

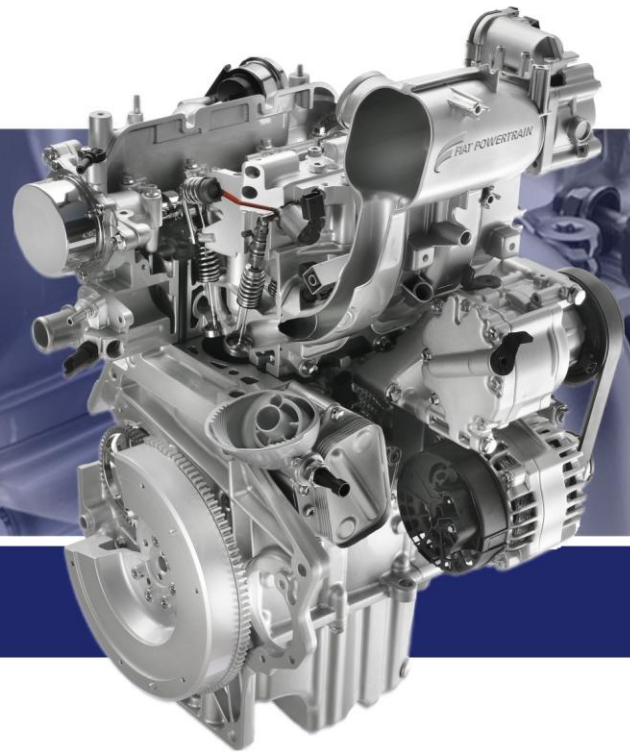


V INTERNATIONAL

CONGRESS ON COMBUSTION ENGINES

**POLISH SCIENTIFIC SOCIETY
OF COMBUSTION ENGINES**

24th-26th June 2013



FINAL PROGRAMME

University of Bielsko-Biala
43-309 Bielsko-Biała, ul. Willowa 2, POLAND

BOSMAL AUTOMOTIVE RESEARCH AND DEVELOPMENT INSTITUTE LTD.
43-300 Bielsko-Biała, ul. Sarni Stok 93, POLAND

CONGRESS SCHEDULE

24.06.2013 Monday ATH		25.06.2013 Tuesday ATH		26.06.2013 Wednesday Industry Sessions – “BOSMAL”	
8.30 - 9.30	Registration Building L, hall			8.40 - 9.20	Travel to BOSMAL
9.30 - 10.20	Opening Ceremony Building L, Assembly hall 128	9.30 - 11.00	Plenary Session III Building L, Assembly hall 128	9.20 - 11.30	Welcome and opening address Industry Session I
10.20 - 10.30	Break				
10.30 - 12.00	Plenary Session I Building L, Assembly hall 128	11.00 - 11.15	Coffee break	11.30 - 12.00	Coffee break
12.00 - 12.15	Coffee break	11.15 - 12.45	Technical Session I, II Building L, Assembly hall 128, Room 120		
12.15 - 13.45	Plenary Session II Building L, Assembly hall 128	12.45 - 13.00	Coffee break	12.00-14.00	Industry Session II <i>/Tour of Fiat</i>
		13.00 - 14.30	Technical Session III, IV Building L, Assembly hall 128, Room 120		
13.45 - 15.15	Lunch Hotel “Blonie”	14.30 - 16.00	Lunch Hotel “Blonie”	14.00 - 15.00	Lunch Institute “BOSMAL”
15.15 - 16.45	Poster Session I Building L, Gallery, 4th floor	16.00 - 17.30	Poster Session II Building L, Gallery, 4th floor	15.00 - 18.10	Industry Session III Summary and closing remarks of Industry Sessions
16.45 - 17.00	Coffee break	17.30 - 18.00	Closing Ceremony Building L, Assembly hall 128		
17.00 - 18.30	Break	18.00 - 20.00	Break	18.10 - 20.00	Break
18.30 - 20.00	Gala Concert Building L, Assembly hall 128			20.00-23.00	Meeting Hotel “Kotulinski”
20.00 - 24.00	Gala Dinner Hotel “Hotel na Bloniach”	20.00 - 24.00	Barbecue Hotel “Vienna”		

24th June 2013

Dear Friends and Colleagues,



On behalf of Polish Scientific Society of Combustion Engines (PTNSS) it is my pleasure to welcome you to the 5th INTERNATIONAL CONGRESS ON COMBUSTION ENGINES which will be held in Bielsko-Biała, Poland on the 24-26th of June 2013 and also it is my great privilege to act as PRESIDENT of the Congress.

I have the honor to offer you an exceptional technical programme including over 180 papers presented by top international experts. The Congress covers a wide range of topics in research fields such as design, manufacture, operation and ecological effects of internal combustion engines in the opinion of specialists from all over the world. The Congress also covers varied applications of combustion engines, including aviation and marine engines. This will be a great meeting, with expert engineers and researchers sharing their new ideas, inventions, and experience.

The attendees will gain knowledge in a wide variety of subjects related to combustion engines and will be able to enjoy, along with friends and family, the hospitality of the city of Bielsko-Biała. There are plenty of comfortable hotels, restaurants and points of entertainment. The attendees will have the opportunity of visiting the country with a multitude of historical monuments and religious sites.

I hope you will enjoy the Congress while meeting old friends and making new ones.

Yours sincerely,

Prof. Jerzy Merkisz

A handwritten signature in dark ink, appearing to be 'J. Merkisz', written in a cursive style.

