

KOKA 2018, XLIX. INTERNATIONAL CONFERENCE OF CZECH AND SLOVAK UNIVERSITIES, DEPARTMENTS AND INSTITUTIONS DEALING WITH THE RESEARCH OF COMBUSTION ENGINES

XLIX. International conference of czech and slovak universities, departments and institutions dealing with research of combustion engines and vehicles will be held on 19th -21st. September 2018 in Nitrianske Rudno. The conference is intended to offer a possibility of presentation of problematic and trends in automotive industry. The conference is given for academics and researchers, research institutes and centres, companies, users of mobile engineering and also other professional or amateur community.

TOPICS

The conference will be focused on topic areas:

1. The area of combustion engines

- combustion engine dynamic
- noise and vibration control
- combustion engine dynamic
- innovative combustion engine concepts and solutions
- fuels, lubricants
- virtual prototyping

2. The engine vehicles area

- vehicle dynamic
- vehicle design
- active and passive vehicle safety
- vehicle control
- motorsport
- vehicle handling and agility

Conference Honorary Chairman:

prof. Ing. Zdenko Tkáč, PhD.

Dean of Faculty of Engineering SUA

Conference Chairman:

doc. Ing. Ivan Janoško, CSc.

doc. Ing. Eubomír Hujo, PhD.

email: Ivan.Janosko@uniag.sk
lubomir.hujo@uniag.sk

SLOVAK UNIVERSITY OF AGRICULTURE

IN NITRA

FACULTY OF ENGINEERING



19th – 21st SEPTEMBER 2018

NITRIANSKE RUDNO, SLOVAKIA

www.koka2018.uniag.sk

Conference Honorary and Scientific Committee:

doc. Ing. Dalibor Barta, PhD. - ŽU Žilina
doc. Ing. Jiří Čupera, PhD. - MZLU Brno
prof. Ing. Pavol Kukuča, PhD. - ŽU Žilina
prof. Ing. Ján Macek, DrSc. - ČVUT Praha
prof. Ing. Václav Pištek, DrSc. - VUT Brno
prof. Ing. Marián Poloni, CSc - STU Bratislava
prof. Ing. Celestýn Scholz, PhD. - TU Liberec
prof. Ing. Zdenko Tkáč, PhD. - SPU Nitra
doc. Ing. Miroslav Růžička, CSc. - ČZU Praha
doc. Ing. Oldřich Víttek, PhD. - ČVUT Praha

Conference Organizing Committee:

doc. Ing. Ján Kosiba, PhD.
email: jan.kosiba@uniag.sk
Ing. Peter Kuchar
email: xkuchars.uniag.sk
Ing. Marek Halenár
email: xhalenarm@is.uniag.sk
Ing. Jozef Nosian
email: xnosian@is.uniag.sk

Correspondence address:

Department of Transport and Handling
St. Andrej Hlinka 2
949 76 Nitra
Slovak Republic

Conference Venue:

Hotel Baník Nitrianske Rudno, Slovakia

Dealings language:

english, czech and slovak

Presence requirements – important deadlines:

- **Abstract form** must be sent by email to address organizing committee till **30th June 2018**
 - Acceptance letter will be sent till **30th June 2018**
 - Deadline for submitting of **Registration form** and **Conference fee** payment till **31st July 2018**.
 - **Full paper** to send at latest till **31st July 2018**
 - Conference timetable till **31st August 2018**
- The organizer reserves a right of selection and insertion of paper to the sections according to a focus of papers.

KOKA 2018, XLIX. INTERNATIONAL CONFERENCE OF CZECH AND SLOVAK UNIVERSITIES, DEPARTMENTS AND INSTITUTIONS DEALING WITH THE RESEARCH OF COMBUSTION ENGINES

Accommodation and Alimentation:

There will be reserved accommodation for conference participants on requirement at accommodation facilities Hotel Baník, like in accommodation facilities of the hotel variant. The all-day alimentation will be reserved in the discussion place in usual quality. Financial details will be specified in registration form.

