



Programme

Date/time	McGregor College Dining Hall
Brisbane local time (AEST, UTC+10h)	
Day 0, Sunday 21st Nov	
6:00 pm -9:00 pm	Registration and Reception – held at McGregor College Dining Hall

Date/time	Room A (Q402) – including Plenaries*	Room B (Q501) – including Breaks**
Day 1, Monday 22nd Nov		
9:00 am – 9:15	Welcome to Country (<i>Chair Wandel</i>) – Gumbi Gumbi Gardens Firepit (Acknowledgement Stone 4, near West St)	
9:30 am – 10:00	Opening (<i>Chairs Klimenko & Wandel</i>)	
10:00 -10:45	Bilger Lecture - Hideaki Kobayashi (<i>Chair Masri</i>)	
10:45 -11:15	Morning tea (30 min)	
11:15 am -12:00 pm	Keynote 1 - Gus Nathan (<i>Chair Klimenko</i>)	
12:00 pm -1:30	Lunch (1.5 h) – Japanese Gardens (weather permitting)	
1:30 - 2:50	S1 Hydrogen (<i>Chairs Dlugogorski & Knibbe</i>)	S2 High-speed combustion (<i>Chairs O'Byrne & Wheatley</i>)
	1 ACS21021 - Experiment and Simulation of Hydrogen Oxidation in the High-Pressure, Weak-Ignition Regime <i>Junqiu Jiang, Zhewen Lu, Yi Yang*, Michael Brear</i>	ACS21006 - Hydrogen Boundary Layer Combustion with Multi-Porthole Injector Arrays <i>J. Sandrai*, T. Vanyai, A. Veeraragavan and V. Wheatley</i>
	2 ACS21012 - Toluene addition to turbulent H ₂ /CH ₄ flames in bluff-body burners <i>Adam J. Gee *, Yilong Yin, Kae Ken Foo, Alfonso Chinnici, Neil Smith and Paul R. Medwell</i>	ACS21007 - Scramjet Combustion Mode Establishment and Stability in a Reflected Shock Tunnel <i>W.O. Landsberg*, A. Veeraragavan</i>
	3 ACS21013 - Visible and thermal radiation from toluene-doped hydrogen flames <i>Douglas Proud*, Adam Gee, Paul Medwell, Neil Smith and Michael Evans</i>	ACS21016 - Atomic Oxygen in Supersonic Combustion Experiment Inflows <i>T. Vanyai* and N.N. Gibbons</i>
	4 ACS21022 - A comparative study of sound generation by turbulent hydrogen/methane premixed flames <i>J.Z. Ho*, M. Talei, and R.L. Gordonl</i>	ACS21024 - Measurements of Density Fluctuations in a Scramjet combustor <i>A. Ramprakash*, T.J. McIntyre, V. Wheatley and D.J. Mee</i>
2:50 - 3:15	Afternoon tea (35 min)	
3:15 - 4:00	Keynote 2 - Peter Lindstedt (<i>Chair Wandel</i>)	
4:10 - 5:00 pm	Women in Combustion (social meeting)	

*Note: Welcome to Country 9:00 will be held in the Gumbi Gumbi Gardens on the USQ campus.

**Lunch on Monday will be held in the Japanese Gardens.



The Australian Combustion Symposium 2021
21-24 November 2021, Toowoomba, Queensland

