2018 Australian & New Zealand Section of The Combustion Institute Report

Section Website: http://www.anz-combustioninstitute.org/
Section Chair: A.R. Masri

List section officers and board members with titles:

Professor A.R. Masri, University of Sydney, Chair
Professor B.B. Dally, University of Adelaide, Deputy Chair
A/Professor Yi Yang, University of Melbourne, Secretary
Professor E. Hawkes, University of New South Wales, Treasurer
Professor G.J. Nathan, University of Adelaide
Professor D.K. Zhang, University of Western Australia
Professor A. Klimenko, University of Queensland, co-opted member
Professor S. Pang, University of Canterbury, co-opted member

Members of the Australian & New Zealand Section:

Active Members	69
Non-Student Members	43
Student Members	26

Section meetings and workshops since 2016 with date and attendance information:

The Australian and New Zealand Section of the Combustion Institute has been holding biennial conferences for more than forty years. These meetings bring together local combustion scientists and young researchers from academia and industry, and provide a forum for the presentation of a wide range of papers in all aspects of fundamental and applied combustion science. Recent symposia were held in University of Melbourne (2015), Western Australia (2013), Newcastle (2011), Queensland (2009), Sydney (2007), Adelaide (2005, with ASPACC-5), Melbourne (2003), Adelaide (2001), Newcastle (1997), Sydney (1997), Adelaide (1995), and Newcastle (1993). Prior to 2005, these conferences used to be held in conjunction with the Australian Flame Days.

The Australian Combustion Symposium for 2017 (ACS-2017) was held at the University of Sydney, 10-14 December, 2017 in conjunction with the 11th ASPACC. Details about the joint conference are given in the Section about 11th ASPACC.

To assist with their travel costs to Sydney, 10 grants ($250 each) were awarded by the Australia and New Zealand Section of the Combustion Institute.

The ACS-2017 Bilger Lecture was delivered by Professor William Roberts (KAUST, Saudi Arabia). This was followed by six Plenary Lectures given by: (i) Professor Fei Qi from Shanghai-JiaoTong University, China, (ii) Professor Hiroaki Watanabe from Kyushu Uni. Japan, (iii) Professor Satya Chakravarthy from IIT-Madras, India, (iv) Professor In-Seuk Jeung from Seoul National University in Korea, (v) Dr Lyle Pickett from Sandia National Laboratories, USA, and (vi) Professor Michael Brear from the University of Melbourne.

List other activities (e.g. section journals, projects, working groups, school for students, etc.)

Summer School

In 2018, the ANZ-CI has submitted a proposal to hold the first "Australian Combustion Summer School (ACSS-2018) at the University of Sydney in December of 2018. The proposal is currently under consideration by the relevant committee.

CI-Fellowships and ANZCI Fellows Nomination Committee

Congratulations to the seven Australian inaugural CI-Fellows who were honoured in the first round of awards for the CI-Fellowships. They are listed here with their citation:

Terry Wall, University of Newcastle, Australia
for seminal advances in the knowledge of chemical and physical processes associated with pulverised coal combustion

Alexander Y. Klimenko, The University of Queensland, Australia
for brilliant advances in the conditional moment closure (CMC) and conditional methods in application to combustion modelling

Brian S. Haynes, University of Sydney, Australia
for breakthrough knowledge in the fields of pollutants formation, chemical processing and reactions in micro-channels

Evatt R. Hawkes, University of New South Wales Sydney, Australia
for exceptional research in combustion modelling, particularly using large-scale direct numerical simulations and practical models in engine-relevant problems

G.J. (Gus) Nathan, The University of Adelaide, Australia
for innovative development of low-emission combustion technologies and the enhanced understanding of soot formation and particle-laden flows

I.W. Smith, Australia
for fundamental breakthroughs in the understanding of char formation, char combustion and coal combustion

Assaad R. Masri, University of Sydney, Australia
for pioneering experimental investigations of turbulent gaseous and spray flames involving local extinction

As recommended by the CI-Fellows Selection Committee, the ANZ-CI Section has established a Fellows Nominating Committee whose task is to (i) identify nominees, (ii) encourage and coordinate nominations, and (iii) ensure that nominees satisfy Fellowship rules. The ANZ-CI-Fellows Nominating Committee includes four of Australia's seven inaugural Fellows:

Professor Gus Nathan (Co-ordinator),
Professor Brian Haynes
Professor Alex Klimenko
Professor Evatt Hawkes.