Conference fee payments:

The conference fee payment is specified on level 130 € (with full alimentation, resp. 110 € (with coffee break only). It includes the expenses associated with conference dealings, conference information material, conference collection, refreshment, alimentation during the conference and chosen excursion. Company presentation and press advertising on boards 100 €.

Information for authors of papers:

The authors of papers can suggest the form of presentation:

- paper presentation
- poster

Presentations of contributions in conference (15 min) and presentations of posters will be organized in a usually conference form:

- time of performance is limited to 15 minutes

The slide, data projector and notebook will be available

Instructions for reading of the paper:

- the papers preparing in english language
- the full paper should not exceed 8 pages (tables and figures included),
- the text must be written in MS Word. 7.0 and higher,
- texture responds to scientific abstract – paper form,
- conference proceedings will be published on CD ROM,
- **chosen paper will be given to research committee in Acta Technologica Agriculturae (Scopus)**

SLOVAK UNIVERSITY OF AGRICULTURE IN NITRA

FACULTY OF ENGINEERING



19th – 21st SEPTEMBER 2018

NITRIANSKE RUDNO, SLOVAKIA

www.koka2018.uniag.sk

Conference Programme:

19.09.2018 - Wednesday

15.00 - Arrival, foreign participants registration of conference
18.00 - Dinner

20.09.2018 - Thursday

8.00 - 9.00 - Registration of conference participants
9.00 - 12.00 - Open and proceedings of conference
12.00 - 13.00 - Lunch
13.00 - 15.00 - Conference proceedings
15.00 - 18.00 - Excursion to Bojnice castle
19.00 - 22.00 - Ceremonial reception

21.09.2018 - Friday

8.30 - 11.30 - Conference proceedings
11.30 - 12.00 - Conference evaluation and ending
12.00 - 13.00 - Lunch
13.00 - Free excursion

PROGRAMME

20.09.2009, Thursday

- 8⁰⁰ - 9⁰⁰ Registration
- 9⁰⁰ - 9¹⁵ Welcome, Plenary Session, „KOKA 2018
- 9¹⁵ - 10³⁰ Scientific Session 1
Chairmans : Celastýn Scholz – Jan Turan

OPTIMIZATION TOOL FOR HYBRID VEHICLES

Jan Macek, Josef Morkus, Petr Denk, Pavel Steinbauer, Oldřich Vítek, Rastislav Toman, ČVUT Praha

