

The 2019 International Conference on

Artificial Life and R

Call for Papers

Advisory Committee Chair Moshe Kam (Former IEEE President)

General Chair Masanori Sugisaka

Co-General Chairs Yingmin Jia Takao Ito **Ju-Jang Lee**

Vice General Chairs John L. Casti Jangmyung Lee **Henrik Hautop Lund** Luigi Pagliarini **Mohd Rizon**

Program Chair Makoto Sakamoto

Sub Program Chair Marion Oswald

Conference Site



http://www.b-conplaza.jp/

ICAROB Office Mobile: +81-80-8565-8256 email:

icarob@alife-robotics.co.jp web:

http://alife-robotics.co.jp/



nding







USA Shrine (Before BC era three goddesses "Shikitusima-himemikoto, Hasizu-himemikoto, Tag iri-himemikoto descended on the earth of Usa from heaven.) The shrine is called Total Motomiya Hachiman Shrine Usa located in Oita Prefecture.

The 2019 International Conference on Artificial Life and Robotics

January 10 to 13, 2019, B-Con Plaza, Beppu, Oita, JAPAN

The 2019 International Conference on Artificial Life and Robotics (ICAROB2019) will be held at B-Con Plaza, Beppu, Oita, JAPAN, from January 10 to 13, 2019. A series of Proceedings of ICAROB are included in both CPCI-Web of Science and Scopus. This Conference will provide new development of modern technologies concerning Robotics, Networking and Artificial Life (this journal is included in ESCI) associated with computer simulations, hardware designs, and networking of state-of-the-art technologies to researchers, and to share findings on how advancements in robotics, networking, complexity and artificial life technologies that relate to interdisciplinary approach to the field such as artificial intelligence, virtual reality, and computer science are creating the basis for exciting new research and applications in various fields listed in the following topics. Please submit papers to ICAROB2019 Web Site from http://alife-robotics.co.jp/.

Topics of interest include, but are not limited to

- Analysis of randomized algorithms
- Artificial nervous systems for robots
- **Artificial living** Bipedal robot

- Evolutionary computations Intelligent control
- Medical surgical robot
- Nano-robotics
- Neuromorphic systems
- Reinforcement learning system & genetic programing
- Foundation of computation and its application
- Unmanned aerial systems technologies

- Artificial sciences
- Brain science and computing Artificial intelligence & complexity
- adaptive behavior and metaboli
- Fuzzy contro an-welfare robotics
- Multi-agent syste Networking

- **Environment navigation and localization**
- Facial expression analysis, music recommendation gmented reality
- Unmanned aero vehicles
- Unmanned aerial systems designing, controls and
- - Unmanned unde

Management of technology

Intelligence in biological systems

Agent-based software

Computer graphics

DNA computing
Genetic algorithms

Image processing

Chaos

- Neural circuits Quantum computing
- Visualization
- Empirical research on network and MOT (Others etc.)

Important Dates

- September 25, 2018
- October 15, 2018

OS,GS,PS,IS,TS proposal submission due date Final early bird registration due date Letter of acceptance due date

November 15, 2018 (We don't accept the papers) Final paper submission due date OS: Organized Session, GS: General Session, PS: Poster Session, IS: Invited Session, TS: Tutorial

Publication

Accepted papers will be published in the Proceedings of the ICAROB Series that was included in Scopus and CPCI-Web of Science. Extended versions of the selected papers will be published in the international journal: Robotics, Networking and Artificial Life (JRNAL became ESCI journal) published by Atlantis Press.

Registration Fee

Registration fee ¥55,000 (¥50,000 for early birds) and ¥30,000 for Students (¥25,000 for early birds):

Organized by

International Steering Committee of International Conference on Artificial Life and Robotics (ICAROB)

Technical co-sponsored by

IEEE Robotics and Automation Society (USA) (Pending)
IEEE Fukuoka Section (Japan)

Co-Organized by

Chinese Association for Artificial Intelligence (CAAI, P. R. China)

Sponsored by

ICAROB society (ALife Robotics Corporation Ltd.)