Section activities with International Workshops

Members of the ANZ-CI Section continue to play leading roles at the international workshop series which take place around the various international conferences. Our members play very active and leading roles in: (i) The International Workshops on Measurements and Calculations of Turbulent Flames (TNF), (ii) The International Workshops on Turbulent Combustion of Sprays (TCS), (iii) The Engine Combustion Network (ECN), (iv) the International Sooting Flame Workshops (ISF) and the Conditional Moment Closure Workshops.

38th Combustion Symposium – 2020

The ANZ-CI Section will be hosting the 38th International Combustion Symposium in Adelaide in 2020. The ANZ-CI is grateful to Professors Bassam Dally and Gus Nathan for the time and efforts they edicated in preparing this successful bid.

The dates for the 38th Symposium are July 12-17, 2020. Preparations for this major event are on track. The Conference will be held at the Adelaide Convention Centre. Venues for other social functions are booked and a local PCO (All Occasions Group) has already been selected to assist with the organization.

11th ASPACC (10-14 December, 2017)

The Asia-Pacific Conference on Combustion (ASPACC) is an important biennial event in the calendar of the Combustion Institute. The ASPACC was initiated in 1996 with the aim of promoting and advancing combustion science and technology in the Asia-Pacific region. A key objective of ASPACC is to promote global and regional scientific partnerships that will accelerate the advent of clean, efficient and versatile combustion technologies.

The first ASPACC conference was held in Osaka, Japan in 1997, followed by Tainan, Taiwan (1999), Seoul, Korea (2001), Nanjing, China (2003), Adelaide, Australia (2005), Nagoya, Japan (2007), Taipei, Taiwan (2009), Hyderabad, India (2010), Gyeongju, Korea (2013), and Beijing, China (2015).

The 11th ASPACC (ASPACC-11) was held at the University of Sydney (10-14 December 2017 in conjunction with the 2017 Australian Combustion Symposium and the Eighth Australian Conference on Laser Diagnostics in Fluid Mechanics and Combustion. Over four busy days and in nine parallel sessions, some 387 papers contributed from 21 countries will be presented covering thirteen different combustion colloquia. This rich technical program reflects the massive and continuing growth of combustion research in the Asia Pacific Region. To put this in perspective, the First ASPACC which took place in Osaka, Japan 1997 had 150 papers. The number of contributions have not only more than doubled since then but have also improved significantly in quality and depth.

Australian authors contributed a massive 89 papers to ASPACC-11 which is second only to China who contributed a total of 134. The number of registrants from Australia was also second to China with a total of 104 attendees (see Tables 2 and 5 below for more details).

Organisation:

The Organizing Committee:
From the University of Sydney: Prof. Assaad R. Masri (Chair), A/Prof. Matthew Cleary, Dr. Matthew Dunn, Dr. Agisilaos Kourmatzis,
From The University of NSW: Prof. Evatt Hawkes, A/Prof. Shawn Kook, Dr. Shaun Chan.

The Process:
Preparation for the conference started with the venue booking which was completed in July 2016. Once confirmed, the Organising Committee started to hold formal monthly meetings in Masri's office. Arinex was contracted as the Professional Conference Organiser to handle issues of registration, accommodation and finance.

Announcements

Three flyers were produced, over time, and distributed to ASPACC Section Chairs who subsequently emailed them to their members. Dates of production are given below and a sample of the third flyer is shown in the Appendix. Flyers were also taken to various conferences to promote ASPACC:

- Flyer 1 issued in July 2016 and promoted at the 36th Combustion Symposium in Seoul.
- Flyer 2 issued in April 2017 and promoted at the European Combustion Conference.
- Flyer 3 issued in July 2017 and promoted at the Mediterranean Combustion Conference.

