20-21 September 2019
Graz, Austria

Human-Centered Digitalization

How to Develop Next Generations of Humans and Robots for a Secure, Harmonic and Prosperous Future of Europe and Japan?
The European Japan Experts Association, the Graz University of Technology, the University of Graz, and the Institute for Security Development Policy jointly organize an 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?**

**Time:**
20 – 21 September 2019

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

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Author’s edition

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INTERNATIONAL CONFERENCE

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

TIME
September 20 and 21, 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
the Institute for Security Development Policy
International Conference “Human-Centered Digitalization: How to Develop Next Generation of Humans and Robots for a Secure, Harmonic and Prosperous Future of Europe and Japan?”

WELCOME MESSAGE

The European Japan Experts Association (EJEA), the Graz University of Technology (TU Graz), the University of Graz (Uni Graz) and the Institute for Security Development Policy (ISDP) cordially welcome you to this international conference on “Human-Centered Digitalization”!

The current hype on digitalization is reflected beyond others by numerous conferences, symposia, and workshops. However, many events primarily focus in a fragmented way or on even more specific aspects of the digital transformation. At a first glance, it seems that any interest and need in the topic of digitalization is already served by those events. Thus, the question arises, if there is any need for yet another conference?

However, this question touches only the surface of the discussion, because it does not take into account the enormous and inadequate fragmentation of the reflections at one hand and the complexity and interconnectedness of the processes at the other hand.

Don’t forget: without integrating the involved relevant humanistic and ethic aspects - such as digital maturity, digital personality, digital competence - any attempt of technical solution is difficult!

The aim of the conference is to identify ways of safeguarding and maintaining human integrity and values in the midst of a technological development where they are less and less taken into account for the technologies to work. While not denying the benefits of technological advancements the organizers of this conference welcome you to get interdisciplinary insights and to discuss how to develop the next generations of humans and robots for a secure and prosperous future, not least for Europe and Japan.

To achieve this aim, the priorities of the conference focus on:
• to overcome the current fragmented situation around the digitalization discourse.
• to provide a forum for educational purposes.
• to involve especially young academics for implementing the above-mentioned educational measures in Japan as well as in Europe.

The final goal of the conference is to develop integrated views and common European-Japanese recommendations which have the potential to avoid digital risks like division of society, socially incompatible developments, disintegration, leaving behind the elderly, social conflicts etc. and to support digital chances to reach aims like equality and fairness of participation, balance of chances and opportunities, cooperation instead of competition, human wellbeing, social peace and to develop the societal and digital transformation in a peaceful spirit.

This conference is the second of a new series of events initiated by EJEA. Austria has been chosen as location, since this year, 2019, marks the 150. Anniversary of the establishment of diplomatic relations between Japan and Austria by concluding a “Treaty of Friendship, Commerce and Navigation” in October 1869.
WELCOME MESSAGE

This year’s conference dealing with the peaceful interaction of man and machine is following-up the previous conference’s topic targeting digitalization and society. Combining current, innovative trends with traditional values is the Japanese way to deal with new situations – and from a European perspective, it is quite worth to take a closer look at the Japanese vision “Society 5.0”, that places the human being into the center.

Our profound gratitude goes to the supporters of this conference: The Japanese Embassy Vienna, the Japan World Exposition 1970 Commemorative Fund of the Kansai Osaka 21st Century Association, and the two Austrian Ministries for Europe Integration Foreign Affairs and for Traffic, Innovation and Technology, the Federal State of Styria and the City of Graz as well as AT&S, AVL, citycom, fnma, Industriellenvereinigung Steiermark, and Steiermärkische Sparkasse.

Last but not least, our sincere thanks for you, keynote speakers, workshop organizers and participants – without your effort and contributions this conference would not be possible and successful!

Prof. Dr. Anders Törnvall (EJEA)

Dr. Elisabeth Lex (TU Graz)

Prof. Dr. Dietrich Albert (Uni Graz, TU Graz, EJEA)

Lars Vargő (ISDP)
Program

Friday | September 20, 2019

09:00 Registration
09:30 Welcoming remarks

Moderator of Welcome Remarks and Keynotes: Prof. em. Dr. Anders Törnvall, Linköping University, Sweden, & Nordic Institute of Asian Studies, Denmark

Prof. Dr. Dr. h.c. mult. Harald Kainz, Rector of Graz University of Technology (TU Graz)

Prof. Dr. Frank Kappe, Vice-Dean of Faculty of Computer Science and Biomedical Engineering (CSBME, TU Graz)

Assoc. Prof. 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. Dr. Dietrich Albert, Chair of European Japan Experts Association (EJEA)

10:00 “Digital Austria – Status & Initiatives”

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

10:45 “Making Society 5.0 a Reality”

Dr. Yuko Harayama, Former Executive Member of Council of Science and Technology Policy, Cabinet Office, Japan; Elsevier Foundation Board Member

11:15 Coffee break

11:45 “Trustworthy Human-Centric AI”

Dr. Fredrik Heintz, Department of Computer and Information Science, Linköping University; Member of the European Commission High-Level Expert Group on Artificial Intelligence

12:30 Lunch break

13:30 “Citizen-Centered Design for Human-Technology Symbiosis”

Dr. Dr. Norbert A. Streitz, Scientific Director of Smart Future Initiative, Germany

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 a 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 by the Governor of Styria and the Mayor of the City of Graz at “Grazer Burg”
PROGRAM

SATURDAY | SEPTEMBER 21, 2019

09:30 6 parallel workshops

WORKSHOP 1: Ethics in the Digitalized Era: Western and Eastern Contexts
CHAIR: Dr. Kay-Wah Chan, Department of Accounting and Corporate Governance, Macquarie University (Australia)

CONTRIBUTIONS:

Prof. Dr. Michal Černý, Radim Šip and Prof. Dr. Denisa Denglerová:
“The Principle of Non-Discrimination in the Infosphere: A New Ethics”

