



The Combustion Institute

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2018 Republic of Korea Section of The Combustion Institute Report

Section Website: <http://www.kosco.or.kr/>

Section Chair: Kee-Man Lee

List section officers and board members with titles:

Chair:

Kee-Man Lee, Suncheon National University

Vice – Chair:

Jeong Park, Pukyong National University

Chung-Hwan Jeon, Pusan National University

Byeong-Jun Lee, Yeungnam University

Yeong-Hun Song, Korea Institute of Machinery & Materials

Industrial – Vice - Chair:

Yang-Mi Choi, Korea Gas Corporation

Chang-Sik Lee, Korea South-East Power Corporation

Sin-gyu Kang, Doosan Heavy Industries & Construction

Jea-Eon Park, Soo-Kook Corporation

Past Chair:

Young-Bin Yoon, Seoul National University

Advisor:

Suk-Ho Chung, King Abdullah University of Science and Technology

Members of the Republic of Korea Section:

Active Members	800
Non-Student Members	505
Student Members	281
Special Members	14

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

1. 48th KOSCO Symposium (2014 Spring)
2014. 05. 22 – 05.24, Wellhill Park, Gangwon-do
90 papers presented (including posters)
152 registered participants
2. 49th KOSCO Symposium (2014 Fall)
2014.11.27 – 11.29, Ocean Suites, Jeju
134 papers presented (including posters)
181 registered participants
Invited speaker:
 - Dr. Shigery Azuhata (Chairman of the combustion institute of Japan) on 'Hitachi and its corporate R&D'
 - Prof. Ho Young Kim (Korea University) on 'Technology development and social Change'
3. 50th KOSCO Symposium (2015 Spring)
2015. 05. 21 – 05. 23, Suncheon National University, Jeollanam-do
91 papers presented (including posters)
177 registered participants 3 invited speakers
Invited Speaker:

- Gwang Geun Jin (Director, POSCO) on 'Utilization of Energy with Gases in Steel Industries'
4. 51th KOSCO Symposium (2015 Fall)
2015. 12. 10 – 12. 12, Maisonglad Hotel, Jeju
99 papers presented (including posters)
176 registered participants
Invited speakers:
 - Prof. Toshiaki Kitagawa (Kyushu University) on 'Study on Propagating turbulent flame in SIP* innovative combustion technology projects'
 - Prof. Derek Dunn-Rankin (Univ. of California, Irvine) on 'Burning Hydrates: energy and environmental aspects'
 - Prof. Hong G. Im on 'An ignition regime diagram and its implications in pre-ignition and super-knock for IC engine applications'
 - Prof. Foluso Ladeinde (The State University of New York) on 'Supersonic combustion modeling and simulation for scramjets'
 5. 52th KOSCO Symposium (2016 Spring)
2016. 05. 12 – 05. 14, Buyeo Lotte Resort, Chungcheongnam-do
93 papers presented (including posters)
189 registered participants
Invited Speakers:
 - Prof. Suk Ho Chung (KAUST) on 'Changing environment in combustion research'
 - Prof. Yiguang Ju (Princeton University) on 'Cool Flames: a new frontier in combustion research'
 - Prof. Minghou Xu (Huazhong University of Science & Technology) on 'Particulate matter from coal combustion: formation and emission control'
 6. 53th KOSCO Symposium (2016 Fall)
2016. 11. 24 – 11. 26, Lotte City Hotel, Jeju
119 papers presented (including posters)
245 registered participants
Invited speakers:
 - Prof. Suk Ho Chung (KAUST) on 'Soot formation characteristics in diffusion flames'
 - Dr. Jae goo Lee (KIMM) on 'R&D status of oxy-combustion in circulated fluidized bed combustor'
 7. 54th KOSCO Symposium (2017 Spring)
2017. 05. 18 – 05. 20, Gangneung Lakai sandpine, Gangwon-do
119 papers presented (including posters)
232 registered participants
Invited speakers:
 - Chang-Sik Lee (KOEN) on 'The present status and future of coal thermal power '
 - Dong-Won Lee (STX) on 'Status of localization development on 200kWe class micro gas turbine cogeneration system for distributed power generation '
 - Prof. Zheng Chen (Peking University) on 'Advances and challenges in accurate measurement of laminar burning velocity'
 - Sung-Jun Choi on 'Empirical trends in high-pressure gas fire explosions'
 - Il Sohn (Yonsei University) on 'Prospects in lowering carbon footprint in the steel industry'
 8. 55th KOSCO Symposium (2017 Fall)
2017. 11. 09 – 11. 11, Yeo-Su the ocean resort , Jeollanam-do
100 papers presented (including posters)
187 registered participants
Invited speakers:
 - Prof. Mitsuhiro Tsue (University of Tokyo) on 'Current state of research on spark ignition behavior in fuel/air mixtures'

