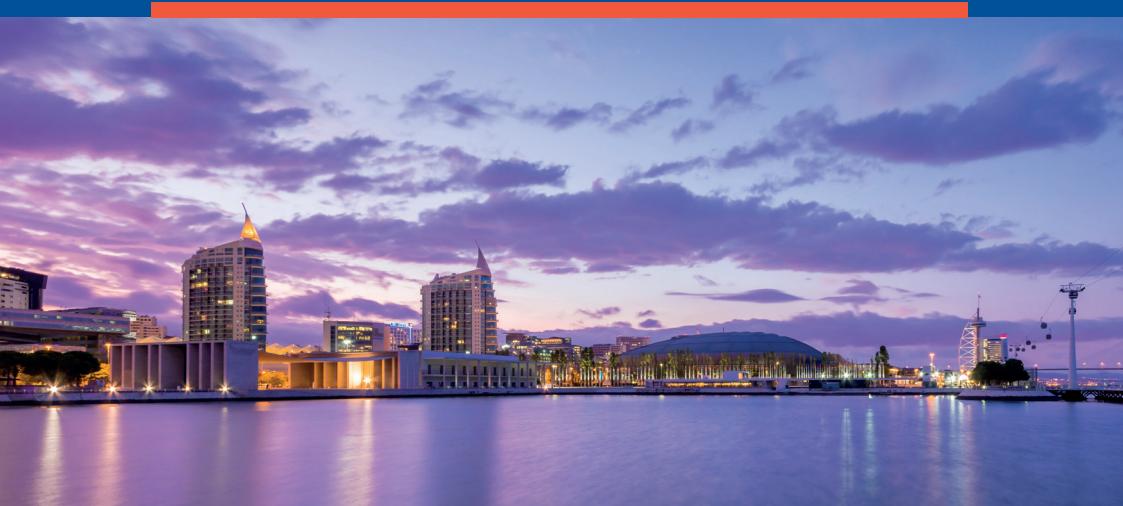


# 9<sup>TH</sup> EUROPEAN COMBUSTION MEETING 2019

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14 - 17 April, 2019 | Lisboa | Portugal



## CONFERENCE PROGRAMME

# 9<sup>TH</sup> EUROPEAN COMBUSTION MEETING 2019

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14 - 17 April, 2019 | Lisboa | Portugal

## PROGRAMME

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TÉCNICO  
LISBOA

**ORGANISERS:**

**Portuguese Section of the Combustion Institute**  
**Instituto Superior Técnico, University of Lisboa, Portugal**

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**Local Organising Committee:**

**Mário Costa**  
Instituto Superior Técnico, University of Lisboa

**Miriam Rabaçal**  
Aerothermochemistry and Combustion Systems Laboratory, ETH Zurich

**Edgar Fernandes**  
Instituto Superior Técnico, University of Lisboa

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# 9<sup>TH</sup> EUROPEAN COMBUSTION MEETING 2019

14 - 17 April, 2019 | Lisboa | Portugal

## PROGRAMME

TIME	Sunday April 14 <sup>th</sup> , 2019	Monday April 15 <sup>th</sup> , 2019	Tuesday April 16 <sup>th</sup> , 2019	Wednesday April 17 <sup>th</sup> , 2019
8:00-17:30		Registration	Registration	Registration
8:30-9:00		Opening ceremony		
9:00-10:00		Plenary lecture 1 <b>Mara de Joannon</b>	Plenary lecture 3 <b>Pascale Desgroux</b>	Plenary lecture 5 <b>Zeynep Serinyel</b>
10:00-10:30		Coffee break	Coffee break	Coffee break
10:30-12:30		<b>Poster session 1</b> <ul style="list-style-type: none"><li>• Reaction kinetics I</li><li>• Laminar flames I</li><li>• Solid fuels I</li><li>• IC engines I</li><li>• Soot and nanomaterials I</li></ul>	<b>Poster session 3</b> <ul style="list-style-type: none"><li>• Reaction kinetics III</li><li>• IC engines II</li><li>• Laminar flames II</li><li>• Porous media</li></ul>	<b>Poster session 5</b> <ul style="list-style-type: none"><li>• Reaction kinetics IV</li><li>• Soot and nanomaterials II</li><li>• Stationary combustion systems and environmental impacts</li><li>• Turbulent combustion II</li></ul>
12:30-14:00		Lunch	Lunch	<b>Closing ceremony</b> Lunch
14:00-15:00		Plenary lecture 2 <b>Ruud Eggels</b>	Plenary lecture 4 <b>Zhongshan Li</b>	
15:00-15:30	Registration	Coffee break	Coffee break	
15:30-17:30		<b>Poster session 2</b> <ul style="list-style-type: none"><li>• Turbulent combustion I</li><li>• Reaction kinetics II</li><li>• Diagnostics</li><li>• Droplets and sprays</li><li>• Gas turbines</li><li>• Fires</li></ul>	<b>Poster session 4</b> <ul style="list-style-type: none"><li>• Propellants</li><li>• Solid fuels II</li><li>• New concepts in combustion technology</li><li>• Laminar flames III</li></ul>	
17:30-19:00	Welcome reception	<b>Meeting of the European Federation of Combustion Sections</b>		
19:00-19:45				
20:00-23:00		<b>Young researchers get together</b>	Banquet	

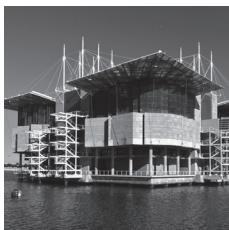
# SOCIAL PROGRAMME

## WELCOME RECEPTION

### **Sophia de Mello Breyner Room, Oceanário de Lisboa**

*Esplanada D. Carlos I - 1990-005 Lisboa, Portugal*

The Sophia de Mello Breyner room offers a panoramic view of the River Tagus. Sophia de Mello Breyner Andresen was an awarded and decorated Portuguese poet and writer, having won acclaim as a storyteller and published a number of children books, several poetry books and anthologies. The sea is probably the most central theme in her poetical work. The room is located in the premises of the Oceanário de Lisboa - The Lisbon Oceanarium - the largest indoor aquarium of Europe built for the World Expo 1998. The Lisbon Oceanarium's conceptual design, architecture, and exhibit design was led by Peter Chermayeff of Peter Chermayeff LLC. It is said to resemble an aircraft carrier, and is built on a pier in an artificial lagoon. The Lisbon Oceanarium has a large collection of marine species, including fish, echinoderms, cnidaria, mollusks, amphibians, mammals, birds, plants and other marine organisms.



## BANQUET

### **Kais restaurant**

*Cais da Viscondessa, R. Cintura do Porto, 1200-109 Lisboa, Portugal*

Restaurant Kais is housed in a late XIX century old warehouse, by the riverside, which was used to generate energy for Portuguese trams that still work in our days. The warehouse was fully recovered and is now one of the most beautiful restaurants you will ever see.

The actual design and decoration were conceived with much honour, by a very famous Portuguese Interior Decorator, Maria José Salavisa, who respected the industrial roots of the warehouse. Maria José Salavisa believed that the industrial épóque style was a winner. Reflected in the building, is the theory of the Arquitect Otto Wagner, who said that; "the actual structure and materials used to construct the building should be visible", for this reason, the elements of the structure and of the old factory where left to be seen.

Our thousand years old Olive trees, which represent happiness and gayness also serve as a means of invoking the past; the water that flows down the fountain into our lake, suggest a connection with the sea and our Discovery era; the vast windows leave an open sky, allowing the stars which once upon a time guided our glorious conquerors to foreign lands and now guide us.

Furniture created by Frank Lloyd Wright inspires an industrial-chique atmosphere, with a choreography of hundreds of candles and warm lighting which transform the immense room into an intimate and welcoming atmosphere, listening to the Jazz & Blues band playing eternal Jazz Fusion themes.

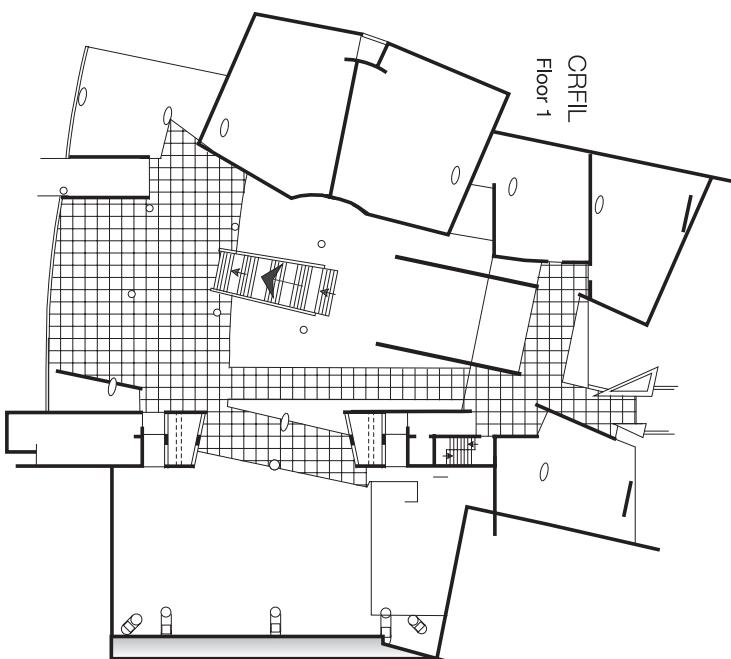
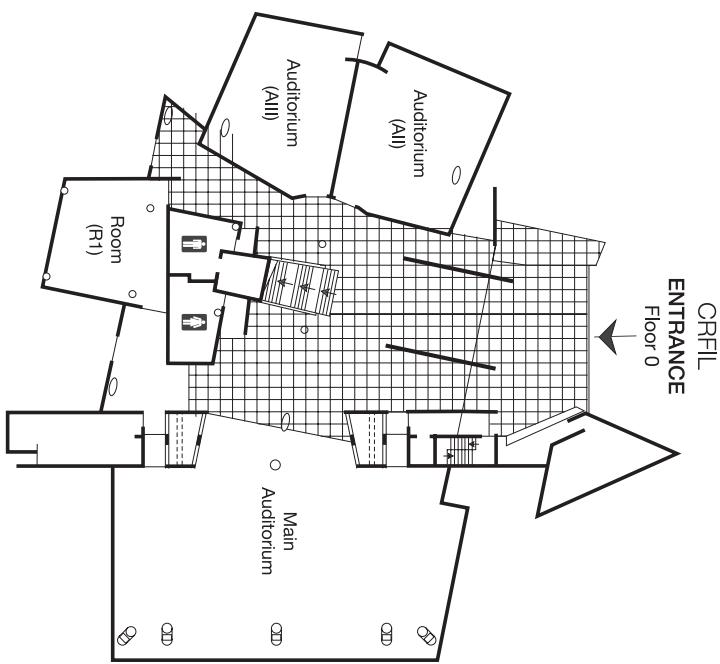
When referring to a restaurante, Kais could never be a relique if the gastronomy we have to serve would not be of an inequitable standard, well as the rich service we provide. Thus our belief in high quality experienced professionals, who aim to offer you the best of the small pleasures in life.