COMBUSTION IN GAS SI ICE EQUIPPED WITH SCAVENGED PRE-CHAMBER

Oldřich Vítek, Vít Doleček, Zbyněk Syrovátka, ČVUT Praha

SYNTHESIS GASES AND PARAMETERS OF COMBUSTION ENGINE

Marián Polóni, Andrej Chribík, Ján Lach, STU Bratislava

SCAVENGED PRE-CHAMBER VOLUME EFFECT ON GAS ENGINE PERFORMANCE AND EMISSIONS

Zbyněk Syrovátka, Michal Takáts, Jiří Vávra, Oldřich Vítek, ČVUT Praha

PARAMETRIC MODEL OF A PISTON COMBUSTION ENGINE

Jindřich Hořenin, Jan Macek, ČVUT Praha

SOLUTION APPROACHES AND TOOLS FOR TURBOCHARGER DEVELOPMENT

Pavel Novotný, Martin Jonák, Jozef Dlugoš, Juraj Hliník, Jozef Doman, VUT Brno

- 10³⁰ - 10⁵⁰ Coffee break

- 10⁵⁰ – 12¹⁵ Scientific Session 2
Chairmans : Marián Polóni – Dalibor Bárta

DEVELOPMENT OF 4-STROKE ENGINE BRAKE USING THERMODYNAMIC AND MECHANICAL SIMULATION MODELS

Ondřej Bolehovský, Radek Tichánek, ČVUT Praha

OPTIMIZED DRIVING CYCLE ORIENTED CONTROL OF A HIGHLY TURBOCHARGED GAS ENGINE

Vít Doleček, Jiří Vávra, Marcel Šakorohlid, ČVUT Praha

INVESTIGATION OF TORSIONAL VIBRATION OF AN INNOVATIVE CRANK TRAIN CONCEPT FOR A FOUR-CYLINDER ENGINE

Lubomír Drápal, Jan Vopařil, VUT Brno

EVALUATION OF A NOX EMISSION MODEL FOR A TURBOCHARGED NATURAL GAS SI ENGINE

Rastislav Toman, ČVUT Praha

MEASUREMENT OF RESIDUAL GAS CONTENT

Karel Páv, Škoda Auto Mladá Boleslav

- 12¹⁵ – 13³⁰ Lunch

- 13³⁰ – 14³⁰ Poster Session

Poster Session

DIFFERENT WAYS OF INTAKE PORT FLOW DESCRIPTION

Petr Hatschbach, ČVUT Praha

PISTON TEMPERATURE MEASUREMENT

Václav Rychtář, Škoda Auto Mladá Boleslav

ENGINE OIL SYSTEM CHARACTERISTICS

Václav Rychtář, Škoda Auto Mladá Boleslav

- 15⁰⁰ – 18⁰⁰ Field trip to Bojnice and Bojnice castle

- 19⁰⁰ - 22⁰⁰ **Gala Dinner**

21.09.200, Friday

- 8³⁰ - 10⁰⁰ Scientific Session 3
Chairmans: Oldřich Vítek – Pavel Novotný

GAS-FUELED DIESEL ENGINE

Aleš Dittrich, Stanislav Beroun, Pavel Brabec, Tomáš Zvolský, TU Liberec

EMISSION AND PERFORMANCE EFFECTS OF DUAL FUEL OPERATION ON TURBOCHARGED COMPRESSION IGNITION TRACTOR ENGINE

Ivan Bortel, Michal Takáts, Vít Beránek, Petr Jevič, Radek Pražan., ČVUT Praha

EURO 6 WITH SEMIELECTRONIC INLINE FIS

Petr Vybíral, Martin Děrgl, Ondřej Štěpánek, Jakub Zeman, Motorpal Jihlava

DIRECTIVE 2014/45 / EU AND ITS APPLICATION IN THE SLOVAK REPUBLIC

Peter Lendák, SEKA, Nitra

LIMITED AND UNLIMITED EMISSION DURING THE BURNING OF ALTERNATIVE FUELS

Daniela Uhrinová, Juraj Jablonický, Ján Kosiba, SPU Nitra

THE IMPACT OF BIOFUELS ON SKODA RAPID 1.6 TDI ENGINE'S EMISSIONS AND FUEL CONSUMPTION

Jakub Mařík, Martin Kotek, ČZU Praha

MONITORING OF THE UNLIMITED EMISSION BY THE BIOFUEL BURNING IN DIESEL ENGINE

Juraj Jablonický, Daniela Uhrinová, Ján Polerecký, SPU Nitra

- 10⁰⁰ - 10³⁰ Coffee break

- 10³⁰ - 11³⁰ Scientific Session 4
Chairmans: Karel Páv – Ivan Janoško

UTILISATION OF VEHICLE ENERGY LOSS IN DECELERATION

Robert Labuda, Dalibor Barta, Miloš Brezáni, Tsvetomir Gechev, ŽUŽ Žilina

MEASUREMENT OF ELECTROMAGNETIC VALVE TRAIN CONSUMPTION

Tomáš Zvolský, TU Liberec

FUEL CONSUMPTION AND EXPLOITATION PARAMETERS OF AXIAL COMBINE HARVESTER

Jan Turan, Vladimír Višacki, Aleksandar Sedlar, Patrik Burg, Pavol Findura, Ondrej Ponjičan, Mladen Ivanišević, UNS Novi Sad

THE SPEED MAPS OF SELECTED COMBUSTION ENGINES

Ivan Vitázek, Radoslav Majdan, Miroslav Mojžiš, SPU Nitra

IMPACT OF GASOLINE FUEL ADDITIVE ON SELECTED COMBUSTION ENGINE PARAMETERS

Ivan Janoško, Peter Kuchar, Lukáš Koleda, SPU Nitra

- 11³⁰ – 12⁰⁰ Summary, Conference closing

- 12⁰⁰ - 13⁰⁰ Lunch

