



**Silesian University
of Technology**



XI INTERNATIONAL

CONGRESS ON COMBUSTION ENGINES

ADAPTATION AND INNOVATION IN THE FACE OF CHANGING NORMS

**POLISH SCIENTIFIC SOCIETY
OF COMBUSTION ENGINES**

23rd-25th June 2025

congress.ptnss.pl

Final Programme

**Silesian University of Technology
Faculty of Transport and Aviation Engineering
Zygmunta Krasinskiego str. 8, 40-019 Katowice, Poland**

**11th International Congress on Combustion Engines
is under the honorary patronage of:**

Ministra Edukacji i Nauki



Ministry of Education and Science
Republic of Poland

JM Rektora Politechniki Śląskiej



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PTNSS–2025 CONGRESS SCHEDULE

23.06.2025 Monday		24.06.2025 Tuesday		25.06.2025 Wednesday			
		9.00	Opening				
		9.15–11.00	Plenary Session I 2 x 30 min + 2 x 20 min	9.30–11.00	Technical Session I		
					A 6x15 min	B 6x15 min	C 6x15 min
		11.00–11.30	Coffee break	11.00–11.30	Coffee break		
		11.30–13.00	Plenary Session II 3 x 20 min + 2 x 15 min VIRT	11.30–13.00	Technical Session II		
					A 6x15 min	B 6x15 min	C (Young) 6x15 min
13.00–14.15	Lunch	13.00–14.30	Lunch				
14.15–14.30	Special session: SAE						
15.00–19.00	Registration	14.30–16.30	Plenary Session III 6 x 20 min	14.30–16.00	Technical Session III		
					A 6x15 min	B 6x15 min	C (Young) 6x15 min
		16.30–18.00	Poster Oral Session (18 x 5 min)	16.00	Conference closing		
19.00–22.00	Welcome Reception	20.00	Gala Dinner Restaurant Marysin Dwór Pukowca 17a street 40-816 Katowice				

SESSIONS SCHEDULE

Tuesday – 24th June 2025

9.00 – 9.10 Opening Ceremony

9.20 – 11.00 Plenary Session I
Powertrain Technology Development LDV & HDV

Chairman: Piotr Bielaczyc

9.15-9.45	Piotr BIELACZYK <i>Cracow University of Technology/BOSMAL, Poland</i>	GLOBAL TRENDS IN THE DEVELOPMENT OF AUTOMOTIVE POWERTRAIN SYSTEMS, ICE AND HYBRIDS VS. E-MOTORS AND THE COMPETITION BETWEEN THE EU AND THE US AND CHINA
9.45-10.15	Harald SCHOLZ <i>EC Joint Research Centre, Italy</i>	TRENDS AND DEVELOPMENTS WITH ELECTRIC DRIVE- TRAIN VEHICLES
10.15-10.35	Andrzej SZALEK <i>Toyota Central Europe</i>	PTNSS-2025-114 ANALYSIS OF THE CURRENT STATE AND FUTURE TRENDS OF FUEL CELL PROPULSION IN TRANSPORTATION DEVELOPMENT
10.35-10.55	Biaggio CIUFFO <i>EC Joint Research Centre, Italy</i>	IMPLICATIONS OF CONNECTED AND AUTOMATED DRIVING ON THE ENERGY INTENSITY OF ROAD TRANSPORT – VIRTUALLY

11.00 – 11.30 Coffee Break

11.30 – 13.00 Plenary Session II
Powertrain technology development HDV, NRMM & MARINE

Chairman: Andrea Piano

11.30-11.50	Chris KOŁODZIEJ <i>Argonne National Laboratory, USA</i>	LCA FOR NON-ROAD MOBILE MACHINERY AND MARINE PROPULSION – VIRTUALLY
11.50-12.10	Andrea PIANO <i>Politecnico Torino, Italy</i>	THE ESSENTIAL ROLE OF NUMERICAL SIMULATION IN DEVELOPING NEXT-GENERATION HYDROGEN INTERNAL COMBUSTION ENGINES
12.10-12.35	Kurt ENGELJEHRINGER <i>AVL, Austria</i>	SUSTAINABLE FUELS/ENERGY TESTING CHALLENGES – VIRTUALLY
12.35-13.00	Maciej MIKULSKI <i>Vaasa University, Finland</i>	CLEAN PROPULSION TECHNOLOGIES FOR MARINE AND HEAVY-DUTY OFF-ROAD SECTORS, MADE IN FINLAND

13.00 – 14.15 Lunch

14.15 – 14.30 Special session: SAE International

Chairman: Piotr Bielaczyc

14.15-14.30	Michael O'SHEA <i>SAE International, USA</i>	INFORMATION ABOUT SOCIETY OF AUTOMOTIVE ENGINEERS (SAE) INTL, USA & SAE EUROPE (in Polish)
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14.30 – 16.30 Plenary Session III
Propulsion technology development HDV, NRMM & MARINE
Chairman: Lauretta Rubino

14.30-14.50	Lauretta RUBINO <i>CEO of VERT Association, Switzerland</i>	THE VERT GPF-RETROFIT PROGRAM FOR CLEANER URBAN MOBILITY WITHIN THE HORIZON EUROPE AEROSOLFD PROJECT
14.50-15.10	Tadashige KAWAKAMI <i>Hosei University, Japan</i>	PTNSS-2025-052 ENHANCING COMBUSTION CHARACTERISTICS IN A CONSTANT VOLUME CHAMBER USING A NOVEL MULTI-INJECTION SYSTEM FOR LIQUID FUEL AND PROPANE-AIR STRATIFIED MIXTURES
15.10-15.30	Ameya JOSHI <i>Founder MobilityNotes, USA</i>	DECARBONIZATION PATHWAYS FOR HEAVY-DUTY VEHICLES – VIRTUALLY
15.30-15.50	Kohei NAKASHIMA <i>Meijo University, Japan</i>	PTNSS-2025-088 HEAT TRANSFER PERFORMANCE OF AIR-COOLED CYLINDERS WITH FINS WITH SLITS
15.50-16.05	Paivi AKKO-SAKSA et al. (res. Wojciech HONKISZ) <i>VTT, Finland</i>	PAREMPI: PARTICLE EMISSION PREVENTION AND IMPACT: FROM REAL-WORLD EMISSIONS OF TRAFFIC TO SECONDARY PM OF URBAN AIR
16.05-16.20	David LUMBRERAS et al. (res. Rafał SALA) <i>UPC Barcelona, Spain</i>	ADVANCING E-AXLE TECHNOLOGY: TESTING AND VALIDATION OF THE RHODAS POWER CONVERTER AND INTEGRATED MOTOR DRIVE
16.20-16.35	Jan CZERWINSKI <i>VERT, Switzerland</i>	PTNSS-2025-005 USE OF VEHICLE EXHAUST FILTERS TO MINIMIZE THE RISK OF INFECTION INDOORS

16.35 – 18.00 Poster Oral Session
Chairman: Prof. Zbigniew Sroka; Prof. J. Nowakowski

Anna DANIELAK, Miłosław KOZAK, <i>Poznan University of Technology</i>	PTNSS-2025-026 PROSPECTS FOR THE DEVELOPMENT OF FUEL CELLS IN RAILWAY APPLICATIONS
Jerzy BOGDAŃSKI, Mariusz IZDEBSKI <i>Warsaw University of Technology</i>	PTNSS-2025-049 METHOD FOR ASSESSING THE ENERGY EXPENDITURE OF ELECTRIC VEHICLES IN TRANSPORT COMPANIES
Emilia SZUMSKA, Adriana SKUZA <i>Kielce University of Technology</i>	PTNSS-2025-055 ENHANCING REGENERATIVE BRAKING EFFICIENCY IN ELECTRIC VEHICLES THROUGH URBAN DRIVING PATTERN ANALYSIS
Radosław WŁOSTOWSKI, Piotr MOŃKA <i>Wroclaw University of Technology</i>	PTNSS-2025-066 GASIFICATION OF PLASTIC WASTE IN A STEAM ATMOSPHERE AS A POTENTIAL SOURCE OF GASEOUS FUELS FOR THE COMBUSTION ENGINE
Łukasz WARGUŁA, Oleg KINDLER, Szymon KRÓLAK, Bartosz WIECZOREK <i>Poznan University of Technology</i>	PTNSS-2025-086 RESEARCH ON THE DESIGN OF A NON-COMMERCIAL IMPULSE COMPRESSED AIR SUPPLY SYSTEM FOR THE TURBOCHARGER OF A SPARK-IGNITION INTERNAL COMBUSTION ENGINE
Hernan Amaya GONZALEZ, Bartosz KAŹMIERSKI, Łukasz BORUC, Łukasz Jan KAPUSTA <i>Warsaw University of Technology</i>	PTNSS-2025-117 EXPERIMENTAL STUDY ON DROPLETS IN IMPINGING-JET SPRAYS GENERATED UNDER FLASH-BOILING CONDITIONS