Hristina Veljanova and Norah Neuhuber:
“A European Approach for Trustworthy Technologies”

Dr. Kay-Wah Chan and Dr. John Selby:
“Legal Ethics in Japan: Compliance Challenges and Risks in the Era of Internet Technologies”

Dr. Helena Webb:
“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 AI
CHAIR: Dr. Lars Vargö, Stockholm Japan Center, Institute for Security and Development Policy (Sweden)

CONTRIBUTIONS:

DI Bernd Prünster:
“A Holistic View on Digital Security”

WORKSHOP 3: Future Role of Artificial Intelligence in Europe and Japan in Realizing Human-Centered Digitalization
CHAIRS: Dr. Roman Kern, Know-Center GmbH and Institute of Interactive Systems and Data Science, TU Graz (Austria), and Prof. Dr. Tobias Schreck, Institute of Computer Graphics and Knowledge Visualization, TU Graz (Austria)

CONTRIBUTIONS:

Dr. Roman Kern:
“AI and Digitalization in Industry”

Prof. Dr. Tobias Schreck:
“Preservation and Analysis of Digital Cultural Heritage Objects”

Dominic Manwani and Dr. Lisa-Christina Winter:
“Psychology and Artificial Intelligence: A User Experience (UX) Approach to Tackle AI”
WORKSHOP 4: Innovating Digital Education and Skills in Different Cultures, on a Global Scope and in an Interdisciplinary Context  
CHAIR: Dr. Paul Lefrere, Cognitive Science Section, University of Graz (Austria) and CCA-Research (UK)  
CONTRIBUTIONS:  
Dr. Paul Lefrere:  
“Preparing Humans and Robots for the Harmonious Evolution of Human-Centered Collective Intelligence Exploiting Ubiquitous AI”  
Prof. Dr. Horst Zeinz and Dr. Masashi Urabe:  
“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’”  
Sebastian Dennerlein, Viktoria Pammer-Schindler et al.:  

WORKSHOP 5: 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: Dr. Martin Kandlhofer, Institute of Software Technology, TU Graz (Austria)  
CONTRIBUTIONS:  
Dr. Martin Kandlhofer:  
“Enabling the Creation of Intelligent Things – The European Driving License for Robots and Intelligent Systems”  
Dr. Oliver Schürer:  
“Together? How to share Space with Robots”  
Dr. Peter Moertl:  
Prof. Dr. Harald Kolrep, Jiré Gözen, Manon Clasen:  
“Human-Robot-Interaction (HRI) in Healthcare and Nursing”  
Dr. Lucas Paletta, Sandra Schüssler et al.:  
“Socially Assistive Care Robots in Dementia Motivated from Health Care, Neuropsychology and ICT”

WORKSHOP 6: What are the Consequences of Digitalization for Economy, Society and Job Market in Europe and Japan?  
CHAIRS: Prof. Dr. Heinz-Dieter Kurz, Dr. Stella Zilian, Schumpeter Centre at University of Graz (Austria)  
CONTRIBUTIONS:  
Prof. Dr. Heinz D. Kurz:  
“Riding a New Wave of Innovations”
PROGRAM

Dr. Atsuko Sano:
“The Fourth Industrial Revolution and Promotion of Gender Equality – Implications of Comparing Germany and Japan”

Prof. Dr. Heinz-Jürgen Klepzig:
“Lean Industry 4.0: Selling Hope or Real Advantages? – An Economic View”

Stelios Damalas:
“The Importance of Acceptance and Job Satisfaction in the Conception and Design of Assistance Systems in Production”

Martin Griesbacher, MA:
“Ambivalences of Working Time Autonomy in the Digital Age”

11:30 Coffee Break
12:30 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-Centered Digitalization”

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 Ajanović, Senior Researcher, Control Systems, VIRTUAL VEHICLE, Kompetenzzentrum - Das virtuelle Fahrzeug Forschungsgesellschaft mbH, Graz (Austria):
“Towards Superhuman Autonomous Vehicles”
**Keynote Title**

“Digital Austria – Status & Initiatives”

**Abstract**

Austria has a long and successful history of digitizing government services through technologies such as digital signatures, ELGA and e-Card. In addition, digitalization of the economic sector is well under way with the producing industry leading the efforts. In order to reach also SMEs, Austria has adopted the concept of Digital Innovation Hubs (DIH). A central initiative started this year is the Digitalization Agentur (DIA) which aims to link the manifold networks together. This talk will try to provide an overview of the current state of digitalization within Austria and discuss the challenges to come.

**CV**

Univ.-Prof. Dr. Stefanie Lindstaedt is the Head of the Institute for Interactive Systems & Data Science (ISDS) at Graz University of Technology and CEO of Know-Center (www.know-center.at), Austria’s leading Research Center for Data-driven business and Big Data Analytics. By annually undertaking more than 50 applied science projects Know-Center effectively bridges the gap between science and industry, already since 2001.

Stefanie has an excellent track record in obtaining EU and Austrian funding (e.g. APOSDLE IP, MATURE IP, MIRROR IP, LAYERS IP, STELLAR NoE, OrganicLingua, EEXCESS, CODE, SemI40, ...) and leading large interdisciplinary research projects and groups.

She has published more than 150 scientific papers in conferences and journals and supervised over 15 of Ph.D. theses. Since 2010 Stefanie is General Chair of the I-Know conference series (www.i-know.at), she acted as Program Chair of EDF 2015 and EC-TEL 2012 conferences.

Stefanie earned her habilitation in Computer Science from Graz University of Technology (Austria), where she has been teaching undergraduate and graduate courses since 2002. She holds an M.S. and a Ph.D. in Computer Science from the University of Colorado at Boulder (USA). Before joining Know-Center, she led various projects at Daimler (Chrysler) Research in Ulm (Germany) and was a product manager for web-globalization services at GlobalSight in Boulder (USA).