The website was also updated including details about the paper submission, conference dates and events as they became available. It must be said here that ASPACC Section Chairs were extremely helpful in disseminating information to members and encouraging them to send papers and attend. This has also contributed to the success of the conference and such cooperation should continue in future events.

Paper Submission and Review

A free Conference Management Toolkit was used for the submission of papers and management of the reviews. This was modified by Dr Shaun Chan for ASPACC and subsequently tested for (i) submission of papers, (ii) allocation of colloquium coordinators (CC), (iii) allocation of reviewers and (iv) submission of reviews. The existing 14 colloquia adopted by the 36th International Combustion Symposium were also used here to allocate papers.
The following deadlines applied:

- 1st June 2017 Paper submission site was opened
- 7 July 2017 Deadline for Submission of full paper (4 pages)
  This was later extended to 21 July 2017.

- 28 August Notification of acceptance
- 11 September Submission of revised paper
- 20 July 2017 Opening of registration site (early bird)
- 30 September 2017 Early bird registration closes.

A total of 429 papers were submitted spanning fourteen colloquia. Each paper was sent to two reviewers who were given 3-4 weeks to respond. The deadline for the submission of reviews was 14 August 2017. A number of papers were subsequently withdrawn and 4 papers were rejected outright. A total of 387 papers were accepted for presentation and of these 94 papers have received one review only while the rest had two reviews. This who cancelled did so mainly because of Visa issues. This was particularly true for authors from India and the reasons for this are not known.

Many attendees, mostly from India and China required invitation letters for their visa application process. Dr Shaun Chan issued 246 invitation letters. Also, some attendees requested Certificates of Presentation at the ASPACC and 18 of those certificates were issued and mailed to delegates.

Technical Program

A total of 387 papers were accepted and slotted in nine parallel sessions. Each paper was allocated 20 minutes for presentation. There are seven Plenary presentations which were allocated one hour each and two invited reviews which were allocated 40 minutes. Tables 1 and 2 show a list of accepted papers by colloquia and by country of origin. The standard of papers was generally good.

Each contributed paper was subjected to a rigorous selection process which included peer- reviews, assessment by colloquium co-chairs and subsequent revision as required. The ASPACC Organizing Committee is grateful to the hundreds of reviewers who have assisted in maintaining a high quality of accepted papers.

The following Keynote presentation were made:

1. Professor William L. Roberts, (Bilger Lecturer)
   King Abdullah University of Science and Technology, Thuwal, Saudi Arabia Title High Pressure Turbulent Combustion Research at KAUST
2. Professor Fei Qi
   Shanghai Jiao Tong University, Shanghai, China
   Title Recent Progress in Experimental and Diagnostic Methods for Combustion Chemistry
3. Professor Hiroaki Watanabe
   Kyushu University, Fukuoka, Japan
   Title: Modelling and Simulation of Pulverized Coal Combustion
4. Professor Satyanarayanan R. Chakravarthy
   Indian Institute of Technology Madras, Chennai, Tamil Nadu, India
   Title: Need for a Comprehensive Approach to Gas Turbine Combustion Including Instabilities and Emissions
5. Professor In-Seuck Jeung
   Seoul National University, Seoul, Korea
   Title: Supersonic Combustion in Ram Accelerator and Scramjet Engine
6. Dr Lyle M. Pickett
   Sandia National Laboratories, Livermore CA, United Sates of America Title: Advanced Optical Diagnostics at Engine Conditions
7. Professor Michael Brear
   The University of Melbourne, Australia
   Title: The Challenges and Prospects of Spark Ignition Engines and Fuels

There were also two invited topical reviews:

8. Professor Chun-Liang Yeh

Feng Chia University, Taichung, Taiwan
Title: Self-propagating High-temperature Synthesis of Ceramics, Intermetallics, and Composite Materials

9. Assistant Commissioner Jeremy
Fewtrell Fire & Rescue NSW
Title: Fire & Rescue NSW's Fire Research Program: A Partnership Approach to Improving Community Safety through the Application of Fire Research