*President of PTNSS
President of 2013 PTNSS Congress*

HONORARY PATRONAGE

The Congress under Honorary Patronage:
Deputy Prime Minister, Minister of Economy – **Janusz Piechociński**
Mayor of the City Bielsko-Biała – **Jacek Krywult**

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Jan A. Wajand	Professor University of Bielsko-Biala, Poland

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Hermann Ecker	Józef Nita
Jacek Elias	Jacek Nowakowski
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Peter Gillbrand	Zbigniew Pawelski
Jerzy Girtler	Richard Pearson
Kurt Gschweidl	Leszek Piaseczny
Vladimir Hlavna	Wiesław Piekarski
Jacek Hunicz	Jacek Pielecha
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Janusz Jakubiec	Stefan Postrzednik
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Oleg Klyus	Bronisław Sendyka
Zbigniew Korczewski	Wojciech Serdecki
Mirosław Kowalski	Lech Sitnik
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 Bolesław **Stolarski**
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 Piotr **Tarkowski**
 Andrzej **Teodorczyk**
 Mirosław **Wendeker**

Chris **Wheelan**
 Krzysztof **Wisłocki**
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Joon-Kyu Lee	Horiba, Germany
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Leonardo Pellegrini	Eni, Italy
Andrzej Piętka	Fiat Auto Poland, Tychy, Poland
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Grzegorz Szyska	The Institute of Logistics and Warehousing (ILiM), Poznań, Poland
Wolfgang Thiel	TUM/TRT, Germany
Marc Walter	BASF, Germany
Witold Wiśniowski	Institute of Aviation, Warsaw, Poland
Andrzej Wojciechowski	Motor Transport Institute, Warsaw, Poland
Joseph Woodburn	BOSMAL, Bielsko-Biała, Poland

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Zdzisław Stelmasiak	Vice – President for Science
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Dariusz Pietras	Secretary for Science
Małgorzata Kuźma	Organising Secretary
Klaudiusz Waniolka	Secretary for Industry Exhibition
Tomasz Gilowski	Member
Tomasz Knefel	Member
Jerzy Larisch	Member
Jacek Nowakowski	Member

SESSIONS SCHEDULE

Monday – 24th June 2013

9.30 - 10.20	Opening Ceremony	Assembly Hall 128
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Jerzy MERKISZ
President PTNSS

10.20 - 10.30	Break
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10.30 - 12.00	Plenary Session I	Assembly Hall 128
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Chairman: Dr Toni KINNUNEN, Finland; Prof. Andrzej TEODORCZYK, Poland

Robin VANHAELST et al
*Ostfalia University of Applied Sciences,
Germany*

PTNSS-2013-301
**OPTICAL INFRARED-SENSOR INSIDE THE CYLINDER TO
DETERMINE THE EGR- AND RESIDUAL GAS RATE IN
DIESEL ENGINE**

Michael WEIßNER
VW, Germany

**POWERFUL – CO₂ REDUCTION IN DIESEL ENGINES.
INTERMEDIATE RESULTS ON A 3-CYL 4-STROKE TDI[®]
ENGINE**

**Piotr BIELACZYK,
Joseph WOODBURN,
Andrzej SZCZOTKA**
*BOSMAL Automotive R&D Institute Ltd,
Bielsko-Biala, Poland*

PTNSS-2013-SC-202
**AN OVERVIEW OF EXHAUST EMISSIONS FROM
MODERN LIGHT DUTY VEHICLES**

12.00 - 12.15	Coffee Break
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12.15 - 13.45	Plenary Session II	Assembly Hall 128
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Chairman: Prof. Robin VANHAELST, Germany; Prof. Wincenty LOTKO, Poland

**Pedro BARROSO
Xavier RIBAS
Mario PITA
Judith DOMINGUEZ
Edgard De SEIA
José María GARCÍA**
*Powertrain Applus IDIADA Group,
Tarragona, Spain*

PTNSS-2013-201
**STUDY OF DUAL-FUEL (DIESEL + NATURAL GAS)
PARTICLE MATTER AND CO₂ EMISSIONS OF A HEAVY-
DUTY DIESEL ENGINE DURING TRANSIENT
OPERATION**

Toni KINNUNEN
Ecocat Oy, Finland

PTNSS-2013-SC-065
**THERMALLY DURABLE V-SCR CATALYST WITH
EXTRAORDINARY WIDE OPERATION WINDOW AS A
PART OF INTEGRATED SCR SYSTEMS**

**Andrzej TEODORCZYK¹,
Piotr JAWORSKI¹,
Peter PRIESCHING²,
Reinhard TATSCHL²**
¹*Warsaw University of Technology, Poland*
²*AVL List GmbH, Austria*

PTNSS-2013-SC-145
**A LES NUMERICAL APPROACH FOR INVESTIGATING
THE CYCLE-TO-CYCLE COMBUSTION PRESSURE
VARIABILITY IN A DIRECT INJECTION GASOLINE
ENGINE**

13.45 - 15.15	Lunch	Hotel na Bloniach
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15.15 - 16.45	Poster Session I	Gallery, 4th floor
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Chairman: Prof Jerzy GIRTLE, Poland; Prof. Marek IDZIOR, Poland

List of Papers see page 9

Tuesday – 25th June 2013**9.30 - 11.00 Plenary Session III Assembly Hall 128**

Chairman: DEng Marek SUTKOWSKI, Finland; Prof. Krzysztof WISŁOCKI, Poland

Hans-Peter LENZ*Austrian Society of Automotive Engineers,
Austria***FUTURE MOBILITY WITHOUT INTERNAL
COMBUSTION ENGINES AND FUELS ?****Raimund ELLINGER***AVL List GmbH, Austria*

PTNSS-2013-SC-146

**SYSTEMS ENGINEERING AS KEY FOR DEVELOPMENT
OF ELECTRIFIED POWERTRAINS****Mirosław Lech WYSZYNSKI***University of Birmingham, United Kingdom*

PTNSS-2013-SC-201

**IN-DEPTH IDENTIFICATION AND MEASUREMENTS OF
COMPONENTS OF FUELS, EMISSIONS, DEPOSITS AND
PARTICULATES IN ENGINE RESEARCH****11.00 - 11.15 Coffee Break****11.15 - 12.45 Technical Session I Assembly Hall 128**