# Conference Floorplan

R. do Boiador 47 | Parque das Nações | 1990-254 LISBOA | Portugal

## PT Meeting Center



## Plenary Lectures

### MILD Combustion: from ignidiffusion to temperature tailored reactors

M. de Joannon  
Istituto di Ricerca sulla Combustione - CNR, Napoli, Italy  
dejoannon@irc.cnr.it

### The challenge of modelling aeronautical combustion chambers

Ruud Eggels, Max Stauffer, Thomas Doerr  
Rolls-Royce Deutschland, Eschenweg 11, 15827 Blankenfelde-Mahlow  
ruud.eggels@rolls-royce.com

### Recent advances in soot nucleation understanding

Pascal Desgroux  
Univ. Lille, CNRS, UMR 8522 - PC2A, F-59000 Lille, France  
pascal.desgroux@univ-lille.fr

### Laser-based flame structure visualization for quantitative interpretation of combustion in small scale turbulent flows

Zhongshan Li  
Division of Combustion Physics, Lund University, P.O. Box 118, S-221 00 Lund, Sweden  
Zhongshan.li@foton.lth.se

### Oxidation chemistry of oxygenated molecules

Z. Serinyel<sup>1,2</sup>, G. Dayma<sup>1,2</sup>, P. Dagaut<sup>2</sup>  
<sup>1</sup>CoST, Université d'Orléans, rue de Cluny, 45000, France  
zeynep.serinyel@cnrs-orleans.fr, guillaume.dayma@cnrs-orleans.fr  
<sup>2</sup>ICARE-CNRS, 1C avenue de la Recherche Scientifique, 45071 Orléans cedex 2, France  
dagaut@cnrs-orleans.fr

# Poster Session 1

Monday | April 15<sup>th</sup>, 2019 | 10:30-12:30

S1_AII_01 Exploring biofuel low-temperature chemistry with a hybrid reactive molecular dynamics / quantum-chemistry scheme <i>L.Krey, L.C. Krüger, W.A. Kopff, F. Schmidt, K. Leonhard</i>	S1_AII_02 Detailed chemical modeling of biomass combustion in domestic heating appliances: in order to reduce their polluting emissions <i>Ann-Dominik, Röder-Bonauere, Oliver Helmert, Céline Le Dref-Lammer, F. Battin-Leclerc</i>	S1_AII_03 Design and validation of single pulse shock tube for combustion chemistry investigations <i>Shantanu S. Nagarkar, Jinhu Liang, Henry J. Curran</i>	S1_AII_04 The thermal degradation of nitro and nitrate compounds: a study of nitromethane and isopropyl nitrate pyrolysis <i>N. Jin, F. Battin-Leclerc, O. Helmert</i>	S1_AII_05 Temperature and pressure dependence of the C-O bond fission reactions of dimethoxymethane <i>Leonne Gohla, Dennis Gratzfeld, Isabell Weber, Matthias Ozmar</i>
S1_AII_06 Byproduct formation in the thermolysis and hydrolysis of urea <i>Natalia Schöber, Henning Bockhorn, Dimosthenis Triantafyllou</i>	S1_AII_07 Low-temperature combustion of methylbutene isomers under engine-relevant conditions <i>H. Song, R. Dauphin, G. Vantore</i>	S1_AII_08 Pyrolysis kinetics of n-propylcyclohexane and isopropylcyclohexane at various pressures <i>Qunpeng Wang, Jizhong Yang, Juan Wang</i>	S1_AII_09 Study of the oxidation of the butanol isomers in a plug flow reactor <i>D.Pezo, R.Terriza, E.Royo, A.Millera, R.Bilbao, M.U.Alzaga</i>	S1_AII_10 Thermochemical study for species and reactions occurring in the S-N-O system <i>Natalia Schöber, Joseph W. Bazzell, Henning Bockhorn, Dimosthenis Triantafyllou</i>
S1_AII_11 Pyrene + O <sub>2</sub> : primary reactions, reaction pathways, and influence of functional groups <i>Natalia Schöber, Henning Bockhorn, Dimosthenis Triantafyllou</i>	S1_AII_12 The impacts of iso-butanol blending on the low temperature autoignition behaviour gasoline and its surrogate <i>C.A. Mühlebach, A.S. Tomlin</i>	S1_AII_13 Direct measurement of high-temperature rate constants and branching ratio on the pyrolysis of diethyl ether behind reflected shock waves <i>P.Selv, S. Pankhurst, Y. Sode, J. Hertzler, M. Faria, C. Schulz</i>	S1_AII_14 Constraints in mechanism reduction applied to alcohol fuels <i>C.Piette, E.J.K. Nilsson</i>	S1_AII_15 An experimental and modelling study of the oxidation of cyclopentanol at high pressures <i>Maxime Garbure, Guillaume Dugay, Zengyu Sireyel, Alain Kermarec, Bénédicte Leffort, Luis le Moigne, Philippe Duguet</i>
S1_AII_16 Study of the oxidation of ammonia as an alternative to carbon-based fuels <i>M. Abina, A. Gómez, B. Muñoz, A. Millera, R. Bilbao, M.U. Alzaga</i>	S1_AII_17 Experimental and modeling study of the oxidation of benzaldehyde or counterflow ammonia-methane flames <i>S. Namysl, U. Pratelli, M. Pelizzetti, O. Hertner, A. Sagni, T. Faravelli, F. Battin-Leclerc</i>	S1_AII_18 Experimental analysis and 1D modelling of counterflow ammonia-methane flames <i>S. Galan, Y. Horai, A. Hayakawa, T. Kubo, H. Takayoshi, C. Gallozzini, D. Escudé</i>	S1_AII_19 Towards a better understanding of the combustion of oxygenated aromatic hydrocarbons. Comparing benzene, toluene, phenol and anisole with ignition delay times in a rapid compression machine <i>R.D. Büttinger, L. Pratelli, M. Pelizzetti, T. Faravelli, A. Frassoldati, K. A. Hettler</i>	S1_AII_20 Global quasi-linearization (GQL) for methane-air MILD combustion <i>C.Yu, V. Baykov, U. Mats</i>
S1_AII_21 Effects of radiation on premixed spherical flame propagation <i>Z. Chen</i>	S1_AII_22 Stability of buoyant laminar diffusion syngas flame: impacts of H <sub>2</sub> :CO <i>T. Pommerehne, J. Günther, M. C. Paul</i>	S1_AII_23 Low dimensional chemistry manifolds applied to premixed methane/air flames under atmospheric conditions <i>P. Breyde, M. Hansinger, M. Pfleiderer</i>	S1_AII_24 Effect of progress variable definition on the mass burning rate of premixed laminar flames in flamelet generated manifold methods <i>H. Gupta, O.J. Feeney, L. Pihl, de Goyet, J.A. van Oijen</i>	S1_AII_25 The effect of tropics on laminar propagation speed of an acetone-methane flame <i>L. Feng, B. Tian, C. C. Chang, D. McGrath, S. Hofzhegeb</i>
S1_AII_26 Experimental study of premixed ozone-seeded DME/O <sub>2</sub> cool flames on a stagnation plate burner <i>N. Mokhtari, S. Battul, L. Pillier, C. Hequet, G. Vantore</i>	S1_AII_27 1064 nm laser-induced grating spectroscopy (LIGS) measurements in flames at pressure <i>François De Doncker, Thibault Gilbert, Simon Hodgetts, William L. Roberts, Gaetano Magriotti</i>	S1_AII_28 An image processing routine to estimate the laminar flame speed of H <sub>2</sub> -enriched biogas/air flames <i>F. M. Quintino, N. Roda, E. Fernandes</i>	S1_AII_29 Influence of DC electric fields on laminar pre-mixed propane/air flames <i>M. Pinto, S.G. Dias, E.C. Fernandes</i>	S1_AII_30 Data consistency of the burning velocity measurements using the heat flux method: syngas flames <i>M. Liborio-Lavado, A. A. Komkov</i>

# Poster Session 1

Monday | April 15<sup>th</sup>, 2019 | 10:30-12:30

S1_AII_31 Propane air flame impingement on a cylindrical surface: experimental investigation of heat transfer <i>P.O. Oketch, M. Gomanchikapov, U. Bergmann, B. Atakan</i>	S1_AII_32 Study of laminar burning velocities and NO formation for methanol-air flames <i>C. Bräuermann, T. Metting, M. Ulibano Andrade, G. Caprioli, A.A. Konnov</i>	S1_AII_33 The H <sub>2</sub> /H preferential diffusion effect on extinction behavior in SiG/air premixed symmetric flames <i>Yeon Se Kang, Kee Man Lee</i>	S1_AII_34 Laminar burning velocities of hydrocarbons with ethanol addition <i>S.S. Matveev, D.V. Anisimov, S.G. Matveev, A.A. Konnov</i>	S1_AII_35 Nature and origin of O-PAH compounds in biomass combustion emissions and their destruction <i>K.D. Barrie, A.R. Lea-Langton, J.M. Jones, E.S. Mitchell, A. Williams</i>
S1_AII_36 Experimental investigation and comparison of particle-laden flows in a gas-assisted oxy-coal combustion chamber for reacting and non-reacting conditions <i>H. Schmidler, L.G. Becker, S. Pfeiffer, B. Böhm, R. Kneer, A. Dreizler</i>	S1_AII_37 Char emissivity measurements for coal chars <i>M. Schermann, P. Grasser, L. Püttner</i>	S1_AII_38 Demonstration of laser-induced incandescence in single coal particle enveloping flames <i>Nikola Vonachen, Stefan Krause, Heinz Pisch, Martin Schermann</i>	S1_AII_39 Heat transfer modeling using waste rubber as starting material in fluidized bed chamber <i>Thanh Duc Mai, Andris Arnold Kalnay</i>	S1_AII_40 Applicability investigation of a validated simulation method developed for a large scale grate incinerator for the case of a small scale pellet boiler <i>T. Zadrazen, B. Rajh, F. Kokaly, N. Sonneveld</i>
S1_AII_41 Experimental two stage gasification of Hungarian brown coal for increased H <sub>2</sub> and CO ratio in the produced synthesis gas <i>A. Katalay, V. Wielan, S. Nagy</i>	S1_AII_42 Gasification of <i>miscanthus x giganteus</i> grown on heavy metal contaminated land <i>A. Samson, J. Gonzalez-Rodriguez, M. Poyetella, M. Moro, I. Huelva, P. Styria, B. Begonyonky, V. Brummer</i>	S1_AII_43 Pyrolysis of plastic wastes for the purpose of liquid fuel production <i>Zs. Dobó, Zs. Jánosi, T. Kiss</i>	S1_AII_44 Laboratory scale pyrolysis of organic fraction and RDF from municipal solid waste <i>E. Sere, G. Nagy, A.A. Kalnay</i>	S1_AII_45 Development of a vision-based monitoring system for optimizing industrial scale moving step grate biomass combustion <i>A. Goratti, A. Pollicino, F. Tomi</i>
S1_AII_46 Sewage sludge combustion in the rotary kiln <i>I. Huelva, P. Styria, B. Begonyonky, V. Brummer</i>	S1_AII_47 Detailed analysis of single biomass particle combustion by shadowgraphy <i>Hussein Mokhtari, Jean-Michel Commande, Bruno Pirnat, Gilles Vanlieren, Benoit Faupin, David Honore</i>	S1_AII_48 The energy aspects of biogas production from sheep manure <i>Gabor Nagy, Alexandra Toklas, Andras Andriold Kalnay</i>	S1_AII_49 Investigation of agriculture biomass for pyrolysis and gasification <i>Ayatul Momtaz-Akmenta, Mulyana Sriwidjaja, Panagiotis Evangelopoulos, Weihong Yang, Antero Magdzisz</i>	S1_AII_50 Physical and chemical characteristics of ash deposits in a utility boiler firing an Indonesian lignite <i>Sigit Adituarahman, Sri Baon Liaw, Hongwei Wu</i>
S1_AII_51 Biomass for energy: Effects air ratio effects on combustion characteristics of pulverized olive cake <i>A. Ebert, B. Sutth, M. Ascoli, T. Boušek, I. Gajdáč</i>	S1_AII_52 Potassium release from single burning pulverized biomass char particle <i>W.B. Weng, M. Costa, Z. Li</i>	S1_AII_53 Study on the high load potential under natural gas/diesel dual-fuel combustion in a heavy-duty engine <i>Jeng-Hwan Lee, Sung-Yup Lee, Seok-hwan Lee, Chung-jin Kim</i>	S1_AII_54 An analysis on the combustion and performance characteristics of a hydrogen spark ignition engine with boosting condition <i>Y. Kim, J. Lee, C. Park, Y. Choi</i>	S1_AII_55 1-methyl-naphthalene LIF for the investigation of the mixture distribution at diesel engine conditions and 1 kHz repetition rates <i>Ulrich Reuter, Stephan Will, Lars Ziegler</i>
S1_AII_56 Highly resolved near-wall flame and flow measurements in an optically accessible SI engine using SO <sub>2</sub> -PLIF and PTV <i>Norbert Sommer, Carsten Philipp Ding, Brian Peterson, Andreas Dreizler, Benjamin Böhm</i>	S1_AII_57 Coupled experimental and numerical investigation of reactive spray processes in internal combustion engine <i>M. Nagy, M. Márton, A. Ben Amara, F. Fouquer, S. Moreau, R. Rajh, R. Totsch</i>	S1_AII_58 Experimental and modeling study of 2-Ethynethiol Nitrate promoting effect on a low octane gasoline surrogate <i>M. J. Le, M. Márton, A. Ben Amara, F. Fouquer, S. Moreau, R. Rajh, R. Totsch</i>	S1_AII_59 A modeling study of a partial oxidation polygeneration process of fuel-rich ethanol/ozone mixtures in an HCl engine <i>D. Stroher, B. Atakan</i>	S1_AII_60 CFD model of a spark-ignition engine fueled with several oxygenated compounds <i>S. Dominguez-Garcia, F. Bustamante-Londonio, R. Agudelo-Santamaría</i>