Stefanie is an interdisciplinary researcher in the fields of data-driven business and adaptive systems. She has a strong background in computer science, especially artificial intelligence. Her research focus is the integration of data-driven approaches (e.g., machine learning, neural networks) with knowledge-based models (e.g., ontologies, engineering models) and human computer interaction.

On the business side, Stefanie has extensive industry experience in process and technical consulting, solution sales, marketing and organizational development for international companies.
Dr. Yuko Harayama

Keynote Title

“Making Society 5.0 a Reality”

Abstract

Since its launch in 2016, « Society 5.0 », the concept proposed by Japan in its 5th Science and Technology Basic Plan, has received many echoes around the world, this beyond the traditional sphere of the Science and Technology policy community.

In fact, Society 5.0 has been captured as a way to prepare our future backed by the digital technologies, but with a particular eye on the fundamental values of society, such as sustainability, inclusiveness and openness. Also, within the context of ever-growing digitalization and connectivity, and expending use of Artificial Intelligence (AI) technologies, it became so critical to move from techno-centric to human-centered approach.

In my presentation, I will report how this concept has been adopted in the Japanese society and also around the world, and will discuss its implication.

CV

Dr. Yuko Harayama is the former Executive Member of the Council for Science and Technology Policy, Cabinet Office of Japan. She is the former Deputy Director of the Directorate for Science, Technology and Innovation, OECD. She is a Legion D’Honneur recipient (Chevalier), and was awarded honorary doctorate from the University of Neuchâtel. Previously, she was Professor in the Department of Management Science and Technology at the Graduate School of Engineering of Tohoku University. She holds a Ph.D. in education sciences and a Ph.D. in economics, both from the University of Geneva.
Dr. Fredrik Heintz

Keynote Title
“Trustworthy Human-Centric AI”

Abstract
The European Union has taken the stance that AI should be trustworthy and developed in a human-centric way with the goal of improving individual and societal well-being. This talk will present the European approach to trustworthy human-centric AI and some research challenges related to it. To be trustworthy an AI-system should be lawful, ethical and robust, as defined by the European Commission High-Level Expert Group on AI. To operationalize these is a major challenge and will require new research. The second part of the talk gives an overview of the state-of-the-art and potential future solutions to these challenges.

CV
Dr. Fredrik Heintz is an Associate Professor of Computer Science at Linköping University, Sweden. He leads the Stream Reasoning group within the Division of Artificial Intelligence and Integrated Systems (AIICS) in the Department of Computer Science. His research focus is artificial intelligence especially autonomous systems, stream reasoning and the intersection between knowledge representation and machine learning. He is the Director of the Graduate School for the Wallenberg AI, Autonomous Systems and Software Program (WASP), the President of the Swedish AI Society and a member of the European Commission High-Level Expert Group on AI. He is also very active in education activities both at the university level and in promoting AI, computer science and computational thinking in primary, secondary and professional education. Fellow of the Royal Swedish Academy of Engineering Sciences.
Keynote Title
“Citizen-Centered Design for Human-Technology Symbiosis”

Abstract
Our current and our future world is, resp. will be determined by digital technologies in an unprecedented way. Future work and living environments, realized as smart ecosystems based on the Internet of Things (IoT) and Artificial Intelligence (AI) as the software layer, will result in a high degree of automation and surveillance. Extensive collection, aggregation, processing, exchange of data is necessary for achieving the technical goals. It often takes place without consent of the citizens concerned. This keynote reflects on the role and options of humans in smart and automated ecosystems. Major issues are the increasingly relevant design trade-offs, e.g., automation or autonomy vs. human control (e.g., in human-robot collaboration) and smartness vs. privacy. The analysis results in a proposal for a citizen-centered and ethically guided design of human-technology symbiosis. It requires rethinking and redefining the "smart-everything" paradigm (as I like to refer to the current technology hypes), empowering people, keeping humans in the loop. Application domains are smart cities (but only as humane, sociable, cooperative cities), autonomous driving, human-robot collaboration. Citizen-centered design and adhering to European regulations (GDPR) can provide competitive advantages and USPs for enterprises. The mission is to empower people for the upcoming changes at an individual, organizational and societal level as well as to reflect on general implications for future successful economies and livable societies.

CV
Dr. Dr. Norbert Streitz (Ph.D. in physics, Ph.D. in cognitive science) is a Senior Scientist and Strategic Advisor with more than 35 years of experience in information and communication technology. Founder and Scientific Director of the Smart Future Initiative launched in 2009. From 1987 – 2008, positions as Deputy Director and Division Manager at Fraunhofer Institute, Darmstadt, Germany, combined with teaching at Computer Science Dept., Technical University Darmstadt for more than 15 years. From 1978– 1986, Assistant Professor at the Technical University Aachen (RWTH). At different times of his career, post-doc research fellow at the University of California, Berkeley; visiting scholar at Xerox PARC, Palo Alto, and at the Intelligent Systems Lab of MITI, Tsukuba Science City, Japan. He has published/edited 30 books and authored/coauthored more than 160 scientific peer-reviewed papers. Research and teaching cover many areas: Cognitive Science, Human-Computer Interaction, Hypertext/Hypermedia, Computer-Supported Cooperative Work (CSCW), Ubiquitous Computing, Privacy Enhancing Technologies, Interaction and Experience Design, Hybrid Worlds, Artificial Intelligence and Ambient Intelligence, Smart Manufacturing/ Industry 4.0, Autonomous Driving, Smart Cities and Smart Airports. Principal Investigator and manager of projects funded by the European Commission (EC), national and international funding agencies, and industry. Reviewer and evaluation expert for the EC, member of editorial boards of journals and book series, advisory boards of institutes in Europe and Asia, senior advisor and consultant for industry. Norbert organized many conferences as general or program chair during his long career and is regularly invited as keynote speaker at international commercial as well as scientific events.
**Keynote Title**

“EU-Japan Collaboration in AI Ethics and Governance”

**Abstract**

AI technologies have rapidly penetrated human society and it varies according to the country, region and socio-political context considered. Discussions of the ethical, legal and social implications of artificial intelligence (AI) are taking place in the government, industry, academia, and in public in Japan as well as abroad. Moreover, R&D guidelines and utilization guidelines have been discussed and AI ethics and governance are becoming important topics. This talk shares some case and experiences from the Japanese community to consider the impact of AI on our society, focused in relationships with EU.