Date/time	Room A (Q402) – including Plenaries	Room B (Q501) – including Breaks
Brisbane local time (AEST, UTC+10h)		
Day 2, Tuesday 23rd Nov		
9:00 am - 9:45	Keynote 3 - Mani Sarathy (Chair Lu)	
9:45 - 9:50	Sponsor Presentation – Kenelec Scientific	
9:50 - 10:20	Morning tea (30 min) - including networking with Kenelec Scientific	
10:20 am - 12:20 pm	S3 Turbulent flames (Chairs Talei & Veeraragavan)	S4 Engines (Chairs Brear & Jahn)
1	ACS21011 - A priori analysis of flame wrinkling factor models in a turbulent premixed round jet flame <i>P. Panek*, D. Brouzet, M. Talei and R.L. Gordon</i>	ACS21005 - Cycle to cycle variations of in-cylinder flow in a high-tumble spark ignition engine <i>D. Kim, L. Rao, S. Kook*, S.W. Lee and H.-k. Baek</i>
2	ACS21020 - LES/PDF Modelling of Turbulent Premixed Flames Using an MMC-Shadow Position Mixing Model Incorporating Detailed Chemistry <i>Y. Shoraka*, S. Galindo-Lopez, M. J. Cleary, A. R. Masri, A. Y. Klimenko</i>	ACS21010 - Laboratory Simulation of Real-driving Emissions with a Heavy-Duty Diesel Engine <i>G M Hasan Shahariar, Mojibul Sajjad, Timothy A. Bodisco, Thuy Chu-Van, Kabir Adewale</i>
3	ACS21038 - A Method for Solving Two-Stream Mixing using the Generalised Binomial-Langevin Multiple Mapping Conditioning Model <i>Matthew du Preez, Andrew P. Wandel*, and R. Peter Lindstedt</i>	ACS21017 - A transition flame speed approach for large-eddy simulation of a natural gas DISI engine <i>M.R. Yosri*, T. Kar, M. Talei, R. L. Gordon, M.J. Brear and J. S. Lacey</i>
4	ACS21026 - An improved understanding of the stability of hydrocarbon flames with compositional inhomogeneity <i>A.R.W. Macfarlane*, M.J. Dunn¹, A.R. Masri</i>	ACS21014 - Preliminary experiments in a confined and pressurised jet-in-hot-coflow combustor <i>Douglas Proud*, Michael Evans, Paul Medwell and Shaun Chan</i>
5	ACS21027 - Studying the Merging Fire Fronts in Field conditions <i>A.I. Filkov*, B. Cirulis, T.D. Penman</i>	ACS21039 - Experimental investigation of iso-butanol-acetone (BA) and diesel blend as an alternative fuel for CI engines <i>S.J.M Algayyim* and A.P Wandel</i>
6	ACS21034 - On the unsteady effects of flamelet models in a turbulent line fire <i>J. Lin*, H. Zhou, G. H. Yeoh and E. R. Hawkes</i>	ACS21040 - Near-field autoignition study of a premixed jet in a cross-flow <i>H. Tummalapalli*, H.D. Ranadive, E.R. Hawkes, and A. Wehrfritz</i>
12:20 pm - 1:30	Lunch (70 min)	



The Australian Combustion Symposium 2021
21-24 November 2021, Toowoomba, Queensland

12:20 pm - 1:30	Lunch (70 min)	
1:30 - 2:50	S5 Special topics (<i>Chairs Jacobs & Medwell</i>)	S6 Flows with physical & chemical processes (<i>Chairs Evans & Shukla</i>)
1	ACS21035 - A Multi-Density Incompressible Method for Industrial Scale Dispersion Calculations <i>M.A. Abdel-jawad*</i>	ACS21029 - Study of electric arc dynamics inside a plasma torch under the influence of external magnetic field using a non-equilibrium model <i>P. Jyothikrishna, A.Y. Klimenko, Pradeep Shukla, Kandasamy Ramachandran, Victor Rudolph</i>
2	ACS21030 - Development length in smooth channels with wall reactions <i>M. M. Kratzer*, S.K. Bhatia and A. Y. Klimenko</i>	ACS21031 - Thermal Plasma Destruction of Perfluoroalkyl Substances: Experimental investigation and modelling studies <i>L. Henderson, J. Perambadur, P. Shukla and Victor Rudolph</i>
3	ACS21019 - On Relations of Combustion and Systems Modelling <i>A.Y.Klimenko</i>	ACS21032 - Supercritical CO ₂ Turbulent Flow and Heat Transfer Behavior in a Concentric Rotating Annulus <i>Md. Uddin*, H. Gurgenci, A. Klimenko and Z. Guan</i>
4		ACS21033 - Super-critical CO ₂ Behavior in a Concentric Annulus Based on Ideal Gas and Real Gas Properties <i>Md. Uddin*, H. Gurgenci, A. Klimenko and Z. Guan</i>
2:50 - 3:05	Afternoon tea (15 min)	
3:05 - 3:50	Keynote 4 - Andreas Kronenburg (<i>Chair Cleary</i>)	
4:00 - 4:30	CI section board meeting (<i>Chair Masri</i>) – Q501 and separate Zoom meeting	
4:30 - 5:00 pm	CI section members meeting (<i>Chair Masri</i>) – Q501	
5:30 pm - 10:00 pm	Dinner (including zoom broadcasting from 7:15 and awards at 7:30pm)	