# Poster Session 1

Monday | April 15<sup>th</sup>, 2019 | 10:30-12:30

S1_AIII_61 <b>Experimental study on the knock phenomena in the individual cycles of direct-injected spark ignition engine with various stroke-to-bore ratios</b> Hsueh Oh, Sukwon Cho, Wojege Shin, Kyungdang Min, Han Ho Sung	S1_AIII_62 <b>Numerical simulation of the prechamber processes in a lean-burn gas engine</b> H. Nguyen, M. Nevenschneider, F. Dimkötter	S1_AIII_63 <b>Time-resolved chemiluminescence spectroscopy of diesel and alternative fuel flames at engine-relevant ambient conditions</b> A. Peter, S. Rieß, L. Weiss, M. Wenzing	S1_AIII_64 <b>A power-to-gas process in a piston engine: energy storage through pyrolysis of methane and ethane</b> C. Rudolph, B. Aduan	S1_AIII_65 <b>Investigation of the chemical stability of the laser-induced fluorescence tracer 1-methylnaphthalene super continuum absorption spectroscopy</b> P. Feindt, U. Reuter, H. Ulrich, S. Will, L. Ziegler
S1_AIII_66 <b>Comparison of fuel additives for synergies production from fuel-rich methane/HCl combustion</b> K. Bunkle, S.A. Kujser	S1_AIII_67 <b>Exploration of the high load limits in dual-fuel combustion operation</b> Mladen Božić, Ante Vučetić, Mario Štemac, Đurđko Kozarac	S1_AIII_68 <b>Operating parameters of the bio-gas-as-diesel dual-fuel engine</b> Ante Vučetić, Mladen Božić, Mario Štemac, Đurđko Kozarac	S1_AIII_69 <b>Active pre-flame ignition systems: an enabler for new ICE combustion concepts</b> T. Rüsswurm, M. Wenzing	S1_AIII_70 <b>Ignition characteristics of plasma reformed n-heptane in a homogeneous combustion compression ignition engine: a modeling study</b> Günter Füngold, Joseph K. Leffowitz
S1_R1_71 <b>Ignition delay times of diluted mixtures of ammonia/methane at elevated pressures</b> C.F. Ramey, B. Sun, P.X. Fernandes, M. Goss	S1_R1_72 <b>Study of a gasoline autowave blended with penta-1,3-diene isomers: sooting tendency and flame structure analysis</b> R. Jelato, B. Bonney, G. Legros, P. Jacobs, A. Matyska	S1_R1_73 <b>Spray and particle characterization of a spray flame synthesis process using wide-angle light scattering (WALS)</b> B. Almsteghem, S. Almann, E.L. Huber, S. Will	S1_R1_74 <b>Measurement of the soot propensity of aviation fuel mixtures</b> S. Rießer, T. Kathrein, C. Hammann, S. Scheuermann, U. Reuter	S1_R1_75 <b>Raman spectroscopy of soot sampled from high-pressure diffusion flames</b> M. Commodo, M. E. Kuntz, G. DeFazio, P. Minutolo, A. D'Amico, O.J. Gitter
S1_R1_76 <b>Production and characterization of superhydrophilic TiO<sub>x</sub> nanoparticle coatings via flame aerosol synthesis and thermophoretic deposition</b> G. DeFazio, M. Commodo, M. E. Kuntz, P. De Gaudio, A. Otter, P. Minutolo, A. D'Amico	S1_R1_77 <b>Numerical modelling of detailed soot radiative properties of a laminar coflow sooting flame</b> K. Torres-Morales, R. Vequedel, O. Gréquel	S1_R1_78 <b>Modelling soot particle inception and soot particle probe sampling</b> H. Matzinger, D. Stoff	S1_R1_79 <b>Formation of soot precursors in benzene-laden producer gas combustion: experimental and computational study</b> Ana M. Valencia-López, F. Bustamante, B. Stelzer, A. Loukou	S1_R1_80 <b>Pathways of soot precursors formation in combustion of producer gas in presence of benzene</b> Ana M. Valencia-López, F. Bustamante, M. Frendlich, A. D'Amico, O.J. Gitter
S1_R1_81 <b>Characterization of soot volume fraction and particle size inside premixed kerosene flames</b> I. von Lengsfeld, A. Loukou, B. Stelzer, N. Zaroulis	S1_R1_82 <b>Experimental investigation of hydrogen impact on atmospheric sooting premixed methane flames</b> H.Q. Do, X. Merer, L.S. Tran, L. Savoia, A. El-Bakali	S1_R1_83 <b>Particle size distribution measurements in ethylene/toluene premixed flames</b> Mariano Szymanski, Gamalé Russy, Anna Giuglio, Andrea D'Amico	S1_R1_84 <b>Soot measurements over a series of laminar pool flames of biofuels, methyl esters and blends with diesel</b> B. Tran, C.T. Cheng, L. Fan, S. M.S. Hodges	S1_R1_85 <b>Quantification of the evolution of mean gaseous species concentrations across the soot limit in turbulent premixed opposed jet flames</b> H. Schäfersträter, F. Trampush, D. Gerecht, R. P. Lindstedt
S1_R1_86 <b>Numerical prediction of soot particle size distribution in a turbulent flame using the LES-PDF method</b> B. Sun, S. Rigopoulos	S1_R1_87 <b>A reduced virtual chemistry model for soot precursors prediction in hydrocarbon-air flames</b> H. Malofodio, Gómez A. Goos, N. Duratibus, B. Flaminio	S1_R1_88 <b>Influence of surrogate biofuels admixture on soot characteristics in isooctane counterflow non-premixed flames</b> P. Jacobs, A. Loukou, D. Trinns	S1_R1_89 <b>Impact of spray nozzle k-factor on spray characteristics, flame propagation, and soot formation under engine-relevant conditions</b> S. Krieg, J. Beekmann, Y. Heyen, W. Willemse, G. Hammes, U. Reuter, H. Phisch	S1_R1_90 <b>Soot particle nanostructure from HRTEM images and reactivity towards oxidation</b> D. Trinns

