

International Conference on
**Human-Centered Digitalization:
How to Develop Next Generation of Humans and Robots for a Secure, Harmonic
and Prosperous Future of Europe and Japan?**

September 20th (Friday) and 21st (Saturday morning), 2019

Venue: Graz University of Technology, Inffeldgasse 13, 8010 Graz, Austria

jointly organized by

**the European Japan Experts Association, the Graz University of Technology,
the University of Graz and the Institute for Security Development Policy**

Friday, September 20, 2019

9:00	Registration
9:30	<p><i>Welcoming Remarks</i></p> <p>Prof. Dipl.-Ing. Dr. Dr.h.c.mult Harald KAINZ, Rector of Graz University of Technology (TU Graz) Prof. Dipl.-Ing. Dr. Frank KAPPE, Vice-Dean of Faculty of Computer Science and Biomedical Engineering (CSBME, TU Graz) Assoc. Prof. Dipl.-Ing. Dr. Karl LOHNER, Vice-Dean of Faculty of Natural Science of University of Graz (Uni Graz) Former Swedish Ambassador to Japan Dr. Lars VARGÖ, Distinguished Fellow at Institute for Security and Development Policy (ISDP) Prof. em. Dipl.-Psych. Dr. Dietrich ALBERT, Chair of European Japan Experts Association (EJEA)</p> <p>Moderator of Welcome Remarks and Keynotes: Prof. em. Dr. Anders Törnvall, Linköping University, Sweden, & Nordic Institute of Asian Studies, Denmark</p>
10:00	<p><i>“Digital Austria – Status & Initiatives”</i></p> <p>Prof. Dr. Stefanie Lindstaedt, CEO and Scientific Director of Know-Center; Head of Institute of Interactive Systems and Data Science, TU Graz; Chairperson of the Advisory Board of the Austrian Digitalization Agency</p>
10:45	<p><i>“Making Society 5.0 a Reality”</i></p> <p>Dr. Dr. Yuko Harayama, Former Executive Member of Council of Science and Technology Policy, Cabinet Office, Japan; Elsevier Foundation Board Member</p>
11:15	<i>Coffee Break</i>
11:45	<p><i>“Trustworthy Human-Centric AI”</i></p> <p>Dr. Fredrik Heintz, Department of Computer and Information Science, Linköping University; Member of the European Commission High-Level Expert Group on Artificial Intelligence</p>
12:30	<i>Lunch Break</i>
13:30	<p><i>“Citizen-Centered Design for Human-Technology Symbiosis”</i></p> <p>Dr. Dr. Norbert A. Streitz, Scientific Director of Smart Future Initiative, Germany</p>

14:15	“EU-Japan Collaboration in AI Ethics and Governance” Prof. Dr. Arisa Ema , Institute for Future Initiatives, The University of Tokyo; Visiting Researcher, RIKEN Center for Advanced Intelligence Project
15:00	Poster Session* during Coffee Break
15:30	“Why Human-Centered is Necessary? How Can We Digitalize? Trial Answers from University of Japan” Prof. Dr. Yoshiro Imai , Reliability-based Information Systems, Kagawa University; Multimedia Processing
16:15	“Big Data & Artificial Intelligence” Prof. Dr. Horst Bischof , Vice Rector for Research, Graz University of Technology; Applied Computer Science; Member of the European Academy of Sciences
17:00	End
19:00	Reception and Dinner hosted by the State of Styria and the City of Graz at “Grazer Burg”

Saturday, September 21, 2019

9:30	6 Parallel Workshops
Workshop 1	Ethics in the Digitalized Era: Western and Eastern Contexts <u>Chair:</u> <i>Dr. Kay-Wah Chan</i> , Macquarie University (Australia) <u>Contributions:</u> <i>Prof. Dr. Michal Černý, Radim Šíp and Prof. Dr. Denisa Denglerová:</i> “The Principle of Non-Discrimination in the Infosphere: A New Ethics” <i>Hristina Veljanova and Norah Neuhuber:</i> “A European Approach for Trustworthy Technologies” <i>Dr. Kay-Wah Chan and Dr. John Selby:</i> “Legal Ethics in Japan: Compliance Challenges and Risks in the Era of Internet Technologies” <i>Dr. Helena Webb:</i> “ROBOTIPS: Developing Responsible Robots for the Digital Economy”
Workshop 2	The EU-Japan Strategic Partnership Agreement - Prospects for Future EU-Japan Cooperation on Cyber Security and Artificial Intelligence <u>Chair:</u> <i>Dr. Lars Vargö</i> , Stockholm Japan Center, Institute for Security and Development Policy (Sweden) <u>Contributions:</u> <i>DI Bernd Prünster:</i> “A Holistic View on Digital Security” <i>Erik Isaksson:</i> “Pushing Back: Shared Narratives in the EU-Japan SPA for a Rules-Based Internationalism” <i>Prof. Dr. Wilhelm Vosse:</i> “Cybersecurity and AI: Core Drivers for the EU-Japan SPA?”
Workshop 3	Future Role of Artificial Intelligence in Europe and Japan in Realizing Human-Centered Digitalization <u>Chairs:</u> <i>Dr. Roman Kern</i> , Know-Center GmbH and Institute of Interactive Systems and Data Science, TU Graz, (Austria) and <i>Prof. Dr. Tobias Schreck</i> , Institute of Computer Graphics and Knowledge Visualization, TU Graz (Austria)