The Australian Combustion Symposium 2021
21-24 November 2021, Toowoomba, Queensland

Date/time	Room A (Q402) – including Plenaries	Room B (Q501) – including Breaks
Brisbane local time (AEST, UTC+10h)		
Day 3, Wednesday 24th Nov		
9:00 am - 9:30	Special Invited Talk - Indigenous Fire Practices (<i>Chair Wandel</i>)	
9:30 - 10:00	Morning tea (30 min)	
10:00 am -12:00 pm	S7 Spray and Soot (<i>Chairs Algayyim & Salehi</i>)	S8 Kinetics and Solid combustion (<i>Chairs Brown & Yang</i>)
1	ACS21037 - Effect of Thermodynamic Pressure on Laminar Burning Velocity in Ammonia/Dimethyl-ether Premixed Flames <i>T. Cai, D Zhao</i>	ACS21025 - Decomposition of Carbonyl Sulfide <i>Zhe Zeng, Bogdan Z. Dlugogorski*, Ibukun Oluwoye, Mohammednoor Altarawneh</i>
2	ACS21004 - An Experimental Study of Ignition and Combustion Characteristics of Single Droplets of Vacuum Residues <i>Mingming Zhu*, Zhezi Zhang, Dongke Zhang</i>	ACS21028 - New Pathways for Formation of Toxic Species in Oxidation of 4-Chlorobiphenyl <i>Song Hou, Bogdan Z. Dlugogorski, Eric M. Kennedy, John C. Mackie, and Mohammednoor</i>
3	ACS21023 - Modelling a dilute spray flame using the eddy dissipation concept <i>Jordan Kildare*, Michael Evans and Paul Medwell</i>	ACS21015 - Partial oxidation of spent tyre pyrolysis oil for the production of carbon black <i>Chiemeka Onyeka Okoye, Isabelle Jones, Mingming Zhu*, Zhezi Zhang and Dongke Zhang</i>
4	ACS21008 - Dilute spray flames of ethanol and n-heptane in the transition to mild combustion <i>D. B. Proud*, M. J. Evans, P. R. Medwell and Q. N. Chan</i>	ACS21009 - Freeboard Effects on Instabilities in a Fixed Bed Biomass Combustor <i>Awais Junejo, Yasir M. Al-Abdeli* and Jacobo Porteiro</i>
5	ACS21003 - Reactive π -diradicals found in soot forming flames <i>J. W. Martin*, L. Pascazio, A. Menon, J. Akroyd, K. Kaiser, F. Schulz, M. Commodo, A. D'Anna, L. Gross and M. Kraft</i>	ACS21018 - Effects of Constant and Staged Torrefaction Temperatures on the Biomass Combustion and Pyrolysis <i>Sajid Riaz and Yasir M. Al-Abdeli</i>
6	ACS21036 - On the Combined Effects of Compositional Inhomogeneity and Ammonia Addition to Turbulent Flames of Ethylene <i>W.R. Boyette*, S.A. Steinmetz, M.J. Dunn, W.L. Roberts, and A.R. Masri</i>	
12:00 - 12:10	Joint meeting of ACS organisers, session chairs and CI board members (Q501 and zoom)	
12:00 pm - 1:00 pm	Lunch (1 h)	
1:00 - 1:15	Student award, closing and farewell (Q501 and zoom)	
1:15 - 2:00 pm	Drinks with Australian Conference on Laser Diagnostics	

Note:

Timing for Keynotes/Bilger lecture: presentation - 35 min; introduction + Q&A -- 10 min

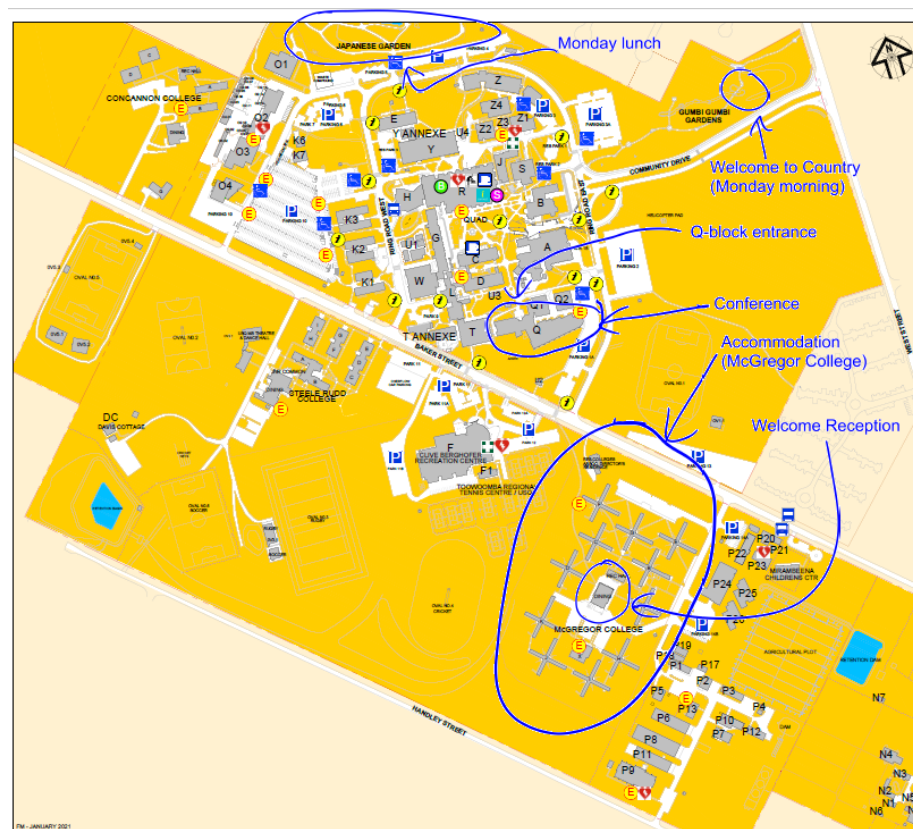
Timing for regular talks: presentations – no more than 15 min; introduction + Q&A -- 5 min

Conference Venues

ACS 2021 is a hybrid event, with delegates from Queensland meeting at the Toowoomba campus, and delegates from elsewhere in the world joining us in the live-streaming event.

Information for delegates travelling to Toowoomba

- The conference will be held at the **Toowoomba campus** of University of Southern Queensland.
- Parking is free on the USQ Toowoomba campus unless otherwise signed. At the time of the conference, the large car parks noted on the map will have ample space.
- The Welcome Reception will be held in the **Dining Hall of McGregor College** at University of Southern Queensland.
- The conference will begin on Monday with a Welcome to Country in the **Gumbi Gumbi Gardens** <https://www.usq.edu.au/about-usq/locations/toowoomba/gumbi-gumbi-gardens>.
- The sessions will be held in **Q block**. The plenary sessions will be held in **Room A (Q402)**, while the second sessions will be held in **Room B (Q501)**. Breaks will be held in the space outside **Q501**.



Information for online delegates

- The live streaming will be using **Zoom**. A link to the Zoom event will be emailed to all registered delegates.
- The Zoom meeting will have breakout rooms which you will be able to navigate between:
 - One each for the Sponsors and Exhibitors
 - One each when there are parallel sessions
 - During break times, one per speaker from the previous session for follow-up conversations
 - During break times, a number of rooms will be available for general group discussions



For more information, please visit our website <http://www.anz-combustioninstitute.org/ACS2021/program.php>