Chairman: Georg STEINER, Austria; Prof. Sławomir LUFT, Poland

Jakub PIASZYK,**Mirosław Lech WYSZYNSKI***University of Birmingham, United Kingdom*

PTNSS-2013-SC-136

**LUBRICATING OIL PROPERTIES – EFFECT OF USING
HIGH ACIDITY FUEL****Stanisław SZWAJA¹,
Michał SKROBECKI²**¹ *Częstochowa University of Technology,
Poland*² *ORLEN Oil, Poland*

PTNSS-2013-SC-180

**WEAR TESTS OF AN IC ENGINE FUELED AGGRESSIVE
LANDFILL GAS IN LONG-TERM OPERATION****Barbara WORSZTYNOWICZ***AGH University of Science and Technology,
Poland*

PTNSS-2013-308

**VOLUME CONTRACTION IN THE PROCESS OF
COMBUSTION OF VARIOUS FUELS IN COMBUSTION
ENGINES****Artur JAWORSKI,
Hubert KUSZEWSKI,
Kazimierz LEJDA,
Adam USTRZYCKI,
Paweł WOŚ***Rzeszów University of Technology, Poland*

PTNSS-2013-SC-107

**THE EFFECT OF ADDING GASOLINE TO DIESEL FUEL
ON ITS SELF-IGNITION PROPERTIES****11.15 - 12.45 Technical Session II Room 120**

Chairman: Prof. Vladimír HLAVŇA, Slovakia; Prof. Władysław MITANIEC, Poland

Dariusz PIERNIKARSKI*Lublin University of Technology, Poland*

PTNSS-2013-SC-114

**REDUCTION OF FUEL CONSUMPTION IN
COMMERCIAL VEHICLES AS A FACTOR INFLUENCING
TRANSPORT EFFICIENCY****Władysław MITANIEC***Cracow University of Technology, Poland*

PTNSS-2013-SC-105

**A NEW CONCEPTION OF TWO-STROKE ENGINE WITH
CLOSED CYCLE****Zdzisław JUDA****Wojciech MAREK***Cracow University of Technology, Poland*

PTNSS-2013-SC-120

**METHOD OF THE FUEL DOSAGE MANAGEMENT, IN
THE DIRECT-INJECTION SYSTEM OF THE INTERNAL-
COMBUSTION ENGINE IN THE COGENERATION UNIT**

Zdzisław CHŁOPEK
Tomasz SZCZEPAŃSKI
Motor Transport Institute, Poland

PTNSS–2013–SC–005
CORRELATION STUDIES OF COMBUSTION ENGINES
PROPERTIES IN DYNAMIC STATES

12.45 - 13.00 Coffee Break

13.00 - 14.30 Technical Session III Assembly Hall 128

Chairman: Prof. Mirosław Lech WYSZYŃSKI, UK; Prof. Mirosław WENDEKER, Poland

Piotr BOGUŚ¹
Jerzy MERKISZ²
¹*Rail Vehicle Institute TABOR, Poland*
²*Poznań University of Technology, Poland*

PTNSS–2013–SC–012
APPLICATION OF WAVELET ANALYSIS IN THE
DIAGNOSIS OF COMBUSTION ENGINE

Łukasz JANCZEWSKI¹,
Jacek NOWAKOWSKI²
¹*Institute of Advanced Manufacturing*
Technology in Cracow, Poland
²*University of Bielsko-Biala, Poland*

PTNSS–2013–SC–174
VIBROACOUSTIC DIAGNOSIS OF THE INTERNAL
COMBUSTION DIESEL ENGINE AT THE END OF
ASSEMBLY LINE

Krzysztof T. WOJCIECHOWSKI¹
Jerzy MERKISZ²
Paweł FUC²
Joanna TOMANKIEWICZ¹
Rafał ZYBAŁA¹
Juliusz LESZCZYŃSKI¹
Piotr LIJEWSKI²
Paweł NIERODA¹
¹*AGH University of Science and Technology,*
Poland
²*Poznań University of Technology, Poland*

PTNSS-2013-307
PROTOTYPICAL THERMOELECTRIC GENERATOR
FOR WASTE HEAT CONVERSION FROM
COMBUSTION ENGINES

Łukasz PIASECKI
EC Test Systems, Poland

PTNSS–2013–SC–171
VIRTUAL PROTOTYPING OF COMBUSTION ENGINES

13.00 - 14.30 Technical Session IV Room 120

Chairman: Pedro BARROSO, Spain; Prof. Andrzej NIEWCZAS, Poland

Marek BRZEŻAŃSKI,
Jerzy CISEK,
Wojciech MAREK,
Michał MARECZEK,
Tadeusz PAPUGA,
Cracow University of Technology, Poland

PTNSS–2013–SC–193
INVESTIGATIONS OF THE FUEL SUPPLY SYSTEM OF
STATIONARY COMBUSTION ENGINE FED WITH
NATURAL GAS

Sławomir LUFT,
Tomasz SKRZEK
University of Technology and Humanities in
Radom, Poland

PTNSS–2013–SC–173
EFFECT OF THE COMPRESSION RATIO ON SELECTED
COMBUSTION PROCESS PARAMETERS IN A NATURAL
GAS FUELLED COMPRESSION IGNITION ENGINE
OPERATING IN A DUAL-FUEL MODE

Zbigniew ROBAK¹,
Tomasz ILUK¹,
Aleksander SOBOLEWSKI¹,
Marek RUDKOWSKI²,
Czesław SMOLKA³
¹*Instytut Chemicznej Przeróbki Węgla, Poland*
²*NGV Autogas, Poland*

PTNSS–2013–SC–151
RESULTS OF STUDIES ON JOHN DEERE 4045 ENGINE
FUELED WITH COKE OVEN GAS

Łukasz GRABOWSKI
Mirosław WENDEKER,
Rafał SOCHACZEWSKI,
Michał GĘCA
Lublin University of Technology, Poland