# Poster Session 2

**Monday | April 15<sup>th</sup>, 2019 | 15:30-17:30**

<b>S2_AII_01</b> <b>Simulation of flameless combustion in Delft lab-scale furnace using EDC model</b> <i>N. Romijn, H. Bao, K. Huang, K. Martin, D.J.M. Roekens</i>	<b>S2_AII_02</b> <b>Reaction-diffusion Manifolds (REDMs) simplified chemistry for the simulation of laminar and turbulent CH<sub>4</sub> diffusion flame</b> <i>C. Yu, F. Minuzzi, U. Maas</i>	<b>S2_AII_03</b> <b>Application of the shadow-position mixing model to large eddy simulation with the Eulerian subgrid probability density function approach</b> <i>Olivier Paray, E.S. Richardson</i>	<b>S2_AII_04</b> <b>The behavior of flame with the increase of turbulence intensity on low swirl combustor in the Sprayfin burner</b> <i>Mitsurok Han, Clemmence E. Bourdouard, I. Wokes, A. M. Kempf</i>
<b>S2_AII_06</b> <b>Comparison of LES combustion models for turbulent premixed flames at atmospheric pressures</b> <i>A. Lampmann, M. Hinsinger, M. Pfister</i>	<b>S2_AII_07</b> <b>Eulerian stochastic fields method and model free finite rate chemistry applied to Sydney partially premixed flame</b> <i>Mathimilien Hinsinger, Julian Zips, Michael Pfister</i>	<b>S2_AII_08</b> <b>Machine learning for sub-grid scale turbulent combustion modeling</b> <i>A. Setz, P. Domming, L. Vervisch</i>	<b>S2_AII_09</b> <b>Turbulent premixed flames in a hele-shaw cell</b> <i>B. Richardson, J. Quillard, B. Denet, C. Almarza</i>
<b>S2_AII_11</b> <b>Visualization of turbulent inverse diffusion flames at elevated pressure using OH-PLIF and OH* chemiluminescence imaging</b> <i>Xin Liu, Ayman Ahmed-Sabry, Qingshuang Sun, Christian Bruckmann, John Faver, Manas Aditya, Zhangjian Li</i>	<b>S2_AII_12</b> <b>Turbulent burning characteristics of hydrogen-air premixed flames in different combustion regimes</b> <i>Wojciech Szargielski, Alfonso, Francisco E. Hernández Pérez, Yong C. Lin</i>	<b>S2_AII_13</b> <b>Flame front detection in combustion imagery based on ridge in two and three dimensions</b> <i>R. Scheff, V. Bykov</i>	<b>S2_AII_14</b> <b>Study of an opposed jet turbulent flame using the sub-grid PDF method</b> <i>Y. Gouy, W.F. Jones, A.J. Marquis</i>
<b>S2_AII_16</b> <b>Studies on the lean flammability limits of hydrogen/methane/air turbulent flames in a combustion bomb</b> <i>Günter Wu, Robert Schäffl</i>	<b>S2_AII_17</b> <b>Effect of equivalence ratio on turbulent premixed stratified methane-air flames</b> <i>P. Petersson, J. Rosell, A. Schulz</i>	<b>S2_AII_18</b> <b>Combined PLIF/SO<sub>2</sub>-PLIF experiments for multi-mode combustion</b> <i>D. Butz, S. Wachter, A. Dreizler, S. Popp, C. Hause, A. Dreizler, D. Geiger</i>	<b>S2_AII_19</b> <b>Statistical dependence of mixture fraction and progress variable in partially-premixed combustion</b> <i>Edwards, Richardson, B.S. Sutanto, J.H. Chen</i>
<b>S2_AII_21</b> <b>Artificial neural network prediction of emissions from primary reference fuel combustion in jet stirred reactor</b> <i>Bingjie Chen, Kuan K. Yiammanith, Haozeng Duan, S. Man Smatly</i>	<b>S2_AII_22</b> <b>CO-concentration and temperature measurements of fuel-rich CH<sub>4</sub>/air mixtures doped with diethyl ether behind reflected shock waves</b> <i>Dong He, Damien Mathei, Jürgen Herzer, Mustapha Hirsi, Christian Schulz</i>	<b>S2_AII_23</b> <b>Experimental study of the autoignition of isooctane/air/oleo mixtures at low to intermediate temperatures</b> <i>C. Meugnain, H. Sung, G. Vanhove</i>	<b>S2_AII_24</b> <b>Experimental speciation study during oxidation of n-butane in a rapid compression machine</b> <i>A. Ramanujam, Y. Fenard, K.A. Heiter</i>
<b>S2_AII_26</b> <b>A chemical functionality approach towards the formulation of a high-fidelity surrogate fuel for ACE gasoline F</b> <i>Andrew D. de Stephen, Dooley, Doug J. Kang, Scott Goldsbrough</i>	<b>S2_AII_27</b> <b>Experimental and modeling study of the pyrolysis and combustion of di-tert-butyl peroxide</b> <i>m. Preussler, K. Heiter</i>	<b>S2_AII_28</b> <b>Influence of CO<sub>2</sub> dilution on shock tube ignition delay times of dimethyl ether/air mixtures at high pressures</b> <i>Nikolaas, Ivo Zandbergen, Johann Wilhelmi, Mette Diogo</i>	<b>S2_AII_29</b> <b>Multidimensional transport phenomena of flame-wall-interactions and the REDM method</b> <i>C. Simmader, V. Bykov, S. Gümmer, J. Janke, U. Maas</i>
<b>S2_AII_30</b> <b>The role of chemical structure in the thermal decomposition of xylan</b> <i>Andrew D. de Stephen, Dooley, Antreas Ogiann, Stephen Dooley</i>			

# Poster Session 2

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<p><b>S2_AII_31</b> <b>Isonerisation and decomposition of alkylperoxy and hydroperoxy alkylperoxy radicals of three heptane isomers</b> Manik Kumar Ghosh, Andrew Ute, Stephen Dooley</p> <p><b>S2_AII_36</b> <b>Image-based analysis of flames in industrial afterburner chambers using geometric constraints</b> P. Wielhel, J. Matthe, M. Vogelbuecher, L. Goll, H.B. Keller</p> <p><b>S2_AII_41</b> <b>Investigation of the time-resolved luminescent spectra of thermographic phosphors for combustion applications</b> E. Herle, J. Bellmann, S. Will, L. Zügan</p> <p><b>S2_AII_42</b> <b>High-speed OH* imaging in a twin piston rapid compression machine</b> M. Figueiredo-Labanda, G. Isayev, A. Farooq</p> <p><b>S2_AII_46</b> <b>Towards non-intrusive diagnostics of ethanol and hydrocarbons formed as intermediates in its flames by Raman scattering</b> K. Dieder, J. Träbholz, K. Kochmück, A. Dieder, D. Geyer</p> <p><b>S2_AII_47</b> <b>Investigation of flame propagation enhancement by a ultra-short nanosecond discharge pulse using the advanced laser- based diagnostics</b> C. Kong, Y. Bao, I. Hung, M. Aden, A. Ehn</p> <p><b>S2_AII_51</b> <b>Characterization of IV endoscopic imaging systems for combustion applications</b> M.A. Shahzad, S.A. Kaiser, M. Schüller, T. Beig</p> <p><b>S2_AII_56</b> <b>Experimental study of droplet impact on oblique dry surface</b> Hitesh Pental, Damodar Ribeiro, Jorge Barata, Anilika Silva</p>	<p><b>S2_AII_32</b> <b>Autoginition properties of liquefied natural gas (LNG)-an experimental and modeling study</b> Sundar, K. Vedula, Bo Shiu, Kai Mashammer, Ravi X. Fernandes</p> <p><b>S2_AII_37</b> <b>Application of image-based process parameters for analyzing multi-dual burners</b> M. Vogelbuecher, P. Wielhel, J. Matthe, H. B. Keller</p> <p><b>S2_AII_38</b> <b>In situ LIF and ex situ CROS applied to NO measurement in flames; probe perturbation and absolute quantification</b> N. Lamoureux, D. Seguin</p> <p><b>S2_AII_39</b> <b>MZI measurements on an oxidant-diluted N<sub>2</sub>O/CH<sub>4</sub> inverse diffusion flame</b> Ghiringhelli, Sreedhury Kaluri Reddy, Wei-Heng Lu</p> <p><b>S2_AII_43</b> <b>The application of Raman crystals as narrowband light sources for shifted vibrational CARS thermometry in sooting flames</b> C. Melßner, J.W. Trägert, F. Breyman, D.W. Kaden, T. Seeger</p> <p><b>S2_AII_44</b> <b>Automatic defect detection in a model combustion chamber using support vector machine</b> Herrlich von der Haar, Friedrich Dinkelsüber</p> <p><b>S2_AII_45</b> <b>Femtosecond two-photon laser-induced fluorescence imaging of atomic hydrogen in a laminar methane/air flame stimulated by nanosecond repetitively pulsed discharges</b> Jordiin Blodd, Andreia Brin, Dennis A. Lososse</p> <p><b>S2_AII_48</b> <b>Phantom studies on a new evolutionary reconstruction technique applied to 3D scalar fields in the gas-phase</b> A. Unterberger, A. Kempf, K. Mohri</p> <p><b>S2_AII_49</b> <b>Alternative soot detection strategies for application in aero-engine test-beds: assessment of the performance and uncertainties of time-integrated LII</b> R. Roy, C. Bourne, G. Ramesh, K. Ocyan, P. Wright, V. Artilla, S.S. Burns</p> <p><b>S2_AII_50</b> <b>A novel approach to high-speed 1D Raman- scattering for combustion dynamics</b> G. Magrini, Y. Krishna, C. Yang, H. Tong</p> <p><b>S2_AII_53</b> <b>Lagrangian approach to CH<sub>4</sub>/D<sub>X</sub> axisymmetric spray combustion</b> R. Kammann, Komwong Lee, Joyce Koo</p> <p><b>S2_AII_54</b> <b>Analysis of LIF and MIE signals from single micrometric droplets for instantaneous droplet sizing in gasoline sprays</b> Matthew Kang, Kevin Baetens-Hinsfeld, Christopher Mull,</p> <p><b>S2_AII_58</b> <b>Numerical simulation of sulfur combustors with high-power-density</b> Reedolyn Hogen Heijnen, Thorsten Zwiers, Marlo Fedork, Stefan Harth, Nada Sibbar, Peter Habischütter, Dimothini Timis, Henning Bockhorn</p> <p><b>S2_AII_59</b> <b>Liquid fuel MILD combustion with two stage combustion structure in a closed combustion chamber</b> Chun-tam Cho, Ho-Yeon Lee, Sung-Sun Huang</p> <p><b>S2_AII_60</b> <b>Numerical modeling of the secondary droplet break-up in spray flows</b> C. Sung, M. V. Jayaraman, S. Gopalakrishnan</p>
<p><b>S2_AII_31</b> <b>Isonerisation and decomposition of alkylperoxy and hydroperoxy alkylperoxy radicals of three heptane isomers</b> Manik Kumar Ghosh, Andrew Ute, Stephen Dooley</p> <p><b>S2_AII_36</b> <b>Image-based analysis of flames in industrial afterburner chambers using geometric constraints</b> P. Wielhel, J. Matthe, M. Vogelbuecher, L. Goll, H.B. Keller</p> <p><b>S2_AII_41</b> <b>Investigation of the time-resolved luminescent spectra of thermographic phosphors for combustion applications</b> E. Herle, J. Bellmann, S. Will, L. Zügan</p> <p><b>S2_AII_42</b> <b>High-speed OH* imaging in a twin piston rapid compression machine</b> M. Figueiredo-Labanda, G. Isayev, A. Farooq</p> <p><b>S2_AII_46</b> <b>Towards non-intrusive diagnostics of ethanol and hydrocarbons formed as intermediates in its flames by Raman scattering</b> K. Dieder, J. Träbholz, K. Kochmück, A. Dieder, D. Geyer</p> <p><b>S2_AII_47</b> <b>Investigation of flame propagation enhancement by a ultra-short nanosecond discharge pulse using the advanced laser- based diagnostics</b> C. Kong, Y. Bao, I. Hung, M. Aden, A. Ehn</p> <p><b>S2_AII_51</b> <b>Characterization of IV endoscopic imaging systems for combustion applications</b> M.A. Shahzad, S.A. Kaiser, M. Schüller, T. Beig</p> <p><b>S2_AII_56</b> <b>Experimental study of droplet impact on oblique dry surface</b> Hitesh Pental, Damodar Ribeiro, Jorge Barata, Anilika Silva</p>	<p><b>S2_AII_34</b> <b>Reaction kinetics: studies of unsaturated methylester: methyl crotonate</b> Sundar, K. Vedula, Bo Shiu, Kai Mashammer, Ravi X. Fernandes</p> <p><b>S2_AII_35</b> <b>A new camera-based flame stability measure for non-oscillating and oscillating combustion</b> J. Matthes, P. Wielhel, M. Vogelbuecher, H.-J. Gehrmann, H.B. Keller</p> <p><b>S2_AII_39</b> <b>NO<sub>x</sub> concentration imaging in low-pressure nanoparticle-synthesis flames via laser-induced fluorescence</b> Robin S.M. Ongsche, Felix L. Elbert, Thomas Deller, Christof Schulz</p> <p><b>S2_AII_45</b> <b>Femtosecond two-photon laser-induced fluorescence imaging of atomic hydrogen in a laminar methane/air flame stimulated by nanosecond repetitively pulsed discharges</b> Jordiin Blodd, Andreia Brin, Dennis A. Lososse</p> <p><b>S2_AII_49</b> <b>Alternative soot detection strategies for application in aero-engine test-beds: assessment of the performance and uncertainties of time-integrated LII</b> R. Roy, C. Bourne, G. Ramesh, K. Ocyan, P. Wright, V. Artilla, S.S. Burns</p> <p><b>S2_AII_50</b> <b>A novel approach to high-speed 1D Raman- scattering for combustion dynamics</b> G. Magrini, Y. Krishna, C. Yang, H. Tong</p> <p><b>S2_AII_53</b> <b>Lagrangian approach to CH<sub>4</sub>/D<sub>X</sub> axisymmetric spray combustion</b> R. Kammann, Komwong Lee, Joyce Koo</p> <p><b>S2_AII_54</b> <b>Analysis of LIF and MIE signals from single micrometric droplets for instantaneous droplet sizing in gasoline sprays</b> Matthew Kang, Kevin Baetens-Hinsfeld, Christopher Mull,</p> <p><b>S2_AII_58</b> <b>Numerical simulation of sulfur combustors with high-power-density</b> Reedolyn Hogen Heijnen, Thorsten Zwiers, Marlo Fedork, Stefan Harth, Nada Sibbar, Peter Habischütter, Dimothini Timis, Henning Bockhorn</p> <p><b>S2_AII_59</b> <b>Liquid fuel MILD combustion with two stage combustion structure in a closed combustion chamber</b> Chun-tam Cho, Ho-Yeon Lee, Sung-Sun Huang</p> <p><b>S2_AII_60</b> <b>Numerical modeling of the secondary droplet break-up in spray flows</b> C. Sung, M. V. Jayaraman, S. Gopalakrishnan</p>

