Program

Time: August 31- September 1, 2019

Venue: Shenyang, China

Registration
Time: 09:00-22:00, August 30, 2019 (Friday)   Place: Lobby, 10st Floor, Shenyang Royal Wanxin Hotel

Opening Ceremony

Opening Ceremony
Time: 09:30-10:10, August 31, 2019 (Saturday)   Place: Convention Hall, 2nd Floor, Shenyang New World EXPO

Keynote Forum

Keynote Forum (I)	
Time: 10:10-11:55, August 31, 2019 (Saturday) Place: Convention Hall, 2nd Floor, Shenyang New World EXPO	
Moderator	**Dr. Ji Zhao,** President, Northeastern University, China
10:10-10:15	**Moderator's Introduction**
10:15-10:35	*Title: Communication Shall Be Real-Time & Reliable, Standardized & Interoperable, Safe & Secure* ***Dr. Axel Sikora,*** Scientific Director, Institute of Reliable Embedded Systems and Communication Electronics, Offenburg University, Germany; Deputy Member of the Board/Division Head "Software Solutions", Hahn-Schickard Association of Applied Research, Germany
10:35-10:55	*Title: Shared Autonomy: Advances in Robot Learning* ***Dr. Sethu Vijayakumar FRSE,*** Royal Academy of Engineering - Microsoft Research Chair in Robotics, Director, Edinburgh Centre for Robotics and Fellow of the Royal Society of Edinburgh; Programme Co-Director, The Alan Turing Institute, UK
10:55-11:15	*Title: Thought-based Control Robotic Systems* ***Dr. Abderrahmane Kheddar,*** Academician, Director of Research, French National Centre for Scientific Research (CNRS), France
11:15-11:35	*Title: Latest Development of Robot to Intelligence* ***Dr. Daokui Qu,*** President, Siasun Robot & Automation Co. Ltd., China
11:35-11:55	*Title: Russian Robotics Market and Opportunities for Sino-Russian Cooperation* ***Ms.** **Alisa Konuikhovskaia,** CEO,* Russian Association of Robotics, Russia
Keynote Forum (II)	
Time: 13:30-15:15, August 31, 2019 (Saturday) Place: Convention Hall, 2nd Floor, Shenyang New World EXPO	
Moderator	**Dr. Axel Sikora,** Scientific Director, Institute of Reliable Embedded Systems and Communication Electronics, Offenburg University, Germany; Deputy Member of the Board/Division Head "Software Solutions", Hahn-Schickard Association of Applied Research, Germany
13:30-13:35	**Moderator's Introduction**
13:35-14:00	*Title: Personal Robotic Assistants for the Aging Society* ***Dr. Volker Graefe,*** Head of the Intelligent Robots Lab, Faculty of Aerospace Engineering, Bundeswehr

	University Muenchen, Germany
14:00-14:20	**Title:** *Wearable Powered Exoskeleton: Function, Technology and Prospect* **Dr. Hongliu Yu,** Professor, University of Shanghai for Science and Technology, China
14:20-14:40	**Title:** *Successful Development of Collaborative Robots-a Case Study on Laboratory Automation* **Dr. Yong Xiao,** Zhongrui Funing Robotics (Shenyang) Co. Ltd., China
14:40-15:00	**Title:** *Current Situation and Trend of Robot in Japan* **Dr. Takamoto Haruaki,** Japan Robot Association, Japan
15:00-15:10	Coffee Break

Project and Talents Matchmaking Fair

Project and Talents Matchmaking Fair	
Time: 15:10-17:00, August 31, 2019 (Saturday) Place: Convention Hall, 2nd Floor, Shenyang New World EXPO	
Moderator	**Mr. Zhao Kai,** President, China Council for the Promotion of International Trade Shenyang Sub-council, China
15:10-15:20	**Moderator's Introduction**
15:20-15:40	**Title:** *Living in a Virtual Moon Habitat Augmented and Virtual Reality Techniques for Teleoperations of Robotic Space Missions* **Dr. Mehran Sarkarati,** Head of Applications and Robotics Data Systems Section, European Space Agency, Germany
15:40-16:00	**Title:** *Increase Flexibility of Industrial Processes Using Advance 3D Machine Vision Solutions* **Mr. Stefano Tonello,** CEO, IT+Robotics, Italy
16:00-16:20	**Title:** *Promobot - Service Robots for Business* **Dr. Daniil Oniskiv,** Head of Asian Department, PROMOBOT, Russia
16:20-16:40	**Title:** *Can Service Robot Satisfy Human's Moral Expectation?* **Dr. Jong-Wook Kim,** Professor, Dong-A University, South Korea
16:40-17:00	

