

EJEA Conference 2021 in Kagawa on
**Human-centered Sustainability and Innovation for an AI-assisted Future:
 New Interdisciplinary Education & Research for the Next Stages in Japan and Europe**
 AI が支援する未来に向けた人間中心のサステナビリティとイノベーションを考える：新たな
 ステージへ導く日本とヨーロッパの学際的な教育と研究の紹介
October 22nd - 24th, 2021 hosted by Kagawa University, Kagawa (Japan)
The conference is managed online on Zoom

Program

Day 1: Friday October 22, 2021		
CEST	JST	
8:00 – 8:30	15:00 – 15:30	Room A Opening Ceremony Mr. Takuya Hirai , The 1 st Minister of Digital Agency (video message) Mr. Hideto Ōnishi , Mayor of Takamatsu City Prof. Dr. Yoshiyuki Kakehi , President of Kagawa University (video message) Dr. Julia Münch , Secretary General, Japanese-German Centre Berlin, JDZB (video message) Prof. Dr. Dietrich Albert , Chairperson European Japan Experts Association, EJEA
		Moderation: Kagawa University Prof. Dr. Masaaki Tokuda, Kagawa University
8:30 – 8:35	15:30 – 15:35	Room A Technical announcements Photo session (Screenshots)
8:35 – 8:55	15:35 – 15:55	Room A Keynote 1: Dr. Yuko Harayama , Executive Director RIKEN (Japan) former Executive Member of Council for Science, Technology and Innovation “Human in the Loop or Human-centered”
8:55 – 9:15	15:55 – 16:15	Room A Keynote 2: Prof. Dr. Fredrik Heintz , Linköping University, Dept. of Computer and Information Science (Sweden); EU Commission High-Level Expert Group on AI “Education for an AI-assisted Future - From Primary Education to Life-Long Learning”
9:15 – 9:30	16:15 – 16:30	SpatialChat Poster session / Break
9:30 - 12:00	16:30 – 19:00	Parallel Sessions: Room B Workshop 1: eHealth and Medical Engineering chaired by Prof. Dr. Kazuhiro Hara and Prof. Dr. Ichiro Ishimaru, Kagawa University (Japan) <ul style="list-style-type: none"> • Ichiro Ishimaru, Kagawa University (Japan) “Mid-infrared (LWIR) passive-active spectroscopic imaging for non-invasive blood glucose sensors” • Lorenz Granrath, Tohoku University (Japan) “EU-Japan Project E-VITA - a Virtual Coach for Smart Aging” • Hirotsugu Yamamoto, Utsunomiya University, (Japan) “Fundamentals and Applications of Aerial Display” • Lingbing Kong, Kagawa University (Japan) “Multidisciplinary Approaches and AIs” • Kazuhiro Hara, Kagawa University (Japan) “Development of ultra-small mobile CTG and its effectiveness on remote monitoring of the expecting mothers, as well as its global expansion” • Yhuko Ogata, CEO, Melody International Co. Ltd. (Japan) “Developing medical devices for e-health to work towards the overseas” • Tetsuo Minamino, Kagawa University, (Japan) “Development of a Novel Program to Detect Atrial Fibrillation Using Pulse Wave from Automated Blood Pressure Monitor”

		<p>Room A Workshop 2: Smart City chaired by Mr. Orfeas Voutyras, National Technical University of Athens (NTUA) (Greece)</p> <ul style="list-style-type: none"> • Orfeas Voutyras, National Technical University of Athens (NTUA) (Greece) “The rise of Smart Cities” • Lars Vikinge, Jakob Algulin, City of Linköping (Sweden) “City of Linköping – a Smart City!” • Takahiro Ozawa, Takamatsu City (Japan) “Smart City Takamatsu: Solutions for Disaster Prevention/Management” • City of Santander (Spain) • Tatsuo Fukuda, Fujisawa City (Japan), Jin Nakazawa, Keio University (Japan) “Secure and Trustworthy Mobile Participatory Sensing over M-Sec Platform” • City of Malmö (Sweden)
12:00 – 12:15	19:00 – 19:15	SpatialChat Poster session / Break
12:15 – 12:45	19:15 – 19:45	<p>Room A <u>Sharing of experience:</u> “What I learned today” By co-chairs of workshops 1 and 2</p>
12:45 – 13:00	19:45 – 20:00	<p>Room A <u>Closing</u> Dr. Phoebe Stella Holdgrün Head of Project Management, Japanese-German Center Berlin (JDZB)</p>