Advisory Committee Chair

Moshe Kam (New Jersey Institute of Technology, Former IEEE President, USA)

General Chair

Masanori Sugisaka (ALife Robotics Co., Ltd., Japan, Open University, UK)

Co- General Chairs

Yingmin Jia (Beihang University, P.R.China) Takao Ito (Hiroshima University, Japan)

Ju-Jang Lee (KAIST, Korea)

Vice General Chairs

John L. Casti (International Institute for Applied Systems Analysis, Austria)

(The company X-Event Dynamics - (Co-founder), Austria)

Jangmyung Lee (Pusan National University, Korea)

Advisory Committee

Adam Grzech (Wrocław University of Technology, Poland) Bruce Eisenstein (Drexel University, Former IEEE President, USA)

Guang-Ren Duan (Harbin Institute of Technology, P. R. China) Hidenori Kimura (RIKEN, Japan)

Jeffrey Johnson (The Open University, UK) Jerzy Świątek (Wrocław University of Technology, Poland) Joshua M. Epstein (The Johns Hopkins University, USA)

Kai-Tai Song (National Chiao Tung University, Taiwan) Ken-ichi Tanaka (Executive Fellow, Mitsubishi Electric Corporation, Japan)

. Makoto Sakamoto (The University of Miyazaki, Japan)

Co-Program Chair

Marion Oswald (The Vienna University of Technology, Austria)

International Organizing Committee

Akira Fukuda (Kyushu University, Japan) Akira Nakamura (AIST, Japan)

Akinori Abe (Chiba University, Japan)

Andrew Gadsden (University of Guelph, Canada)
Caoli Wang (University of Shanghai for Science and Technology, P. R. China)

Chan Gook Park (Seoul National University, Korea) Eiji Hayashi (Kyushu Institute of Technology, Japan) Evgeni Magid (Kazan Federal University, Russia) Fuzhong Wang (Henan Polytechnic University, P. R. China) Hazry Desa (University of Malaysia, Perlis, Malaysia) Hidehiko Yamamoto (Gifu University, Japan)

Hideyuki Suzuki (The University of Tokyo, Japan) Hiroki Tamura (The University of Miyazaki, Japan) Hiroshi Kage (Mitsubishi Electric Corporation, Japan) Hiroshi Matsuno (Yamaguchi University, Japan) Jiwu Wang (Beijing Jiaotong University, P. R. China)

Jovana Jovic (CNRS-AIST JRL, Japan, France)
Junping Du (Beijing University of Posts and Telecommunications, P. R. China)

Katsunori Shimohara (Doshisha University, Japan) Kazuo Ishii (Kyushu Institute of Technology, Japan) Kenichi Tanaka (Meii University, Japan) Kenji Hashimoto (Waseda University, Japan) Kevin Voges (Canterbury University, New Zealand) Kunikazu Kobayashi (Aichi Prefectural University, Japan)

Kuo-Hsien Hsia (Far East University, Taiwan) Kuo-Lan Su (National Yunlin University of Science and Technology, Taiwan)

Kyungho Park (U.S. ARMY, Japan and USA)

International Program Committee

Abdul Rahman bin Dullah (Universiti Teknikal Malaysia Melaka, Malaysia)

Akinori Abe (Chiba University, Japan)

Akira Utsumi (The University of Electro-Communications, Japan) Akihiro Yamaguchi (Fukuoka Institute of Technology, Japan)

Akihito Kanai (Hosei University, Japan)

Ali Selamat (University of Technology of Malaysia, Malaysia) Aminurafiuddin bin Zulkifli (Multimedia University, Malaysia)

Amornphun Phunopas (King Mongkut's University of Technology, North Bankok, Thailand)

Andre Rosendo (Shanghai Tech University, P. R. China) Anne Jeannin-Girardon (University of Strasbourg, France)

Anton Shiriaev (Norwegian University of Science and Technology, Norway) Artur Sagitov (Kazan Federal University, Russia)

Ashi Gautam (The University of Tokyo, Japan) Atsuya Tange (The University of Tokyo, Japan) Ayumu Tominaga (Kyushu Institute of Technology, Japan)