Hunnan Night Dialogue (High-end Experts' Talk)

Hunnan Night Dialogue (High-end Experts' Talk)	
Time: 18:00-20:00, August 31, 2019 (Saturday) Place: Wanxi Hall, 3rd Floor, Shenyang Royal Wanxin Hotel	
Part One: Shenyang Robotics Industry Promotion	
Part Two: High-end Experts' Talk	
Theme: Gathering Talents in Hunnan, Creating a New Era	
Moderator	**Dr. Xiaodan Mei,** President, BIT Congress Inc., China
Guests	**Mr. Wang Xinyu,** Director, Shenyang Hunnan District Municipal People's Government, China
	Dr. Sethu Vijayakumar FRSE, Royal Academy of Engineering - Microsoft Research Chair in Robotics, Director, Edinburgh Centre for Robotics and Fellow of the Royal Society of Edinburgh; Programme Co-Director, The Alan Turing Institute, UK
	Dr. Abderrahmane Kheddar, Academician, Director of Research, French National Centre for Scientific Research (CNRS), France
	Dr. Daokui Qu, President, Siasun Robot & Automation Co. Ltd., China
	Dr. Ji Zhao, President, Northeastern University, China

Forum 1: Smart Frontiers: Key Techniques in Robots

Forum 1: Smart Frontiers: Key Techniques in Robots	
Time: 08:30-12:00, September 1, 2019 (Sunday) Place: Meeting Room 203, 2nd Floor, Shenyang New World EXPO	
Chair	**Dr. Tao Wang,** Associate Professor, Peking University, China
08:30-08:35	**Chair's Introduction**
08:35-09:00	*Title: Deep Predictive Learning for Robot System and Application Examples* ***Dr. Tetsuya Ogata,*** Associate Dean, Research Promotion Division, Waseda University; Joint-appointed Fellow, Artificial Intelligence Research Center, AIST, Japan
09:00-09:25	*Title: Widening the Horizon of Space Robotics and Autonomous Systems* ***Dr. Yang Gao,*** FIET FRAeS, Professor of Space Autonomous Systems; Head of Space Technology for Autonomous systems and Robotics (STAR) Lab, University of Surrey, UK
09:25-09:50	*Title: Enhancing 3D Vision Industrial Applications Implementing a Robot Offline Programming System that can Emulate 3D Cameras* ***Mr. Roberto Polesel,*** CEO, Euclid Labs srl, Italy
09:50-10:15	*Title: Control and Monitor the Robots!* ***Dr. Karl Christoph Ruland,*** Chair for Data Communications Systems, University of Siegen, Germany
10:15-10:30	Coffee Break
10:30-10:55	*Title: Gaze Tracking and Its Applications for Human-Robot Interactions* ***Dr. You-Fu Li,*** Professor, Department of Mechanical Engineering, City University of Hong Kong, Hong Kong, China
10:55-11:20	*Title: Vibration Control in a Flexible Manipulator Using Machine Learning* ***Dr. Minoru Sasaki,*** Senior Professor, Department of Mechanical Engineering, Faculty of Engineering, Gifu University, Japan
11:20-11:45	*Title: Bayesian Robotics: Self-creating Robots and Machines Learning to Adapt* ***Dr. Andre Rosendo,*** Tenure Track Assistant Professor at ShanghaiTech University, Brazil
11:45-12:00	Discussion

Forum 2: Healthcare: Health & Medical Robotics

Forum 2: Healthcare: Health & Medical Robotics	
Time: 08:30-11:00, September 1, 2019 (Sunday) Place: Meeting Room 204, 2nd Floor, Shenyang New World EXPO	
Chair	**Dr. Hongyi Li,** CEO, General Robotics, China
08:30-08:35	**Chair's Introduction**
08:35-09:00	*Title: Watch Over Robot to Discover Abnormal State of Patients in Hospital and Help Patients* ***Dr. Kazuhiko Terashima,*** Vice President of Research Affairs, Toyohashi University of Technology, Japan ***Mrs. Yanyan Yang,*** Reseach Engineer, Sintokogio Ltd., Japan
09:00-09:25	*Title: Intuitive Human-Robot Interaction for Care* ***Dr. Daniel Schilberg,*** Vice-Dean, Head of Institute Robotics and Mechatronics, University of Applied Sciences Bochum, Germany
09:25-09:50	*Title: Trust me I'm a [Robot] Doctor: Ethics and Trust in Autonomous Systems* ***Dr. John C Murray,*** Professor of Robotics and Autonomous Systems; Head of the Department of