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<b>S2_AIII_61</b> <b>Analysis of multiphase MMC coupling using DNS of a reacting double shear layer</b> <i>M. Sørensen, A. Koenigsmann, O. Stein</i>	<b>S2_AIII_62</b> <b>Quantifying the effect of the turbulence and break-up modelling for spray simulations through a dimensionless number analysis</b> <i>F. Gehring, R. Morgan, P. Adams, K. Voglitzaki</i>	<b>S2_AIII_63</b> <b>Investigation of the sulfur dioxide absorption in water droplets</b> <i>I. Beccari, J. Boletti, M. Wagnon, C. Brodier, R. Tischflik</i>	<b>S2_AIII_64</b> <b>A direct numerical simulation analysis of turbulent V-flames propagating into droplet-laden mixtures with an overall equivalence ratio of unity</b> <i>G. Oberholzer, J. Hossberger, M. Klein, N. Chakraborty</i>
<b>S2_AIII_66</b> <b>Droplets autoignition simulations of ethanol mixtures with a reduced kinetic mechanism</b> <i>A. Muñoz-Hernández, E. Fernández-Torres, M. Sánchez-Sanz, O. Williams</i>	<b>S2_AIII_67</b> <b>Uncertainty of droplet evaporation measurements and its effect on model validation</b> <i>D. Gerning, V. Izzo</i>	<b>S2_AIII_68</b> <b>Temporal and spectral correlation of acoustic and chemiluminescent signal of a liquid-fueled turbulent swirl burner</b> <i>G. Hellebrecht, V. Jozsa</i>	<b>S2_AIII_69</b> <b>Determination of the minimal acoustic signal length for fast-acting control of a liquid-fueled turbulent swirl burner by Wavelet and Fourier transform</b> <i>G. J. Montaño, V. Jozsa</i>
<b>S2_R1_71</b> <b>The influence of film cooling flow over turbine blades from different shaped holes</b> <i>O. Cenek, J. Gaeta, J. Wong, X. Wong</i>	<b>S2_R1_72</b> <b>How far can we go? Stability limit assessment of micro gas-turbine combustion in diluted conditions using LES</b> <i>A. Pappu, M. Gondet, P. Bertrand, L. Brétheau, W. De Roege</i>	<b>S2_R1_73</b> <b>Detection of high-frequency thermacoustic combustion oscillations in a model rocket</b> <i>S. Shimura, T. Itochimura, H. Saitoh, H. Goda, Y. Ohmichi, S. Matsuyama</i>	<b>S2_R1_74</b> <b>Early detection and prevention of blowout in a laboratory-scale gas-turbine model combustor using complex networks</b> <i>S. Matsuda, T. Kobayashi, H. Goda</i>
<b>S2_R1_76</b> <b>Emission estimation for lean premixed methane - air flame at high pressure</b> <i>A. Yoshizawa, S. Yosukefita, S. Ito, G. Goldin, K. Projdt, G. Bourque, R.F.D. Moxon</i>	<b>S2_R1_77</b> <b>LES of combustion dynamics in a partially premixed swirl combustor</b> <i>D. Friedrich, W.P. Jones, A.J. Marquis</i>	<b>S2_R1_78</b> <b>A tabulated chemistry method for the LES of diluted, non-isothermal, premixed flames including auto ignition</b> <i>P. Grallaté, C. Beck, B. Horriau, A. M. Kempf</i>	<b>S2_R1_79</b> <b>Suppression of instabilities of swirled premixed flames with minimal secondary hydrogen injection</b> <i>G. Dantzig, L. Selle, I. Poinsot, I. Schuller</i>
<b>S2_R1_81</b> <b>Effects of mixture stratification on thermo-acoustic instabilities in a dual-swirl gas turbine model combustor</b> <i>C.M. Andritz, Y. Guo, W. Meier</i>	<b>S2_R1_82</b> <b>Systematic CFD-CRN study of exit NO<sub>x</sub> emission in a methane/air diffusion flame</b> <i>S. Yosukefita, G. Bourque, R. F. D. Moxon</i>	<b>S2_R1_83</b> <b>Analysis of ignition processes at combustors for aero engines at high altitude conditions</b> <i>A. Martínez, L. Blaustein, S. Harth, A. Andreini, N. Zarifidis, D. Timus, J. Vitale</i>	<b>S2_R1_84</b> <b>The effects of compressibility on the response of a flame to acoustic forcing</b> <i>N. Treteau, A. Gammie, G. Argue</i>
<b>S2_R1_86</b> <b>Simultaneous measurement of 2D mixture fraction and flame structure in a non-premixed, swirl stabilized burner</b> <i>R. Suttorp, J. Stenzeloff, M. Paul, H. Grossmann, D. Marts</i>	<b>S2_R1_87</b> <b>Assessing emission characteristics of multiphase fuel combustion under gas turbine conditions</b> <i>Ugojanovaya, Agustín Vilella-Medina, Cheng-Jung Chang</i>	<b>S2_R1_88</b> <b>Assessment of subgrid-scale turbulence-radiation interaction on the filtered mean radiative emission in large-scale pool fire simulations</b> <i>G.C. Fraga, A.P. Perry, P.J. Coelho, F.H.R. Franco</i>	<b>S2_R1_89</b> <b>Experimental and numerical study on the interaction between sprinkler water spray, fire plume and smoke layer</b> <i>I. Ulyanov, M. Vierer, D. Syret, J. Timis</i>
<b>S2_R1_90</b> <b>Laboratory investigation of the ignition of wood structural materials under the influence of spot fires</b> <i>D.Y. Cherdakov, M.A. Agafonov, V.V. Pernikov, A.Yu. Cherdakov, V.A. Tarakanov, P.S. Matrynov</i>			

# Poster Session 3

**Tuesday | April 16<sup>th</sup>, 2019 | 10:30-12:30**

<b>S3_AII_01</b> <b>Activation effect of diethyl ether on the partial oxidation of methane</b> <i>D. Kozmarcek, S. Sajiqu, B. Atakan, T. Kasper</i>	<b>S3_AII_02</b> <b>Estimation of sticking coefficients using mobile and immobile transition states for catalytic-platinum systems</b> <i>A.-M. Tsigelehou, K. Gaglione, M.P. Lindstedt</i>	<b>S3_AII_03</b> <b>Evaluation of pyridinic aromatic hydrocarbon formation in counterflow diffusion flames</b> <i>R. Tijanji, W. Dejicksteboul, L. Cai, M. Peuchot, T. Farnell, H. Pitsch</i>	<b>S3_AII_04</b> <b>Combustion study of a 3-components surrogate fuel</b> <i>Wei-Xiu Liu, Sander Reijer, Clemens Heumann, Martin Braun-Unkoff, Zhen-Yu Tian</i>	<b>S3_AII_05</b> <b>Mechanism and kinetic study on the pyridine low-temperature oxidation under fuel-rich condition</b> <i>Ling-Nan Wu, Zhen-Yu Tian, Jun-Jie Wang, Dan Yu, Wei-Xiu Liu, Dong-Xu Tian, Chung-Chung Guo, Jia-Biao Zou, Yun Zhang, Li-Zheng Yang</i>
<b>S3_AII_06</b> <b>Reduction of methane-air combustion kinetic model through tux analysis and optimized with adaptive Monte Carlo optimization for chemical kinetics</b> <i>Gerry Hughes, Federico Felizia, Stephen Doolley</i>	<b>S3_AII_07</b> <b>An experimental and theoretical kinetic study of the reaction of hydroxyl radicals with 1,4-Pentadiene</b> <i>Bindu Jaggi, Tim V. T. Hui, Daoyong Liu, Milán Sári, Lam K. Huihy, Balázs Vészák, Ákos Fürnörg</i>	<b>S3_AII_08</b> <b>Combustion behaviour of ammonia-blended with dimethyl ether</b> <i>Garikisayegu, Bindu Jaggi, Ayman M Elbar, William L Roberts, Amrit Faruq</i>	<b>S3_AII_09</b> <b>Exploring the combustion chemistry of a novel lignocellulose-derived biofuel: cydolethane</b> <i>L. Gao, L. Krämer, M. Dörriger, H. Minnewege, R. D. Büttner, A. Baumgärtel, K. Leonhardt, K. Narayanan, S. M. Smithy, Y. A. Heuer, H. Pitsch</i>	<b>S3_AII_10</b> <b>Comparison of methane combustion mechanisms based on shock tube and RCM ignition delay time measurements</b> <i>Peng Zhang, Jiwon Gy, Zeddy, Victor Sumar, Tomás Lundqvist</i>
<b>S3_AII_11</b> <b>Comparison of detailed reaction mechanisms for nitrogen chemistry in syngas combustion systems</b> <i>António Gy, Szilárd Gy, Zsófia Tamás Türoffy</i>	<b>S3_AII_12</b> <b>Modeling study of ignition delay time characteristics of ultra-rich C1/C2 mixtures in a constant volume reactor at low-pressure</b> <i>S. Marinaz, M. Salgommamadif, K. Somes, H. Curnin, A. Pekitski</i>	<b>S3_AII_13</b> <b>An updated chemical kinetic model for the simulation of laminar burning velocities of premixed hydrogen, methane, and n-heptane/air flames</b> <i>R. Hess, J. Bechtelmann, H. Pitsch</i>	<b>S3_AII_14</b> <b>A jet-stirred reactor study of the oxidation and pyrolysis of di-n-propyl-ether</b> <i>Marcinek, Laflitte, Zengyu, Semenov, Guillermo Dayma, Philippe Dugout</i>	<b>S3_AII_15</b> <b>Determination of the rate parameters of N/H/O elementary reactions based on H<sub>2</sub>/O<sub>2</sub>/NO<sub>x</sub> combustion experiments</b> <i>M. Kovács, T. Türoffy, C. Oros, R. Pálvölgyi, I. Gy, Zeddy, T. Türoffy</i>
<b>S3_AII_16</b> <b>Experimental and modelling study of the oxidation of methane doped with ammonia</b> <i>Y. Song, O. Hettner, M. Peuchot, A. Sajiqu, T. Farnell, F. Buttini-Ledecq</i>	<b>S3_AII_17</b> <b>An experimental and kinetic modeling study on the reactivity of 1,3-diolane under engine relevant conditions</b> <i>A. Wilkensberg, Y. Fenard, B. Lejeut, L. Le Moigne, A. Kérimès, K. A. Heuer</i>	<b>S3_AII_18</b> <b>An experimental and modeling study of diisobutylene oxidation</b> <i>A. Hilti-Jakobini, B. Küwen-Zhang, C. William J. Platz, D. Henry J. Curnin</i>	<b>S3_AII_19</b> <b>Response-surface and group-additivity methodology for estimation of thermodynamic properties of oxygen-containing organosilanes</b> <i>H. Jamshidi, C. Schulz, J. Wolke, S. Peukert</i>	<b>S3_AII_20</b> <b>Global Quasi-linearization (GQL) method for high dimensional detailed reaction mechanisms</b> <i>S. Purvis, C. Yu, E. Berzany, V. Bykov, U. Maas</i>
<b>S3_AII_21</b> <b>Prediction of non-premixed combustion regimes in a DI diesel engine in various operation points</b> <i>D. Denier, K. Klemm, A. Attili, M. Kokkinas, H. Pitsch</i>	<b>S3_AII_22</b> <b>Methodology for knock investigation in spark ignition engines</b> <i>O. Myöhänen, M. Mattila, A. Robert, R. Dauphin, N. Chameck</i>	<b>S3_AII_23</b> <b>Toward direct numerical simulations of a gas engine pre-chamber</b> <i>C. Chi, A. Abuselme, D. Thevenin</i>	<b>S3_AII_24</b> <b>Development of phenomenological blending rule for the assessment of the antiknock quality of hydrocarbon fuel mixtures</b> <i>Dimitre Simov, Jonason A. Bosson, José A. Vélezquez</i>	<b>S3_AII_25</b> <b>Combustion characteristics of diesel blended with soybean derived hydrothermal liquefaction oil and its applications</b> <i>Chun-Hsiu Lin, Chung-Hao Hsu, Wei-Heng Li</i>
<b>S3_AII_26</b> <b>A computationally efficient combustion progress variable (CPV) approach for engine applications</b> <i>A. Werner, C. Wever, A. Borg, A. Matthes, L. Seidel, F. Matus</i>	<b>S3_AII_27</b> <b>Cycle variation analysis of the partially premixed combustion (PPC) using natural flame luminosity and planar-laser-induced fluorescence imaging</b> <i>Qingling Tang, Vannipragam, Ramana, Kanthao An, Hoa Shi, Prabhat Sharma, Gereon Mayrath, Bengt Johnson</i>	<b>S3_AII_28</b> <b>Modelling of auto-ignition to premixed flame combustion in a context of Dual-Fuel engine</b> <i>Ulfan Nur Bakhtiar, Rok Yih, Somer Kolmann, Örsesik, Tomaž Kavčičnik</i>	<b>S3_AII_29</b> <b>Reactivity controlled compression ignition combustion using renewable fuels</b> <i>Ulfan Nur Bakhtiar, Rok Yih, Somer Kolmann, Örsesik, Tomaž Kavčičnik</i>	<b>S3_AII_30</b> <b>Experimental investigation of the impact of advanced injection strategies on LTC concept for a single cylinder CI engine</b> <i>M. Kortman, J. Bechtelmann, H. Pitsch</i>