Bin Zhang (Beijing University of Posts and Telecommunications, P. R. China) Cecilia Zanni-Merk (INSA-Rouen, France)

Chaoli Wang (University of Shanghai for Science and Technology, P. R. China)

Chia-Nan Ko (Nan kai University of Technology, Taiwan)
Chung-Wen Hung (National Yunlin University of Science & Technology, Taiwan)

Congdao Han (Shanghai Institute of Technology, P. R. China)

Cui Zhang (Beihang University, P. R. China) Cynthia Matuszek (University of Maryland, USA) Donglian Qi (Zhejiang University, P. R. China) Dongmei Ai (Universty of Science and Technology Beijing, P. R. China)

Duangiai Jitkongchuen (Dhurakij Pundit University, Thailand) Dunwei Gong (China University of Mining and Technology, P. R. China) Jiao Jia (Beihang University, P. R. China)

Junping Du (Beijing University of Posts and Telecommunications, P. R. China) Endra Joelianto (Bandung Institute of Technology, Indonesia)

Fabio Guigou (University of Strasbourg, France)

Fei Hao (Beihang University, P. R. China)

Henrik Hauton Lund (Technical University of Denmark, Denmark) Luigi Pagliarini (Academy of Fine Arts of Macerata, Italy)

Masato Nakagawa (Executive Fellow, DENSO CORPORATION, Visiting Professor of Hiroshima

Masayoshi Tomizuka (University of California Berkeley, USA) Moshe Kam (New Jersey Institute of Technology, Former IEEE President, USA)

Paul Kalata (Drexel University, USA) Paul Oh (Drexel University, USA)

Peter Herczfeld (Drexel University, USA) Steen Rasmussen (University of Southern Denmark, Denmark)

Zengqi Sun (Tsighua Univesity, P. R. China)

Masao Kubo (National Defense Academy of Japan, Japan) Masanao Obayashi (Yamaguchi University, Japan) Maxim Sokolov (Innopolis University, Russia) Mehta Rajiv (New Jersey Institute of Technology, USA) Minoru Kumano (University of Miyazaki, Japan) Minsoo Kim (Pusan National University, Korea) Peter Sapaty (Ukrainian Academy of Science, Ukraine) Pierre Parrend (University of Strasbourg, France)

Qiang Cai (Beijing Technology and Business University, P. R. China) Qu Yanbin (Harbin Institute of Technology, P. R. China) Shin Jisun (Pusan National University, Korea) Singo Mabu (Yamaguchi University, Japan) Takashi Kohno (The University of Tokyo, Japan) Takashi Ogata (Iwate Prefectural University)

Teruhisa Hochin (Kyoto Prefectural University, Japan) Tetsuro Hattori (Kagawa University, Japan) Thi Thi Zin (University of Miyazaki, Japan)
Thomas S. Ray (University of Oklahoma, USA) Toru Yamamoto (Hiroshima University, Japan) Toshihro Inukai (DENSO WAVE INCORPORATED, Japan) Victor Berdonosov (Komsomolsk-on-Amur State University of Technology, Russia)

Yasunari Yoshitomi (Kyoto Prefectural University, Japan) Yi Chai (Chongqing University, P. R. China)

Yoshifumi Morita (Nagoya Institute of Technology, Japan) Yoshiro Imai (Kagawa University, Japan)

Yuji Shinano (Zuse Institute Berlin, Germany) Zengqiang Chen (Nankai University, P. R. China)

Masayoshi Tabuse (Kyoto Prefectural University, Japan) Masaomi Hatakeyama (university of Zurich, Switzerland) Max Talanov (Kazan Federal University, Russia)

Meng Duan (Beihang University, P. R. China) Moeko Tominaga (Kyushu Institute of Technology, Japan)

Mohammad Al-Shabi (University of Sharjah, United Arab Emirates) Mohammad Biglarbegian (University of Guelph, Canada)

Mou Chen (Nanjing University of Aeronautics and Astronautics, P. R. China)