Wojciech KARPIUK, Rafał SMOLEC, Paweł KRIL <i>Poznan University of Technology</i>	PTNSS-2025-132 CHIPTUNING IMPACT ON EMISSION IN NEDC TESTS
Robert JAKUBOWSKI, Marek SZUMSKI <i>Rzeszow University of Technology</i>	PTNSS-2025-116 APPLICATION OF CHATGPT IN THE DEVELOPMENT OF A NUMERICAL PERFORMANCE MODEL OF A TURBOFAN ENGINE
Piotr ŁAGOWSKI <i>Kielce University of Technology</i>	PTNSS-2025-124 RESEARCH AND EVALUATION OF THE IMPACT OF DUAL FUEL (DIESEL AND CNG) POWER SUPPLY ON EXHAUST GAS TEMPERATURE AND NITROGEN OXIDE EMISSIONS IN A PERKINS 1104DE44TA ENGINE
Adriana SKUZA, Emilia SZUMSKA, Rafał JURECKI <i>Kielce University of Technology</i>	PTNSS-2025-057 THE IMPACT OF TRAFFIC INTENSITY ON THE PERFORMANCE AND EFFICIENCY OF HYBRID VEHICLES<
Michał WARIANEK <i>Kielce University of Technology</i>	PTNSS-2025-127 EFFICIENCY OF THE FIAT 0,9 TWIN AIR ENGINE OPERATING ACCORDING TO SELECTED LOAD CHARACTERISTICS WHEN FUELED WITH GASOLINE AND GASEOUS FUELS LPG AND CNG
Mateusz BEDNARSKI, Piotr ORLIŃSKI, Mieczysław SIKORA <i>Warsaw University of Technology</i>	PTNSS-2025-037 THE INFLUENCE OF BIOETHANOL CONTENT IN GASOLINE ON THE PHYSICOCHEMICAL PROPERTIES OF ENGINE OIL
Mateusz IWIŃSKI <i>Office of Competition and Consumer</i>	PTNSS-2025-028 MONITORING THE QUALITY OF LIQUID FUELS IN RELATION TO THE EFFICIENCY AND SAFETY OF INTERNAL COMBUSTION ENGINE FUEL SYSTEMS
Grzegorz SOBECKI, Anna BORUCKA <i>Military University of Technology</i>	PTNSS-2025-135 PROPERTIES OF COOLANTS AT ELEVATED ENGINE OPERATING TEMPERATURES
Piotr WIŚNIEWSKI, Edward KOZŁOWSKI, Magdalena ZIMAKOWSKA-LASKOWSKA, Ksawery ŻBIK, Marcin ŚLĘZAK, Sławomir TAUBERT <i>Motor Transport Institute Lublin University of Technology</i>	PTNSS-2025-060 COMPARISON OF POLLUTANT CONCENTRATIONS AND ENGINE OPERATING PARAMETERS DURING COLD START WITH PETROL AND LPG
Jakub LASOCKI, Gabriela SNARSKA-BIEŃ <i>Warsaw University of Technology</i>	PTNSS-2025-065 ENHANCING DRIVING CYCLE DEVELOPMENT USING ARTIFICIAL INTELLIGENCE
Maciej GRZYWNA <i>Cracov University of Technology</i>	PTNSS-2025-095 EVALUATION OF THE RELIABILITY OF A HEAVY DIESEL LOCOMOTIVE
Adam KAMIŃSKI <i>Wroclaw University of Technology</i>	PTNSS-2025-101 A MATHEMATICAL STUDY OF THE NARROWBAND LAMBDA SENSOR CHARACTERISTICS FOR LEAN AND RICH OPERATION

Wednesday – 25th June 2025
9.30 – 11.00 Technical Session I A
Powertrain system performance indicators

Chairman: Prof. A. Teodorczyk; Prof. P. Folęga

9.30-9.45	Mariusz GRABA, Krystian HENNEK, Krzysztof PRAŻNOWSKI, Jarosław MAMALA, Maximilian MAULLER <i>Opole University of Technology</i>	PTNSS-2025-001 ACCELERATION DYNAMICS OF A PASSENGER VEHICLE WITH AN ELECTRIC POWER TRAIN AND THEIR IMPACT ON THE MILEAGE ENERGY CONSUMPTION
9.45-10.00	Jacek KROPIWNICKI, Tomasz GAWŁAS <i>Gdańsk University of Technology</i>	PTNSS-2025-036 ENERGY EFFICIENCY OF A CAR DRIVING WITH REGENERATIVE BRAKING
10.00-10.15	Kinga SKOBIEJ <i>Poznan University of Technology</i>	PTNSS-2025-099 COMPARATIVE ASSESSMENT OF EXHAUST AND NON-EXHAUST PARTICLE EMISSIONS IN THE EURO 7 CONTEXT
10.15-10.30	Lech SITNIK, Monika ANDRYCH-ZALEWSKA, Anna MIELIŃSKA <i>Wroclaw University of Technology</i>	PTNSS-2025-035 METHOD OF ASSESSING THE FUEL CONSUMPTION OF A CAR ENGINE IN ITS LONG-TERM NATURAL OPERATION
10.30-10.45	Grzegorz WCISŁO, Dariusz KURCZYŃSKI, Piotr ŁAGOWSKI, Szymon WCISŁO, Bolesław PRACUCH <i>University of Agriculture in Krakow Kielce University of Technology</i>	PTNSS-2025-125 DETERMINATION OF THE EFFECT OF ADDING BIODIESEL PRODUCED FROM FISH FRYING OIL TO DIESEL FUEL ON THE PARAMETERS OF TYPE “B” FUELS
10.45-11.00	Karol GRAB-ROGALIŃSKI, Wojciech TUTAK, Arkadiusz JAMROZIK, Arkadiusz KOCISZEWSKI <i>Częstochowa University of Technology</i>	PTNSS-2025-096 COMPARATIVE ANALYSIS OF IC DIESEL ENGINE PERFORMANCE FUELED WITH DIESEL/HYDROGEN AND DIESEL/AMMONIA MIXTURES

9.30 – 11.00 Technical Session I B
Optimization of engine operating parameters

Chairman: Prof. S. Wierzbicki; Prof. M. Brzeźański

9.30-9.45	Zbigniew SROKA <i>Wroclaw University of Technology</i>	PTNSS-2025-003 GEOPOLITICAL CONDITIONS OF RIGHTSIZING COMBUSTION ENGINES
9.45-10.00	Andrzej KULCZYCKI, Tomasz BIAŁECKI, Bartosz GAWRON, Anna ŁĘGOWIK, Jerzy MERKISZ <i>Air Force Institute of Technology Poznan University of Technology</i>	PTNSS-2025-053 ASSESSMENT OF THE INFLUENCE OF PHYSICOCHEMICAL PROPERTIES OF FUELS CONTAINING SUSTAINABLE COMPONENTS ON THE PARAMETERS CHARACTERIZING THE COMBUSTION PROCESS IN AIRCRAFT TURBINE ENGINES
10.00-10.15	Dariusz SZPICA, Michał S. GĘCA, Jacek HUNICZ, Mirosław JAKUBOWSKI, Artur KRZEMIŃSKI, Grzegorz MIECZKOWSKI <i>Białystok University of Technology Lublin University of Technology</i>	PTNSS-2025-094 CYCLE-BY-CYCLE PERFORMANCE EVALUATION OF A DIESEL ENGINE FUELLED WITH A MIXTURE OF HYDROTREATED VEGETABLE OIL MIXED WITH WASTE PLASTIC PYROLYSIS OILS

10.15-10.30	Jacek HUNICZ, Arkadiusz RYBAK, Krzysztof LUDZIAK, Michał S. GEĆCA, Bogdan LATAŁA, Liping YANG, Maciej MIKULSKI <i>Lublin University of Technology</i>	PTNSS-2025-071 REACTIVITY CONTROLLED COMPRESSION IGNITION COMBUSTION (RCCI) WITH HYDROTREATED VEGETABLE OIL (HVO) AND NATURAL GAS
10.30-10.45	Joanna GROCHOWALSKA, Klaudia WRZASK, Łukasz Jan KAPUSTA <i>Gdansk University of Technology</i> <i>Warsaw University of Technology</i>	PTNSS-2025-074 PROPER ORTHOGONAL DECOMPOSITION ANALYSIS OF AN ATOMIZED FUEL SPRAY OF MARINE DIESEL ENGINE
10.45-11.00	Grzegorz PRZYBYŁA, Wojciech ADAMCZYK, Łukasz ZIÓŁKOWSKI, Grzegorz PECZKIS, Willian Cezar NADALETI <i>Silesian University of Technology</i>	PTNSS-2025-133 EXPERIMENTAL STUDIES OF AN AMMONIA-FUELLED SI ENGINE