# Poster Session 3

**Tuesday | April 16<sup>th</sup>, 2019 | 10:30-12:30**

<p><b>S3_AIII_31</b> Comparison of two velocity-pressure coupling algorithms for laminar non-premixed combustion</p> <p>Fabio Afonso Cunha, Juliana Petrucci Rodrigues</p>	<p><b>S3_AIII_32</b> Effect of burner diameter and diluents on structure and stability of co-flow laminar premixed flames of diluted methane fuel</p> <p>A. Anuping Mishra, B. Arijit Manna, C. Prashant Sharma, D. Basur Joseph, E. Mayank Kumar, F. Arjun Ray</p>	<p><b>S3_AIII_33</b> Analysis of CH<sub>3</sub>O OH as marker for fuel-rich air to pure oxy-fuel flames under higher preheat temperature and elevated pressure</p> <p>M. Schmitz, P. Habisreuter, G. Koumoutsakos, C. Keimowitz, B. Stelzer, M. Faust, D. Träns</p>	<p><b>S3_AIII_34</b> Numerical simulation of flames in narrow combustion chambers</p> <p>K. Bialek, G. Robert, G. Vervisch</p>	<p><b>S3_AIII_35</b> Features of cellular flames propagating between closely spaced parallel plates</p> <p>M.M. Alievay, O.Iu. Semenov, S.E. Ishak</p>
<p><b>S3_AIII_36</b> Investigation of NO<sub>x</sub> emission for different laminar premixed CH<sub>4</sub> fuel blends stabilized on a flat-flame burner</p> <p>M. Hellmuth, S. Karg, Y. Den, J. Hilmerts, M. Flammie, J. Beeldman, H. Pitsch, A. A. Komarov</p>	<p><b>S3_AIII_37</b> Laminar burning velocity and extinction strain rate of H<sub>2</sub>/CH<sub>4</sub>/O<sub>2</sub>/N<sub>2</sub> in flat flames</p> <p>S. Edler, M. Baier, C. Krause, H. Kausig</p>	<p><b>S3_AIII_38</b> Numerical generation of multidimensional flamelet databases using an adaptive wavelet method</p> <p>S. Gerini, P. P. Gontijo, R. Madala Gontijo, T. Grengau, H. Pitsch, S. Probst, M. Watanabe</p>	<p><b>S3_AIII_39</b> Influence of natural gas composition and hydrogen addition on fundamental flame characteristics</p> <p>S. Zlachnai, D. Pugh, A. Crawford, P. Bowen</p>	<p><b>S3_AIII_40</b> A DNS study of the impact of gravity on spherically expanding premixed flames</p> <p>L. Berger, R. Heise, K. Kleinhenz, A. Atili, J. Beeldman, H. Pitsch</p>
<p><b>S3_AIII_41</b> Laminar premixed flames of ethanol-water-air mixtures</p> <p>L. van Treck, M. Lubrano Landeria, L. Seidel, F. Massa, A. A. Komarov</p>	<p><b>S3_AIII_42</b> Laminar flame speed simulations of methane-air and i-n-heptane-air mixtures by using an adapted mechanism</p> <p>S. Schulz, F. Wintner</p>	<p><b>S3_AIII_43</b> Propagating edge flames in nonpremixed coflow jets under electric fields</p> <p>Jinwoo Son, Mennatou Benli, Hong G. Im, Sunho Park, Jeong Park, Boil J.H. Lee, Min Suk Cho</p>	<p><b>S3_AIII_44</b> Effect of diluent addition on methane/nitrous oxide inverse diffusion flame</p> <p>Chun-Han Chen, Yueh-Heng Li, Chung-Hsiu Lin</p>	<p><b>S3_AIII_45</b> Determination of temperature and water-concentration in fuel-rich oxy-fuel methane flames applying TDAS</p> <p>M. Schmitz, S. Schulz, B. Stelzer, C. Keimowitz, M. Veierød, D. Träns</p>
<p><b>S3_AIII_46</b> Experimental investigation of synthesis gas production in fuel-rich oxy-fuel methane flames</p> <p>M. Kiani, D. Träns</p>	<p><b>S3_AIII_47</b> 2D and 3D numerical simulation of chemiluminescent radial concentrations during side-wall quenching of premixed methane and propane flames</p> <p>T. Zhou, S. Lohse, J. Zhang, H. Kosfeld, H. Borchhorn, R. Sunz, A. Dreher, J. Jamroka</p>	<p><b>S3_AIII_48</b> Experimental analysis of lean hydrogen premixed flames propagating in a confined vertical channel</p> <p>Fernando Vélez-López, Daniel Martínez-Ruiz, Mike Kauten, Eduardo Fernández-Tarazón, Mario Sánchez-Sanz</p>	<p><b>S3_AIII_49</b> Laminar burning velocity measurements of ethanoh-air and methanol-air mixtures at atmospheric and elevated pressures on a flamelet heat flux method setup</p> <p>M.B. Kauten, G.J. Hoerner, J.A. van Oijen, L.P.H. de Goy, M. Veierød, D. Träns</p>	<p><b>S3_AIII_50</b> Flames interaction under velocity and equivalence ratio gradients</p> <p>J.M. Pérez, E. L. C. Fernández, A. F. Grönem</p>
<p><b>S3_AIII_51</b> Modeling the smoldering of a static bed of biomass with inert solids</p> <p>G. Guntelke, A. Bönnig, M. Della Zesca, P. Guo</p>	<p><b>S3_AIII_52</b> A detailed investigation on a novel combustion heat exchanger design for heating applications</p> <p>B. Nishidoh, N. Komai, M.C. Paul</p>	<p><b>S3_AIII_53</b> Development of a porous burner for low calorific gaseous fuels offering a wide operating range</p> <p>C. Weiland, P. Weinhoefer, C. Wels, Ph.Dissertator, D. Träns</p>	<p><b>S3_AIII_54</b> Experimental study on the application of the water tube in porous media burners</p> <p>Jaebyeon Kim, Hyojo Lee, Keemun Lee</p>	

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**Tuesday | April 16<sup>th</sup>, 2019 | 15:30-17:30**