**CV**

Arisa Ema is Assistant Professor at the University of Tokyo and Visiting Researcher at RIKEN Center for Advanced Intelligence Project in Japan. She is a researcher in Science and Technology Studies (STS), and her primary interest is to investigate the benefits and risks of artificial intelligence by organizing an interdisciplinary research group. She is co-founder of Acceptable Intelligence with Responsibility Study Group (AIR) (http://sig-air.org/) established in 2014, which seeks to address emerging issues and relationships between artificial intelligence and society. She is a member of the Ethics Committee of the Japanese Society for Artificial Intelligence (JSAI), which released the Japanese Society for Artificial Intelligence Society Ethical Guidelines in 2017. She is also a board member of Japan Deep Learning Association (JDLA) and chairing Public Affairs Committee. She obtained Ph.D. from the University of Tokyo in 2012 and previously held position as Assistant Professor at the Hakubi Center for Advanced Research, Kyoto University.
Keynote Title

“Why Human-Centered is Necessary? How can we Digitalize? Trial Answers from a University of Japan”

Abstract

Human-centered digitalization is a very attractive theme and idea to realize advanced and creative computerized society with Industrie 4.0, SDGs and the next generation Society.

This article describes my introductory talk about analog vs. digital and why human-centered is necessary. And then it demonstrates our experience of challenging researches for human-centered digitalization. For example, first of all, I would like to illustrate education of computer and network for human-centered digitalization. Not only learners but also teachers need useful tools for their effective learning and efficient teaching. One is computer simulator and another is network simulator. In such a case, “easy-to-operate” is important and moreover “to be precise” and “to be reproducible” are also definitely important and necessary for both of learners and teachers.

Secondarily, I focus on mobile computing based researches from my previous studies. The first half of them is to utilize mobile phone (not smart-phone) for monitoring and controlling as a part of surveillance system. Their second half is to employ smart phone as smart sensor. The former can be based on its capability to be precise, while the latter can emphasize its capability to be reproducible. Both of the relevant researches explicitly include human-centered digitalization.

Finally, I give illustration of the following three examples of collaboration through digitalization such as evaluation of camera performance, personal health data from health screening and e-Healthcare scheme for health management. One is to work together with my friends of small scale enterprise, others is to do collaboration with medical doctor. With the results from digitalization, performance evaluation and analysis have been objectively confirmed and health has become explicitly easy to manipulate and can be verified periodically, precisely and reproducibly.

Last but not least, from the important viewpoint of human-centered digitalization, my relevant researches will be able to obtain more interesting values and applicable energy for productive purpose.

CV

• Education: B. S. Engineering (Information Science), Kyoto University, 1980
• Education: Ph.D. Engineering (Electronics & Computer Science), Tokyo University of Agriculture and Technology, 2008
• Employment: Ass. Professor, Takuma National College of Technology 1980–1993
• Employment: Ass. Professor and Professor, Kagawa University 1993–present
Keynote Title
“Big Data & Artificial Intelligence”

Abstract
This talk will review recent developments in Artificial Intelligence. It will show examples of current AI systems. It will also present some short comings of current systems and will emphasize robustness, introspection, adaptivity, transparency, explainability and fairness as ingredients of future systems.

CV
Horst Bischof received his M.S. and Ph.D. degree in computer science from the Vienna University of Technology in 1990 and 1993. In 1998 he got his Habilitation (venia docendi) for applied computer science.

Currently he is Vice Rector for Research at Graz University of Technology and Professor at the Institute for Computer Graphics and Vision at the Graz University of Technology, Austria. H. Bischof is a member of the scientific board of Joanneum Research. His research interests include object recognition, visual learning, on-line and life-long learning, motion and tracking, visual surveillance and biometrics and medical computer vision where he has published more than 750 peer reviewed scientific papers.

Horst Bischof was General Chair of CVPR 2015 and ECCV2018. He was program co-chair of ECCV2006 and ECCV 2020. He is multiple times Area chair of all major vision conferences. He was Associate Editor for IEEE Trans. on Pattern Analysis and Machine Intelligence, Pattern Recognition, Computer and Informatics and the Journal of Universal Computer Science.

Horst Bischof is member of the European academy of sciences and has received several awards >20 among them the Most Influential Paper over the Decade Award from MVA 2019, the Jan Konder-ink award at ECCV 2018 and the 29th Pattern Recognition award in 2002, the main price of the German Association for Pattern Recognition DAGM in 2007 and 2012, the Best scientific paper award at the BMVC 2007, the BMVC best demo award 2012 and the Best scientific paper awards at the ICPR 2008, ICPR2010, PCV 2010, AAPR2010 and ACCV 2012.
WORKSHOP 1:
ETHICS IN THE DIGITALIZED ERA: WESTERN AND EASTERN Contexts