Day2: Saturday October 23, 2021		
CEST	JST	
	11:30 – 14:30	<p>Poster Session (Face to Face) Olive Square @ Kagawa University</p>
8:00 – 8:15	15:00 – 15:15	<p>Room A <u>Welcome and Introduction</u> Institute for Security and Development Policy (ISDP) Dr. Lars Vargö, Director, ISDP Japan Center (Sweden)</p>
		<p><u>Moderation:</u> European Japan Experts Association (EJEA) Prof. Dr. Anders Törnvall, EJEA Executive Committee, Linköping University (Sweden)</p>
8:15 – 8:35	15:15 – 15:35	<p>Room A <u>Keynote 3:</u> Prof. Dr. Satoshi Murayama, Co-convenor of the International Consortium for Earth and Development Sciences, Kagawa University (Japan) “Environmental humanities: a long-term local history approach to living spaces to be sustained”</p>
8:35 – 8:55	15:35 – 15:55	<p>Room A <u>Keynote 4:</u> Dr. Lucas Paletta, Human Factors Lab at Joanneum Research Forschungsgesellschaft mbH, DIGITAL – Institute for Information and Communication Technologies (Austria) “Cognitive Sensing for Future Smart Health and Care”</p>
8:55 – 9:15	15:55 – 16:15	<p>Room A <u>Presentation:</u> Dr. Philippe de Taxis du Poët Managing Director, EU-Japan Centre for Industrial Cooperation (video message)</p>
9:15 – 9:30	16:15 – 16:30	SpatialChat Poster session / Break

9:30 –
12:00

16:30 –
19:00

Parallel Sessions:

Room A Workshop 3: Innovative Technologies for New Industry Creation

chaired by Prof. Dr. Kiyoshi Tanaka, Shinshu University (Japan) and Prof. Dr. Tomohiko Ishii, Kagawa University (Japan)

- Xing Wang, Kagawa University (Japan)
“Lithium-ion Battery Anode of Mesocrystalline CoTiO₃/TiO₂ Nanocomposite with Extremely Enhanced Capacity”
- Kaisei Harada, Kagawa University (Japan)
“Development of Air Supply System for Wearable Robot-Effectiveness of Hollow Cylindrical-shaped Variable Volume Tank”
- Tomoya Kitazaki, Kagawa University (Japan)
“Mid-infrared Passive Spectroscopic Imaging of Microplastics Using Imaging-type 2-D Fourier Spectrometer for Wide-field Measurements”
- Haruto Adachi, Kagawa University (Japan)
“Real-Time Infrared Spectroscopic Monitoring of Fermentation Process to Support Sensory Evaluation”
- Endi Kazuto Takeda, Kyushu University (Japan)
“Modelling and Simulation of Introduction of RFID in Warehousing of a Supply Chain”
- Takaki Nishimura, Kagawa University and others (Japan)
“Theoretical Research Aiming at High-efficiency Hydrogen Production Using Solar Thermochemical Energy for the Goal of Sustainable Energy Supply”
- Takuya Mitani, Kagawa University (Japan)
“Relationship Between the Joint Angle and the Contact Force at the Knee During Walking”

Room B Workshop 4: Environmental Humanities: Water, Air and Land for Sustainable Living Spaces

chaired by Prof. Dr. Satoshi Murayama and Prof. Dr. Toru Terao, Kagawa University (Japan)