<p><b>S4_AII_01</b> <b>The study of combustion in gas generator with a change of solid propellant enriched by metal</b> M.V.Gordin, L.S.Yanovskiy, A.V.Bakov, A.F.Zholudev</p>	<p><b>S4_AII_02</b> <b>Development of a variable thrust water breathing engine</b> R.Siddharth, S.Konaraglo, P.A.Ramadesinha</p>	<p><b>S4_AII_03</b> <b>Development of cost effective high aluminum based fuel rich propellant</b> Anush Kumar Muthu, R.Siddharth, P.A.Ramadesinha</p>	<p><b>S4_AII_04</b> <b>Development of controllable lab-scale hybrid motor thruster</b> Arvind Bharat, Venkateshwaran, P.A.Ramadesinha</p>	<p><b>S4_AII_05</b> <b>Experimental determination of ignition and combustion characteristics of two insensitive propellants</b> L.Courty, P.Gilani, J.F.Lagrange, C.Boulais</p>
<p><b>S4_AII_06</b> <b>Thermal analysis and kinetics of biomass combustion</b> I.Nogurnova, E.Seminanova, T.Petrova, O.Sundov, L.Vorotinaeva-Rucheva</p>	<p><b>S4_AII_07</b> <b>Thermal treatment of lignin-rich residue from biobrand production: preliminary study on char properties</b> C.M.Grotto, P.Guillard, R.Ruguel</p>	<p><b>S4_AII_08</b> <b>Hydrogen rich syngas from updraft gasification of lignocellulosic feedstock</b> N.Ceroni, F.Zimboldi, J.Balea</p>	<p><b>S4_AII_09</b> <b>The co-oxidation study of coal and corn residue as a representative of biomass with photoionization mass spectrometry</b> Jun-Jie Wong, Zhen-Yu Tian, Wei-Xi Liu, Yu-Nan Zhu, Yang Pan</p>	<p><b>S4_AII_10</b> <b>PAN distribution in pig manure pyrolysis products</b> I.Jadonez-Sabio, P.de Blas, M.I.Fortis, G.Gómez, M.U.Alzate</p>
<p><b>S4_AII_11</b> <b>Innovative 3D CFD sewage sludge combustion modeling for furnace design optimization</b> A.Zhidkarev, T.Kutrasik, T.Szajek</p>	<p><b>S4_AII_12</b> <b>Multi-phase reactive systems - analysis of involved time scales</b> M.Bückereder, E.M.Wirth, C.Jordan, B.König, M.Hansch</p>	<p><b>S4_AII_13</b> <b>Dust explosion characteristics of corn starch at elevated temperature and pressure and reduced oxygen concentrations</b> Frederik Kammann, Tim van der Gucht, Tom Segers, Jeff Griffin, Filip Verpoesten</p>	<p><b>S4_AII_14</b> <b>Combustion behavior of torrefied biochar with different constituents of cellulose, hemicellulose, and lignin</b> Wei-Chieh Lin, Wei-Hung Li, Yu-Hsiang Huang, Chia-Wen Huang</p>	<p><b>S4_AII_15</b> <b>Effect of Cl<sup>-</sup> injection method on combustion and gasification efficiency of pulverized coal in the tuyere part of blast furnace</b> A.Murao, K.Fukada, M.Sato, H.Matsuura, Y.Saito, S.Matsuura, Y.Matsuura, H.Haki</p>
<p><b>S4_AII_16</b> <b>Experimental study on reaction front propagation during biomass packed bed smoldering combustion</b> Manoh Wang, Tora Suzuki, Naoko Kami, C.Paul</p>	<p><b>S4_AII_17</b> <b>Numerical simulation of raceway zone in small-scale combustion equipment for blast furnace</b> H.Umaru, K.Tanno, S.Umemoto, K.Morita, A.Murao, I.Sano</p>	<p><b>S4_AII_18</b> <b>Direct numerical simulations of spontaneous ignition of biomass in turbulent, high temperature particle-laden mixtures</b> M.Rabadi, M.Grotta, V.Papageorgiou, C.Turquand d'Alauzy, N.Chakrabarty</p>	<p><b>S4_AII_19</b> <b>Kinetic modeling of the effects of Na<sup>+</sup> and K<sup>+</sup> on the slow pyrolysis of hemi-cellulose</b> Al.Ferreira, M.Grotta, M.Rabadi, P.Guillard, V.Gargiulo, M.Arie, R.Ruguel</p>	<p><b>S4_AII_20</b> <b>Modelling of particulate matter emissions from non-woody biomass combustion</b> S.Pereira, M.Grotta</p>
<p><b>S4_AII_21</b> <b>Influence of the cobalt oxide coated flame holder in stabilization of inverted-methane lean flames</b> L.M.Marques, Pedro F.Madeira, E.C.Fernandes</p>	<p><b>S4_AII_22</b> <b>Feasibility of natural gas pyrolysis for production of unsaturated hydrocarbons: an RCM study</b> Simon Drost, Robert Schlegl, Ulrich Maass</p>	<p><b>S4_AII_23</b> <b>Plasma assisted super-equilibrium radical plasma and its effect on ignition</b> J.Leibowitz, S.Hummel, C.Carter, I.Ombrello</p>	<p><b>S4_AII_24</b> <b>Designing a cooling burner using droplets as fuel</b> Muhammet Züfer Kahraman, Hakan Şenhad Sayhan</p>	<p><b>S4_AII_25</b> <b>Pri-lar methane oxidation via MLD combustion</b> A.Pilipidis-Best, V.Tsiorvas, I.Raijinov, S.Chekhis</p>
<p><b>S4_AII_26</b> <b>Experimental and numerical studies on CO<sub>2</sub> reformation in piston engines</b> Simon Drost, Hendrik Gosteler, Robert Schlegl, Olaf Deutschermann, U.Maus</p>	<p><b>S4_AII_27</b> <b>Autothermal and steam reforming of liquid synthetic fuels</b> b.Bernter, R.E.Hermanns, B.Wilfert, D.Bauer</p>	<p><b>S4_AII_28</b> <b>Key modeling aspects in the simulation of a cyclonic burner operated in MLD combustion conditions through Flamelet generated manifold model</b> G.Cerello, G.Sorrentino, P.Labat, M.de la Jonquier, A.Cavallere, R.Ruguel</p>	<p><b>S4_AII_29</b> <b>Investigation of heterogeneous kinetic combustion of propane using novel CSFR</b> Aktaruzzaman, Guan-Fu Pan, Ling-Nan Wu, Zheng-Yuan Tian</p>	<p><b>S4_AII_30</b> <b>Abatement of toluene by non-thermal plasma coupled with Cu-Co-O thin film coated on stainless steel mesh</b> Dan Xu, Zhen-Yu Tian, Muhammad Waseq, Zhi-hao Jin, Pengfei Mu, Ming-ping He, Kai-wu Guo</p>

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**Tuesday | April 16<sup>th</sup>, 2019 | 15:30-17:30**

<p><b>S4_AIII_31</b>  <b>Investigation of support effect of Fe-Cu-Co thin film catalyst on the catalytic activity and stability for CO oxidation</b>  <b>Muhammad Waseem, Akhraf El Kasmi, Patrick Mountagné, Mehdi Bouatou, Zhen-Yu Tian</b></p>	<p><b>S4_AIII_32</b>  <b>Experimental investigation of stabilization and emission characteristics of ammonia combustion in a cyclonic burner</b>  <b>G. Surrentini, P. Scialò, P. Bozzu, R. Ragucci, M. de Giovanni</b></p>	<p><b>S4_AIII_33</b>  <b>Experimental study of MILD combustion in a cyclonic burner using prevaporized liquid fuels</b>  <b>G. Surrentini, P. Scialò, P. Bozzu, R. Ragucci, M. de Giovanni</b></p>	<p><b>S4_AIII_34</b>  <b>New method of refinery gas processing into valuable petrochemicals</b>  <b>A.I. Nekrasov, I.V. Sedov, V.I. Savchenko, V.S. Antyukhov</b></p>	<p><b>S4_AIII_35</b>  <b>A preliminary assessment of alternative fuels for marine engines using combustion chemistry tools</b>  <b>G. Vourliotakis, M.A. Frumti, G. Kazanidis, L. Kortesis, G. Skeris</b></p>
<p><b>S4_AIII_36</b>  <b>Evaluation of gas turbine concepts for ammonia combustion</b>  <b>J.C. Rodriguez, M. Costa, X.S. Bai</b></p>	<p><b>S4_AIII_37</b>  <b>Unsteady pure straining effects on lean premixed flames of different Lewis numbers</b>  <b>J.A. Dever, L. Noydenova, F. Zhang, T. Zivkovic, H. Bodmann</b></p>	<p><b>S4_AIII_38</b>  <b>Laminar burning velocities and laser-induced fluorescence measurements of nitric oxide formation in propyl alcohol-air flames</b>  <b>G. Caprioli, M. Lubrano, Amedeo, C. Bradtmann, T. Mettling, A.J. Kammer</b></p>	<p><b>S4_AIII_39</b>  <b>Flame structures and local heat release rates during side-wall quenching of atmospheric methane and DME flames</b>  <b>H. Kosaka, T. Zeitgräf, A. Schönseck, C. Hause, A. Dreizler</b></p>	<p><b>S4_AIII_40</b>  <b>Influence of iron and phosphorus containing additives on the laminar flame speed</b>  <b>S. Liu, Y. Zhang, T. Kupper, B. Atakan</b></p>
<p><b>S4_AIII_41</b>  <b>Measurement of laminar burning velocity of SNG fuel with various hydrogen content</b>  <b>S.H. Cho, J.H. Song, K.M. Lee</b></p>	<p><b>S4_AIII_42</b>  <b>Experimental study of the maximum upstream location of premixed CH<sub>4</sub>/air and CH<sub>4</sub>/He flames with repetitive extinction and ignition in a quartz micro flow reactor</b>  <b>H. Chouinard, C. Chauveau, P. Dugout, F. Halet, G. Dayma</b></p>	<p><b>S4_AIII_43</b>  <b>Thermacoustic instabilities: flame-flame interaction and boundary conditions</b>  <b>Omer Butrone, Salvador Novaro-Martínez</b></p>	<p><b>S4_AIII_44</b>  <b>Numerical analysis of characteristics of biogas and syngas combustion</b>  <b>T. Bauschitz, K. Smayk, H. Zandbergen, P. Galon, B. Sutthiwanich, Wong, Zhihua Wong, Yong He, Xiaohui Han, Yaqun Zhu, Kele Cen</b></p>	<p><b>S4_AIII_45</b>  <b>Laminar burning velocity of CH<sub>4</sub>/N<sub>2</sub>/CO<sub>2</sub> flames measured by heat flux method under elevated pressure</b>  <b>Shiqing Wong, Zhihua Wong, Yong He, Xiaohui Han, Yaqun Zhu, Kele Cen</b></p>
<p><b>S4_AIII_46</b>  <b>High-temperature laminar flame speed experiments in a shock tube: laminar flame speed, temperature, and species measurements</b>  <b>Alisan M. Ferris, Adam J. Sosa, Julian J. Grind, David F. Davidson, Ronald K. Hanson</b></p>				