PTNSS–2013–SC–054
THE STUDY OF HYDROGEN AND GASOLINE MIXTURES
COMBUSTION IN A SPARK-IGNITION ENGINE

14.30 - 16.00	Lunch	Hotel na Bloniach
16.00 - 17.30	Poster Session II	Gallery, 4th floor
Chairman: Prof. Jacek NOWAKOWSKI, Poland; Prof. Piotr BOGUŚ, Poland		
List of Papers see page 14		
17.30 - 18.00	Congress Closing Ceremony	Assembly Hall 128

Wednesday – 26th June 2013

Industry Sessions Powertrain Development for Low-to-Zero Emissions and Efficient Energy Usage

9.20 - 9.30	Industry Sessions 2013 welcome and opening address	BOSMAL
9.30 - 11.30	Industry Session I – Emissions Legislation and Test Method Development	BOSMAL

Chairman: Dr Piotr BIELACZYK (BOSMAL, Poland); Wolfgang THIEL (TUM/TRT, Germany)

Piotr BIELACZYK
*BOSMAL Automotive R&D Institute Ltd,
Bielsko-Biala, Poland*

PTNSS-2013-SC-208
**DRIVERS OF CO₂ AND POLLUTANT EMISSIONS
REDUCTION FROM MODERN IC ENGINES**

Kurt ENGELJEHRINGER
AVL List GmbH, Austria

PTNSS-2013-SC-209
EMISSIONS TRENDS FOR LIGHT-DUTY AND HEAVY-DUTY ENGINES

Harald SCHOLZ
*European Commission, JRC, Institute for
Energy and Transport, Italy*

PTNSS-2013-SC-210
**THE EURO 7 EMISSIONS STANDARD AND ITS
IMPLICATIONS FOR VEHICLES, POWERTRAINS AND
TESTING**

Joon Kyu LEE
Horiba, Germany

PTNSS-2013-SC-211
**SIMULATION TECHNOLOGIES IN HYBRID
POWERTRAIN TESTING TO OPTIMIZE DEVELOPMENT
WORK FOR REDUCING TIME TO MARKET**

11.30 - 12.00	Coffee Break and presentation of BOSMAL's emissions & engine labs – AVL CAMEO engine calibration software presentation
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12.00 - 14.00	Industry Session II – Development of Powertrains and Aftertreatment Systems for Low-to-Zero Emissions	BOSMAL
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Chairman: Massimiliano LAVANA (Fiat Industrial, Italy); Dr Piotr BIELACZYC (BOSMAL, Poland),

Georg STEINER
AVL List GmbH, Austria

PTNSS-2013-SC-212
DEVELOPMENT OF VEHICULAR POWERTRAINS FOR LOW REAL DRIVING EMISSIONS

Toni KINNUNEN
Ecocat Oy, Finland

PTNSS-2013-SC-213
LESSONS LEARNED IN AUTOMOTIVE - THE UTILIZATION OF AUTOMOTIVE AFTERTREATMENT DEVELOPMENT IN OFF-ROAD, INDUSTRY AND MARINE APPLICATIONS

Andrzej SZCZOTKA,
Adam SORDYL
Piotr BIELACZYC,
Joseph WOODBURN
BOSMAL Automotive R&D Institute Ltd,
Bielsko-Biala, Poland

PTNSS-2013-SC-214
USAGE OF CNG IN AUTOMOTIVE APPLICATIONS AS A PROMISING STRATEGY FOR LOW CARBON EMISSIONS

Gerardo CARELLI
Carelli Consulting, Italy/Germany

PTNSS-2013-SC-215
CNG AS A FUEL FOR PASSENGER CARS AND HEAVY DUTY APPLICATIONS

14.00 - 15.00 Lunch BOSMAL's canteen

15.00 - 18.00	Industry Session III – Engine Fuel & Oil Development in the Context of Emission Reduction Efforts and Vehicle Performance Requirements	BOSMAL
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Chairman: Roberto PEIRANO (Petronas Lubricants, Italy); Piotr GIŻYŃSKI (Orlen, Poland)

Roger CRACKNELL
Shell Global Solutions, UK

PTNSS-2013-SC-216
FUEL REQUIREMENTS FOR DOWNSIZED BOOSTED ENGINES

Leonardo PELLEGRINI
Eni, Italy

PTNSS-2013-SC-217
ESTIMATION OF THE EMISSION AND FUEL CONSUMPTION REDUCTIONS FROM MODERN PASSENGER CARS USING NEW FUEL TECHNOLOGIES

Marc WALTER
BASF, Germany

PTNSS-2013-SC-218
EFFECTIVENESS OF DEPOSIT CONTROL ADDITIVES IN FLEX-FUEL VEHICLES POWERED WITH E85

Zdzisław CIEŚLIKOWSKI,
Tomasz STYPUŁKOWSKI
PKN ORLEN, Poland

PTNSS-2013-SC-219
THE FUTURE QUALITY REQUIREMENTS FOR MOTOR FUELS - CHALLENGES AND RISKS

Hu LI
Energy Research Institute,
University of Leeds, UK

PTNSS-2013-SC-220
EVALUATION OF COMBUSTION AND EMISSIONS PERFORMANCE OF STRAIGHT VEGETABLE OILS (SVO) IN DIESEL ENGINES

Przemysław LASZCZAK,
Jerzy FRANEK
ORLEN Oil, Poland

PTNSS-2013-SC-221
QUALITY CONFIRMATION OF SELECTED ORLEN OIL MOTOR OILS ON THE BACKGROUND OF THE LUBRICANT MARKET DEVELOPMENT TREND

18.00 -	Summary and closing remarks of the Industry Sessions	BOSMAL
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List of Papers of the Poster Session I