- Lrong Lim, Kagawa University (Japan)
“Contributing Towards Sustainable Living via Environmental Cleaning - a Community-based Movement in Action -”
- Kazuhiko Ichimi, Kagawa University (Japan)
“Global warming as one of the causes of decrease in fisheries resources; the case of Manila clam”
- Kuninao Tada, Kagawa University (Japan)
“Environmental Conservation and Fishery of the Seto Inland Sea, Japan”
- Hirotohi Tamura, Kagawa University (Japan)
“Green Chemistry for the Investigation of Agricultural Products and Functional Foods: Statistical Approach”
- Takahiro Yamamoto, Kagawa University (Japan)
“A Study on Estimation of Air Conditioning Load from Human Body and Equipment Using Image Analysis”
- Masato Katoh, Shinshu University (Japan)
“The Practical Application of Smart Precision Forestry Project Using Laser Scanning for an AI-assisted in Japan”
- Gaurav Vikash Bhuyan, Gauhati University (India)
“Community Response to Local Environment: Reflection in Certain Micro-Landscapes of the Brahmaputra River Valley in Assam, India”
- Anjaneyulu Akkimi, Indian Inst. of Technology Guwahati (India)
“Modeling for Prediction of Extreme Floods in Urban Landscapes: Developing Land for Sustainable Living Spaces during Floods”
- Soumya Guchhait, Indian Inst. of Technology Guwahati (India)
“Socio-hydrological aspects of event-based flood hazard in Assam, India”
- Nazmul Huda, Kagawa University (Japan)
“Influence of Natural Disasters on Surface Water: A Spatiotemporal Study in A Disaster-Prone Area from 1988 to 2021”
- A.T.M. Shakhawat Hossain, Jahangirnagar University (Bangladesh)
“Risk Associated with Rohingya Refugee Settlements at Ukhia Camp, Cox’s bazar, Bangladesh - A Threat for Sustainable Development”

		<p>Room C <u>Workshop 5: Distributed Cognition in Learning and Behavioral Change – Based on Human and Artificial Intelligence</u> chaired by Prof. Dr. Dietrich Albert, University of Graz (Austria), Prof. Dr. Xiangen Hu, The University of Memphis (USA) & Central China Normal University (China), Prof. Dr. Tomoko Kojiri, Kansai University (Japan), and Dr. Paul C. Seitlinger, University of Vienna (Austria)</p> <ul style="list-style-type: none"> • Dietrich Albert, University of Graz (Austria) “Do We Need a Holistic Interpretation of ‘Distributed Cognition’? Past and Future Research Questions with respect to AI” • Daniel Wolferts, Fraunhofer FIT (Germany) “Remote Design Thinking for Sustainability - Investigating the Role of Distributed Cognition” • Toshihiro Hayashi, Kagawa University (Japan) “Conceptual Structure of an Intelligent Educational Support System Using Various Kinds of Cognitive Characteristic Information” • Xiangen Hu, The University of Memphis (USA), Central China Normal University (China) “Self-Improvable Adaptive Instructional Systems (SIAIS) ” • Vasile Rus, The University of Memphis (USA) “Models of Learner-Teacher-EdTech Partnerships in the Future Learning” • Tomoko Kojiri, Kansai University (Japan) “Visualization System of Nonverbal Information in Medical Interviews for Training Doctors' Credible Attitude” • Michael Öllinger, Parmenides Center for the Study of Thinking & Cognostics AG (Austria) “Distributed Cognition in Innovative Problem Solving” • Paul Seitlinger, University of Vienna (Austria) “Distributed Cognition in Modeling Cross-Modal Short-Term Memory for the Design of Smart Sensory Prostheses” • Yulia Zhiglova, Tallinn University (Estonia) “BeMe Jacket - Using Vibrotactile Body-Centric Displays for Distributed Emotion Regulation” • Gerald Steinbauer-Wagner, TU Graz (Austria) “Robust Joint Plan Execution in Teams of Mobile Robots”
12:00 – 12:15	19:00 – 19:15	SpatialChat <u>Poster session / Break</u>
12:15 – 12:45	19:15 – 19:45	<p>Room A <u>Sharing of experience:</u> “What I learned today” By co-chairs of workshops 3, 4 and 5</p>
12:45 – 13:00	19:45 – 20:00	<p>Room A <u>Closing</u> Prof. Dr. Takahiro Shinyo (video message) Senior Advisor for the Japan-German Society Kagawa</p>