Table 1: Table of papers accepted in APSACC 11 showing the split by colloquium

Colloquium	Frequency	Percentage
Detonations, Explosions, and Supersonic Combustion	23	5.94
Diagnostics	15	3.88
Fire Research	26	6.72
Gas turbine and Rocket Engine Combustion	21	5.43
Gas-Phase Reaction Kinetics	23	5.94
Internal Combustion Engines	49	12.66
Laminar Flames	49	12.66
Other Concepts	34	8.79
Solid Fuel Combustion	29	7.49
Soot, Nanomaterials, and Large Molecules	24	6.20
Spray, Droplet, and Supercritical Combustion	39	10.08
Stationary Combustion Systems & Control of Greenhouse Gas Emissions	17	4.39
Turbulent Flames	38	9.82
Sum	387	

Table 2: Table of papers accepted in ASPACC11 showing the split by country

Country	Frequency	Percentage
Australia	89	23.00
Canada	2	0.52
China	134	34.63
Columbia	1	0.26
Germany	3	0.78
India	44	11.37
Iran	4	1.03
Japan	34	8.79
Korea	39	10.08
Malaysia	1	0.26
New Zealand	0	0.00
Norway	1	0.26
Pakistan	1	0.26
Philippines	1	0.26
Russia	1	0.26
Saudi Arabia	25	6.46
South Africa	0	0.00
Thailand	1	0.26
UAE	1	0.26
United Kingdom	2	0.52
USA	2	0.52
France	1	0.26
Sum	387	

Table 5: Registration at ASPACC11 and attendance of Banquet

	Early Bird Fee (AUD)	Deadline	Standard (AUD)
Full Registration	850	30/09/2017	950
Student Registration	500	30/09/2017	600
Accompanying Visitors	100	30/09/2017	200
Thursday Only-Full	300		
Thursday Only-Student	150		
Banquet	110		

	Registrants	Banquet
Australia	104	66
Canada	2	1
China	138	61
Columbia	1	
France	4	2
Germany	6	3
HongKong	4	
India	30	7
Indonesia	1	1
Iran	1	
Japan	58	31
Korea	63	35
Malaysia	1	
Norway	2	2
Pakistan	1	
Philippines	1	1
Russia Federation	1	
Saudi Arabia	32	26
Taiwan	20	5
Thailand	1	
United Kingdom	2	1
USA	3	3
Total	**476**	**245**

Full Registration	EarlyBird	126
	Standard	98
Student Registration	EarlyBird	170
	Standard	44
Thursday Only*	Full	4
Thursday Only*	Student	4
Accompanying Visitors		18
Invited Speakers & Sponsors		12
Total		**476**

* Thursday only registration was a special allowance for those attending laser sessions only (as the Laser Conference, ACLDFMC)

Session chairs were selected and notified. Many reminders had to be sent to extract an acceptance from them and even with this some changes had to be made on the day. We have tried to ensure that each paper had an allocated presenter, preferably being one of the authors. Despite this, out of the 387 papers listed in the program, 22 papers were NOT presented due to no-shows. It is not clear what more one could do to reduce the number of no shows.

Registrations:
The list of registration fees charged per category is shown in Table 5 along with the total number of registrants was 478 which includes 18 accompanying visitors. This is a record number for ASPACC and it exceeded all expectations. Table 5 shows also the number of registrants split by country of origin and by category. Registrants originated from 22 counties and about 50% of them are students which is excellent and reflects the potential for continuing excellence in combustion research in the ASPACC region.

Social Events
The conference venue was the Abercombie Building, on Abercombie Street. The following other events

- Welcome Reception, Sunday, 10th Dec. at 4.00pm in MacLaurin Hall. It is estimated that about 300 delegates joined this event.
- Excursion to Taronga Zoo on Tuesday 12th Dec. at 1:00pm. We had no idea how many people would join so we over-catered and nine buses (50 passengers each) were hired to transport delegates to the event. About 330 delegates joined in this trip. Almost two buses remained empty. This is better than under-catering.
- Banquet at the Sydney Convention Centre (Cockle Bay Room) on Wednesday 13th Dec. at 6.30pm. Table 5 shows a list by Country of the 245 delegates who joined this event. The performance by the Walangari Dance Group performing a Diramu Aboriginal Dance and Digeridoo Performance was very well received.
- Farewell in the Abercombie Building on Thursday 14th Dec. at 4:00pm. About 200 delegates joined this event