9.30 – 11.00 Technical Session I C

Trends in the development of powertrain systems

Chairman: Prof. M. Ślęzak; Prof. D. Burchart

9.30-9.45	Krzysztof SICZEK, Marek WOŹNIAK, Adam RYLSKI, Wojciech STACHURSKI <i>Lodz University of Technology</i>	PTNSS-2025-030 THE EFFECT OF OPERATING FACTORS ON THE BEHAVIOR OF THE COMBUSTION ENGINE VALVE TIMING SYSTEM
9.45-10.00	Janusz CHOJNOWSKI <i>Military University of Technology</i>	PTNSS-2025-029 POTENTIAL FOR THE USE OF SAF IN INTERNAL COMBUSTION PISTON ENGINES
10.00-10.15	Piotr PRYCIŃSKI <i>Warsaw University of Technology</i>	PTNSS-2025-068 SELECTED EMISSIVITY ASSESSMENT ISSUES FOR ELECTRIC AND HYBRID VEHICLES
10.15-10.30	Paweł MAGRYTA, Grzegorz BARAŃSKI, Michał BIAŁY <i>Lublin University of Technology</i>	PTNSS-2025-080 ACOUSTIC SOURCE IDENTIFICATION AND KNOCK DETECTION IN A WANKEL ENGINE OPERATING ON GASOLINE AND HYDROGEN FUELS
10.30-10.45	Artur KRZEMIŃSKI, Hubert KUSZEWSKI, Mirosław JAKUBOWSKI, Artur JAWORSKI, Paweł WOŚ, Jacek HUNICZ, Arkadiusz RYBAK, Andrzej BORAWSKI, Dariusz SZPICA <i>Rzeszow University of Technology</i> <i>Białystok University of Technology</i>	PTNSS-2025-115 PROBLEMS OF FILTRATION AND STANDARDIZATION ON PARAMETER CONFORMITY OF DIESEL FUELS CONTAINING DECARBONIZATION COMPONENTS AND PROCESSING IMPURITIES
10.45-11.00	Anna JANICKA, Aleksandra KĘSKA, Mateusz DZIUBEK, Maciej ZAWIŚLAK <i>Wroclaw University of Technology</i>	PTNSS-2025-111 COMPARATIVE ANALYSIS OF THE CYTOTOXICITY OF EXHAUST EMISSIONS AND THE MORPHOLOGY OF PARTICULATE MATTER PRESENT IN GASES EMITTED FROM COMPRESSION IGNITION ENGINES

11.00 – 11.30 Coffee Break
11.30 – 13.00 Technical Session II A
Alternative fuels: Hydrogen
Chairman: Prof. J. Mamala; Prof. A. Kulczycki

11.30-11.45	Marcin WOJS, Piotr LASKOWSKI, Magdalena ZIMAKOWSKA-LASKOWSKA <i>Warsaw University of Technology</i>	PTNSS-2025-046 NUMERICAL INVESTIGATION OF INTAKE FLOW DYNAMICS IN HYDROGEN-FUELED ENGINES
11.45-12.00	Grzegorz KUBICA, Paweł MARZEC <i>Silesian University of Technology</i>	PTNSS-2025-082 THE INFLUENCE OF THERMAL CONDUCTIVITY ON FIRE RESISTANCE OF COMPRESSED HYDROGEN STORAGE SYSTEMS (CHSS)
12.00-12.15	Jacek CZARNIGOWSKI, Krzysztof SKIBA, Marek KIDA <i>Lublin University of Technology</i>	PTNSS-2025-084 SIMPLE DYNAMIC MODEL OF A PEM-TYPE FUEL CELL
12.15-12.30	Marcin NOGA, Tomasz MOSKAL <i>Cracov University of Technology</i>	PTNSS-2025-067 CONVERSION TO HYDROGEN FUELING OF A RANGE EXTENDER SI ENGINE FOR A 48 V ELECTRIC VEHICLE
12.30-12.45	Paula KURZAWSKA-PIETROWICZ, Remigiusz JASIŃSKI, Sławomir SZRAMA, Maciej SIEDLECKI <i>Poznan University of Technology</i>	PTNSS-2025-070 EVALUATION OF JET ENGINE PERFORMANCE PARAMETERS FUELED WITH SUSTAINABLE AVIATION FUEL
12.45-13.00	Jędrzej MATLA, Andrzej KAŻMIERCZAK, Michał GRZEBYK, Tomasz HARDY <i>Wroclaw University of Technology</i>	PTNSS-2025-075 THE STUDY OF HYDROGEN CONSUMPTION IN 12-METER FUEL CELL ELECTRIC URBAN BUSES

11.30 – 13.00 Technical Session II B
Maintenance of powertrain systems
Chairman: Prof. A. Kaźmierczak; Prof. T. Kniaziewicz

11.30-11.45	Michał BRZOZOWSKI, Krzysztof PARCZEWSKI <i>University of Bielsko-Biala</i>	PTNSS-2025-018 THE IMPACT OF ADVERSE WEATHER ON THE MOVEMENT OF AN AUTONOMOUS CAR
11.45-12.20	Damian KURZYDYM <i>TENNECO AUTOMOTIVE EASTERN EUROPE Sp. z o.o.</i>	PTNSS-2025-014 COMPARATIVE STUDY OF AFTERMARKET AND OEM DPFS FOR PERIODIC TECHNICAL INSPECTIONS (PTI) COMPLIANCE WITH NEW PN EMISSION LIMITS
12.00-12.15	Ksenia SIADKOWSKA <i>University of Vaasa</i>	PTNSS-2025-013 INTEGRATED HYDROGEN-ARGON POWER CYCLE TO IMPROVE COMBUSTION EFFICIENCY
12.15-12.30	Krystian HENNEK, Andrzej BIENIEK, Jarosław MAMALA, Szymon KOŁODZIEJ <i>Opole University of Technology</i>	PTNSS-2025-078 ANALYSIS OF THE ACCELERATION PROCESS OF A PASSENGER VEHICLE UNDER VARIABLE LOAD CONDITIONS
12.30-12.45	Maria SKRĘTOWICZ <i>Wroclaw University of Technology</i>	PTNSS-2025-081 ANALYSIS OF THE QUALITY OF VEHICLE FLEET DATA AS INPUT FOR MODELING EMISSIONS AND DISPERSION OF POLLUTANTS EMITTED BY COMBUSTION ENGINE VEHICLES

12.45-13.00 Marek BRZEŻAŃSKI, Michał
MARECZEK, Marcin NOGA
Cracov University of Technology

PTNSS-2025-107
**CONVERSION OF AN INTERNAL COMBUSTION
ENGINE
TO SUPPLY OF HYDROGEN OR OTHER GASEOUS
FUELS**

11.30 – 13.00 Technical Session II C **Young Scientists**

Chairman: Prof. Ł. Rymaniak; N. Szymlet, DEng.

11.30-11.45 Aleksandra LUDWICZAK, Adam
KOZAKIEWICZ, Ryszard
CHACHURSKI, Mirosław
KARCZEWSKI
Military University of Technology

PTNSS-2025-041
**MEASUREMENTS OF EXHAUST EMISSIONS FROM
THE GTM-120 MINIATURE AIRCRAFT TURBINE
ENGINE USING ATMOSFIR MEASURING
EQUIPMENT.**

11.45-12.00 Dawid MIELCARZEWICZ, Filip
SZWAJCA, Ireneusz PIELECHA
Poznan University of Technology

PTNSS-2025-004
**EXPERIMENTAL INVESTIGATION ON THE
INFLUENCE OF PASSIVE/ACTIVE PRE-CHAMBER
INJECTION STRATEGY ON THE HYDROGEN
KNOCK LIMIT**

12.00-12.15 Iga PRZYTUŁA, Dorota
BURCHART
Silesian University of Technology

PTNSS-2025-040
**ENVIRONMENTAL ANALYSIS OF ALTERNATIVE
FUELS IN PUBLIC TRANSPORT USING THE LCA
METHOD**

12.15-12.30 Agata JARON, Anna BORUCKA
Military University of Technology

PTNSS-2025-015
**A MULTIDIMENSIONAL ASSESSMENT OF URBAN
AIRBORNE POLLUTANTS: A CASE STUDY
OF A MAJOR TRAFFIC ARTERY**

12.30-12.45 Piotr PIELECHA, Łukasz
RYMANIAK
Poznan University of Technology

PTNSS-2025-102
**ANALYSIS OF POTENTIAL ENVIRONMENTAL
BENEFITS FROM INTRODUCING A CLEAN
TRANSPORT ZONE BASED ON SELECTED AREA
IN THE CITY OF POZNAŃ**

12.45-13.00 Rafał LONGWIC, Michał
KUSZNERUK, Dawid
TATARYNOW, Gracjana
WOŹNIAK-BORAWSKA
Lublin University of Technology

PTNSS-2025-112
**ENERGY INDICATORS OF DIESEL ENGINE
OPERATION AT DIFFERENT INJECTION ANGLES
OF RAPESEED OIL AND N-HEXANE MIXTURES**

13.00 – 14.30 Lunch

14.30 – 16.00 Technical Session III A **Alternative fuels**

Chairman: Prof. A. Tomporowski; Prof. J. Hunicz

14.30-14.45 Denys STEPANENKO
Gdansk University of Technology

PTNSS-2025-012
**STUDY ON EFFECTS OF LPG ADDITION
AND EGR APPLICATION ON THE COMBUSTION
AND EMISSION CHARACTERISTICS IN A DUAL-
FUEL DIESEL ENGINE**

