSATED TRANSFORMATION OF HEAT AND WORK IN THE EXERGY ANALYSIS
ID065	Carlanescu R., Prisecaru T., Prisecaru M., Soriga I.	SWIRL INJECTOR FOR PREMIXED COMBUSTION OF HYDROGEN- METHANE MIXTURES
ID110	Nowak I.	BAYESIAN APPROACH APPLIED FOR THERMOACOUSTIC INVERSE PROBLEM
ID099	Teixeira S.F., Gomes N.A., Rodrigues N.J., Teixeira J.C., Loureiro I.	NUMERICAL SIMULATION OF AN INDUSTRIAL WORKER ROUTE USING THERMAL HUMAN BODY SOFTWARE

Room C

ID030	Kopczyński M., Lasek J., Iluk A., Zuwała J.	CO-COMBUSTION OF HARD COAL WITH A RAW AND TORREFIED WILLOW (SALIX VIMINALIS), OLIVE OIL RESIDUE AND WASTE WOOD FROM FURNITURE MANUFACTURING
ID031	Plis A., Lasek J., Zuwała J., Yu C., Iluk A.	COMBUSTION PERFORMANCE EVALUATION OF POSIDONIA OCEANICA USING TGA AND BUBBLING FLUIDIZED-BED COMBUSTOR
ID098	Mitianiec W.	CO-COMBUSTION OF PULVERIZED COAL AND BIOMASS IN FLUIDIZED BED OF FURNACE
ID113	Mendecka B., Lombardi L., Kozioł J.	MULTI-CRITERIA ANALYSIS OF BIODIESEL PRODUCTION TECHNOLOGY FROM USED COOKING OIL
ID092	Cozzolino R., Lombardi L., Tribioli L.	PERFORMANCE EVALUATION OF BIOGAS REFORMING FOR SOLID OXIDE FUEL CELL

13:00 - 14:00 **Lunch** (QUBUS Hotel - Restaurant)

14:00 - 15:00 **Invited Lecture #5** (Conference Centre - Plenary Room)

Prof. A. Valero, Centre of Research for Energy Resources and
Consumption, University of Zaragoza, Spain

SUSTAINABLE MATERIAL-ENERGY SYSTEMS FOR OUR COMMON
FUTURE

15:00 - 15:30 **Awards Ceremony** (Conference Centre - Plenary Room)

15:30 - 16:00 **Coffee break** (QUBUS Hotel - Conference Centre Lobby)

16:00 - 17:00 **Horizon2020 Special Session** (Conference Centre - Plenary Room)

17:00 - 18:00 **Break**

18:00 - 22:00 **Conference Gala Dinner** (Queen Louise Adit)

Buses will leave at 18:00 from the QUBUS Hotel.

September 16th, 2016 (Friday)

08:00 - 12:00 **Registration** (QUBUS Hotel - Conference Centre)

09:00 - 11:00 **Parallel sessions #5** (Conference Centre - Rooms A, B and C)

Room A

ID086	Krawczyk P., Szablowski Ł., Badyda K., Karellas S.	ENERGY ANALYSIS OF ADIABATIC LIQUID AIR ENERGY STORAGE SYSTEM
ID063	Szablowski Ł., Krawczyk P., Badyda K., Karellas S.	ENERGY AND EXERGY ANALYSIS OF ADVANCED ADIABATIC COMPRESSED AIR ENERGY STORAGE SYSTEM
ID071	Kirova-Yordanova	THERMODYNAMIC EVALUATION OF AIR SEPARATION UNITS INTEGRATION IN NITROGEN FERTILIZERS PRODUCTION COMPLEXES
ID103	Nguyen T., Oliveira Junior S.	OPTIMISATION OF PRELIMINARY SYSTEMS DESIGNS FOR OFFSHORE OIL AND GAS PRODUCTION
ID108	Ziółkowski P., Badur J.	A THERMODYNAMIC ANALYSIS OF THE ZERO-EMISSION POWER PLANT AT POMERANIA
ID104	Kowalczyk T., Badur J.	ENERGY AND EXERGY ANALYSIS OF A GAS-VAPOR CYCLE TOPPED WITH A HIGH TEMPERATURE NUCLEAR REACTOR HEATING A THERMOCHEMICAL CYCLE FOR HYDROGEN PRODUCTION

Room B

ID061	Homa D., Wróblewski W.	NUMERICAL INVESTIGATION OF CAVITATING FLOW OVER A FOIL
ID095	Więckowski Ł., Krawczyk P., Badyda K.	NUMERICAL INVESTIGATION OF TEMPERATURE DISTRIBUTION WITHIN A FURNACE OF A COAL FIRED GRATE BOILER FOR PART POWER CONDITIONS
ID097	Teixeira J.C., Ferreira M.E., Soares D.F., Teixeira S.F.	EXPERIMENTAL ANALYSIS OF A FINLESS GAS-LIQUID HEAT EXCHANGER
ID106	Rogoziński K., Nowak I., Nowak G.	MODELLING OF A THERMOACOUSTIC ENGINE OPERATION
ID165	Bulinski Z., Krysinski T., Werle S., Ziółkowski Ł.	MATHEMATICAL MODELLING OF BIOMASS DRYING PROCESS IN A FIXED BED
ID138	Van Der Meer W.A., Rousseau P.G., Jestin L.	A SYSTEM LEVEL MODELLING APPROACH FOR COMBUSTION AND RADIATIVE HEAT TRANSFER IN A SINGLE BURNER FURNACE BASED ON A ZONAL METHOD

Room C

ID119	Lipnicki Z., Gortych M., Staszczuk A., Kuczyński T.	THE THEORETICAL ANALYSIS OF MASS AND ENERGY FLOW THROUGH SOLAR COLLECTOR – CHIMNEY SYSTEM
ID166	Tańczuk M., Junga R., Werle S., Chabiński M., Ziółkowski Ł.	EXPERIMENTAL ANALYSIS OF THE FIXED BED GASIFICATION PROCESS OF THE MIXTURES OF THE CHICKEN MANURE WITH BIOMASS
ID167	Junga R., Niemiec P., Tanczuk M.	EXPERIMENTAL TESTS OF CO-COMBUSTION OF POULTRY LITTER WITH COAL BY USING THERMOGRAVIMETRIC ANALYSIS
ID022	Witkowski A., Rusin A., Majkut M., Stolecka K.	COMPREHENSIVE ANALYSIS OF THE HYDROGEN COMPRESSION AND PIPELINE TRANSPORT WITH THERMODYNAMICS AND SAFETY ASPECTS
ID014	Kalina J.	TECHNO-ECONOMIC ASSESSMENT OF SMALL-SCALE INTEGRATED BIOMASS GASIFICATION DUAL FUEL COMBINED CYCLE ENERGY CONVERSION PLANT
ID079	Manfrida G., Petela K., Rossi F.	NATURAL CIRCULATION SOLAR THERMAL SYSTEM FOR WATER DISINFECTION

- 11:00 - 11:30** **Coffee break** (QUBUS Hotel - Conference Centre Lobby)
11:30 - 12:00 **Closing session** (Conference Centre - Plenary Room)
12:00 - 13:00 **Lunch** (QUBUS Hotel - Restaurant)

QUBUS Hotel Conference Centre Plan

QUBUS Hotel - Conference Centre



The CPOTE 2016 Conference will be held in QUBUS Hotel Katowice - Conference Centre.

If you need any assistance please do not hesitate to contact the Organising Committee:

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