Catering:
Coffee/tea/water and pastries were available every morning before the start of sessions. This was also repeated for the morning and afternoon breaks. Lunch was provided daily. On Tuesday, bag-lunch and drinks were handed out for the trip to Zoo. There was an abundance of food left at every occasion and delegates commented frequently about the generosity of the service. Delegates with special dietary requirements were also catered for.

Closure:
The conference was a resounding success and delegates were very satisfied. Many sending congratulatory comments to the organising team. The technical program It was the largest ASPACC ever both in terms of attendance and number of papers. The next ASPACC will be held in Japan in 2019 and we all look forward to attend and enjoy the Japanese hospitality.

ASPACC-11 Organising Committee:
Assaad Masri, Matthew Cleary, Matthew Dunn, Agisilaos Kourmazis Evatt
Hawkes, Shawn Kook, Shaun Chan

37th Combustion Symposium

The Section has provided Travel Grants (of $300 each) to thirty (30) members of the Australia and New Zealand Section to assist them in attending the Symposium. It has awarded its David Warren Travelling Fellowship to Dr Michael John Evans from the University of Adelaide. Congratulations to Dr Evans on this highly deserved award. The Brian Haynes Travelling Award (for a researcher from a non-Go8 University) was awarded to Dr Sui Boon Liaw from Curtin University in Perth.

Sixty one papers with Australian corresponding authors were submitted for consideration for oral presentation at the 37th Symposium in Dublin and 32 of those were accepted. In addition, four other papers with Australian authors were accepted bringing the total number of papers with Australian authors to 36. Professor Brian Haynes from the University of Sydney is also presenting the prestigious Hottel Plenary Lecture entitled: Combustion Research for Chemical Processing. Listed below are the accepted 36 paper with Australian authors:

1. Structure and propagation of two-dimensional, partially premixed, laminar flames in diesel engine conditions
Deepak K. Dalakoti ,Alex Krisman ,Bruno Savard ,Armin Wehrfritz ,Haiou Wang ,Marc S. Day ,
John B. Bell ,Evatt R.