14.45-15.00 Paweł KRZACZEK
*University of Life Sciences in
Lublin*

PTNSS-2025-130
**PERFORMANCE AND EMISSION
CHARACTERISTICS OF AN AGRICULTURAL
TRACTOR ENGINE FUELED WITH ADDITIVES
BIODIESEL AND HYDROTREATED VEGETABLE
OIL**

15.00-15.15	Marietta MARKIEWICZ, Jerzy KASZKOWIAK, Lubomir HUJO <i>Bydgoszcz University of Technology</i>	PTNSS-2025-022 THE EFFECT OF ETHANOL IN GASOLINE ON EXHAUST GAS COMPONENTS EMITTED BY SPARK IGNITION ENGINES
15.15-15.30	Piotr LASKOWSKI, Marcin WOJS, Piotr WIŚNIEWSKI, Magdalena ZIMAKOWSKA-LASKOWSKA, Edward KOZŁOWSKI <i>Warsaw University of Technology</i> <i>Lublin University of Technology</i>	PTNSS-2025-051 DESIGN AND PERFORMANCE OF INTERNAL COMBUSTION ENGINES FOR MICRO-BIOGAS POWER GENERATION: A REVIEW OF TECHNOLOGIES AND CONFIGURATIONS FOR SUB-50 KW SYSTEMS
15.30-15.45	Rafał LONGWIC, Michał KUSZNERUK, Mateusz KLEPKA <i>Lublin University of Technology</i>	PTNSS-2025-118 COMPARATIVE ANALYSIS OF EXHAUST EMISSIONS FROM A COMPRESSION-IGNITION ENGINE FUELED WITH VEGETABLE FUEL AND DIESEL FUEL DURING SELECTED PHASES OF THE WLTP TEST
15.45-16.00	Dmytro SAMOILENKO, Jakub LASOCKI, Mateusz BEDNARSKI, Cho Haeng MUK <i>Warsaw University of Technology</i>	PTNSS-2025-069 THE INFLUENCE OF BIOGAS INJECTOR LOCATION ON AIR-BIOGAS MIXTURE HOMOGENEITY IN DUAL-FUEL COMPRESSION-IGNITION ENGINE

14.30 – 16.00 Technical Session III B **Maintenance of powertrain systems**

Chairman: Prof. A. Borucka; Prof. Z Stelmasiak

14.30-14.45	Wojciech SAWCZUK, Sławomir KOŁODZIEJSKI, Łukasz KUBACKI, Agnieszka BARTKOWIAK <i>Poznan University of Technology</i>	PTNSS-2025-019 MICROFILTRATION OF OILS AND FUELS IN COMBUSTION ENGINES - RESEARCH AND REVIEW OF SOLUTIONS
14.45-15.00	Oleksandr VRUBLEVSKYI, Daria SKONIECZNA <i>University of Warmia and Mazury</i>	PTNSS-2025-090 OPTIMISATION-ORIENTED VERIFICATION OF A PLAIN BEARING PROCESS MODEL TAKING INTO ACCOUNT REAL TOLERANCES AND MEASUREMENT ACCURACY
15.00-15.15	Zbigniew KNEBA <i>Gdansk University of Technology</i>	PTNSS-2025-033 HEATING CABINS OF ELECTRIC AND HYBRID VEHICLES – CALCULATION METHOD
15.15-15.30	Krzysztof LEW, Paweł WOJEWODA, Janusz LUBAS <i>Rzeszow University of Technology</i>	PTNSS-2025-054 THE ANALYSIS OF THE IMPACT OF THE STORAGE PERIOD OF ENGINE AND TRANSMISSION OIL ON OPERATIONAL PROPERTIES
15.30-15.45	Karol F. ABRAMEK, Tomasz OSIPOWICZ <i>West Pomeranian University of Technology in Szczecin</i>	PTNSS-2025-110 ANALYSIS OF THE IMPACT OF INJECTOR FAILURES ON EXHAUST EMISSIONS IN A MODERN COMPRESSION-IGNITION ENGINE
15.45-16.00	Małgorzata GRZELAK, Anna BORUCKA, Magdalena RYKAŁA <i>Military University of Technology</i>	PTNSS-2025-108 ANALYSIS OF THE IMPACT OF ENGINE DESIGN PARAMETERS ON FUEL CONSUMPTION AND CO₂ EMISSIONS IN PASSENGER CARS

14.30 – 16.00 Technical Session III C
Young Scientists
Chairman: Prof. A. Janicka; Prof. A. Świdorski

14.30-14.45	Piotr GŁADYSZ <i>Poznan University of Technology</i>	PTNSS-2025-063 ARTIFICIAL INTELLIGENCE IN UNMANNED AERIAL VEHICLE SYSTEMS: OPPORTUNITIES AND THREAT
14.45-15.00	Michał TRENDAK, Jacek CZARNIGOWSKI <i>Lublin University of Technology</i>	PTNSS-2025-077 AGGREGATE INDICATOR OF ENGINE OIL DEGRADATION BASED ON PHYSICO-CHEMICAL PARAMETERS
15.00-15.15	Gadisa SUFE <i>Wroclaw University of Technology</i>	PTNSS-2025-042 REVIEW ON THE EFFECTS OF NANOPARTICLES ON AUTOMOTIVE ENGINE COOLING SYSTEM: PROPER TYPE, SIZE, AND CONCENTRATION WITH BASE FLUID SELECTIONS
15.15-15.30	Katarzyna ŚLUSARCZYK, Rafał Stanisław JURECKI <i>Kielce University of Technology</i>	PTNSS-2025-059 THE USE OF A VEHICLE SIMULATOR FOR ECO-DRIVING RESEARCH
15.30-15.45	Henry Andres Porras PERUCHO, Joanna GROCHOWALSKA, Łukasz Jan KAPUSTA, Łukasz BORUC <i>Warsaw University of Technology</i>	PTNSS-2025-119 SPRAY STRUCTURES FORMED BY A MULTI- NOZZLE INJECTOR DURING THE INJECTION OF A MULTI-COMPONENT SURROGATE SYNTHETIC FUEL UNDER FLASH-BOILING CONDITIONS
15.45-16.00	Maciej BEDNAREK, Andrzej ZIÓŁKOWSKI <i>Poznan University of Technology</i>	PTNSS-2025-103 EMISSION PERFORMANCE OF A HEAVY VEHICLE FOR THE TRANSPORT OF CONCRETE WITH REFERENCE TO THE CURRENTLY APPLICABLE REAL DRIVING EMISSIONS PROCEDURES

16.00 – 16.30 Closing Remarks

List of Papers of the Poster Session

Radosław WŁOSTOWSKI, Arkadiusz MACEK, Maciej ZAWIŚLAK <i>Wroclaw University of Technology</i>	PTNSS-2025-002 METHOD FOR EVALUATING THE EFFICIENCY OF DUST COLLECTION BASED ON CENTRIFUGAL CONCENTRATORS
Kacper LEŚNY, Radosław WŁOSTOWSKI, Adriana WŁÓKA, Andrzej KAŻMIERCZAK <i>Wroclaw University of Technology</i>	PTNSS-2025-007 ANALYSIS OF THE POSSIBILITIES OF USING ALTERNATIVE FUEL MIXTURES AS A SUBSTITUTE FOR CONVENTIONAL FUELS
Adriana WŁÓKA, Andrzej KAŻMIERCZAK, Radosław WŁOSTOWSKI, Kacper LEŚNY <i>Wroclaw University of Technology</i>	PTNSS-2025-008 PRELIMINARY RESEARCH ON THE CO-COMBUSTION PROCESS OF AMMONIA IN A COMPRESSION-IGNITION ENGINE
Patrycja PUZDROWSKA, Jakub SKOBYŁKO <i>Gdansk University of Technology</i>	PTNSS-2025-009 ANALYSIS OF THE POSSIBILITY OF USING THE SANKEY DIAGRAM IN THE DIAGNOSIS OF A PARTIALLY LOADED DIESEL ENGINE
Piotr PIÓRKOWSKI, Maciej ANDRZEJEWSKI, Mateusz NOWAK <i>Poznan University of Technology</i>	PTNSS-2025-010 THE ANALYSIS OF THE USE OF HYDROGEN IN COMMERCIAL VEHICLES
Dawid MIELCARZEWICZ, Ireneusz PIELECHA <i>Poznan University of Technology</i>	PTNSS-2025-011 THERMODYNAMIC ASPECTS OF HYDROGEN AND AMMONIA CO-COMBUSTION IN AN ENGINE WITH A TWO-STAGE TURBULENT JET IGNITION COMBUSTION SYSTEM
Mariusz IZDEBSKI, Marianna JACYNA <i>Warsaw University of Technology</i>	PTNSS-2025-016 DETERMINING THE ENERGY EXPENDITURE OF ELECTRIC VEHICLES USING ARTIFICIAL INTELLIGENCE ALGORITHMS
Michał BRZOZOWSKI, Kacper CIEŚLAR, Jacek NOWAKOWSKI <i>University of Bielsko-Biala</i>	PTNSS-2025-017 ROBUST AND FAST TEN DEGREES OF FREEDOM MODELIN AUTONOMOUS VEHICLE MOTION PLANNING
Piotr WRÓBLEWSKI, Przemysław BRATKOWSKI <i>University of Technology and Economics</i>	PTNSS-2025-020 THE INFLUENCE OF PROPELLER AERODYNAMIC PARAMETERS ON THE OPERATING TEMPERATURE OF CYLINDER HEADS IN AIRCRAFT PISTON ENGINES
Zbigniew ŻMUDKA <i>Silesian University of Technology</i>	PTNSS-2025-021 IMPROVING THE UNCERTAINTY OF MEASURED AND CALCULATED DATA IN ENGINE PROBLEMS USING THE RECONCILIATION ALGORITHM
Marietta MARKIEWICZ, Małgorzata MALINOWSKA <i>Bydgoszcz University of Technology</i>	PTNSS-2025-023 RAPESEED, CASTOR, AND LINSEED OIL AS ALTERNATIVE FOR CONVENTIONAL PETROLEUM-DERIVED TRUNK PISTON ENGINE OIL
Andrzej TOMPOROWSKI, Izabela PIASECKA, Katarzyna PIOTROWSKA <i>Bydgoszcz University of Technology</i> <i>Lublin University of Technology</i>	PTNSS-2025-025 ENVIRONMENTAL LIFE CYCLE ASSESSMENT OF SELECTED SUV PASSENGER CARS
Wioletta CEBULSKA, Damian HADRYŚ, Adam RAJCA <i>Silesian University of Technology</i>	PTNSS-2025-027 COMPARISON OF MAGNETIC INDUCTION EMISSIONS IN ELECTRIC, HYBRID AND CONVENTIONAL CARS
Zbigniew STĘPIEŃ, Ireneusz PIELECHA, Filip SZWAJCA <i>Oil and Gas Institute</i> <i>Poznan University of Technology</i>	PTNSS-2025-031 THE INFLUENCE OF ALCOHOL-GASOLINE BLENDS AND DEPOSIT CONTROL ADDITIVES ON FUEL INJECTOR CONTAMINATION IN SI DI ENGINES