Nan Xiao (Northeastern University at Qinhuangdao, P. R. China) Nicolas Monmarché (university of Tours, France) Noriaki Kuwahara (Kyoto Prefectural University, Japan)

Noritaka Sato (Nagoya Institute of Technology, Japan) Norrima Mokhtar (University of Malaya, Malaysia) Palakorn Tantrakool (King Mongkut's Institute of Technology, North Bankok, Thailand)

Ping Wang (North China Electric Power University, P. R. China) Pierre David (University of Strasbourg, France) Pierre Willaume (University of Strasbourg, France)

Rizauddin bin Ramli (Universiti Kebangsaan Malaysia, Malaysia) Roman Lavrenov (Kazan Federal University, Russia)

Ruztamreen bin Jenal (Universiti Teknikal Malaysia Melaka, Malaysia) Ryohei Anshi (Kyushu Institute of Technology, Japan)

R.K.P.S. Ranaweera (University of Moratuwa, Sri Lanka) Satoshi Ikeda (The University of Miyazaki, Japan) Sanjay S. Joshi (University of California, USA)

Seong-Ik Han (Pusan National University, Korea) Shahriman Abu Bakar (Universiti Malaysia Perlis, Malaysia)

Shanbi Wei (Chongqing University, P. R. China)

Shihao Sun (Beihang University, P. R. China) Shin-ichi Asakawa (Tokyo Woman's Christian University, Japan)

Shin Wakitani (Hiroshima University)
Shumin Fei (Southeast University, P. R. China)

Fuzhong Wang (Henan Polytechnic University, P. R. China)

Haibo Li (Royal Institute of Technology, Sweden)

Haisheng Li (Beijing Technology and Business University, P. R. China) Haruhisa Okuda (Mitsubishi Electric Corporation, Japan) Haruka Tsuboi (The University of Miyazaki, Japan) Haruna Matsushita (Kagawa University, Japan) Heeje Kim (Pusan National University, Korea)

Hidetsugu Suto (Muroran Institute of Technology, Japan) Hiroyuki Iizuka (Osaka University, Japan)

Hongbo Li (Tsinghua University, P. R. China) Hongji Ma (Shandong University of Science and Technology, P. R. China) Hongjiu Yang (Yanshan University, P. R. China)

Hongpeng Yin (Chongqing University, P. R. China) Hussein Abbass (University of New South Wales, and ADFA, Australia)

I-Hsien Liu (National Cheng Kung Univrsiity, Taiwan)

Ilva Afanasyev (Innopolis University, Russia)

Istvan Harmati (Budapest Institute of Technology and Economics, Hungary)

Ivan Tanev (Doshisha University, Japan) Jiandong Zhao (Beijing Jiaotong University, P. R. China)

JJ Merelo (University of Granada, Spain)

Joono Cheong (Korea University, Korea) Julio Navarro Lara (University of Strasbourg, France)

Jun Kobayashi (Kyushu Institute of Technology, Japan) Jung-Shian Li (National Cheng Kung University, Taiwan)

Junping Du (Beijing University of Posts and Telecommunications, P. R. China)

Keiji Kamei (Nishinippon Institute of Technology, Japan)

Keisuke Watanabe (Tokai University, Japan) Keita Honda (Gifu university, Japan) Ke Zhang (Chongqing University, P. R. China) Ken-ichi Tanaka (Meiji University, Japan) Kensuke Ogata (Osaka City University Japan)

Khairul Salleh bin Mohamed Sahari (Universiti Tenaga Nasional, Malaysia)

Khoyratee Farad (The University of Tokyo, Japan) Kouichi Takeuchi (Okayama University, Japan)

Konstantin Yakovlev (Russian Academy of Sciences, Higher School of Economics, Russia)

Kui Xiang (Wuhan University of Technology, P. R. China) Leonid Freidovich (Umea University, Sweden) Levi Timothéeé (The University of Tokyo, Japan)

Liming Chen (Beihang University, P. R. China) Lin Li (University of Shanghai for Science and Technology, P. R. China)

