



The Combustion Institute

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Kaoru Maruta

2020 Candidate Profile: The Combustion Institute Board of Directors

Reasons for Nomination

I started research on combustion in 1988. Since then I have expanded my research areas to near-limit flames under microgravity, micro-scale, MILD and SI engine combustion.

The CI community has expertise and sophisticated methodologies to work on competition between transport and reaction. Therefore, we have strong potential to solve not only combustion problems but also global issues in much broader fields. To open our doors even wider, it is time to discuss the scope of the CI activities by promoting interdisciplinary studies utilizing our strong international network. I envision that such direction will contribute to the sustainability of the CI community and will also serve human society and environment.



For this purpose, I would like to discuss and work together with my colleagues, friends and young scientists. One of my suggestions is the strategic and flexible use of the research category “Novel concepts.” In the past two decades, its doors have sometimes been wide open but not always.

I worked as a member of several CI committees and was a Program Co-chair at the Warsaw Symposium. Based on my experience and visions, I would like to contribute to the further development of the Combustion Institute if I am elected to the board of directors.

See the next page for the candidate’s curriculum vitae.

Kaoru MARUTA

Professor, Director of Institute of Fluid Science (IFS), Tohoku University
Head of Energy Dynamics Laboratory, Fellow of the Combustion Institute

Education

Doctor of Engineering, Sophia University, Tokyo, 1993.
B.S. & M.S., Sophia University, Tokyo, 1988 & 1990.

Research Interests and expertise

New concept combustion technology, Microcombustion, Combustion under microgravity, Fundamentals for super lean-burn SI engines and MILD combustion.
Managed more than 20 research contracts with various government agencies and industries (NEDO, JST, JSPS, IHI, NFK, Hitachi, MHPS, JAXA, Toyota, Honda, Mazda, Tokyo Gas, IIC)

Professional Experiences

2007 - present: Professor, IFS, Tohoku University
2014 - 2018: Lead scientist of Mega-Grant, Professor, Far Eastern Federal University, Russia
2012 - 2015: Invited Professor, The University of Tokyo
2002 - 2007: Associate Professor, IFS, Tohoku University
2000 - 2001: Visiting Scholar, University of Southern California & UC Berkeley
1999 - 2002: Associate Professor, Akita Prefectural University
1993 - 1999: Research Associate, Assistant Professor, IFS, Tohoku University

Awards

Young Investigator Award, First Asia-Pacific Conference on Combustion, 1999.
Young Investigator Award, Combustion Society of Japan, 2001.
Best paper Award, Combustion Society of Japan, 2011.
ICHIMURA Academic Award, New Technology Development Foundation, Japan, 2013.
Prizes for Science and Technology in Research, the Minister of Education, Japan, 2015.
Degree of doctor honoris causa, Far Eastern Federal University, Russia, 2017.

Professional Activities

Editorial board of Combustion and Flame (2009-2014), Progress in Energy and Combustion Science (2009-present), and Combustion Explosion and Shock Waves (2009-present).
Associate Editor: Combustion Science and Technology (2016-present).
Program Co-Chair of the Thirty Fourth Symposium on Combustion, Warsaw, Poland, 2012.
Vice President of Combustion Society of Japan (2019-present).
Chair of Thermal Eng. Division, Japan Society of Mechanical Engineers (2019-2020).
Board of directors , Society of Automotive Engineers of Japan (2020-).