The Combustion Institute



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2016 to 2020 Executive Committee Biographies

Prof. James F. Driscoll, University of Michigan, USA President, The Combustion Institute Contact: jamesfd@umich.edu

Jim Driscoll is the incoming President of The Combustion Institute. He is also a professor of Aerospace Engineering at the University of Michigan. Driscoll received his Ph.D. in Aerospace and Mechanical Sciences from Princeton University.

Driscoll has enjoyed mentoring 44 Ph.D. graduates of the Department of Aerospace Engineering. He has worked closely with these students to study the physics of turbulent flames using kilohertz laser imaging diagnostics. He feels that the highlights of these efforts are the opportunities for his students to present their results at a Combustion Symposium.

Recent fundamental work has involved the measurement of regimes of premixed turbulent combustion and the recording of movies of turbulent eddies as they cross a flame front, which causes wrinkling and broadening of the reaction layers and Landau instabilities. A more applied topic involved measuring and modeling combustion instabilities within a large-scale jet engine combustor experiment. The structure of supersonic flames and flameout limits also were recorded within a scramjet experiment.

Driscoll is the recipient of numerous honors and awards, including the AIAA Propellants and Combustion Award in 2013 and the Silver Shaft Award for Excellence in Teaching in 2001. He was elected an AIAA Fellow in 2005.



James Driscoll President, The Combustion Institute A.B. Modine Professor of Aerospace Engineering, University of Michigan, USA

The Combustion Institute Roles

Vice President (President-Elect), 2012-2016

Editor, Combustion and Flame, 2003-2009

Distinguished Paper Award, 31st International Symposium on Combustion

Technical Program Co-Chair, 28th International Symposium on Combustion

Recipient, Silver Medal of The Combustion Institute, 26th International Symposium on Combustion

Dr. Philippe Dagaut, CNRS-INSIS, ICARE, France

Vice President (President-Elect), The Combustion Institute Contact: <u>dagaut@cnrs-orleans.fr</u>

Philippe Dagaut will serve as Vice President (President-Elect) of The Combustion Institute. He is also the Research Director, Group Leader at CNRS-INSIS, ICARE. Dagaut received his Ph.D. from University Pierre & Marie Cure, Paris. In 2016, he received the CNRS Silver Medal.

Dagaut's research interests include: Chemical kinetics of combustion; oxidation of hydrocarbons, oxygenates, commercial and synthetic fuels; formation of PAH and soot precursors, and production of hydrogen by partial oxidation (POX).

While Dagaut currently supervises three Ph.D. students and two postdoctoral researchers, he is proud of the accomplishments with more than 70 former students and postdoctorals. A prolific scientific writer and editor, Dagaut is the co-author of more than 250 peer-reviewed papers, over 200 communications, and several chapters in scientific books. He is also an active participant of the French Association of Combustion (French section of The Combustion Institute), a member of the American Chemical Society, and a member of the ASME.

Dagaut has been a member of the editorial boards of five international journals: The International Journal of Chemical Kinetics, 1996-1998, Progress in Energy and Combustion Science, since 2006, Combustion and Flame, 2008-2010, Recent Patents on Chemical Engineering, since 2006, and Recent Patents on Engineering, since 2006.



Philippe Dagaut Vice President (President-Elect), The Combustion Institute Research Director, Group Leader, CNRS-INSIS, ICARE

The Combustion Institute Roles

Chairman, French Association of Combustion (French Section), 2007-2010

Member, Board of Directors, 2008-2014

Program Co-Chair, 33rd International Symposium on Combustion

Editor, Proceedings of the Combustion Institute, 2008-2011

Editor, Combustion and Flame, 2010-2016.

Prof. Hideaki Kobayashi, Tohoku University, Japan

Vice President for Sectional Affairs, The Combustion Institute Contact: <u>kobayashi@ifs.tohoku.ac.jp</u>

Hideaki Kobayashi will serve as Vice President for Sectional Affairs of The Combustion Institute. He is also a professor, Institute of Fluid Science at Tohoku University, Japan. Kobayashi received his Ph.D. in Engineering as applied to combustion research from Tohoku University.

Kobayashi started his career as a researcher of combustion fundamentals. He investigated the effects of flame stretch and curvature using a stretched cylindrical premixed flame as a base of laminar flamelet of turbulent flames. He extended his research to the field of actual turbulent combustion for various fuels including syngas, especially in a high-pressure and hightemperature environment, and extended his research into microgravity, an important experimental environment to study combustion fundamentals.

Supersonic combustion is one of the promising technologies for future hypersonic propulsion systems. Kobayashi performed experimental and numerical studies of flame holding in supersonic flow and extended the research to the interaction between incident shock wave and injected fuel jet.

Presently, he is also involved in utilization of ammonia as a hydrogen energy carrier and a carbon-free fuel. He is serving as a leader of an ammonia combustion team in the national project supported by the Council for Science, Technology and Innovation (CSTI), the Crossministerial Strategic Innovation Promotion Program (SIP), Energy Carrier.



Hideaki Kobayashi Vice President for Sectional Affairs, The Combustion Institute Professor, Institute of Fluid Science, Tohoku University, Japan

The Combustion Institute Roles

Secretary for Sectional Affairs, 2012-2016

Member, Board of Directors

President and Board Member, Combustion Society of Japan (Japanese Section)

> Member, Gold Medal Selection Committee, 2014

Editorial Board Member, Combustion and Flame, 2008-2012

Member, Silver Medal Committee, 2010

Program Co-Chair, 32nd International Symposium on Combustion

Member, New Initiatives Committee

Multiple committee chairs for several International Symposia on Combustion

Prof. Derek Dunn-Rankin, University of California, Irvine, USA

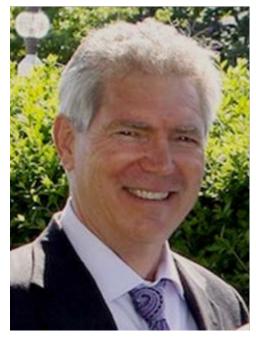
Treasurer, The Combustion Institute Contact: ddunnran@uci.edu

Derek Dunn-Rankin is re-elected as Treasurer of The Combustion Institute. He is also a professor in the Department of Mechanical and Aerospace Engineering at the University of California, Irvine (UCI) and a former department chair. He received his Ph.D. in Mechanical Engineering from the University of California, Berkeley, with an emphasis in combustion science.