	Computer Science and Technology; University of Hull, UK
09:50-10:15	*Title: Research, Development and Introduction of Robotic Devices for Elderly Care* *Dr. Yoshio Matsumoto,* Team Leader of Service Robotics Research Team, Robot Innovation Research Center, National Institute of Advanced Industrial Science and Technology (AIST), Japan
10:15-10:40	*Title: Lightweight Robotics in Medicine* *Dr. Cyrill von Tiesenhausen,* Business Development Manager of Medical Robotics, KUKA, Germany
10:40-11:00	*Discussion*

Forum 3: Smart World: Smart Robotics Systems and Applications

Forum 3: Smart World: Smart Robotics Systems and Applications	
Time: 13:30-16:00, September 1, 2019 (Sunday) Place: Meeting Room 203, 2nd Floor, Shenyang New World EXPO	
Chair	**Dr. Volker Graefe,** Head of the Intelligent Robots Lab, Faculty of Aerospace Engineering, Bundeswehr University Muenchen, Germany
13:30-13:35	**Chair's Introduction**
13:35-14:00	*Title: Helping People to Reach the Unreachable-with Robots* *Dr. Ing. Bartłomiej Stańczyk,* CTO, ACCREA Engineering, Poland
14:00-14:25	*Title: The Taxonomy of Social and Service Robotics in the EUREKA Robotics Lab* *Professor Jon Platts,* Dean, Cardiff School of Technologies, Cardiff Metropolitan University, UK
14:25-14:50	*Title: Why our RPA Projects Never Fails* *Mr. Vincenzo Marchica,* CEO, Vincix Group, Italy
14:50-15:15	*Title: Agile Robotics and 5G in Smart Manufacturing* *Dr. Attila Vidács,* Associate Professor, High Speed Networks Laboratory (HSN Lab), Department of Telecommunications and Media Informatics (TMIT), Budapest University of Technology and Economics (BME), Hungary
15:15-15:40	*Title: Affective Intelligent Robotics* *Dr. Tao Wang,* Associate Professor, Peking University, China
15:40-16:00	Discussion

Forum 4: Grafting Platform: AI and Robotics

Forum 4: Grafting Platform: AI and Robotics	
Time: 13:30-16:30, September 1, 2019 (Sunday) Place: Meeting Room 204, 2nd Floor, Shenyang New World EXPO	
Chair	**Dr. Mehran Sarkarati,** Head of Applications and Robotics Data Systems Section, European Space Agency, Germany
13:30-13:35	**Chair's Introduction**
13:35-14:00	*Title: Human-Robot Collaboration in Next Generation Factories* *Dr. Fulvio Mastrogiovanni,* Associate Professor, University of Genoa, Italy
14:00-14:25	*Title: Collaborative Data Processing in Mobile Edge Computing Environment* *Dr. Hee Yong Youn,* Director of Ubiquitous Computing Technology Research Institute (UTRI), Sungkyunkwan University, South Korea

14:25-14:50	*Title: Learning 4.0 and Robotics: Data and Emotions* **Dr. Milena Krumova,** Assistant Professor, Technical University - Sofia, Bulgaria
14:50-15:15	*Title: An Industry 4.0 Architecture for Smart Sensing and Distributed Monitoring in the UK Water Industry* **Dr. Michael Short,** Reader (Professor Extraordinarius) in Control Engineering,Teesside University Middlesbrough, UK
15:15-15:30	**Coffee Break**
15:30-15:55	*Title: Future Direction of Augmented and Virtual Reality* **Dr. Hoshang Kolivand,** Assistant Professor in Computer Graphics, Liverpool John Moores University, UK
15:55-16:20	*Title: Autonomous Underwater Robotics for Low Depth Water Sources: Scientific Research Applications* **Dr. Arockia Selvakumar Arockiadoss,** Assistant Director - Placement & Training, Associate Professor – Mechanical, Faculty Coordinator - Robotics Club, VIT University, India
16:20-16:30	Discussion