

Proposal for Organized Session in ICIUS 2023

| | |
|--|---|
| Title of the session | Bio-inspired robots |
| Synopsis (~ 100 words) During the last two decades, natural species have been inspiring scientists and engineers to produce their robotic replicas mimicking key locomotion features of target natural species. Still, the bio-inspired robots cannot outperform their counter-part natural species in many ways. This session aims to collect papers that show the most recent efforts to mimic a distinct species and/or to further improve performance of existing bio-inspired robot designs. Topics of the papers may cover structural mechanism design, control strategy, dynamics, and experiments of bio-inspired robots. | |
| Session organizer | |
| Name | Hoon Cheol Park |
| Position | Professor |
| Affiliation | Konkuk University, Seoul, Republic of Korea |
| Contact information | (E1) hcpark@konkuk.ac.kr (E2) hcpark62@gmail.com |
| Biography (~ 100 words) Professor Hoon Cheol Park received his BS (1985) and MS(1987) degrees from Seoul National University in Seoul, Korea and Ph.D.(1994) degree from the University of Maryland at College Park, MD, USA. He joined the Department of Aerospace Engineering, Konkuk University in Seoul, Korea in 1995, and he is currently professor in the Department of Smart Vehicle Engineering. His professional experience includes research engineer at Kia Motors (1986-1988) and senior researcher at Korea Aerospace Research Institute (1994-1995). His specialty is the finite element analysis, and his recent research mainly focuses on biomimetics and bio-inspired flight. | |
| Information on potential contributors and papers | |
| Thrust generation by flapping wings under low air density condition, GH Ha and HC Park (Konkuk U., Republic of Korea) | |
| Roles of hydrodynamic forces generated by tail-beating motion in gliding flight of flying-fish-mimicking robot, K Nguyen and HC Park (Konkuk University, Republic of Korea) | |
| Control Board Design for a Directly Motor-driven Flapping MAV, Seunghee Jeong, Seungik Choi, Daewook Kim, Jungkeun Park, and Taesam Kang (Konkuk University, Republic of Korea) | |
| Design of a Remote Controller for flapping MAVs Based on Motions, Jeong-Hwan Kim, Sandhya Rani Gumpina, SeungYeon Lee, Taesam Kang, and Jungkeun Park (Konkuk University, Republic of Korea) | |
| | |
| | |
| | |
| | |