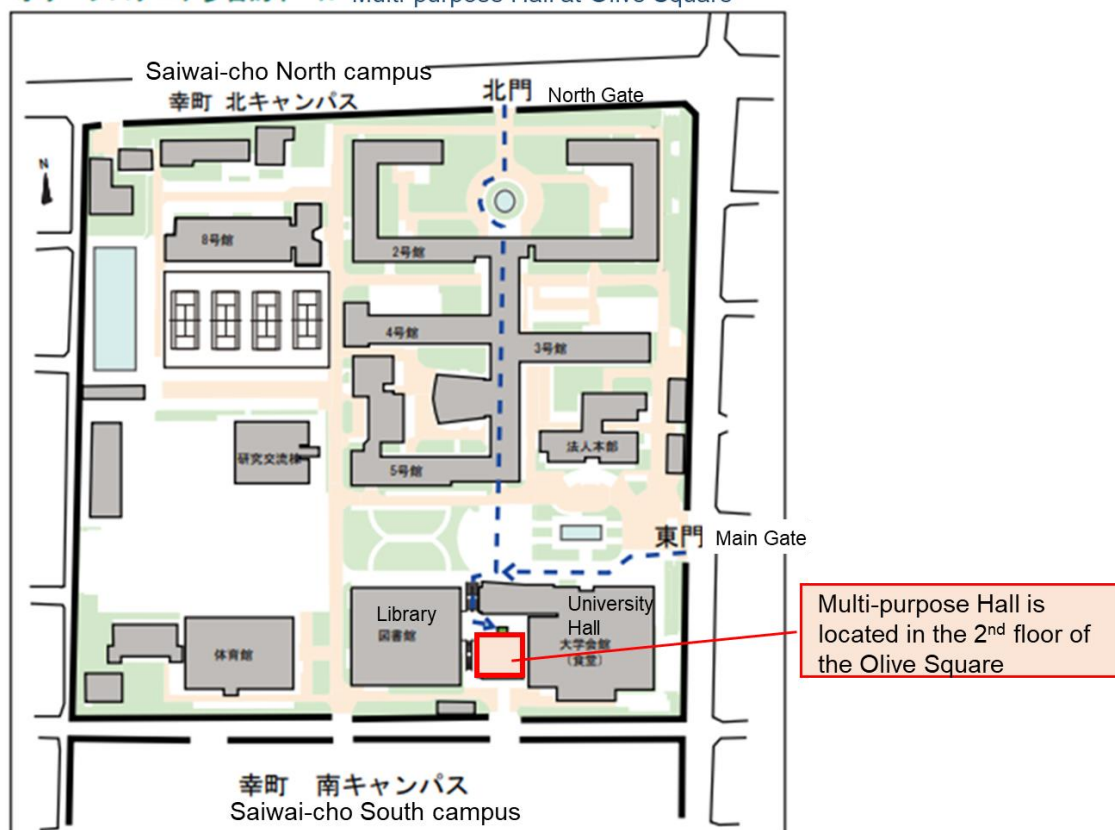
Day 3: Sunday October 24, 2021		
CEST	JST	
8:00 – 8:15	15:00 – 15:15	<p>Room A <u>Welcome and Introduction</u> Fraunhofer Institute for Applied Information Technology (FIT) Dr. René Reiners, Head of Human-centered Engineering and Design</p>
		<p><u>Moderation:</u> Fraunhofer Institute for Applied Information Technology (FIT) Elisabeth Stein and Daniel Wolferts</p>