Krzysztof PARCZEWSKI, Henryk WNEK, Błażej ŻYLEWSKI <i>University of Bielsko-Biala</i>	PTNSS-2025-032 ANALYSIS OF ENERGY CONSUMPTION AND RECOVERY BY THE ELECTRIC MOTOR AND GENERATOR OF A HEV HYBRID VEHICLE
Sebastian SOBCZUK, Anna BORUCKA <i>Military University of Technology</i>	PTNSS-2025-034 STUDY OF THE RELATIONSHIP BETWEEN FINAL ENERGY CONSUMPTION IN TRANSPORT, CO2 EMISSIONS AND GOVERNMENT REVENUES USING THE EXAMPLE OF POLAND
Mateusz BEDNARSKI, Mieczysław SIKORA, Piotr ORLIŃSKI <i>Warsaw University of Technology</i>	PTNSS-2025-038 ANALYSIS OF THE CURRENT LUBRICANT REQUIREMENTS OF THE LATEST COMBUSTION ENGINES
Mateusz NOWAK, Bartłomiej FLIS <i>Poznan University of Technology</i>	PTNSS-2025-039 ENGINES USED IN MODERN UNMANNED AERIAL VEHICLES
Andrzej KRYŻAN, Jan MONIETA <i>Maritime University of Szczecin</i>	PTNSS-2025-043 IMPROVING THE CLEANLINESS OF OUTLET GASES IN INLAND SHIPPING IN TERMS OF ENVIRONMENTAL COMPLIANCE USING HHO TECHNOLOGY
Robert SZCZUR, Anna BORUCKA <i>Military University of Technology</i>	PTNSS-2025-044 THE EVOLUTION OF DRIVE SYSTEMS IN THE AREA OF MICROMOBILITY – SOLUTIONS FOR MODERN URBAN TRANSPORT SYSTEMS
Tomasz KNEFEL, Kamil WĘGLARZ <i>University of Bielsko-Biala</i>	PTNSS-2025-045 ANALYSIS OF CHANGES IN THE MEAN INDICATED PRESSURE OF COMPRESSION-IGNITION ENGINES WITH DIFFERENT DEGREES OF SUPERCHARGING
Filip SZWAJCA, Krzysztof WISŁOCKI <i>Poznan University of Technology</i>	PTNSS-2025-047 IMPACT OF SPARK PLUG GEOMETRY ON THE CYCLE-TO- CYCLE VARIABILITY IN AN INTERNAL COMBUSTION GAS ENGINE
Dariusz PIETRAS, Piotr PIETRAS, Piotr PAJDOWSKI, Andrzej SZCZOTKA <i>University of Bielsko-Biala</i> <i>BOSMAL Automotive Research and Development Institute Ltd</i>	PTNSS-2025-048 ANALYSIS OF THE EXHAUST EMISSIONS OF A PLUG-IN HYBRID VEHICLE DEPENDING ON THE BATTERY STATE OF CHARGE
Piotr LASKOWSKI, Marcin WOJS <i>Warsaw University of Technology</i>	PTNSS-2025-050 APPLICATION OF 3D-PRINTED METAL PISTONS IN INTERNAL COMBUSTION ENGINES: ADVANTAGES AND CHALLENGES
Katarzyna PIOTROWSKA, Izabela PIASECKA, Andrzej TOMPOROWSKI, Katarzyna MARKOWSKA, Kamil WITTEK, Marek OPIELAK <i>Lublin University of Technology</i> <i>Bydgoszcz University of Technology</i> <i>Silesian University of Technology</i>	PTNSS-2025-058 LIFE CYCLE ECO-EFFICIENCY ASSESSMENT OF SELECTED GASOLINE-POWERED BEV AND ICEV VEHICLE SEGMENTS
Edward KOZŁOWSKI, Magdalena ZIMAKOWSKA-LASKOWSKA, Piotr WIŚNIEWSKI, Ksawery ŻBIK, Andrzej ŚWIDERSKI, Ewa ROSTEK <i>Motor Transport Institute</i> <i>Lublin University of Technology</i>	PTNSS-2025-061 THE INFLUENCE OF AMBIENT TEMPERATURE ON EXHAUST EMISSIONS DURING COLD START IN THE HOMOLOGATION TEST

Magdalena ZIMAKOWSKA- LASKOWSKA, Artur BOGDANOWICZ, Tomasz KNIAZIEWICZ <i>Motor Transport Institute Naval Academy</i>	PTNSS-2025-064 ASSESSING POLLUTANT FLOW IN A MARINE ENGINE EXHAUST BASED ON CONCENTRATIONS MEASURED AT MULTIPLE POINTS
Piotr PIETRAS, Monika ANDRYCH- ZALEWSKA <i>University of Bielsko-Biala</i>	PTNSS-2025-073 DESIGN OF A TEST STAND FOR A DIESEL ENGINE POWERED BY HYDROGEN, DEDICATED TO HDV VEHICLES
Andrzej AUGUSTYNOWICZ, Jarosław MAMALA, Maciej SPROCH <i>Opole University of Technology</i>	PTNSS-2025-076 RESEARCH ON FUEL AND ELECTRIC ENERGY CONSUMPTION IN PASSENGER CARS IN A MIXED CYCLE, USING THE EXAMPLE OF LOCAL ROAD TRAFFIC IN OPOLE
Grzegorz KOSZAŁKA, Eduardo TOMANIK, Thiago Marinho MARIA, Jacek HUNICZ, Wania CHRISTINELLI <i>Lublin University of Technology</i>	PTNSS-2025-079 USE OF DIGITAL TWIN TO ANALYSE THE EFFECT OF GRAPHENE AS A LUBRICANT ADDITIVE FOR DIESEL ENGINES
Artur BOGDANOWICZ, Paweł SOCIK, Ryszard ZADRAĞ, Marcin ZACHAREWICZ, Paweł WIRKOWSKI <i>Naval Academy</i>	PTNSS-2025-083 MULTI-CRITERIA ANALYSIS OF THE EMISSION OF HARMFUL COMPOUNDS FROM A MARINE DIESEL ENGINE FUELED WITH A MIXTURE OF MARINE FUEL AND N-BUTANOL
Marcin ZACHAREWICZ, Artur BOGDANOWICZ, Paweł SOCIK <i>Naval Academy</i>	PTNSS-2025-085 CAPACITANCE-BASED ASSESSMENT OF WATER CONTENT IN FUELS AND LUBRICATING OILS FOR MARINE ENGINES
Paweł FABIŚ, Piotr HEMLECKI <i>Silesian University of Technology</i>	PTNSS-2025-087 THE INFLUENCE OF IGNITION TIMING ON THE OPERATING PARAMETERS OF A VEHICLE POWERED BY GASEOUS FUELS
Maciej SZKODA, Bartłomiej ROMOWICZ <i>Cracov University of Technology</i>	PTNSS-2025-089 EFFICIENCY ASSESSMENT OF HIGH-POWER DIESEL LOCOMOTIVES USING A TWO-ENGINE DRIVE SYSTEM
Przemysław KUBIAK, Mariusz NIEŚCIORUK, Gustavo OZUNA, Agustín Braun ÁVILA, Andrei-Alexandru BOROIU, Constantin ONESCU, Marek WOŹNIAK, Krzysztof SICZEK <i>Lodz University of Technology</i>	PTNSS-2025-091 THE USE OF HYDROGEN TO SUPPLY OF COMBUSTION ENGINES – PART 2
Przemysław KUBIAK, Mariusz NIEŚCIORUK, Gustavo OZUNA, Agustín Braun ÁVILA, Andrei-Alexandru BOROIU, Marek WOŹNIAK, Krzysztof SICZEK <i>Lodz University of Technology</i>	PTNSS-2025-092 THE USE OF HYDROGEN TO SUPPLY OF COMBUSTION ENGINES – PART 1
Jacek PIELECHA, Michał LIBERA, Łukasz RYMANIAK, Igor KSIĄŻEK <i>Poznan University of Technology</i>	PTNSS-2025-093 PARTICULATE MATTER EMISSIONS FROM PASSENGER CAR BRAKES
Łukasz RYMANIAK, Maciej ZIÓŁKOWSKI, Jakub SOBCZAK <i>Poznan University of Technology</i>	PTNSS-2025-097 COMPARISON OF POLLUTANT EMISSIONS PER PASSENGER FOR PUBLIC AND INDIVIDUAL TRANSPORT
Albert LEWANDOWSKI, Władysław PAPACZ <i>University of Zielona Góra</i>	PTNSS-2025-098 STUDY OF LUBRICATING PROPERTIES OF MODIFIED BASE OIL OPERATING BY PREPARATIONS WITH A CHEMICAL EFFECT IN TERMS OF LUBRICATION OF INTERNAL COMBUSTION ENGINES