	<p>Contributions: <i>Dr. Roman Kern:</i> “Artificial Intelligence and Digitalization in Industry” <i>Prof. Dr. Tobias Schreck:</i> “Preservation and Analysis of Digital Cultural Heritage Objects” <i>Dominic Manwani and Dr. Lisa-Christina Winter:</i> “Psychology and Artificial Intelligence: A User Experience (UX) Approach to Tackle AI”</p>
Workshop 4	<p>Innovating Digital Education and Skills in Different Cultures, on a Global Scope and in an Interdisciplinary Context Chair: <i>Dr. Paul Lefrere</i>, Cognitive Science Section, University of Graz (Austria) and CCA-Research (UK)</p> <p>Contributions: <i>Dr. Paul Lefrere:</i> “Preparing Humans and Robots for the Harmonious Evolution of Human-Centered Collective Intelligence Exploiting Ubiquitous AI” <i>Prof. Dr. Horst Zeinz and Dr. Masashi Urabe:</i> “Human Centered Digitalization in School: The Project ‘Building Bridges’ as an Example for Learning in a ‘Virtual Reality’ Combined with Learning in a ‘Natural Reality’” <i>Sebastian Dennerlein, Viktoria Pammer-Schindler et al.:</i> “TEL Marketplace – A Sandpit- and Co-Design-informed Innovation Process for Implementing TEL Research in Higher Education”</p>
Workshop 5	<p>Forming Cooperation of Robots and Humans in Industrial and Service Sectors: How Does the Socio-Cultural Context in Europe and Japan Influence Technology Affinity? Chair: <i>Dr. Martin Kandlhofer</i>, Institute of Software Technology, TU Graz (Austria)</p> <p>Contributions: <i>Dr. Martin Kandlhofer:</i> “Enabling the Creation of Intelligent Things – The European Driving License for Robots and Intelligent Systems” <i>Dr. Oliver Schürer:</i> “Together? How to Share Space with Robots” <i>Dr. Peter Moertl:</i> “Trust Management Systems: Toward Establishing Trustworthy Systems Based on Practices in Aviation Safety” <i>Dr. Lucas Paletta, Sandra Schüssler et al.:</i> “Socially Assistive Care Robots in Dementia Motivated from Health Care, Neuropsychology and ICT” <i>Prof. Dr. Dr. Felix Tretter:</i> “Human-Centered Digitalization and Health Issues: Some Reflections From Medicine”</p>
Workshop 6	<p>What are the Consequences of Digitalization for Economy, Society and Job Market in Europe and Japan? Chairs: <i>Prof. Dr. Heinz-Dieter Kurz, Stella Zilian</i>, Schumpeter Centre at University of Graz (Austria)</p> <p>Contributions: <i>Prof. Dr. Heinz D. Kurz:</i> “Riding a New Wave of Innovations” <i>Dr. Atsuko Sano:</i> “The Fourth Industrial Revolution and Promotion of Gender Equality - Implications of Comparing Germany and Japan”</p>

	<p><i>Prof. Dr. Heinz-Jürgen Klepzig:</i> “Lean Industry 4.0: Selling Hope or Real Advantages? - an Economic View”</p> <p><i>Stelios Damalas:</i> “The Importance of Acceptance and Job Satisfaction in the Conception and Design of Assistance Systems in Production”</p> <p><i>Martin Griesbacher, MA:</i> “Ambivalences of Working Time Autonomy in the Digital Age”</p>
11:30	<i>Coffee Break</i>
12:00	Final Discussion – Plenum
13:00	Final Lunch

*** Poster Session:**

Dr. Robert Woitsch, Managing Director, BOC Asset Management GmbH, Wien (Austria):

“OMiLAB: A Conceptual Model Laboratory Supporting Human-Centred Digitalisation”

Dr. Erich Weichselgartner, Deputy Scientific Director, Leibniz Institute for Psychology Information, Trier (Germany):

“Where is the Focus of Attention in Human-Centered Digitalization in Europe versus Japan: An Exploratory Text Analysis”

Dipl. Ing. Silvia Russegger, Dr. Lucas Paletta et al., Joanneum Research, Graz (Austria):

“Tablet-Based Playful Multimodal Training for Activating People with Dementia”

Zlatan Ajanovic, Graz University of Technology, Graz (Austria):

“Towards Superhuman Autonomous Vehicles”

Kindly supported by