# Poster Session 5

**Wednesday | April 17<sup>th</sup>, 2019 | 10:30-12:30**

<b>S5_AII_01</b> <b>Non-ideal effects in shock tubes: experiments, modeling, and simulations</b> <i>D. Martel, J.J. Upton, Z. Wiktor, M. Fiter, A. Kempf, C. Schulz</i>	<b>S5_AII_02</b> <b>An ignition delay time and kinetic modeling study of 1- and 2-pentene</b> <i>J.M. Colom-Díaz, M. Abin, A. Millera, R. Bilbao, M.U. Alzate</i>	<b>S5_AII_03</b> <b>Plasma assisted combustion kinetics: modeling study for hydrogen-air mixtures in a non-thermal plasma reactor</b> <i>Shijun Dong, Kunwen Zhang, William J. Mizzi, Henry J. Gurn</i>	<b>S5_AII_04</b> <b>High-pressure shock-tube study of the ignition and product formation of fuel-rich CH<sub>4</sub>/dimethoxymethane air mixtures</b> <i>Jürgen Herzer, Mostapha Fiter, Christian Schulz</i>	<b>S5_AII_05</b> <b>Testing several butanol combustion mechanisms against a large set of experimental data and investigating their thermochemical data inconsistency</b> <i>M. Ballo, C. Olin, T. Haug, I. Gy. Zédy, T. Tundaij</i>
<b>S5_AII_06</b> <b>Influence of pressure on H<sub>2</sub>S conversion</b> <i>J.M. Colom-Díaz, M. Abin, A. Millera, R. Bilbao, M.U. Alzate</i>	<b>S5_AII_07</b> <b>ARAS study of ethanol, butanol and DME reactions with atomic oxygen behind shock waves</b> <i>N. Bystrov, A. Emelianov, A. Eremeev, P. Kostylev, P.A. Grachev</i>	<b>S5_AII_08</b> <b>High-temperature oxidation of 2,3-dimethyl-2-butene</b> <i>M. Gavasgouli, B. Sijercan, P.A. Grachev, R. Faure</i>	<b>S5_AII_09</b> <b>Modeling of NO<sub>x</sub> formation and consumption during oxidation of small alcohols</b> <i>Kishan Prasad Shrestha, Lars Seeger, Thomas Zschäck, Fabian Müssig</i>	<b>S5_AII_10</b> <b>A novel approach for nitrogen flux accounting of NO<sub>x</sub> formation pathways in 1D flames</b> <i>O. Golmankh, M.D. Bohan, J. Vinkovic, N. Djordjevic</i>
<b>S5_AII_11</b> <b>Kinetic modeling of the destruction of organics in short ports</b> <i>J.-C. Lizardo-Huerta, B. Sijercan, L. Verder, R. Faure, P.A. Grachev</i>	<b>S5_AII_12</b> <b>CarbNet: a novel software tool for the evaluation and development of reaction mechanisms</b> <i>H. Gosselet, D. Schmid, O. Deutschmann</i>	<b>S5_AII_13</b> <b>Thermodynamic property estimation based on group additivity method: impact of groups on kinetic model predictions</b> <i>F. van Lehn, L. Gao, H. Pitsch</i>	<b>S5_AII_14</b> <b>On the reliability of Ab-initio reaction rate constant estimations used for biobutanol oxidation mechanisms on the example of CH<sub>3</sub>OH + H</b> <i>Heiko Münzenberg, Kath Alexander Heiter</i>	<b>S5_AII_15</b> <b>Reduction of NO<sub>x</sub> in combustion of solid waste fuels by the SNCR process using ammonium sulfate as alternative additive</b> <i>Kristian Krum, Martin Jensen, Hou Wu, Sungjeng Li, Thomas Normann, Peter Götting</i>
<b>S5_AII_16</b> <b>Experimental and modeling study of the oxidation of pentanones: 2-pentanone, 3-pentanone and 3-methyl-2-butaneone</b> <i>V. Fernand, C. Henrion, R. Büttgen, H. Minnevegen, K.A. Heiter</i>	<b>S5_AII_17</b> <b>Formation of Isoprene and Naphthalene through C<sub>4</sub>-C<sub>5</sub> and C<sub>4</sub>-C<sub>6</sub> reaction pathways in low-pressure premixed flames</b> <i>T. Mertling, M. Braun-Uinkhoff, B. Tong, N. Hansen</i>	<b>S5_AII_18</b> <b>NO emission prediction using virtual optimized chemistry</b> <i>Giovanni Pollicino, A. Colet, B. Faure</i>	<b>S5_AII_19</b> <b>Probing the low-temperature oxidation of tetrahydroxyran and its effect on toluene ignition</b> <i>Monica Barocelli, Rupali Upadhyay, Niels Hansen, H. Pitsch</i>	<b>S5_AII_20</b> <b>Synthesized alternative kerosenes - characterization through experiments and modeling</b> <i>S. Röther, C. Naumann, T. Katharina, M. Braun-Uinkhoff, U. Riedel</i>
<b>S5_AII_21</b> <b>Ethane/nitrous oxide mixtures as a green propellant to substitute hydrazine: validation of reaction mechanism</b> <i>C. Naumann, C. Janzer, U. Riedel</i>	<b>S5_AII_22</b> <b>Metabolic comparison for PAH formation in pyrolysis and laminar premixed flames</b> <i>W. Beijerhofdekkel, R. Inglett, M. Peletzki, L. Gao, H. Pitsch, E. Komai, T. Farrell</i>	<b>S5_AII_23</b> <b>Ammonia oxidation in a JSR reactor. Towards a better understanding of ammonia chemistry</b> <i>P. Sabat, M. V. Marana, M. de Joannin, R. Rajyagopal</i>	<b>S5_AII_24</b> <b>Degree centrality of combustion reaction networks for analyzing and modeling combustion processes</b> <i>Almond Sogami, Kamal Hafla, Mostapha Fiter</i>	<b>S5_AII_25</b> <b>High temperature synthesis of TiO<sub>2</sub> nanoparticles using TIP-methane flat premixed flame</b> <i>Ho Yeon Lee, Chin Loon Chua, Sung Soon Hwang</i>
<b>S5_AII_26</b> <b>Comparative mass spectrometric study of gaseous key intermediates from terephthalic/ketane and hexamethyl-disiloxane in situ synthesis flames</b> <i>V. Karakaya, T. Kayaçar</i>	<b>S5_AII_27</b> <b>Impact of the injector geometry on soot production in a model scale swirled combustor under perfectly premixed rich conditions</b> <i>M. Boussou, P. Gauthier, N. Darabhani, D. Veymarie, S. Gantet, B. Franzeil</i>	<b>S5_AII_28</b> <b>Experimental and numerical investigation of iron-oxide nanoparticles from flame assisted synthesis</b> <i>M. Nogajew, A. Philipp-Best, A. Lomin, S. Cheskis, L. Deng, H. Jünger, J. Selmann, A. Kempf, I. Wöhres, I. Rahimov</i>	<b>S5_AII_29</b> <b>Soot formation in laminar diffusion flames with population balance modelling and laser diagnostics</b> <i>Benjamin Liu, Gaito E. Garcia, Robert Seiwert, Benjamin A.O. Williams, Stelios Bigopoulos</i>	<b>S5_AII_30</b> <b>Absolute ion atom concentration imaging in nanoparticle flame-synthesis reactor using self-calibrating laser induced fluorescence</b> <i>M.R. Lalanne, O. Slomka, A. Fomin, A. Philipp-Best, S. Cheskis, I. Rahimov</i>

# Poster Session 5

**Wednesday | April 17<sup>th</sup>, 2019 | 10:30-12:30**

<p><b>S5_AIII_31</b> <b>Newly-designed catalytic jet-stirred reactor for low-temperature oxidation of T135MB</b> Aitor Elizalde, Guan-Fu Peng, Zhen-Kun Lian</p>	<p><b>S5_AIII_32</b> <b>Dehydrogenation of a chemical hydrogen carrier using a porous media burner</b> J. Balonim, L. Zgusta, S. Wili</p>	<p><b>S5_AIII_33</b> <b>Chemiluminescent and structure characteristics of a <math>H_2O_2</math> downward inverse diffusion flame</b> K. Utria, C. Galizzi, M. Künni, D. Eskudero, S. Labor</p>	<p><b>S5_AIII_34</b> <b>The impact fragmentation tendency of limestone particles in calcium looping systems: effect of steam and sulphur dioxide sorbents</b> A. Gopalkar, F. Massa, P. Sartorio, F. Scialino</p>
<p><b>S5_AIII_36</b> <b>Emissions from combustion of fuels with oleoresin-based compounds as additives</b> Dobromíř Růžek, Goran Novosel, Štefan Blatná, Tomáš Lomáňo, Alena Lúž, Vítěz Holý, Edwin Alexis Alarcón Durango</p>	<p><b>S5_AIII_37</b> <b>Implementation and validation of the discrete ordinates method for calculation of radiative heat transfer in the CFD software AVL FIRE™</b> E. Juric, Z. Pavlenović, M. Ilijanovic, P. Presečnik, R. Trischl</p>	<p><b>S5_AIII_38</b> <b>Effects of <math>O_2</math>-<math>H_2O</math> dilution on characteristics of <math>CH_4</math>-air-O<sub>2</sub> flames</b> H. Zantamaj, T. Bouška, J. C. Souret, C. Chaveau, I. Gökep</p>	<p><b>S5_AIII_39</b> <b>Reliability of particulate matter sensor operation during uncomfortable weather conditions</b> G. Battaglia, M. L. Kiss, A. Imre, Zs. Dobó, Á. B. Pálosi</p>
<p><b>S5_AIII_41</b> <b>The influence of the combustion operation parameters in the process burners on the formation of NO<sub>x</sub> and heat fluxes</b> Pavel Skýja, Raděk Smrk, Igor Hrdlicka, Jiří Bojarovský</p>	<p><b>S5_AIII_42</b> <b>Cold flow analysis, flame stability and emission properties of blade-based premixed swirl burners at various blade angles</b> M. Heide, S. Eckart, C. Kressel, H. Clowes, H. Krause</p>	<p><b>S5_AIII_43</b> <b>Using high-speed multispectral infrared imaging for temperature calculation of composite materials under kerosene flame</b> Alainneira Huot, Martin Lüniger, Böster, Marc-Antoine Langevin, Benjamin Suire, Stéphanie Boulaudi, Jean-Pierre Seigné-Olivier, Adrien Gresson, Alain De Givry, Sébastien Le Gall, Anne De Givry</p>	<p><b>S5_AIII_44</b> <b>Natural gas replacement by syngas in Resource Energy Intensive Industries (REII) burners: numerical CFD evaluation</b> H. Oliwedo, M. Gostanski, L. Aldea, A. Kiedrzynski, R. Lewicki</p>
<p><b>S5_AIII_46</b> <b>Ignition and early stages of flame propagation in non-premixed bunsen as planar turbulent jet</b> Ondřej Inguanti, Jérôme Somer, F. Ahmed, Marjan Gholami</p>	<p><b>S5_AIII_47</b> <b>Large eddy simulations of reacting sprayjet with active control</b> J. Sternberg, A. Myslinski</p>	<p><b>S5_AIII_48</b> <b>Determination of a correlation for predicting lean blow off limits of gaseous fueled, premixed turbulent jet flame arrays enclosed in a hexagonal dump combustor</b> C. Weis, A. Schwegert, S. Galle, R. Brügmann, P. Hobbs, Gatter, N. Zurzits</p>	<p><b>S5_AIII_49</b> <b>Large eddy simulation of a lab-scale 30 kW flame operating in MILD combustion</b> M. Göder, J. Dubois, L. Breitweix</p>
<p><b>S5_AIII_51</b> <b>Turbulent bluff-body flames close to stability limits revealed by coupling of high speed optical diagnostics</b> Nelson Valente, David Hanmer, Graine Loxton, Bertrand Leorette, Amélie Cessou</p>	<p><b>S5_AIII_52</b> <b>Mixing and entrainment of burned products in high Karlovitz number premixed jet flames</b> Anton Attili, Konstantin Kleinheinz, Dominik Denker, Lukas Beiger, Fabrizio Bocci, Heinz Pitsch</p>	<p><b>S5_AIII_53</b> <b>Multi-scale air velocity measurements in a turbulent bluff-body flame using spectral fitting of spontaneous Raman scattering and PIV</b> Florestan Gutschard, Nelson Valente, Pascal Bobet, David Hanmer, Graine Loxton, Bertrand Leorette, Amélie Cessou</p>	<p><b>S5_AIII_54</b> <b>Emissions in stationary gas turbines</b> Konstantin Kleinheinz, Paul Mihalek, Lukas Beiger, Matthias Stade, Emre Sude Gengen, Antonio Attili, Heinz Pitsch</p>
<p><b>S5_AIII_56</b> <b>Flame stabilization in a cavity-based scramjet</b> J. Ruan, P. Domínguez, G. Robert</p>	<p><b>S5_AIII_57</b> <b>Modelling and simulation of high-pressure flows</b> E. M. Wortha, M. Bisselohner, C. Jordan, M. Hausek</p>	<p><b>S5_AIII_58</b> <b>Mesh partitioning of reactive flow simulations - 'speed-up' and other side effects</b> U. Guven, G. Robert</p>	<p><b>S5_AIII_59</b> <b>Auto-ignition characteristics of transient methane, bungas and syngas jets at elevated pressure and temperature conditions: an axisymmetric DNS study</b> M. Rangel, A. Corri, G. S. Gianniotopoulos, G. E. Frangoulis, K. Boulosdros</p>

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