2. Temperature and Reaction Zone Imaging in Turbulent Swirling Dual-Fuel Flames
Michael John Evans, Jenni Sidey ,Jingjing Ye ,Paul R. Medwell ,Bassam B. Dally,
Epaminondas Mastorakos
3. Application of a Multiple Mapping Conditioning Mixing Model to ECN Spray A
Achinta Varna ,Armin Wehrfritz ,Evatt R Hawkes ,Matthew J Cleary ,Tommaso Lucchini ,
Gianluca D'Errico ,Sanghoon Kook ,Qing N Chan
4. A DNS evaluation of mixing and evaporation models for TPDF modelling of nonpremixed spray flames
Joshua C.K. Tang ,Haiou Wang ,Michele Bolla ,Armin Wehrfritz ,Evatt R. Hawkes
5. Closer to intrinsic rate, the limits during isothermal CO2-char gasification experiments using Thermogravimetric analyzer
M.A. Kibria ,Pavan Pramod Sripada ,Sankar Bhattacharya
6. Volatile-char interactions: roles of in situ volatiles with distinctly-different chemistry in determining char structure and reactivity
Xujun Chen ,Hongwei Wu
7. A Mixture-Fraction-Based Hybrid Binomial Langevin-Multiple Mapping Conditioning Model
Andrew P. Wandel ,R. Peter Lindstedt
8. Sparse MMC-LES of a Sydney Swirl Flame
Zhijie Huo ,Fatemeh Salehi ,Sebastian Galindo-Lopez ,Matthew J. Cleary ,Assaad R. Masri
9. Co-oxidation of methane (CH4) and carbon disulfide (CS2)
Zhe Zeng ,Bogdan Dlugogorski ,Ibukun Oluwoye ,Mohammednoor Altarawneh
10. Wall-impinging laminar premixed n-dodecane flames under autoignitive conditions
Armin Wehrfritz ,Haiou Wang ,Evatt R. Hawkes ,Yang Gao ,Tianfeng Lu
11. Investigation of fire-driven cross-wind velocity enhancement
Esmaeel Eftekharian ,Yaping He ,Kenny C.S. Kwok ,Robert H. Ong ,Jianping Yuan
12. Effect of Fe2O3 Nanoparticles on Combustion of Coal Surrogate (Anisole): Enhanced
Ignition and Formation of Persistent Free Radicals
Jomana Al-Nu'airat ,Bogdan Z. Dlugogorski ,Ibukun Oluwoye ,Xiangpeng Gao, Mohammednoor Al
13. Oxidation of PRFs and Ethanol/Isooctane Mixtures in a Flow Reactor and the Implication
for Their Octane Blending
Zhewen Lu ,Yi Yang ,Michael J. Brear
14. Formation of Polychlorinated Dibenzo-p-Dioxins and Dibenzofurans (PCDD/F) from
Oxidation of 4,4'-Dichlorobiphenyl (4,4'-DCB)
Song Hou ,Altarawneh Mohammednoor ,Eric M. Kennedy ,John C. Mackie ,Roland Weber,
Bogdan Z. Dlugogorski
15. Butanol-Acetone Mixture Blended with Cottonseed Biodiesel: Spray Characteristics
Evolution, Combustion Characteristics, Engine Performance and Emission
Sattar Jabbar Murad Algayyim ,Andrew P Wandel ,Talal Yusaf ,Saddam Al
16. Ash cenosphere fragmentation during pulverised pyrite combustion: importance of cooling
Hongwei Wu ,Yi Li
17. The influence of fuel type and partial premixing on the structure and behaviour of turbulent autoigniting flames
Andrew R.W. Macfarlane ,Matthew J. Dunn ,Assaad R. Masri
18. Mechanisms of Thermal Decomposition of Cyclodiene Pesticides, Identification and Possible Mitigation of their Toxic Products
Nirmala Kumuduni Dharmarathne ,John C. Mackie ,Eric M. Kennedy ,Michael Stockenhuber
19. Chirped-Probe-Pulse Femtosecond CARS Thermometry in Turbulent Spray Flames
Albyn Lowe ,Levi M. Thomas ,Aman Satija ,Robert P. Lucht ,Assaad R. Masri
20. Generalisation of the eddy-dissipation concept for jet flames with low turbulence and low
Damköhler number
Michael John Evans ,Christophe Petre ,Paul R. Medwell ,Alessandro Parente
21. Effect of steam on particulate matter emission during oxyfuel combustion of char and in
situ volatiles generated from rapid pyrolysis of chromated-copper-arsenate-treated wood
Xujun Chen ,Sui Boon Liaw ,Hongwei Wu
22. Mechanistic investigation into particulate matter formation during air and oxyfuel combustion of formulated water-soluble fractions of bio-oil
Chao Feng ,Hongwei Wu
23. Understanding In-Cylinder Soot Reduction in the Use of High Pressure Fuel Injection in a