Michał ŚMIEJA, Kamil DUDA, Jakub BANACH <i>University of Warmia and Mazury</i>	PTNSS-2025-100 COMPARISON OF VIBROACOUSTIC SIGNALS GENERATED BY COMBUSTION ENGINE ACQUIRED WITH ACCELEROMETER AND MICROPHONE
Łukasz RODAK <i>Cracov University of Technology</i>	PTNSS-2025-104 ANALYSIS OF ENERGY FLOW IN A HYBRID DRIVE SYSTEM WITH A HYDROGEN-POWERED COMBUSTION ENGINE
Łukasz RYMANIAK, Tomasz KALOCIŃSKI, Piotr PIELECHA, Natalia SZYMLET <i>Poznan University of Technology</i>	PTNSS-2025-105 THE IMPACT OF THE INTELLIGENT POWER MANAGEMENT SYSTEM ON POLLUTANT EMISSIONS IN AN AGRICULTURAL TRACTOR
Natalia SZYMLET, Xymena GROSS, Jakub TOMASZ, Manuela SKOWRON, Beata KURC, Ewelina RUDNICKA <i>Poznan University of Technology</i>	PTNSS-2025-106 THE ELECTROCHEMICAL ROUTE TO SUSTAINABLE TRANSPORT
Marek BRZEŻAŃSKI, Michał MARECZEK, Marcin NOGA <i>Cracov University of Technology</i>	PTNSS-2025-107 CONVERSION OF AN INTERNAL COMBUSTION ENGINE TO SUPPLY OF HYDROGEN OR OTHER GASEOUS FUELS
Joanna GROCHOWALSKA, Łukasz Jan KAPUSTA <i>Gdansk University of Technology</i> <i>Warsaw University of Technology</i>	PTNSS-2025-109 A MODEL OF A FUEL SPRAY PARAMETER IN A MARINE DIESEL ENGINE
Michał GRZEBYK, Tomasz HARDY <i>Wroclaw University of Technology</i>	PTNSS-2025-113 TECHNO-ECONOMIC ANALYSIS OF RETROFITTING HEAVY-DUTY VEHICLES FOR HYDROGEN CO-FUELING: SAVINGS AND ENVIRONMENTAL BENEFITS
Przemysław SANDER, Rafał LONGWIC <i>Lublin University of Technology</i>	PTNSS-2025-120 ANALYSIS OF THE INFLUENCE OF THE N-HEXANE CONTENT IN THE MIXTURE WITH RAPESEED OIL ON THE AUTO-IGNITION DELAY ANGLE OF THE FUEL
Łukasz RYMANIAK, Kajetan WIŚNIEWSKI, Marcin MILEWSKI, Natalia SZYMLET <i>Poznan University of Technology</i>	PTNSS-2025-121 COMPARISON OF POLLUTANT EMISSIONS FROM A HISTORIC AND A MODERN VEHICLE DURING CHASSIS DYNAMOMETER TESTING
Piotr ŁAGOWSKI, Grzegorz WCISŁO, Dariusz KURCZYŃSKI <i>Kielce University of Technology</i> <i>University of Agriculture in Krakow</i>	PTNSS-2025-122 ASSESSMENT OF THE OXIDATIVE STABILITY OF BIOFUELS FOR COMPRESSION IGNITION ENGINES
Monika MAGDZIAK-TOKŁOWICZ <i>Wroclaw University of Technology</i>	PTNSS-2025-123 ELECTROMAGNETIC FIELD INTENSITY IN ELECTRIC VEHICLES: CORRELATION WITH MOTOR LOAD DURING REAL-WORLD OPERATION
Magdalena RYKAŁA, Anna BORUCKA, Małgorzata GRZELAK <i>Military University of Technology</i>	PTNSS-2025-126 MODELING CARVEHICLE CO₂ EMISSIONS WITH THE USE OF MULTIFACTOR REGRESSION MODEL
Borys ADAMIAK, Adam SORDYL, Jerzy MERKISZ <i>BOSMAL Automotive Research and Development Institute Ltd</i> <i>Poznan University of Technology</i>	PTNSS-2025-128 COMPARISON OF NITROGEN OXIDE EXHAUST EMISSION RESULTS OBTAINED FROM PORTABLE EMISSIONS MEASUREMENT SYSTEMS (PEMS) USING TWO DIFFERENT METHODS MEASUREMENT AND A LABORATORY SYSTEMS
Piotr LIJEWSKI, Paweł FUĆ, Artur BRYDZIŃSKI, Marcin ZYGMANOWICZ <i>Poznan University of Technology</i>	PTNSS-2025-129 REAL DRIVING AND SIMULATION INVESTIGATION OF ENERGY CONSUMPTION OF TWO-WHEELED ELECTRIC VEHICLES

Marek IDZIOR <i>Poznan University of Technology</i>	PTNSS-2025-131 STUDY OF THE IMPACT OF ENGINE OIL OPERATING CONDITIONS ON THE WEAR OF COMBUSTION ENGINES
Willian Cezar NADALETI, Grzegorz PRZYBYŁA, Ireneusz SZCZYGIEŁ <i>Silesian University of Technology</i>	PTNSS-2025-134 ANALYSIS OF THE 6-STROKE SI ENGINE CYCLE WHEN USING FUELS WITH HIGH HYDROGEN CONTENT
Karol DĘBOWSKI, Mirosław KARCZEWSKI <i>Military University of Technology</i>	PTNSS-2025-136 EVALUATION OF THE REPEATABILITY OF FUEL DOSING BY THE COMMON RAIL FUEL SUPPLY SYSTEM
Tadeusz DZIUBAK <i>Military University of Technology</i>	PTNSS-2025-137 ANALYSIS OF THE FILTRATION PROCESS OF INLET AIR TO AN INTERNAL COMBUSTION ENGINE IN A TWO-STAGE FILTER
Katarzyna TURON <i>Silesian University of Technology</i>	PTNSS-2025-138 ANALYSIS OF POWERTRAIN TYPES IN GLOBAL CAR-SHARING SERVICES AS AN INDICATOR OF SERVICE INNOVATION
Andrzej KUBIK <i>Silesian University of Technology</i>	PTNSS-2025-139 APPLICATION OF LARGE LANGUAGE MODELS FOR VIBROACOUSTIC-BASED DIAGNOSTIC ASSESSMENT OF TURBOCHARGER COMPONENT EFFICIENCY
Dominika BANKO, Kacper GAŚIOREK, Adam GRUSZKA, Marcin LEBIECKI, Szymon ŁOJKO, Patrycja MALŻYCKA, Wiktoria MIERZWA, Mateusz MYŚLIWIEC, Mateusz OGŁOZIŃSKI, Patrycja OŁUBEK, Jagoda PECZYŃSKA, Konrad PIÓRKOWSKI, Jakub RYMASZEWSKI, Magdalena STEC, Wojciech WEKSEJ <i>Silesian University of Technology</i>	PTNSS-2025-140 PREFERENCES OF STUDENTS FROM THE FACULTY OF TRANSPORT AND AVIATION ENGINEERING AT SILESIA UNIVERSITY OF TECHNOLOGY REGARDING INTERNAL COMBUSTION ENGINES
Hubert WOJCIECHOWSKI, Jerzy MERKISZ <i>Poznan University of Technology</i>	PTNSS-2025-141 RESULTS REPEATABILITY EVALUATION OF EXHAUST EMISSION DATA OBTAINED IN LABORATORY WLTC TEST CONDITIONS USING STATIONARY AND PEMS ANALYSERS
Piotr PEŁECHAT, Łukasz KONIECZNY <i>Silesian University of Technology</i>	PTNSS-2025-142 AUTOMOTIVE ELECTRONIC CONTROL UNIT ON-BOARD DIAGNOSTICS SYSTEM SECURITY