Chair: Dr Kay-Wah Chan

Abstract of Workshop 1

Technologies, such as internet technologies and artificial intelligence, have been developing rapidly. They become increasingly used by different sectors in the society for different purposes. Their usage may bring many benefits such as efficiency and cost-saving. However, there may also be risks and challenges. Will the technologies be in line with ethical value of the society? What are the ethics in the design and use of technologies? Will the usage expose the users to risks of violating their ethical obligations or duties? The contributions in this workshop will explore these questions. Michal Černý, Radim Šíp and Denisa Denglerová, in their contribution entitled “The Principle of Non-Discrimination in the Infosphere: A New Ethics”, argue that the ethical framework on discrimination / non-discrimination in Western culture does not adequately cover the situations regarding artificial intelligence. They will propose principles of non-discrimination that will cover people and “biotic and technical entities in the infosphere”. In their contribution entitled “A European Approach for Trustworthy Technologies”, Hristina Veljanova and Norah Neuhuber aim to address the issue that technology needs to be “trustworthy” and “respect[ing] and reflect[ing] fundamental rights and values”. They provide a framework of values and rights for “the design and use of new technologies” and offer an insight into the VERDI project: “Trust in digitisation using the example of systems for (partially) autonomous driving and driver assistance”. Kay-Wah Chan and John Selby, in their contribution entitled “Legal Ethics in Japan: Compliance Challenges and Risks in the Era of Internet Technologies”, analyse the ethical challenges and risks that lawyers in Japan face in their use of Internet technologies. They also explore whether the current ethical regulatory framework is adequate in protecting the public from harm that may result in Japanese lawyers’ use of those technologies.

CV of the Chair

Dr Kay-Wah Chan is a senior lecturer in law in Macquarie University, Sydney, Australia. He has research interest in Japanese law and society, particularly the legal professions and quasi-legal professions in Japan. Currently, his main research focus is on lawyers’ ethics in Japan. He is also working with his colleague Dr John Selby on projects regarding technology and the legal profession in Japan and Australia. Dr Chan has published journal articles and/or book chapters on the legal professions in Japan and other Asian law and society or Asian law topics. He has co-edited/co-authored two books on Chinese commercial law / legal system. Dr Chan is a member of the Editorial Board of the Asian Journal of Law and Society. He presents papers in international conferences regularly and received invitations to deliver speeches/lectures and present papers in seminars, lectures, workshops, symposia and conferences in different places in the world. Dr Chan is very active in international research collaborative activities. From 2018, he has been serving as the President-Elect of the Asian Law and Society Association and will assume the role as its President in 2020 – 2021.
WORKSHOP 1:
ETHICS IN THE DIGITALIZED ERA: WESTERN AND EASTERN Contexts

WORKSHOP 1 CONTRIBUTIONS:

Prof. Dr. Michal Černý, Radim Šíp and Prof. Dr. Denisa Denglerová:
“The Principle of Non-Discrimination in the Infosphere: A New Ethics”

Hristina Veljanova and Norah Neuhuber:
“A European Approach for Trustworthy Technologies”

Dr. Kay-Wah Chan and Dr. John Selby:
“Legal Ethics in Japan: Compliance Challenges and Risks in the Era of Internet Technologies”

Dr. Helena Webb:
“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 AI

CHAIR: Dr. Lars Vargö

Abstract of Workshop 2
With the coming-into-effect of two major international agreements, the EU-Japan Economic Partnership Agreement and the EU-Japan Strategic Partnership Agreement, there is a liberal momentum engineered by the EU and Japan – one that goes against an international trend colored by crackdown on dissent in Hong Kong, authoritarianism in Russia and “America First”. Among many fields outlined in the agreement, the SPA promises cooperation in cyber security, an area that is extremely topical in this time of “fake news”, cyber attacks and surveillance ambitions of totalitarian regimes. In the light of the EU-Japan SPA, this workshop seeks to discuss the history, the now, and the prospects for future EU-Japan cyber security and AI cooperation.

CV of the Chair
Dr. Lars Vargö is Head of the Institute for Security and Development Policy’s Stockholm Japan Center, as well as former Swedish Ambassador to Japan (2011-14) and South Korea (2006-11). He holds a Ph.D. in Japanese studies (history) from Stockholm University (1982). He graduated from Uppsala University 1972 with a major in sinology. In 1972-76 he was a repeat Mombusho scholar at Kyoto University. As a diplomat Vargö has returned to Japan four times, but has also served in Libya, Lithuania and the United States. 2001-2005 he served as Ambassador and Head of the International Department of the Swedish Parliament. Correspondence to: lvargo@isdp.eu.

WORKSHOP 2 CONTRIBUTIONS:
DI Bernd Prünster:
“A Holistic View on Digital Security”
WORKSHOP 3:
FUTURE ROLE OF ARTIFICIAL INTELLIGENCE IN EUROPE AND JAPAN IN REALIZING HUMAN-CENTERED DIGITALIZATION

CHAIRS: Dr. Roman Kern and Prof. Dr. Tobias Schreck

Abstract of Workshop 3

Machine Learning and Artificial Intelligence provide novel approaches with the potential to transform many important aspects of industry and culture, society, research and many other fields. In many domains, new technologies disrupt long-established processes and present new opportunities, chances but also, risks and challenges. In this workshop, speakers from User Interaction Design, Psychology, and Computer Science address facets of such disruptive new technologies, asking important questions and providing guidance as to the potential.

CV of the Chairs

Roman Kern is the head of Knowledge Discovery at the Know-Center (competence centre for Big Data analytics and data-driven business) and works at the Institute for Interactive Systems and Data Science at the Technical University of Graz.

Roman's research interest are multi-disciplinary and include Natural Language Processing, Machine Learning and Information Retrieval - with a focus on Data Science and Big Data Analytics. He applies these methods in fields like Scientific Publication Mining, Intelligent Transportation Systems, and Smart Production. His work includes writing of proposals for national and international research projects; he served as coordinator, work package lead, scientist in charge and national contact point for numerous research projects, ranging from small national projects to big European projects.

Tobias Schreck is a Professor with the Institute of Computer Graphics and Knowledge Visualization at Graz University of Technology, Austria.