Small-Bore Diesel Engine
Lingzhe Rao ,Yilong Zhang ,Sanghoon Kook ,Kenneth S. Kim ,Chol-Bum Kweon
24. In-flame soot particle structure on the up- and down-swirl side of a wall-interacting jet in a small-bore diesel engine
Yilong Zhang ,Dongchan Kim ,Lingzhe Rao ,Sanghoon Kook ,Kenneth S. Kim ,Chol-Bum Kweon
25. Head-on Quenching of laminar premixed methane flames diluted with hot combustion products
Bin Jiang ,Robert L. Gordon ,Mohsen Talei
26. Flame-Wall Interaction of a Forced Laminar Premixed Propane Flame: Flame Dynamics and Exhaust CO Emissions
Jacob Eldrich Rivera ,Robert Lindsay Gordon ,Mohsen Talei
27. A New Correlation between Soot Sheet Width and Soot Volume Fraction in Turbulent Non-Premixed Jet Flames
Saleh M. Mahmoud ,Timothy C. Lau ,Graham J. Nathan ,Paul R. Medwell ,Zeyad T. Alwahabi, Bassam B. Dally
28. The influence of partial premixing and dilution on the evolution of soot in laminar diffusion flames
Daniel Bartos ,Matthew J. Dunn ,Mariano Sirignano ,Andrea D'Anna ,Assaad R. Masri
29. Simultaneously calibrated two-line atomic fluorescence for high-precision temperature imaging in sooting flames
Zhiwei Sun ,Zeyad Alwahabi ,Bassam Dally ,Graham Nathan
30. Direct numerical simulations of rich premixed turbulent n-dodecane/air flames at diesel engine conditions
Bruno Savard ,Haiou Wang ,Armin Wehrfritz ,Evatt R. Hawkes
31. An experimental study of the stability and performance characteristics of a Hybrid Solar Receiver Combustor operated in the MILD combustion regime
Alfonso Chinnici ,Graham J. Nathan ,Bassam B. Dally
32. Pressure Effects and Transition in the Stabilization Mechanism of Turbulent Lifted Flames
T.F. Guibertia, W.R. Boyette, W.L. Roberts, and A.R. Masri
33. Experimental investigation of soot evolution in a turbulent nonpremxied prevaporized toluene flame
S. Kruse, J. Ye, Z. Sun, A. Attili, B.B. Dally, P. Medwell, H. Pitsch
34. Joint Experimental and Numerical Study of Silica Particulate Synthesis in a Turbulent Flame
G. Neuber, Garcia, A. Kronenberg, Williams, F. Beyrau, O. Stein, M.J. Cleary.
35. Cavity Flameholding in an Optical Axisymmetric Scramjet in Mach 4.5 Flows
Q. Liu, D. Baccarella, W. Landsberg, A. Veeraragavan, T. Lee
36. Structure of a Stratified CH4 Flame with H2 Addition
D. Geyer, S. Schneider, G. Magnotti, M.J. Dunn, R.S. Barlow, A. Dreizler

List awards given by section with details:

The Terry Wall Best Student Paper Award valued at $800 for “the best paper on solid fuel combustion” was not awarded this time.

The Best Student Paper Prizes valued at $200 each were awarded to:

Mr Kae Ken Foo (The University of Adelaide)
Paper-139: Characteristics of an Acoustically Forced Non-Premixed Jet Flame
Authors: K.K. Foo, Z.W. Sun, P.R. Medwell, Z.T. Alwahabi, G.J. Nathan, B.B. Dally

Mr Andrew Mcfarlane (The University of Sydney)
Paper-322: Stabilization of Turbulent Auto-Igniting Hydrogen Jets Issuing in a Hot Vitiated Coflow
Authors: A.R.W. Macfarlane, M.J. Dunn, M. Juddoo, A.R. Masri

ASPACC Young Investigator Awards:
Winner of the 10th ASPACC (which was help in Beijing) Young Investigator Awards were announced during the Banquet and the prizes were handed out by Professor Fei Qi who is the head of the Chinese Section of the Combustion Institute. The winners were:

1. Yuyang Li (Shanghai Jiao Tong University, China)
   Title : Decalin pyrolysis at low to atmospheric pressures: A photoionization mass spectrometry and kinetic modeling study
2. Hua Zhou (Tsinghua University, China)

Title : RANS-PDF Simulations of Piloted Premixed Jet Flames

3. Sungwoo Park (King Abdullah University of Science and Technology, Saudi Arabia) Title : A PAH Mechanism for Gasoline Surrogate Fuels
4. Youngjun Shin (Hanyang University, Korea)
   Title : Numerical modeling of flame dynamics in two-layer porous burner
5. Akito Sugahara (Keio University, Japan)
   Title : Effect of Fuel Boiling Point of Pool Flame for the Flame Extinction by CO_2 Hydrate
6. Albyn Lowe (The University of Sydney, Australia)
   Title : On the Boundary Conditions and Stability of Moderately Dense Spray Flames