Adam DUŻYŃSKI <i>Czestochowa University of Technology, Poland</i>	PTNSS–2013–106 COMMERCIAL OPERATION OF THE BIOGAS COGENERATION SET WITH THE JMS 316 GS-B.LC GE JENBACHER TYPE ENGINE
Vladimír HLAVŇA Jozef KRAKOVSKÝ <i>University of Žilina, Slovakia</i>	PTNSS-2013-203 EMISSIONS OF THE COMBUSTION ENGINE AS A SOURCE OF COLD FOR ITS EXTREME INTERCOOLING
Wojciech SERDECKI Piotr KRZYMIEŃ <i>Poznan University of Technology, Poland</i>	PTNSS–2013–205 AN ANALYSIS OF PHENOMENA ACCOMPANYING RING COLLABORATION WITH WORN CYLINDER SURFACE
Grzegorz KOSZAŁKA Jacek HUNICZ Paweł KORDOS <i>Lublin University of Technology, Poland</i>	PTNSS–2013–207 A RESEARCH STAND FOR THE TESTING OF THE SEALING PROPERTIES OF THE PISTON–RINGS –CYLINDER ASSEMBLY IN A COMBUSTION ENGINE
Zbigniew KORCZEWSKI¹ Jacek RUDNICKI¹ Leszek PIECHOWSKI² Adam CENIAN² <i>¹Gdańsk University of Technology, Poland</i> <i>²Institute of Fluid-Flow Machinery PAFci., Gdańsk, Poland</i>	PTNSS–2013–209 INVESTIGATIONS OF A D10 LABORATORY FARYMANN DIESEL ENGINE BY MEANS OF A LANGMUIR PROBE
Krzysztof SICZEK <i>Technical University of Lodz, Poland</i>	PTNSS–2013–211 THE EFFECT OF THE DESIGN AND MATERIAL PARAMETERS ON THE TEMPERATURE GRADIENT IN LIGHTWEIGHT VALVES IN THE VALVETRAINS OF COMBUSTION ENGINES
Grzegorz KOSZAŁKA¹ Andrzej SUCHECKI² <i>¹Lublin University of Technology, Poland</i> <i>²BOSMAL Automotive R&D Institute Ltd, Bielsko-Biala, Poland</i>	PTNSS–2013–304 CHANGES IN BLOW-BY AND COMPRESSION PRESSURE OF A DIESEL ENGINE DURING A BENCH DURABILITY TEST
Winićjusz STANIK¹ Janusz JAKÓBIEC² Mariusz WĄDRZYK² <i>¹Oil and Gas Institute, Krakow, Poland</i> <i>²AGH University of Science and Technology, Kraków, Poland</i>	PTNSS–2013–305 DESIGN FACTORS AFFECTING THE FORMATION OF THE AIR-FUEL MIXTURE AND THE PROCESS OF COMBUSTION IN COMPRESSION IGNITION ENGINES
Agata LENC-BROL Jarosław MAMALA <i>Opole University of Technology, Poland</i>	PTNSS–2013–309 ANALYSIS OF IMPACT OF EGR VALVE CONSTRUCTION ON THE EXHAUST GAS FLOW PARAMETERS IN THE ENGINE
Jan MONIETA <i>Maritime University of Szczecin , Poland</i>	PTNSS–2013–SC–001 THE APPLICATION IN-CYLINDER PRESSURE COURSE IN DIFFERENT DOMAINS FOR DIAGNOSTICS OF MEDIUM SPEED MARINE DIESEL ENGINES IN OPERATION CONDITIONS
Jan MONIETA <i>Maritime University of Szczecin , Poland</i>	PTNSS–2013–SC–002 DIAGNOSTICS OF WORK PROCESS COURSE IN CYLINDERS OF MARINE RECIPRO-CATING INTERNAL COMBUSTION ENGINES USING VIBRATION SIGNAL
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Grzegorz BARAŃSKI Mirosław WENDEKER Michał GĘCA Michał BIAŁY <i>Lublin University of Technology, Poland</i>	PTNSS–2013–SC–060 EFFECT OF INTAKE HYDROGEN ADDITION ON THE PERFORMANCE AND EMISSION CHARACTERISTICS OF A SPARK-IGNITION GASOLINE ENGINE
Jerzy MERKISZ Miłosław KOZAK Maciej ANDRZEJEWSKI <i>Poznan University of Technology, Poland</i>	PTNSS–2013–SC–066 THE INFLUENCE OF THE ACCELERATION STYLE OF THE TRUCK ON CARBON DIOXIDE EMISSIONS
Ireneusz PIELECHA Jakub CZAJKA Przemysław BOROWSKI Krzysztof WISŁOCKI <i>Poznan University of Technology, Poland</i>	PTNSS–2013–SC–069 RESEARCH-BASED ASSESSMENT OF THE INFLUENCE OF HYDROCARBON FUEL ATOMIZATION ON THE FORMATION OF SELF-IGNITION SPOTS AND THE COURSE OF PRE-FLAME PROCESSES

