The Combustion Institute
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Youngbin Yoon

2024 Candidate Profile: The Combustion Institute Board of Directors

Reasons for Nomination

The Combustion Institute has played a great role in leading world-wide issues such as global warming, carbon neutrality, sustainable energy, etc. However, temperature rise has been maintained steadily since the pre-industrial era, and therefore environmental issues have posed catastrophic threats to the next generation as well as the current one. In this regard, it is essential to have a shared vision and cope with environmental disasters cooperatively with all the CI sections around the world. Otherwise, the slowing of temperature rise may not be possible in our generation.

I have been a member of CI for almost 30 years, and my interest focuses on turbulent flames and propulsion engines such as gas turbines and rockets. If I am elected as a board member, I will first place the current environmental issues at the top of the agenda and come up with detailed strategies to solve these problems. Secondly, I will share these ideas with young scientists because this agenda may need to be dealt with beyond generations. Finally, I will do my best to make the regional sections in America, Asia and Europe more cooperative to become a unified combustion society.

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

Youngbin Yoon

Current Position

Professor, Aerospace Engineering, Seoul National University, Seoul, Korea (1996 – present)

Education

B.S., Aerospace Engineering, Seoul National University, Seoul, Korea (1985)
M.S., Aerospace Engineering, Seoul National University, Seoul, Korea (1987)
Ph.D., Aerospace Engineering, U. of Michigan, Ann Arbor, MI, USA (1994)

Research Interests

Combustion Instability, Rocket Injector Dynamics, Gas Turbine Combustor and Laser Diagnostics

Selected Honors and Awards

Fellow of Combustion Institute (2022)
Best Paper Awards, ILASS-Asia (2020)
Award Certificate, Ministry of Science and ICT (2017)
Younsong Academic Award, ILASS-Korea (2007)
Young Investigator Award, Asian Pacific Conference on Combustion(ASPACC)-1997 (1997)

Service to Combustion Institute

Initial Review Committee (2023), Fellows Selection Committee (2022, 2023), Site Committee (2020, 2022), Board of Directors Nomination Committee (2018, 2020), Gold Medal Nomination Committee (2018, 2020)
Section Chair, Republic of Korea Section (2016-2017), Program Advisory Committee (2018, 2023)
Secretary General, 36th International Symposium on Combustion, Seoul, Korea (2016)
Local Organization Committee, 36th International Symposium on Combustion, Seoul, Korea (2016)

Selected Keynote Lectures and Invited Talks

Keynote Lecture, 14th Asia-Pacific Conference on Combustion, Kaohsiung, Taiwan (2023)
Plenary Lecture, China National Symposium on Combustion, Tianjin, China (2019)
Plenary Lecture, 52nd Symposium (Japanese) on Combustion, Okayama, Japan (2014)
Plenary Lecture, 16th ILASS-Asia, Nagasaki, Japan (2013)

Selected Publications

- Sanghyeok Kwak, Jaehong Choi, MinChul Lee, Youngbin Yoon, “Attenuation of combustion instability in a fuel-staged dual-nozzle gas turbine combustor with asymmetric hydrogen composition”, Proceedings of The Combustion Institute (2022)
- Myunggeun Ahn, Daehong Lim, Taesung Kim, Youngbin Yoon, “Pinch-off process of Burke–Schumann flame under acoustic excitation”, Combustion and Flame, Vol. 231 (2021)
- Chanyeong Jeong, Jinhyun Bae, Taesung Kim, Jisu Yoon, Seongpil Joo, Youngbin Yoon, “Investigation of flashback characteristics coupled with combustion instability in turbulent premixed bluff body flames using high-speed OH-PLIF and PIV”, Proceedings of The Combustion Institute (2017)
- Jisu Yoon, Seongpil Joo, Jeongjin Kim, Min Chul Lee, Jong Guen Lee, Youngbin Yoon, “Effects of convection time on the high harmonic combustion instability in a partially premixed combustor”, Proceedings of The Combustion Institute (2017)