CONGRESS LOCATION AND TRAVEL DETAILS

The Congress will be held on the campus
of the Silesian University of Science and Technology

Addresses location:

23.06.2025, Monday

Registration

– Ground floor, hall near the main entrance (L-0), Krasińskiego 8 Str., 40-019 Katowice, Poland

Welcome reception

– Room 1023 (L-1), Krasińskiego 8 Str., 40-019 Katowice, Poland

24.06.2025, Tuesday and 25.06.2025, Wednesday

Registration

– Ground floor, hall near the main entrance (L-0), Krasińskiego 8 Str., 40-019 Katowice, Poland

Lunches

– Main hall 2001 (L-2), Krasińskiego 8 Str., 40-019 Katowice, Poland

Gala Dinner

– Marysin Dwór Hotel, Józefa Pukowca 17a Str., 40-847 Katowice, Poland

Main hall 2001 (L-2), is located in main campus of Silesian University of Science and Technology at a distance of about 1.4–1.7 km from the railway station – **Fig. 1.**

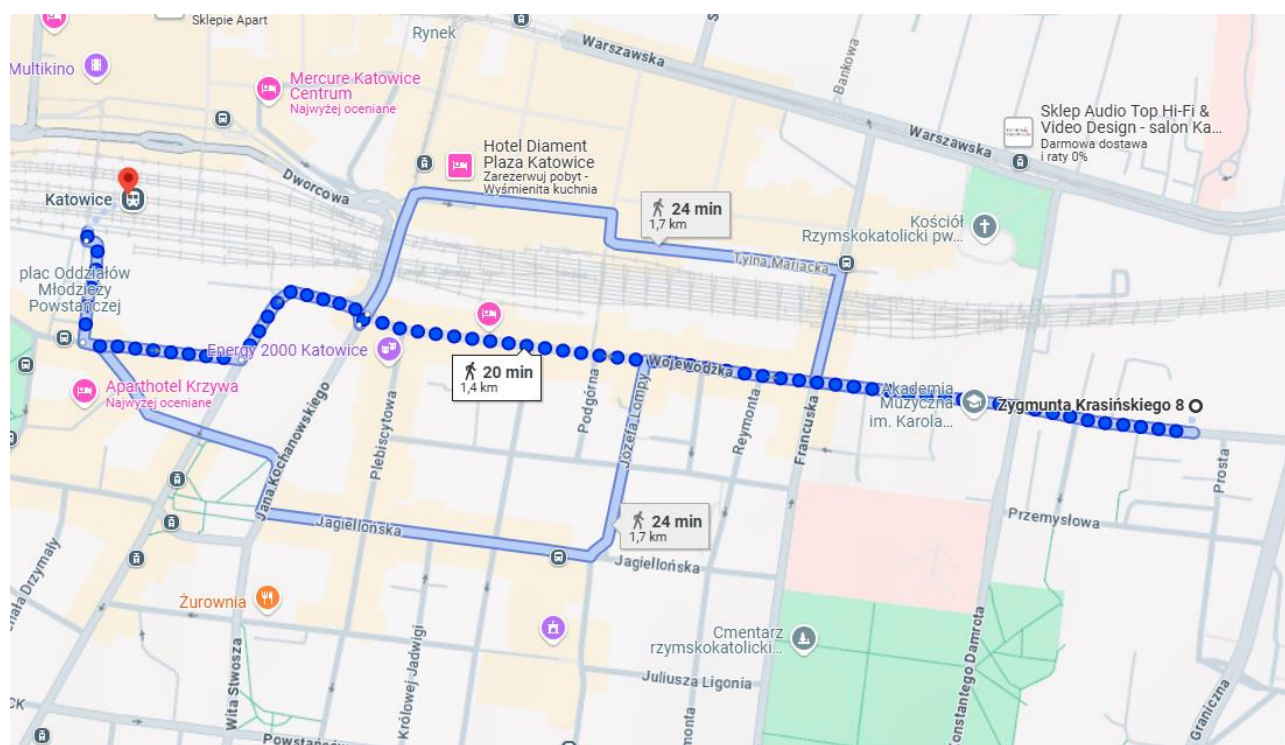


Fig. 1. Route to the Silesian University of Technology, campus Katowice from the railway station

Main entrance to Silesian University of Technology in Katowice – Fig. 2.