Jarosław KALUŻNY Jakub CZAJKA Ireneusz PIELECHA Krzysztof WISŁOCKI <i>Poznan University of Technology, Poland</i>	PTNSS–2013–SC–072 INVESTIGATIONS OF THE FUEL INJECTION AND ATOMIZATION WITH THE USE OF LASER ILLUMINATION
Piotr WYGONIK <i>Rzeszow University of Technology, Poland</i>	PTNSS–2013–SC–074 SELECTION CRITERIA OF INTERNAL PARAMETERS OF TURBOFAN ENGINE FOR THE TYPE OF MULTI-TASK AIRCRAFT MISSION
Andrzej SUCHECKI <i>BOSMAL Automotive R&D Institute Ltd, Bielsko-Biala, Poland</i>	PTNSS–2013–SC–079 REDUCING MECHANICAL LOSSES OF THE ENGINE AS A METHOD OF REDUCING CO₂
Ireneusz PIELECHA <i>Poznan University of Technology, Poland</i>	PTNSS–2013–SC–083 DIAGNOSTICS OF STRATIFIED CHARGE COMBUSTION IN THE CONDITIONS OF MULTIPLE GASOLINE INJECTION
Maciej BABIAK¹ David CARNAHAN² Michael GIERSIG³ Antoni ISKRA¹ Jarosław KALUŻNY¹ Krzysztof KEMPA⁴ ¹ <i>Poznan University of Technology, Poland</i> ² <i>NanoLab Inc., USA</i> ³ <i>Freie Universität Berlin, Germany</i> ⁴ <i>Boston College, Chestnut Hill, USA</i>	PTNSS–2013–SC–085 COATING THE BEARING SURFACE OF A PISTON WITH A LAYER OF NANOTUBES AS A MEANS OF REDUCING FRICTION
Jerzy CISEK Andrzej MRUK Wojciech SZCZYPÍŃSKI-SALA <i>Cracow University of Technology, Poland</i>	PTNSS–2013–SC–087 PHYSICAL AND TRIBOLOGICAL CHARACTERISTICS OF DIESEL ENGINE FUEL OBTAINED BY RECYCLING OF PLASTICS
Tomasz WOŁOSZYN Robert JAKUBOWSKI Marek ORKISZ Piotr WYGONIK <i>Rzeszów University of Technology, Poland</i>	PTNSS–2013–SC–094 ANALYSIS OF INTEGRATION CAPABILITIES OF HYBRID-ELECTRIC PROPULSION SYSTEM IN AN UNMANNED AERIAL VEHICLE FOR A DETERMINED MISSION
Wojciech GIS Paulina GRZELAK Sławomir TAUBERT Andrzej ŻÓLTOWSKI <i>Motor Transport Institute, Warsaw, Poland</i>	PTNSS–2013–SC–096 EVALUATION OF THE EFFECTIVENESS OF REPLACEMENT CATALYTIC CONVERTERS
Wojciech GIS¹ Marek RUDKOWSKI² Andrzej ŻÓLTOWSKI¹ ¹ <i>Motor Transport Institute, Warsaw, Poland</i> ² <i>AUTOGAS Sp. z o.o., Krakow, Poland</i>	PTNSS–2013–SC–099 FEASIBILITY STUDY FOR THE PILOT BIOMETHANE REFUELING STATION FOR CITY BUSES IN RZESZOW
Antoni ISKRA Maciej BABIAK Jarosław KALUŻNY <i>Poznan University of Technology, Poland</i>	PTNSS–2013–SC–102 THE INFLUENCE OF CYLINDER DISENGAGING ON THE FRICTION RESISTANCE IN THE PISTON-CYLINDER ASSEMBLY
Antoni ISKRA Maciej BABIAK Jarosław KALUŻNY <i>Poznan University of Technology, Poland</i>	PTNSS–2013–SC–103 THE RESISTANCE TO MOTION OF INTERNAL COMBUSTION ENGINE DURING THE RUNNING-IN PROCESS
Krzysztof ŚLIWIŃSKI <i>Cracow University of Technology, Poland</i>	PTNSS–2013–SC–110 ENERGY RECOVERY SYSTEMS IN THE AUTOMOTIVE VEHICLES
Jerzy DUTCZAK <i>Cracow University of Technology, Poland</i>	PTNSS–2013–SC–115 NON-STANDARD APPLICATIONS OF THE HORIBA TEOM 1105 ANALYSER
Jacek KAŻMIEROWSKI Ireneusz PIELECHA Jakub CZAJKA Krzysztof WISŁOCKI Przemysław BOROWSKI Jarosław KALUŻNY <i>Poznan University of Technology, Poland</i>	PTNSS–2013–SC–117 INVESTIGATIONS OF OPERATIONAL AND OPTICAL INDEXES OF THE COMBUSTION PROCESS FOR THE MULTIPLE INJECTION DIFFERENT STRATEGIES IN CI-TYPE MODEL ENGINE