Between 2011 and 2015, he was an Assistant Professor with the Data Analysis and Visualization Group at University of Konstanz, Germany. His research interests are in Visual Analytics and in applied 3D Object Retrieval. With his research group, he works on methods for visual exploration of high-dimensional and spatial-temporal data, and 3D object data, supporting data understanding and decision-making. Tobias Schreck has served as a paper co-chair for the IEEE VIS Conference on Visual Analytics Science and Technology (VAST) in 2018 and 2017. Also, he previously served as co-chair for Posters, Workshops and Panels for IEEE VIS, as well as a co-organizer for the EG Workshop on 3D Object Retrieval.
WORKSHOP 3:
FUTURE ROLE OF ARTIFICIAL INTELLIGENCE IN EUROPE AND JAPAN IN REALIZING HUMAN-CENTERED DIGITALIZATION

WORKSHOP 3 CONTRIBUTIONS:

Dr. Roman Kern:
“AI and Digitalization in Industry”

Prof. Dr. Tobias Schreck:
“Preservation and Analysis of Digital Cultural Heritage Objects”

Dominic Manwani and Dr. Lisa-Christina Winter:
“Psychology and Artificial Intelligence: A User Experience (UX) Approach to Tackle AI”
WORKSHOP 4:
INNOVATING DIGITAL EDUCATION AND SKILLS IN DIFFERENT CULTURES, ON A GLOBAL SCOPE AND IN AN INTERDISCIPLINARY CONTEXT

CHAIR: Dr. Paul Lefrere

Abstract of Workshop 4
Through their discussions of the three linked contributions that begin this workshop, and in the context of opportunities for substantial funding for linked research and innovation, participants in this workshop will be able to share their ideas on creative, productive, respectful and powerful ways to blend insights from multiple cultures, using collaborative digital education where this is appropriate. A recurrent theme we shall explore is the notion of using Human Centered Digitalization to create bridges between different communities, for example new and old realms, virtual/augmented and real, young and old, evolving change versus radical change, expert and novice, follower and sensei, open/free knowledge and knowledge-monetisation. Popular and proven innovation methodologies such as Sandpit and Marketplace will cross-fertilise discussions of all the papers. Present-day and prospective forms of intelligence augmentation and skill augmentation will be discussed in the context of AI-enhanced and robotic-enhanced Human Centered Digitalization and collective intelligence. Short video examples will be given, to show possible futures.

CV of the Chair
Dr. Lefrere provides internationally-regarded Strategic Advice on how higher education institutions and public agencies can collaborate with industry to foster technology transfer, spin outs and job and wealth creation at societal level through research and innovation (eg on AI and cognitive science), collaboration on global standards, and entrepreneurship.

Senior Scientist, Cognitive Science Section, University of Graz, Austria, and CEO of CCA-Research (Applied Psychology and AI solutions company with strong portfolio of boundary-crossing R&D). Honorary senior researcher positions in knowledge media (UK: Open University; Finland: Tampere, Hameenlinna). Background: cross-disciplinary uses of quantum physics and AI for innovation, personal knowledge management, privacy. Past Executive Director of Microsoft EMEA. In recent years his research has focused on developing shareable approaches to applying public R&D.

WORKSHOP 4 CONTRIBUTIONS:
Dr. Paul Lefrere:
“Preparing Humans and Robots for the Harmonious Evolution of Human-Centered Collective Intelligence Exploiting Ubiquitous AI”

Prof. Dr. Horst Zeinz and Dr. Masashi Urabe:
“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’”

Sebastian Dennerlein, Viktoria Pammer-Schindler et al.:
**Workshop 5:**
**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:** Dr. Martin Kandlhofer

**Abstract of Workshop 5**

Robots and Artificial Intelligence (AI) are already part of our daily life. However, robots are often viewed as humans’ servants. On the contrary, in science fiction films and literature intelligent robots regularly try to take over the world, enslaving humankind. One precondition for this scenario is - of course - that robots are autonomous systems based on AI. Thus, the term robot is often used as a metaphor for autonomous intelligent systems. In this context several questions arise. Should we copy or clone humans in order to create biological autonomous systems? Actually, what is the difference between biological and digital (artificial) autonomous intelligent systems? Can robots and humans effectively cooperate? For an effective interaction between robots and humans it seems to be necessary that people know about technical concepts and AI of robots, that humans trust in robots and vice versa, as well as that humans’ fear and prejudice regarding robots is reduced. Optimizing the interaction and cooperation between humans and robots is essential not only for achieving specific tasks or for addressing individuals, but also for fostering a positive development of society in general.

**CV of the Chair**

Martin Kandlhofer received an M.Sc. in Software Engineering in 2010 and a Ph.D. in Computer Science in 2017 from Graz University of Technology.

His area of research is the preparation and evaluation of AI topics for different age groups on different educational levels (K-12, undergraduate). He has published a number of papers at international conferences, workshops and journals. He is currently member of the research group Autonomous Intelligent Systems at Graz University of Technology, working as post-doctoral researcher in the EU funded project “EDLRIS - European Driving License for Robots and Intelligent Systems”.

**Workshop 5 Contributions:**

**Dr. Martin Kandlhofer:**
“Enabling the Creation of Intelligent Things – The European Driving License for Robots and Intelligent Systems”

**Dr. Oliver Schürer:**
“Together? How to share Space with Robots”

**Dr. Peter Moertl:**

**Prof. Dr. Harald Kolrep, Jiré Gözen, Manon Clasen:**
“Human-Robot-Interaction (HRI) in Healthcare and Nursing”

**Dr. Lucas Paletta, Sandra Schüssler et al.:**
“Socially Assistive Care Robots in Dementia Motivated from Health Care, Neuropsychology and ICT”
WORKSHOP 6:
WHAT ARE THE CONSEQUENCES OF DIGITALIZATION FOR ECONOMY, SOCIETY AND JOB MARKET IN EUROPE AND JAPAN?