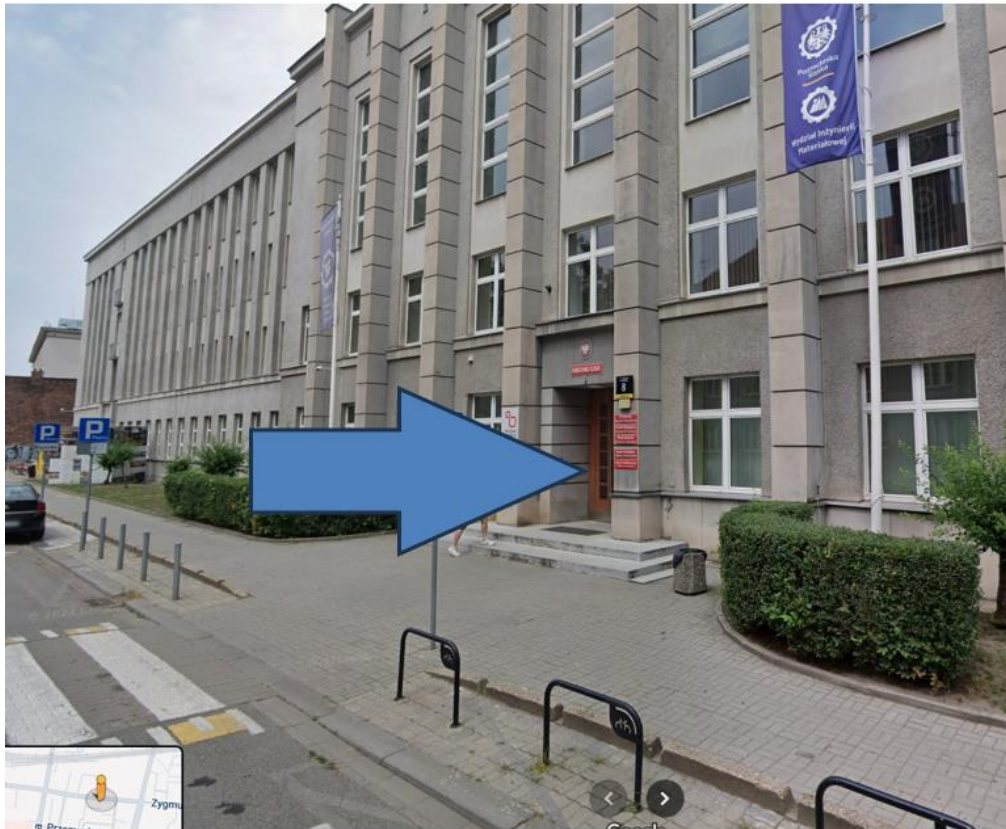


Fig. 2. Main entrance to Silesian University of Technology in Katowice



Fig. 3. Main entrance to Silesian University of Technology in Katowice



Fig. 4. Main hall – registration

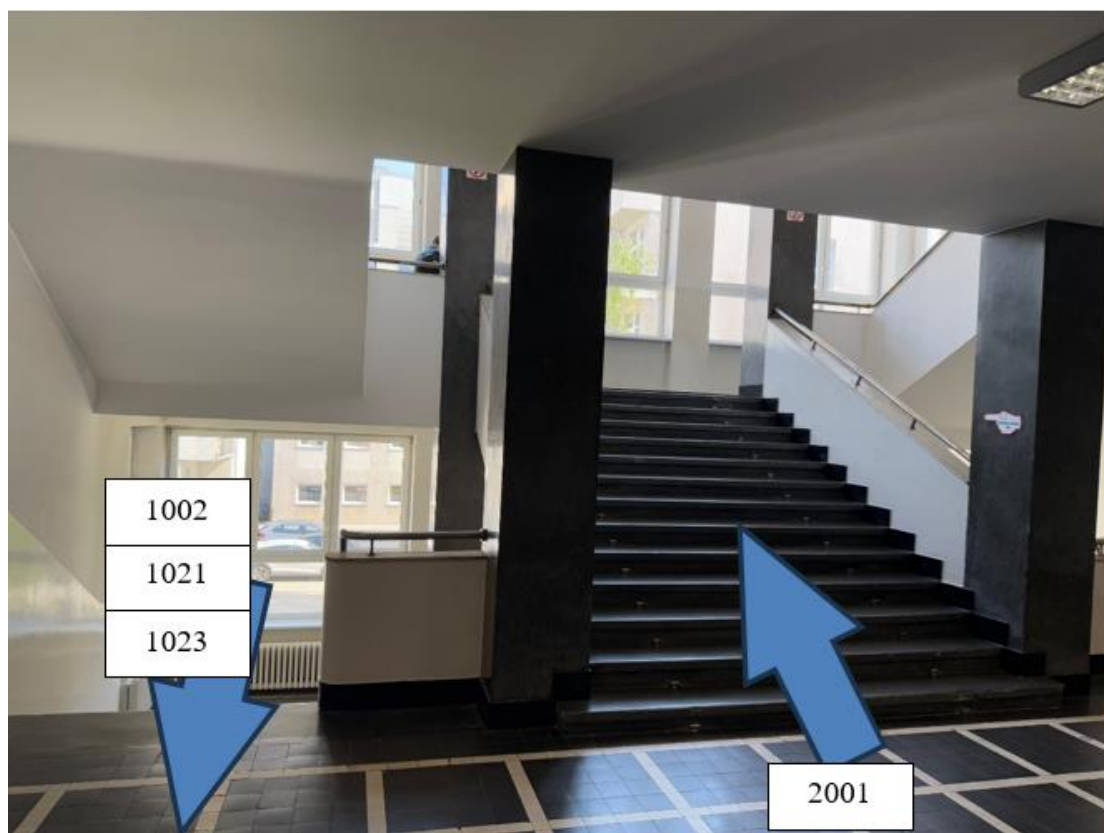


Fig. 5. 1st Floor



Fig. 6. 2nd Floor – Main entrances to 2001 Room (Aula)



Fig. 7. 1st Floor – Main entrances to 1002, 1021, 1023



Fig. 8. 1st Floor – Main entrance to 1021



Fig. 9. 1st Floor – Main entrance to 1023

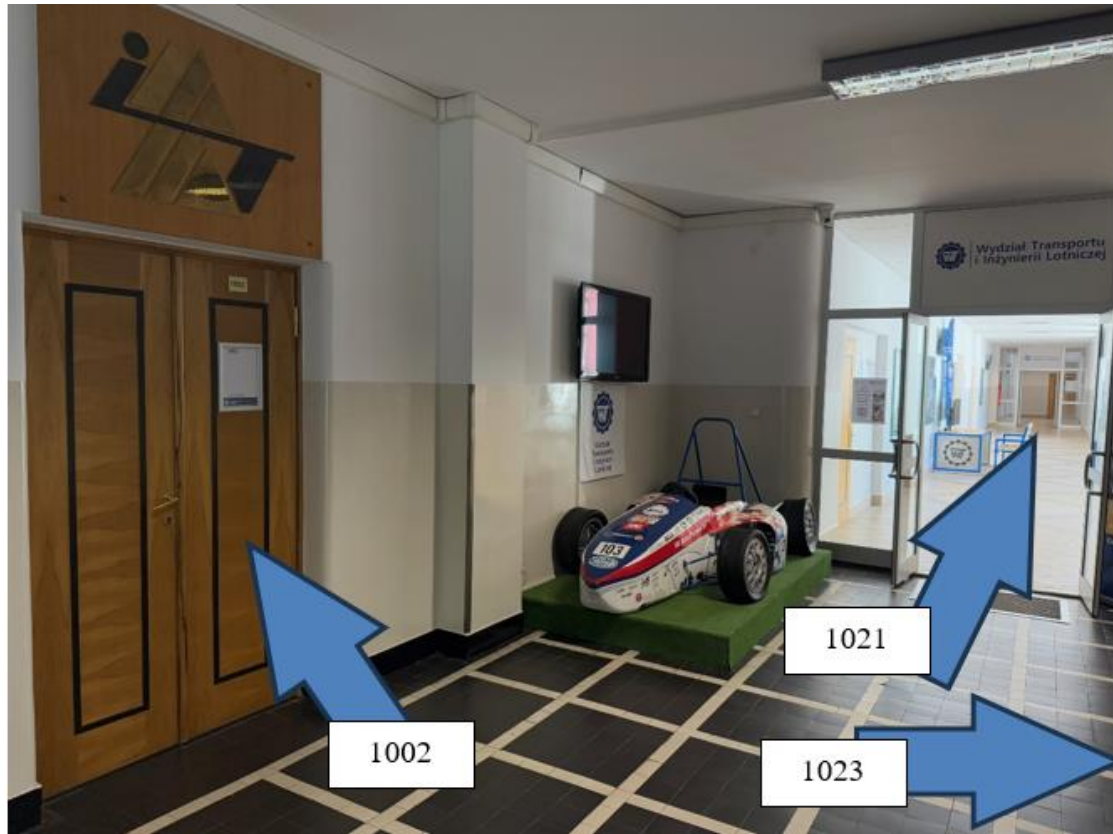


Fig. 10. 1st Floor – Main entrance to 1002

Details of the travel:

- **Train communication to Katowice:**

- direct links are available from various cities of Poland
- for more detailed information on train connection please visit: <http://www.pkp.com.pl>

From the selected hotels:

- | | |
|--|--|
| – Hotel Mercure Katowice Centrum | on foot (1.3 km distance) |
| – Hotel Novotel Katowice Centrum | on foot (0.9 km distance) |
| – Hotel Ibis Budget Katowice | on foot (0.9 km distance) |
| – Hotel Senator | on foot (0.5 km distance) |
| – Best Western Hotel Mariacki | on foot (0.7 km distance) |
| – Hotel Monopol | on foot (0.7 km distance) |
| – Hotel Diament Plaza Katowice | on foot (0.9 km distance) |
| – Hotel Qubus Hotel Katowice | on foot (1.3 km distance) |
| – Hotel Courtyard by Marriott Katowice City Center | on foot (1.3 km distance) |
| – Hotel Marysin Dwór | by car, taxi or rail (5.5 km distance) |

- **How to get to the Marysin Dwór Hotel (Gala Dinner) from Silesian University of Technology?**
Best connection is from the Katowice main railway station (3 Maja Str., 40-001 Katowice) to Katowice Załęże railway station – **Fig. 11**.
- Marysin Dwór Hotel is opposite the railway station Katowice Załęże

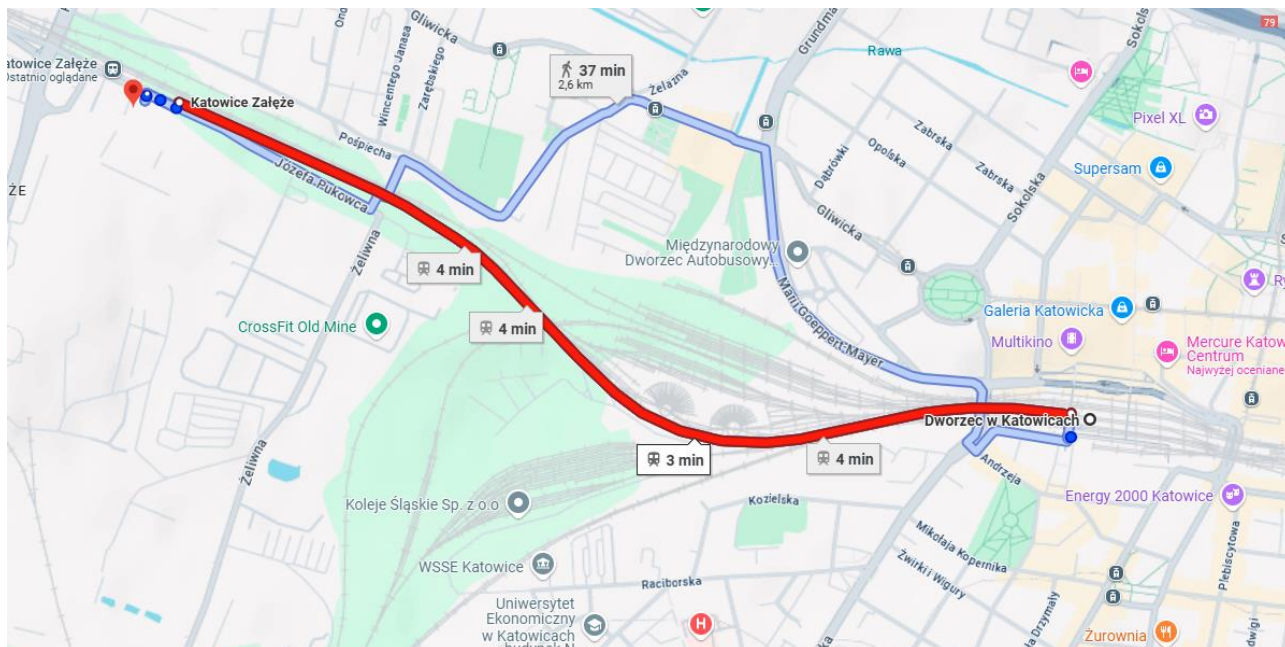


Fig. 11. Route to the Marysin Dwór Hotel (Gala Dinner) from Katowice main railway station