Paweł FUĆ Jerzy MERKISZ Piotr LIJEWSKI Maciej BAJERLEIN Andrzej ZIÓLKOWSKI Łukasz RYMANIAK Michał DOBRZYŃSKI <i>Poznan University of Technology, Poland</i>	PTNSS–2013–SC–123 EXHAUST EMISSION IN NEDC TEST SIMULATED AT A DYNAMIC ENGINE TEST BED
Łukasz RYMANIAK Maciej BAJERLEIN Andrzej ZIÓLKOWSKI Michał DOBRZYŃSKI <i>Poznan University of Technology, Poland</i>	PTNSS–2013–SC–125 ANALYSIS OF PM EMISSION AND FUEL CONSUMPTION IN TRANSIENT CONDITIONS IN A TWO-STROKE ENGINE WITH A MODIFIED PISTON
Ewa ŁAZOWSKA¹ Tomasz KAMIŃSKI¹ Michał NIEZGODA¹ Mikołaj KRUSZEWSKI¹ Rafał GRZESZCZYK² ¹ <i>Motor Transport Institute, Warsaw, Poland</i> ² <i>Automex Sp. z o.o., Gdańsk, Poland</i>	PTNSS–2013–SC–128 THE CONCEPT OF AUTOMATIC ROAD SAFETY EVALUATION
Tomasz KAMIŃSKI¹ Arkadiusz MATYSIAK¹ Michał NIEZGODA¹ Mikołaj KRUSZEWSKI¹ Rafał GRZESZCZYK² ¹ <i>Motor Transport Institute, Warsaw, Poland</i> ² <i>Automex Sp. z o.o., Gdańsk, Poland</i>	PTNSS–2013–SC–129 THE CONCEPT OF ELECTRIC CROSS-COUNTRY VEHICLE
Jacek ŁĄCZYŃSKI <i>Gdańsk University of Technology, Poland</i>	PTNSS–2013–SC–131 DIAGNOSING CATALYTIC CONVERTERS BASED ON GAS TEMPERATURE MEASUREMENT
Jerzy MERKISZ Milosław KOZAK Maciej ANDRZEJEWSKI Andrzej ZIÓLKOWSKI <i>Poznan University of Technology, Poland</i>	PTNSS–2013–SC–134 DIMENSIONAL DISTRIBUTION OF PARTICULATE MATTER EMITTED FROM CI ENGINE FUELED BY DIESEL FUEL/RME BLENDS
Marcin NOGA <i>Cracow University of Technology, Poland</i>	PTNSS–2013–SC–141 APPLICATION OF THE INTERNAL COMBUSTION ENGINE AS A RANGE-EXTENDER FOR ELECTRIC VEHICLES
Marek IDZIOR Paweł STOBNIKI Ireneusz PIELECHA Jakub CZAJKA <i>Poznan University of Technology, Poland</i>	PTNSS–2013–SC–149 RESEARCH AND ANALYSIS OF THE INFLUENCE OF THE INJECTION PRESSURE ON SPRAYING FUEL IN THE CHAMBER ABOUT THE FIXED VOLUME
Aleksander SOBOLEWSKI¹ Marek ŚCIAŻKO¹ Zbigniew ROBAK¹ Marek RUDKOWSKI² Zdzisław BOROWIEC² ¹ <i>Instytut Chemicznej Przeróbki Węgla, Poland</i> ² <i>NGV Autogas, Poland</i>	PTNSS–2013–SC–152 COKE OVEN GAS AS A FUEL FOR GAS ENGINE
Krzysztof ŚLIWIŃSKI <i>Cracow University of Technology, Poland</i>	PTNSS–2013–SC–156 ENERGY RECUPERATION WITH USE OF THE THERMODYNAMIC CYCLES
Stefan POSTRZEDNIK Zbigniew ŻMUDKA Grzegorz PRZYBYŁA <i>Silesian University of Technology, Poland</i>	PTNSS–2013–SC–162 BASIC CONDITIONS AND EFFECTIVENESS OF REPLACEMENT OF CONVENTIONAL LIQUID FUEL WITH GASEOUS FUEL TO COMBUSTION ENGINE DRIVE
Tomasz GIŁOWSKI Zdzisław STELMASIAK <i>University of Bielsko-Biala, Poland</i>	PTNSS–2013–SC–164 IMPACT OF SYMMETRICAL DIVISION OF INITIAL DOSAGE DIESEL OIL ON THE SELECTED THERMODYNAMIC PARAMETERS OF THE WORKING MEDIUM AND OPERATION PARAMETERS DUAL FUEL ENGINE FUELLED CNG
Krzysztof PARCZEWSKI Henryk WŃĘK <i>University of Bielsko-Biala, Poland</i>	PTNSS–2013–SC–166 STUDY OF THE VEHICLE DYNAMICS WITH THE APPLICATION OF SCALE MODELS