- Prof. Kenneth H. Yu (University of Maryland) on 'Anatomy of rotating detonation engines: beyond the hype and uncovering the potential'
 - Prof. In-Seuck Jeong (Seoul University) on 'Self-ignition of highly pressurized hydrogen suddenly released to ambient environment'
 - Yong-Mo Kim (Hanyang University) on 'Modeling issues for turbulent flames and combustion dynamics'
 - Byeong-Ryeol Jeon (KETEP) on 'Strategies to develop clean thermal power technologies to reduce dust'
9. 56th KOSCO Symposium (2018 Spring)
 2018. 5. 10 – 5. 12, Chonbuk National University, Jeollabuk-do
 108 papers presented (including posters)
 270 registered participants
 Invited speakers:
- Prof. Ki Yong Lee (Andong National University) on 'Research Ethics'
 - Prof. Bin Yang (Tsinghua University) on 'Experimental support of combustion kinetic model development'
 - Prof. Sang Min Choi (KAIST) on 'Solid combustion and industry-related research examples'
 - Dr. Dong Min Han (Vice-president, Hyundai Motors) on 'Innovation in developing engine combustion system'
10. The 36th International Symposium on Combustion 2016 held in Seoul, Korea
 The Symposium was held at the Coex Convention & Exhibition Center in Seoul, Korea from Sunday, July 31 through Friday, August 5, 2016
 Chair:
- Inseuck Jeong, Seoul National University
- Secretariat:
- Youngbin Yoon, Seoul National University
 - Jack Yoh, Seoul National University

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

KOSCO Journals published

- (1) Vol. 19, No. 3 (2014, 9) 6 papers, 52 pages (600 prints)
- (2) Vol. 19, No. 4 (2014, 12) 8 papers, 55 pages (600 prints)
- (3) Vol. 20, No. 1 (2015, 3) 6 papers, 51 pages (600 prints)
- (4) Vol. 20, No. 2 (2015, 6) 6 papers, 53 pages (600 prints)
- (5) Vol. 20, No. 3 (2015, 9) 6 papers, 42 pages (600 prints)
- (6) Vol. 20, No. 4 (2015, 12) 7 papers, 55 pages (600 prints)
- (7) Vol. 21, No. 1 (2016, 3) 5 papers, 45 pages (600 prints)
- (8) Vol. 21, No. 2 (2016, 6) 5 papers, 46 pages (600 prints)
- (9) Vol. 21, No. 3 (2016, 9) 5 papers, 49 pages (600 prints)
- (10) Vol. 21, No. 4 (2016, 12) 7 papers, 70 pages (600 prints)
- (11) Vol. 22, No. 1 (2017, 3) 7 papers, 64 pages (600 prints)
- (12) Vol. 22, No. 2 (2017, 6) 7 papers, 67 pages (600 prints)
- (13) Vol. 22, No. 3 (2017, 9) 8 papers, 55 pages (600 prints)

(14) Vol. 22, No. 4 (2017, 12) 7 papers, 64 pages (600 prints)

(15) Vol. 23, No. 1 (2018, 3) 6 papers, 61 pages (250 prints)

3rd KOSCO Workshop

2014. 08. 28 – 08. 29, Chungwoo Resort, Gangwon-do

The workshop was held with presentations about 'Combustion Technology & Application in Power Generation Field'. The detail subjects are 1) Coal combustion, 2) Coal & Biomass and 3) Gas turbine.

Gas Turbine Combustor Design Technology Workshop

2016. 04. 29, Hotel Interciti, Daejeon

The workshop was held with 11 presentations about 'Gas turbine combustor design technology'
94 registered participants

Status of particulate emissions and response measures Workshop

2016. 07. 21, Coex, Seoul

The workshop was held with 10 presentations about 'Status of particulate emissions and response measures'

117 registered participants

Fine dust and power projects Workshop

2016. 11. 02, Kim Dea-Joung convention center, Gwangju

The workshop was held with 11 presentations about 'Fine dust and power projects'

65 registered participants

Clean Coal Energy Forum Workshop

2017. 07. 20, Kim Dea-Joung convention center, Gwangju

The workshop was held with 13 presentations about 'Clean Coal Energy Forum'

8th Power Supply Planning According to the Roles and Issue of Coal Thermal Power Performance Workshop

2018. 03.19, Dedimdol Center, Daejeon

The workshop was held with 8 presentations about '8th Power Supply Planning According to the Roles and Issue of Coal Thermal Power Performance Workshop'

112 registered participants

Educational program for graduate student and industrial engineers

2018.05.09-10, Chonbuk National University, Jeollabuk-do

Prof. Yong Mo Kim and Inseok Chung lectured the fundamentals and applications to graduate students on "Modelling for flame stabilization and pollutant formation in turbulent gaseous and spray flames" and "Ram acceleration and scramjet engine". Drs. Dea Geun Lee and Won Yang lectured the fundamentals to industrial engineers on thermodynamics, analysis of thermal system, thermofluid system, the fundamentals on combustion, and application examples to industries.

List awards given by section with details:

No awards given.