CHAIRS: Prof. Dr. Heinz-Dieter Kurz and Dr. Stella Zilian

Abstract of Workshop 6

Many advanced economies have experienced low growth rates and modest aggregate productivity gains for some time now – a problem which is high on the agenda of policy makers and economists both in Asia and Europe. An essential part of its solution may come from the surge of innovations and investments spurred by the vast economic potential of digitalization and smart technologies. This “second machine age” opens up new and promising ways to spur growth but may also raise serious socioeconomic challenges. One of them is the impact of digitalization on the labor market. Ever since, technological change has also instilled the fear of human work becoming superfluous in the long run. Thus far, the predictions of a constantly high technological unemployment have never been fulfilled. On the contrary: Radical innovation has given rise to the creation of new jobs and industries and further they contributed to an increase in labor productivity and productive capacities, improved living standards and fostered the development of new products. However, as the rate of technological change is set to outpace productivity growth (which usually drives labor demand), the trends and effects caused by digitalization on the job market, and on the economy and society as a whole, have to be thoroughly investigated.

In this workshop, we will therefore discuss inter alia the following issues:

• To what extent are labor markets in Europe and Japan affected by digitalization and automatization?

• How have the framework conditions of production changed? Are the economies ready for technological transformation from a broad socioeconomic perspective?

• Are the right institutions in place to promote the development and proliferation of smart technologies, on the one hand, and to compensate those left behind in the technological race, on the other?

CV of the Chairs

Professor Heinz D. Kurz acquired his PhD in Economics at the University of Kiel in 1975, where he was Associate Professor of Economics until 1979, when he was appointed Professor of Economics at the University of Bremen. From 1988 onwards Heinz D. Kurz held a chair as Full Professor of Economics at the University of Graz, and additionally he was director of the Graz Schumpeter Centre for studies in economic and social development (GSC) from 2006 until 2015. Heinz D. Kurz has published numerous papers in major economic journals, including the Journal of Political Economy, the Journal of Economic Behavior and Organization, the Journal of Evolutionary Economics etc.; and several books with leading international publishers, including Cambridge University Press, Columbia University Press, Macmillan, Routledge, among them Theory of Production (1995, with N. Salvadori), which was also translated into Russian and Chinese. His research interests are wide-ranging, including topics of economic theory such as production theory and economic growth, capital accumulation and technological change.
WORKSHOP 6:  
WHAT ARE THE CONSEQUENCES OF DIGITALIZATION FOR ECONOMY, SOCIETY AND JOB MARKET IN EUROPE AND JAPAN?

Stella Zilian works as a researcher at the Graz Schumpeter Centre for studies in social and economic development (GSC). She received her Master’s degree in Economics from the University in Graz and is currently enrolled in the PhD programme at Vienna University of Business and Economics (WU Wien). In her PhD-thesis she focuses on the empirical analysis of the relationship between technological change and inequality. Her main research interests lie in the exploration of wage inequality, employment polarization, gender inequality as well as the labor market discrimination of migrants. Before joining the GSC, she has been working at the Research Institute Economics of Inequality (INEQ) on the project "Technological Change and Inequality". She has also been involved in the OeNB project "The Social and Economic Advantages of Migration and Europe" at WU Wien.

WORKSHOP 6 CONTRIBUTIONS:

Prof. Dr. Heinz D. Kurz:
“Riding a New Wave of Innovations”

Dr. Atsuko Sano:
“The Fourth Industrial Revolution and Promotion of Gender Equality – Implications of Comparing Germany and Japan”

Prof. Dr. Heinz-Jürgen Klepzig:
“Lean Industry 4.0: Selling Hope or Real Advantages? – An Economic View”

Stelios Damalas:
“The Importance of Acceptance and Job Satisfaction in the Conception and Design of Assistance Systems in Production”

Martin Griesbacher, MA:
“Ambivalences of Working Time Autonomy in the Digital Age”
**THE SCIENTIFIC COMMITTEE**

**Prof. Dr. Dietrich Albert**

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Prof. Dr. Albert is currently  
(a) Professor em. at the University of Graz (Faculty of Natural  
Science, Department of Psychology, Cognitive Psychology and  
Neuroscience), chairing the Cognitive Science Section (CSS,  
http://cognitive-science.at),  
(b) Senior Scientist at the Graz University of Technology (Faculty  
of Computer Science and Biomedical Engineering, Institute of Interactive Systems and Data  
Science), and  
(c) Key Researcher at the Know-Center GmbH, Austria’s leading research center for big data anal-  
ysis and data-driven business.

He graduated from the University of Göttingen (Germany) with a degree in Psychology (Dipl.-Psy-  
chol.). His Doctor Degree (D.Sc.) and his postdoctoral degree (Habilitation) he received from the  
University of Marburg/Lahn (Germany). He was Professor of Experimental Psychology at the Uni-  
versity of Heidelberg (Germany), and Professor of Psychology, Head of Institute of Psychology and  
Lead of Cognitive Science Section at the University of Graz (Austria).

Prof. Albert has been Research Fellow at Kyushu Institute of Technology (3 months), Visiting Pro-  
fessor at Hiroshima University (12 months) and Visiting Lecturer at Osaka Prefecture University (1  
month). Currently he is chairing the European Japan Experts Association (EJEA).

Until recently Dietrich Albert was the Chair of the Scientific Advisory Board and the Board of  
Trustees of the Leibniz-Center for Psychology Information (ZPID), Germany; he co-founded sci-  
entific associations, e.g. the Wilhelm Wundt Society (Germany). His research topics cover several  
areas in cognitive science; his current research focuses on (a) knowledge and competence structures  
and their technical applications in different fields, (b) human decision processes in the context of  
technical support of security measures and smart cities, and (c) evaluation of adaptive systems. He  
is (co-)editor of several books on knowledge and competence structures (published by Springer-Ver-  
lag and by Lawrence Erlbaum Ass.), and (co-)author of about 200 publications in reviewed journals  
and proceedings volumes (http://cognitive-science.at/publications/alphabetical-list/).