Dunn-Rankin was a post-doctoral researcher at Sandia National Laboratories Combustion Research Facility in Livermore until 1987, when he joined the faculty of Mechanical Engineering at UCI. His research is in combustion and energy, droplet and sprays, and applications of laser diagnostic techniques to practical engineering systems, with recent emphasis on electrical aspects of flames, and the direct combustion of methane hydrates.

In 1989 Dunn-Rankin received a National Science Foundation Presidential Young Investigator Award. He has also received the Society of Automotive Engineering Ralph R. Teetor Engineering Educator Award in 1991, a Fulbright Scholar Fellowship in 1997, a Japan Society for the Promotion of Science Fellowship in 2008, and the Oppenheim Prize of the Institute for the Dynamics of Explosions and Reactive Systems in 2013.

Dunn-Rankin is also co-Director for CAMP, the University of California Louis Stokes Alliance for Minority Participation, a program designed to increase minority representation in science and technology.



Derek Dunn-Rankin Treasurer, The Combustion Institute Professor, Mechanical and Aerospace Engineering, University of California, Irvine, USA

The Combustion Institute Roles

Treasurer, 2012-2016

Member, Board of Directors, Western States Section of The Combustion Institute (WSSCI)

Chair, Executive Committee, WSSCI

Member, Finance Committee

Member, Silver Medal Committee

Prof. L.P.H. de Goey, Eindhoven University of Technology, Netherlands

Secretary, The Combustion Institute

Contact: <u>I.p.h.d.goey@tue.nl</u>

L.P.H. de Goey will serve as Secretary of The Combustion Institute. He is also a professor of combustion technology and dean of the Department of Mechanical Engineering at Eindhoven University of Technology. He received his Ph.D. at the Department of Physics of the same university.

In May 2011, de Goey was named dean of the Department of Mechanical Engineering at Eindhoven University of Technology. Prior to that role, he served as a visiting professor at the Institut fur Technische Mechanik (Prof. Norbert Peters) at the RWTH-Aachen, Germany. He also served as chairman of the Dutch Section of the Combustion Institute, from 1996-2000 and chairman of the platform for Clean and Efficient Combustion of the Dutch Technology Foundation STW from 2001-2005 and was program leader of Clean Combustion Concepts research program of STW.

As member of many boards for scientific and engineering societies, de Goey has pursued advances in combustion science, technology and innovation. As a prolific scientific writer and editor, he has served as guest editor of Combustion Science, member of the editorial board of the Open Thermodynamics Journal, member of the editorial board of the Journal of Thermodynamics, co-editor of the Proceedings of the Combustion Institute and has coauthored over 300 scientific publications.

As a member of many scientific advisory committees, de Goey has organized many international conferences. In 2010 he was received the 'Simon Stevin Meester' Award, this is the highest Dutch award in the area of technical sciences.



L.P.H. de Goey Secretary, The Combustion Institute Professor, Combustion Technology Dean, Department of Mechanical Engineering, Eindhoven University of Technology, Netherlands

The Combustion Institute Roles

Member, Board of Directors, 2004-2016

Co-Editor, Proceedings of the Combustion Institute, 2010-2013

Chair, Dutch Section of the Combustion Institute (DSCI), 1996-2000

Coordinator & Colloquium Co-Chair, Laminar Flames colloquium, 31st and 32nd International Symposia on Combustion

Member, Silver Medal Committee

Member of multiple committees: Program Committee, Editorial and Nominations Committee, New Initiatives and Awards Committee

Prof. Fei Qi, Shanghai Jiao Tong University, China Secretary for Sectional Affairs, The Combustion Institute Contact: fqi@sjtu.edu.cn

Fei Qi will serve as Secretary for Sectional Affairs of The Combustion Institute. He is a distinguished professor at Shanghai Jiao Tong University. Qi received his Ph.D. from the University of Science and Technology of China in 1997, and conducted his postdoctoral work at Lawrence Berkeley National Laboratory and Sandia National Laboratories from 1998 to 2003.

Qi has worked as a professor at National Synchrotron Radiation Laboratory, University of Science and Technology of China during 2003-2014. In early 2015, he moved to Shanghai Jiao Tong University. His research interests include the development of synchrotron VUV photoionization mass spectrometry and its applications in combustion and energy research.

A well-respected scientist, Qi has co-authored more than 190 peer-reviewed journal papers. He was elected as a fellow of American Physical Society in 2012, and gave a plenary lecture at the 34th International Symposium on Combustion. He has served as a member of the Board of Directors of the Combustion Institute since 2012. Currently he is the Chair of China Section of the Combustion Institute. He has also served or currently serves as a member of the Editorial Board of several journals including Progress in Energy and Combustion Science, Combustion and Flame, Proceedings of the Combustion Institute, and Review of Scientific Instruments. He also served as a colloquium coordinator of the 34th International Symposium on Combustion.



Secretary for Sectional Affairs, The Combustion Institute Distinguished Professor, Shanghai Jiao Tong University, China

The Combustion Institute Roles

Chair, China Section of The Combustion Institute Chair, Tellers' Committee

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