8:15 – 8:35	15:15 – 15:35	<p>Room A <u>Keynote 5:</u> Prof. Dr. Hiroshi Tsuji, Executive Director, University Public Corporation Osaka (Japan), former President of Osaka Prefecture University (Japan) “From 45 Years’ Experience on R&D and Education of Systems Sciences”</p>
8:35 – 8:55	15:35 – 15:55	<p>Room A <u>Keynote 6:</u> Dr. René Reiners Head of Human-centered Engineering and Design at Fraunhofer Institute for Applied Information Technology FIT (Germany), Coordinator of GRANITE “Human-Centered System Design for Successful Digital Transformation”</p>
8:55 – 9:15	15:55 – 16:15	<p>Room A <u>Keynote 7:</u> Mr. Colin De Kwant, Vice President Modular Management®; Lecturer at Royal Institute of Technology (Sweden) “Sustainable Mobility Scenario Modeling: Evaluating Future Resilience of Modular Concepts for Electrified Trucks”</p>
9:15 – 9:30	16:15 – 16:30	SpatialChat Poster session / Break
9:30 – 12:00	16:30 – 19:00	<p>Parallel Sessions:</p> <p>Room C <u>Workshop 6: GRANITE - Human-Centered Research and Transfer to Application</u> chaired by Dr. René Reiners, Fraunhofer FIT (Germany) and Prof. Dr. Satoru Takahashi, Kagawa University (Japan)</p> <ul style="list-style-type: none"> • Lena Brüch, Fraunhofer FIT (Germany) “<i>A Practical Approach of Integrating Sustainability Goals in the Human-Centered-Design-Process</i>” • Takefumi Mokudai, Kyushu University (Japan) “<i>Digital Technologies as Lean Augmentation: A Preliminary Study of Japanese Automotive Manufacturers</i>” • Satoru Adachi, Kagawa University (Japan) “<i>Planck’s Law Base Function for Background Correction of Remote Sensing with Compact and High-Sensitivity Mid-Infrared Spectrometer</i>” • Anika Isabelle Rieth, Fraunhofer FIT (Germany) “<i>Service Design for Beneficial Technology Integration: Looking into the Case Study of Renova</i>” • Minoru Inadama, Nagano Prefectural Government (Japan) “<i>Disaster-Resistant Hydropower Microgrid Construction and Smart Conservation Initiatives in Nagano Prefecture</i>” • Mai Murabayashi, Kagawa University (Japan) “<i>Functional Verification and Structural Evaluation of Transfemoral Prosthetic Knee Mechanism for Running</i>” • Tatsuya Usui, Osaka University (Japan) “<i>Soft Capacitive Tri-axis Tactile Sensor Based on Level Sensing</i>” • Dominik Pins, Fraunhofer FIT (Germany) “<i>Challenges and Concepts for the Evaluation of Usable and Satisfying VAs According to DIN EN ISO 9241-11 and -110</i>” <p>Room A <u>Workshop 7: Human Security and Sustainability</u> chaired by Dr. Lars Vargö, Director Japan Center, Institute for Security and Development Policy (Sweden)</p> <ul style="list-style-type: none"> • Renée Schulz, JRCS. Co. Ltd. (Japan) “<i>AI and HCI come together for the Digitalization of the Maritime Industry to Foster a Sustainable, Innovative and Safe Work Environment</i>” • Colin De Kwant, Modular Management (Sweden) “<i>Sustainable Mobility Scenario Modeling, Evaluating Future Resilience of Modular Concepts for Electrified Trucks</i>” • Sudha Jamthe, Stanford University (USA) “<i>Character Development for Artificial Intelligence</i>” • Kazuya Ishii, Kagawa University (Japan) “<i>SDGs in the Anthropocene: A Gandhian Critique</i>”

		<ul style="list-style-type: none"> Masatoshi Imai, Kagawa Junior College (Japan) “A Proposal of Numerical Approach of Quantitative Verification of Check List to Support Human Digital Security through Kansei Engineering” <p>Room B Workshop 8: Educational Change: New Models and New Thinking in Intercultural Concepts chaired by Prof. Dr. Toshihiro Hayashi, Kagawa University (Japan) and Prof. Dr. Anders Törnvall, Linköping University (Sweden)</p> <ul style="list-style-type: none"> Michal Cerný, Masaryk University (Czech Republic) “Extended Mind as a Way for Education in the Networked World” Khalifa Sy, Kagawa University (Japan) “Extracting Learning Path Data from Learning History” Toru Takamizu, Kagawa University (Japan) “Online Japanese Language Education for Elementary Level Learners” Nik Anni Afiqah bitni Haji Mohammad Tuah, Brunei Darussalam University (Brunei) “The Transition from Traditional to Online Learning: what are the new approaches and challenges for higher education during the pandemic?”
12:00 – 12:15	19:00 – 19:15	SpatialChat Poster session / Break
12:15 – 12:45	19:15 – 19:45	Room A <u>Sharing of experience:</u> “What I learned today” By co-chairs of workshops 6, 7, and 8
12:45 – 13:00	19:45 – 20:00	Room A <u>Closing Ceremony</u> Poster Awarding Ceremony , Prof. Dr. Kenji Wada, Kagawa University Kagawa University , Prof. Dr. Masaaki Tokuda European Japan Experts Association (EJEA) , Sabine Ganter-Richter, Executive Manager

