Warsaw University of Technology



# **KNOCKY** Symposium

Programme





# Agenda

	Monday 2019-11-25	Tuesday 2019-11-26	Wednesday 2019-11-27	Thursday 2019-11-28	Friday 2019-11-29
9:15 - 10:00	Welcome and Open lecture	Open lectures	KNOCKY CFD Workshop	KNOCKY CFD Workshop	
10:15 - 11:00					KNOCKY CFD Workshop
11:00 - 12:00					
12:00 - 13:15	BREAK	BREAK	Lunch (workshop participants)	Lunch (workshop participants)	Lunch (workshop participants)
13:15 - 14:00	Open lectures	Open lectures	KNOCKY CFD Workshop	KNOCKY CFD Workshop	Workshop closure
14:15 - 15:00					
15:15 - 16:00					
16:15 – 17:00					
17:00		Lectures closure			
18:00					
19:00					
20:00				Dinner (workshop participants)	

- **Open lectures** open event
- KNOCKY CFD Workshop Advanced Simulations in AVL FIRE<sup>™</sup> due to limited number of places registration required - to register:
  - you need to be familiar with CFD modelling (preferably with AVL FIRE<sup>™</sup>)
  - Please send an email to: *lukasz.kapusta@pw.edu.pl* and provide following information:
    - Family name (last name):
    - Given name (first name):
    - Affiliation (university or institute):
    - Email address:

Fees: both Open lectures and KNOCKY CFD Workshop are free of charge



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# **Open lectures**

#### Monday 2019.11.25

morning session (chair: Dr Łukasz J. Kapusta)

- 11:00 11:15 Welcome and
  KNOCKY Project Overview by Prof. Stanislaw Szwaja from Czestochowa
  University of Technology
- 11:15 12:00 "Scalable Simulation of IC-Engine Combustion Processes" by Dr Reinhard Tatschl from AVL LIST GmbH

12:00 - 13:15 - BREAK

#### afternoon session (chair: Dr Karol Grab-Rogaliński)

- 13:15 16:00 "Knock Combustion, its Metrics and Characteristics" by Prof. Jeffrey D. Naber from Michigan Technological University
- 16:15 17:00 "MOTORTECH Gas Engine Technology"

by Mr Robert Virchow from Motortech GmbH



# **Open lectures**

#### Tuesday 2019.11.26

morning session (chair: Prof. Andrzej Teodorczyk)

09:15 – 11:00 – "Knock Research at University of Birmingham" by Prof. Mirosław Wyszyński from University of Birmingham

11:15 – 12:00 – *"Smart Power generation"* by Mr Juha-Pekka Sundell from Wärtsilä Finland Oy

12:00 - 13:15 - BREAK

#### afternoon session (chair: Prof. Mirosław Wyszyński)

13:15 – 14:00 – "Knock Propensity of Gaseous Fuels – Research at Wärtsilä Fuel Laboratory"

by Mr Per Löfholm from Wärtsilä Finland Oy

- 14:15 15:00 "Various Applications to Reduce Knock Combustion"
  by Dr Karol Grab-Rogaliński from Czestochowa University of Technology
- 15:15 16:00 *"Optical Research in the KNOCKY Project"* by Dr Łukasz J. Kapusta
- 16:15 17:00 "Knock Limitation Studies in a Rapid Compression Machine"
  by Dr Agnieszka Jach and Mr Michał Klamka from Warsaw University of Technology
- 17:00 SYMPOSIUM CLOSURE Prof. Stanislaw Szwaja and Dr Łukasz J. Kapusta



# **KNOCKY CFD Workshop** - Advanced Simulations in AVL FIRE<sup>™</sup>

#### Wednesday 2019.11.27

09:15 – 12:00 – "Numerical modelling of spark ignition and flame propagation in internal combustion engines"

Dr Rafał Pyszczek from Warsaw University of Technology

- 12:00 13:15 Lunch
- 13:15 17:00 "Numerical modelling of spark ignition and flame propagation in internal combustion engines"

Dr Rafał Pyszczek from Warsaw University of Technology

#### Thursday 2019.11.28

- 09:15 12:00 *"Spray modelling conventional and flash-boiling"* Mr Rafał Rogóż, Mr Jakub Bachanek from Warsaw University of Technology
- 12:00 13:15 Lunch
- 13:15 17:00 "Spray modelling conventional and flash-boiling"
  Mr Rafał Rogóż, Mr Jakub Bachanek from Warsaw University of Technology

#### Friday 2019.11.29

09:15 – 12:00 – *"Spray modelling – conventional and flash-boiling"* Mr Rafał Rogóż, Mr Jakub Bachanek from Warsaw University of Technology

12:00 – 13:15 – Lunch

13:15 – 14:00 – Workshop closure – presentation of diplomas

# Venue

The KNOCKY Symposium will be held at Warsaw University of Technology in the main campus area in the center of Warsaw



- Open lectures Centre for Innovation and Technology Transfer Management of Warsaw University of Technology (Centrum Zarządzania Innowacjami i Transferem Technologii Politechniki Warszawskiej), Rektorska 4, 00-614 Warsaw, Poland
- 2. KNOCKY CFD Workshop Advanced Simulations in AVL FIRE<sup>™</sup> Institute of Heat Engineering (Instytut Techniki Cieplnej), Nowowiejska 21/25, 00-665 Warsaw, Poland
- 3. Warsaw Chopin Airport (Lotnisko Chopina)
- 4. Warsaw Central Station (Warszawa Centralna)

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Centre for Innovation and Technology Transfer Management

WARSAW UNIVERSITY OF TECHNOLOGY