Lin Zhao (Qingdao University, P. R. China) Mamoru Yoshimura (The University of Miyazaki, Japan) Manabu Yamada (Nagoya Institute of Technology, Japan) Masahide Ito (Aichi Prefectural University, Japan) Masahiro Ushio (Kyushu Institute of Technology, Japan) Masahiro Yokomichi (The University of Miyazaki, Japan) Masamichi Hori (The University of Miyazaki, Japan) Masanori Takahashi (Tokai University, Japan) Masayoshi Kano (Chukyou University, Japan)

Shyi-Ming Chen (National Taichung University of Education, Taiwan)

Stephen Wilkerson (York College of Pennsylvania, USA) Takashi Kuremoto (Yamaguchi University, Japan) Takayoshi Yamada (Gifu University, Japan)

Takuya Fuginaga (Kyushu Institute of Technology, Japan) Takuya Nanami (The University of Tokyo. Japan)

Taishiro Kishimoto (Keio University, Japan) Taisuke Akimoto (Kyushu Institute of Technology, Japan) Takashi Iwamoto (Mitsubishi Electric Corporation, Japan)

Tarik bin Abd Latef (Universiti Malaya, Malaysia)

Taro Shibanoki (Ibaraki University, Japan) Teruhisa Hochin (Kyoto Prefectural University, Japan) Tetsuro Katayama (The University of Miyazaki, Japan) Thomas Noel (University of Strasbourg, France) Thunyaseth Sethaput (Thammasat University, Thailand)

Tianping Zhang (Yangzhou University, P. R. China) Tomohiko Takagi (Kagawa University, Japan)

Toshihiro Inukai (DENSO Wave Incorporated, Japan)

Toshinori Nawata (Kumamoto National College of Technology, Japan) Tsunehiro Yoshinaga (Tokuyama National College of Technology, Japan)

Ussath Martin (The University of Potsdam, Germany)
Wan Khairunizam Wan Ahmad (Universiti Malaysia Perlis, Malaysia)

Weicun Zhang (University of Science and Technology Beijing, P. R. China)

Wenhao Zheng (Beihang University, P. R. China) Wenlin Li (Beihang University, P. R. China)

Wisanu Jiviriya (King Mongkut's University of Technology North Bankok, Thailand) Xiaocan Wang (Technical University Munich, Germany)

Xiaofeng Su (Beijing Institute of Astronautical Systems Engineering, P. R. China)

Xiaoyan Chen (Tianjin University of Science and Technology, P. R. China)

Xiaoyan Fu (Capital Normal University, P. R. China) Xuemei Ren (Beijing Institute of Technology, P. R. China) Xuhui Lu (Beihang University, P. R. China)

Yan Cui (Shanxi Normal University, P. R. China)

Yasunori Takemura (Nishinippon Institute of Technology, Japan)

Yo Horikawa (Kagawa University, Japan)

Yongqiang Qi (China University of Mining and Technology, P. R. China)

Yoshihiro Kita (Tokyo Institute of Technology, Japan) Youji Kawamura (Kindai University, Japan)

Yu-an Zhang (Qinghai University, P. R. China) Yue Lin (Beijing Institute of Control Engineering, P.R. China)

Yueqian Liang (China Academy of Elecronics and Information Technology, P. R. China)

Yuji Minami (National Institute of Technology, Ube College, Japan)

Yunju Chen ((Shiga University, Japan)

Yunzhong Song (Henan Polytechnic University, P. R. China) Zacharie Mbaitiga National Institute of Technology, Okinawa College, Japan)

Zakri bin Ghazali (Universiti Malaysia Pahang, Malaysia)

Zengqiang Chen (Nankai University, P. R. China) Zhao Peng (Huazhong University of Science and Technology, P. R. China)

Zhengquan Yang (Civil Aviation University of China, P. R. China) Zhongxin Liu (Nankai University, P. R. China)

Zuradzman bin Mohamad Razlan (Universiti Malaysia Perlis, Malaysia)

Local Arrangement Committee

Makoto Sakamoto (The University of Miyazaki, Japan)

Masanori Sugisaka (Open University, UK, ALife Robotics Corporation Ltd., Japan)

Takao Ito (Hiroshima University, Japan)