Venue of the Poster Session (Face-to-face)

オリーブスクエア多目的ホール Multi-purpose Hall at Olive Square



https://www.kagawa-u.ac.jp/files/6715/1175/5632/Olive_Square.pdf

Poster Presentation

October 22, 23, 24, 2021		
CEST	JST	
	October 23 11:30 – 14:30	Poster Session (Face to Face) Olive Square @ Kagawa University
October 22, 23, 24 9:15 – 9:30 12:00 – 12:15	October 22, 23, 24 16:15 – 16:30 19:00 – 19:15	Poster Session (Online, P01 – P04) SpatialChat @ http://spatial.chat/s/ejea-kagawa
<p>P01 Sachiko Somaki (Osaka Medical and Pharmaceutical University, Japan), Yukie Majima, Seiko Masuda and Yumiko Nakamura (Osaka Prefecture University, Japan) “Education Support System for Newcomer Nurses at Visiting Nursing Stations” (online discussions only)</p> <p>P02 Koji Mikami, Yukie Majima and Seiko Masuda (Osaka Prefecture University, Japan) “Proposal of a System Enhancing Self-affirmation Using LINE Chatbots for Elementary School Students” (online discussions only)</p> <p>P03 Naoki Yaemoto and Shoichi Maeyama (Kagawa University, Japan) “Development of the second prototype of a half drone inverted pendulum transportation robot to improve the safety and the controllability”</p> <p>P04 Masataka Yatsuzuka, Masahide Ishizuka, Satoshi Murayama and Toru Terao (Kagawa University, Japan) “Location of wells and groundwater distribution in Teshima Island, Japan. Environmental humanities approach and hydrological simulation”</p> <p>P05 Takeshi Kasai and Atsuko Nonomura (Kagawa University, Japan) “Verification of human resources development methods for continuous disaster prevention and crisis management unique to local governments”</p> <p>P06 Naoya Matsuda, Tomohiro Tsubata and Yukihiko Okumura (Kagawa University, Japan) “NOx reaction analysis of ammonia flame burner with hydrogen stabilizer”</p> <p>P07 Tomohiro Tsubata, Naoya Matsuda and Yukihiko Okumura (Kagawa University, Japan) “Effect of reaction scheme on the structure of ammonia turbulent flame”</p> <p>P08 Kosuke Hoshika, Kira Kagawa and Yukihiko Okumura (Kagawa University, Japan) “Combustion characteristics of NH₃/H₂ premixed flames and mechanism of NO_x formation”</p> <p>P09 Izumi Funahashi (Kagawa Prefectural Marugame High School, Japan) “Study about relationship between walking habit and lack of exercise”</p> <p>P10 Anna Mimuro (Kagawa Prefectural Marugame High School, Japan) “To increase the recycling rate of Marugame city”</p> <p>P11 Kokoa Shirakawa, Yuna Tao and Sora Kondo (Kagawa Prefectural Kanonji Daiichi High School, Japan) “Investigating the Mechanism of the Marsilea Mutica's Nyctinastic Movements”</p> <p>P12 Haruchika Onishi, Natsuki Koyama and Airi Toyoura (Kagawa Prefectural Kanonji Daiichi High School, Japan) “The Relationship Between the Crystalline Lens and Vitreous Humor's Quality in Fish Freshness”</p>		
Day 3: Sunday October 24, 2021		
12:45 – 13:00	19:45 – 20:00	Room A in Closing Poster awarding by Kagawa University and EJE

Note:

- 1) Red-color numbered posters will be mainly discussed at the online poster session.
- 2) Face-to-face poster presentation will be held at Multi-purpose room in Olive Square, Kagawa University on October 23 (Sat) 11:30-14:30.
- 3) Online poster presentation using “SpatialChat” will be held 16:15-16:30 and 19:00-19:15 every day.