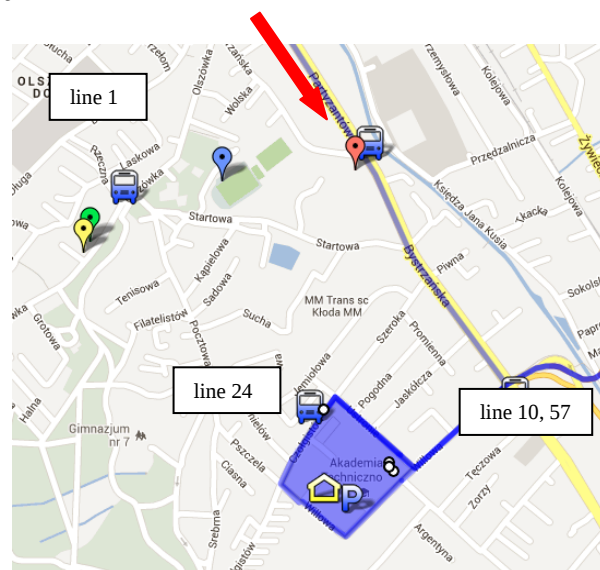
Ewa ROSTEK¹ Maciej BABIAK² ¹ Motor Transport Institute, Warsaw, Poland ² Poznan University of Technology, Poland	PTNSS–2013–SC–168 THE PROSPECTS OF EVALUATION OF SELECTED ENGINE LUBRICATING OIL PARAMETERS WITH THE USE OF THERMOANALYSIS METHODS
Mariusz CHWIST Michał ZYCH Arkadiusz JAMROZIK <i>Częstochowa University of Technology, Poland</i>	PTNSS–2013–SC–170 ERROR ANALYSIS OF THE ENGINE CONTROL UNIT IN TRUCKS DIAGNOSIS
Tomasy KNEFEL Tomasz GANCARCZYK <i>University of Bielsko-Biala, Poland</i>	PTNSS–2013–SC–178 DYNAMIC AND STRENGTH ANALYSIS OF INJECTOR OF COMMON RAIL INJECTION SYSTEM
Marek BRZEŻAŃSKI¹ Rafał SALA² ¹ Cracow University of Technology, Poland ² BOSMAL Automotive R&D Institute Ltd, Bielsko-Biala, Poland	PTNSS–2013–SC–181 IN-SERVICE PROBLEMS OF SELECTIVE CATALYTIC REDUCTION SYSTEMS FOR REDUCTION OF NITROGEN OXIDES
Tomasy KNEFEL Andrzej CIURLA <i>University of Bielsko-Biala, Poland</i>	PTNSS–2013–SC–184 USE OF STANDARD COMPUTER PACKAGES IN THE ANALYSIS OF THE FUEL INJECTION PROCESS
Jerzy LARISCH Zdzisław STELMASIAK <i>University of Bielsko-Biala, Poland</i>	PTNSS–2013–SC–187 DUAL FUELLING SI ENGINE BY MIXING ALCOHOL AND GASOLINE
Jerzy LARISCH <i>University of Bielsko-Biala, Poland</i>	PTNSS–2013–SC–188 ELECTROMECHANICAL ACTUATOR FOR VALVE TIMING CHANGES IN AN INTERNAL COMBUSTION ENGINE
Marek BRZEŻAŃSKI¹ Rafał SALA² ¹ Cracow University of Technology, Poland ² BOSMAL Automotive R&D Institute Ltd, Bielsko-Biala, Poland	PTNSS–2013–SC–190 THE INFLUENCE OF ADBLUE DOSAGE ON THE PROCESS OF SELECTIVE CATALYTIC REDUCTION OF NITROGEN OXIDES
Marek BRZEŻAŃSKI¹ Jerzy CISEK Wojciech MAREK Tadeusz PAPUGA <i>Cracow University of Technology, Poland</i>	PTNSS–2013–SC–192 INVESTIGATION OF THE COMBUSTION ENGINE FUELLED WITH HYDROGEN
Marek BRZEŻAŃSKI¹ Jerzy CISEK Jerzy CISEK Wojciech MAREK Michał MARECZEK Tadeusz PAPUGA <i>Cracow University of Technology, Poland</i>	PTNSS–2013–SC–194 INVESTIGATION OF THE COMBUSTION ENGINE FUELLED WITH HYDROGEN AND MIXED N-BUTANOL WITH ISO-BUTANOL
Dawid CEMPIEL <i>University of Bielsko-Biala, Poland</i>	PTNSS–2013–SC–196 AUTOMATIC CLASSIFIER OF THE KIND OF CAR SHOCK ABSORBER DAMAGE
Dariusz PIETRAS Bartosz HEJNY <i>University of Bielsko-Biala, Poland</i>	PTNSS–2013–SC–199 THE ANALYSIS OF THE DESIGN AND OPERATING PARAMETERS OF DOWNSIZED ENGINES
Zdzisław CHŁOPEK <i>Warsaw University of Technology, Poland</i>	PTNSS–2013–SC–203 IMPACT ASSESSMENT OF MONITORING OF POLLUTANT EMISSION FROM AUTOMOTIVE INTERNAL COMBUSTION ENGINES ON THE EFFECTIVENESS OF PRO-ENVIRONMENTAL ACTIONS IN MOTORIZATION
Andrzej RÓŻYCKI <i>University of Technology and Humanities in Radom, Poland</i>	PTNSS–2013–SC–206 EFFECT OF DUAL FUELLING ON SELECTED OPERATING PARAMETERS AND EMISSION OF A TURBOCHARGED COMPRESSION IGNITION ENGINE
Wincenty LOTKO Krzysztof GÓRSKI Robert GIELNIEWSKI <i>University of Technology and Humanities in Radom, Poland</i>	PTNSS–2013–SC–205 IMPACT OF ETBE ADDITION TO DIESEL OIL ON VARIATION OF ENGINE CRANKSHAFT ACCELERATION PROCESS
Jerzy MERKISZ Jarosław MARKOWSKI Marek WALIGÓRSKI Ireneusz PIELECHA <i>Poznan University of Technology, Poland</i>	PTNSS–2013–SC–207 THE EVALUATION OF THE INFLUENCE OF THE FUEL PRESSURE IN THE INJECTOR ON THE PARAMETERS OF VIBRATION OF THE REACTION SLEEVE TRIGGERED BY THE ATOMIZED FUEL SPRAY

CONGRESS LOCATION AND TRAVEL DETAILS

Details of the travel:

- **Train communication** to Bielsko-Biała
 - direct links are available from different cities of Poland
for more detailed information on train connection please visit: <http://www.pkp.com.pl>
 - **Taxi**
 - Plus Radio Taxi (33) 8 111 111, 800 400 400 (free order)
 - Mega Taxi (33) 818 88 88, (33)196 24, (33)196 26
 - Inter Taxi (33) 810 10 50, 811 1000
 - MPT-Radio Taxi (33) 818 09 19, (33) 91 91
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 - teleTaxi (33) 811 21 12
 - **Congress shuttles** (Two buses will run collecting guests attending the Congress, and special events). The timetable will be available in hotels and on the Congress website.
 - **Public transport** from The Railway-Station Radom to the Congress Centre
 - line 24 – direction Mikuszowice Błonia
 - line 1 – direction Cygański Las
 - line 10 – direction Mikuszowice Śląskie
 - line 57 – direction Bystra Leśniczówka
- Transit to the Congress Venue PTNSS:
Faculty of Mechanical Engineering and Computer Science,
ul. Willowa 2
End bus stop:
- | | |
|--------------|-------------------------|
| line 24: | ul. Szeroka, Campus ATH |
| line 1 : | ul. Olszówka |
| line 10, 57: | ul. Bystrzańska/Willowa |

-  Centrum Kongres PTNSS 2013
-  Parking Kongres PTNSS 2013
-  Hotel Na Błoniach
-  Hotel Vienna
-  Hotel Rekord
-  Hotel Beskid I
-  Hotel Beskid II



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To Park Hotel Vienna ul. Bystrzańska 48 Bus stop Bystrzańska/Bewelana line 10 – direction Mikuszowice Śląskie line 24– direction Mikuszowice Błonia line 57–direction Bystra Leśniczówka	To Hotel na Błoniach ul. Pocztowa 39 Bus stop Szeroka, Campus ATH line 24– direction Mikuszowice Błonia Bus stop Olszówka line 1 – direction Cygański Las
To Hotel Rekord ul. Startowa 13 Bus stop Bystrzańska/Bewelana line 10 – direction Mikuszowice Śląskie line 24– direction Mikuszowice Błonia Bus stop Olszówka line 1 – direction Cygański Las	To Hotel Beskid I, II ul. Olszówka 24 Bus stop Olszówka line 1 – direction Cygański Las

- Individual transport

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