

ISABMEC2022 Program 16–18 Nov, 2022

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| Keynote | Biomechanics of Microorganisms |
| | Biomechanics and Biomimetics in Flying |
| | Biomechanics and Biomimetics in Swimming |

| 16th (Wed) | | |
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| Time (JST) | Author(s) | Title |
| 14:00 | | Opening remarks |
| | | Biomechanics and Biomimetics in Flying (1) |
| 14:15 | Sanjay P. Sane | Flying in sync: how flight reflexes are coordinated in insects |
| 15:00 | Shota Hara, Yuto Maezawa, Toshiyuki Nakata and Hao Liu | Development of an insect-inspired unmanned aerial vehicle with thrust-vectoring mechanism |
| 15:15 | Szu-I Yeh and Yi-Hsien Lee | Ground Effect Acting on Insect-like Wing Under Different Flapping Motion |
| 15:30 | | Break |
| | | Biomechanics of Microorganisms (1) |
| 15:45 | Eleonora Secchi | What shapes bacterial biofilms? A Physics perspective |
| 16:30 | Hikaru Watanabe, Tonau Nakai and Tomonobu Goto | Measurement of swimming speed and rotational speed of monotrichous bacteria in polymer aqueous solutions |
| 16:45 | Takumi Ogawa, Toshihiro Omori, Kenji Kikuchi and Takuji Ishikawa | Pumping Efficiency of Spongillidae's Choanocyte Chamber |

| 17th (Thu) | | |
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| Time (JST) | Author(s) | Title |
| | | Biomechanics and Biomimetics in Swimming (1) |
| 10:00 | Koraon Wongkamhaeng, Tosaphol Saetung Keetapithchayakul, Patchara Danaisawadi | Mating behaviour of <i>Cerapus</i> sp. (Amphipoda: Ischyroceridae), a tube builder amphipod in Amphawa Estuary, the inner Gulf of Thailand |
| 10:45 | Yuto Tanaka, Yuichi Sakai, Go Eguchi and Tsutomu Takagi | Hydrodynamic characteristics and flow resistance of sea cucumber <i>Apostichopus japonicus</i> |
| 11:00 | Tetsuya Yano | Locomotion Analysis of a River Snail by PIV and Displacement Measurement of the Foot Sole |
| 11:15 | | Break |
| | | Biomechanics and Biomimetics in Swimming (2) |
| 11:30 | Ayane Shinjima, Yuma Naka, Naoki Kawasaki, Masashi Ohara and Yogo Takada | Development of a Small Robotic Fish with a Function to Tag Mackerel |
| 11:45 | Katsuya Kugai, Ryouta Irifune, Kaito Sanada and Riku Kishino | Experimental Study of Propulsive Ability by a Swimming Robot Imitating a Bluefin Tuna |
| 12:00 | Akira Fukuhara, Riku Yokota, Takeshi Kano and Akio Ishiguro | Measurement of the Effect of Inter- and Intra-flipper Coordination on Swimming Performance Using a Plesiosaur-like Robotic Platform |
| 12:15 | Gen Li, Dmitry Kolomenskiy, Hao Liu, Ramiro Godoy-Diana, Benjamin Thiria and Thomas Engels | Investigation on the swimming pattern of a magnetic-drive soft-robot by an integrated numerical approach with fluid-structure-motion interaction |
| 12:30 | Fakhrur Razi and Motomu Nakashima | Development of the new swimming humanoid robot as an experimental platform for human swimming research |
| 12:45 | Daisuke Izutsu, Shotaro Ikemoto and Tsuyoshi Mizuguchi | A method for motion analysis of periodically moving objects by using inertial sensor |
| 13:00 | | Lunch |
| | | Biomechanics and Biomimetics in Swimming (3) |
| 15:00 | Shunichi Kobayashi, Toshiki Kimura, Daichi Sako, Yuichiro Akune and Tomoko Mori | Motion Analysis of Dolphin during Tail Walk |
| 15:15 | Yoshinobu Inada, Ryoya Takatsuki, Mitsuhiro Mori and Yayoi Yoshida | Sound and Impact Attenuation Effect of the Small Tubercles on the Dorsal Ridge of Finless Porpoise |
| 15:30 | Taichi Asano and Akitoshi Ito | The effect of moving texture patterns on the behavior of Japanese Killifish 'Medaka' and the possibility of the behavior control |
| 15:45 | Go Eguchi, Shinsuke Torisawa, Kohsei Takehara and Tsutomu Takagi | Fish staying against flow without tail beating at stagnant area in front of object |
| 16:00 | | Break |
| | | Biomechanics of Microorganisms (2) |
| 16:15 | Marco Polin | Phototaxis of microalgae: lessons from <i>Chlamydomonas</i> and <i>Micromonas</i> |
| 17:00 | Hiroshi Yamashita, Touya Kamikubo, Kazuki Muku, Nobuhiko J. Suematsu and Makoto Iima | Bioconvection of <i>Euglena</i> suspension under heterogeneous light condition |

| 18th (Fri) | | |
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| Time (JST) | Author(s) | Title |
| | | Biomechanics and Biomimetics in Flying (2) |
| 10:45 | Chihiro Fukui, Tomoya Uchida, Yuji Sukekawa, Ryohei Kanzaki and Daigo Terutsuki | Improvement of electroantennography-based sensor performance for odor source localization by a small drone |
| 11:00 | Atsushi Kase and Ryota Kaigawa | Influence of wing planer shape on aerodynamic performance of flapping wing simulating mosquito |
| 11:15 | Kenichiro Shimazaki, Takumi Sugimoto, Hirofumi Toda and Hidetoshi Takahashi | A force plate using a polyimide film-based flat spiral springs for measuring the body part mass of fruit flies |
| 11:30 | Yusuke Fujita and Makoto Iima | Aerodynamic performance and vortex motion of corrugated wing started impulsively |
| 11:45 | Jinxiang Dang, Tomoya Fujii and Hiroto Tanaka | Design of a hummingbird-mimetic flexible wing with elastic passive feathering rotation limitation mechanism |
| 12:00 | Jiixin Rong and Hao Liu | Effects of owl-inspired trailing-edge fringes on the three-dimensional aeroacoustic characteristics of a flat plate model |
| 12:15 | | Closing remarks |