Dietrich Albert’s expertise and that of his interdisciplinary team Cognitive Science Section (psy-  
chologists, computer scientists, mathematicians) in European and National R&D&I projects are  
documented by numerous successful co-operative projects e.g. GRAPPLE, 80Days, TARGET,  
ROLE, ImREAL, NEXT-TELL, GaLA, CULTURA, INNOVRET, RECOBIA, weSPOT, MER-  
ITS, S-HELP, LEA’s BOX, VALCRI, RAGE, OMFix, CODALoop (http://web.cognitive-science.  
at/projectvis). Combining Cognitive Science and Information Communication Technology is the  
focus of research and development in these projects.
THE SCIENTIFIC COMMITTEE

Prof. Dr. Anders Törnvall

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2009  Associate Professor, Nordic Institute of Asian Studies, Copenhagen University
2000  Full Professor, Department of Humanities, Inter-cultural Communication Mälardalen University, Västerås
1988  Associate Professor, Docent Pedagogics, Linköping University
1982 – Director of the SWETECH-program (Swedish Technology in Foreign Countries) (China, Japan, Korea, Malaysia, Indonesia, Taiwan) Linköping Institute of Technology, Linköping University,
1982  Doctor of Philosophy, Ph.D.
spring 1996  Visiting Professor, Meiji University, Tokyo, Japan
spring 1986  Visiting Scholar, Harvard University, U.S.A.
1974 – 75  Visiting Lecturer, University of Lancaster, U.K.
1970  Visiting Lecturer, Concordia Teachers College, III. U.S.A

Assignments
2014  Temporarily assigned to Swedish Television documentary
2004 – Temporarily assigned to European Science Foundation
2004  Temporarily assigned to the Ministry for Foreign Affairs

Latest published research work
• Asiens Dolda Ansikte Djup- Dynamik-Demokrati, Carlsson Förlag, Stockholm 2006

Fields of Teaching at Linköping Institute of Technology, Linköping University
• Networking in Asian countries
• Asian Leadership, Leadership Strategies in Multicultural Teams

Fields of research / Projects
• Papers in Business Culture presented at conferences in U.S.A, Australia, Japan, Germany, U.K. China (Guangzhou and Hong Kong), France, Norway, Eritrea, Korea, Canada Denmark, Finland etc.
• Work motivation and work ethics in the industry – a comparative study in Japan, U.S.A. and Europe Technicians’ attitude to humanism and social science

Memberships
• European-Japan Expert Association (EJEAs), Member of the Executive Committee
• Head of the Department of Japanese Studies with the Master of Science programme in Industrial Engineering and Management-International, Linköping University
THE SCIENTIFIC COMMITTEE

Dr. Lars Vargö

Distinguished Fellow, ISDP
Head of ISDP Stockholm Japan Center
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CV

Dr. Lars Vargö is Head of the Institute for Security and Development Policy’s Stockholm Japan Center, as well as former Swedish Ambassador to Japan (2011-14) and South Korea (2006-11). He holds a Ph.D. in Japanese studies (history) from Stockholm University (1982). He graduated from Uppsala University 1972 with a major in sinology. In 1972-76 he was a repeat Mombusho scholar at Kyoto University. As a diplomat Vargö has returned to Japan four times, but has also served in Libya, Lithuania and the United States. 2001-2005 he served as Ambassador and Head of the International Department of the Swedish Parliament.

Awards

2014 Grand Cordon of the Order of the Rising Sun (Japan)
2003 Ichikawa city (Japan) cultural award
1997 Swedish Academy Grant

Latest publications (Books)

THE SCIENTIFIC COMMITTEE

Ass. Prof. Dr. Elisabeth Lex

Graz University of Technology
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CV

Ass.-Prof. Dr. Elisabeth Lex is assistant professor at Graz University of Technology (TUG) and head of the Social Computing Lab at TUG and Know-Center. Her research interests include Social Computing, Recommender Systems, Computational Social Science, Web Science and Open Science. Elisabeth was work package leader in the FP7 IP Learning Layers, and scientific coordinator of the Marie Curie IRSES Web Information Quality Evaluation Initiative (WIQ-EI) project. She was task leader in the H2020 Analytics for Everyday Learning (AFEL) project where she researched on novel recommender systems and on opinion dynamics in online collaboration networks. Elisabeth was of the Expert Group on Altmetrics, which advised the European Commission, DG Research and Innovation. The expert group developed policies for the commission on how to use altmetrics to assess the impact of scientific artefacts. Elisabeth has published more than 60 scientific publications in venues such as the ACM World Wide Web Conference (WWW), ACM Conference on Hypertext and Social Media (HT), ACM Conference on Recommender Systems, as well as in journals such as Social Network Analysis and Mining (SNAM), Computational Social Networks (CSN), Scientometrics, Frontiers in Research Metrics & Analytics and the International Journal of Human–Computer Interaction on Recommender Systems, Social Network Analysis, Altmetrics, Data Mining, and Machine Learning and she has given several invited talks in the mentioned fields. Elisabeth regularly acts as Senior PC member, PC member and co-organizes and co-chairs a number of workshops and conferences at venues such as ACM IUI, ACM Web Science or OpenSym. Among other courses at Graz University of Technology, Elisabeth teaches Web Science, as well as Computational Social Systems I + II.

Research Interests

Social Computing, Recommender Systems, Computational Social Science, Web Science, Data Science
THE LOCAL ORGANIZING COMMITTEE

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THE EUROPEAN JAPAN EXPERTS ASSOCIATION (EJEA)

Building a Bridge between Europe and Japan through Academia-Government-Industry Collaboration

The European Japan Experts Association e.V. (EJEA) has been founded as an alumni organization on November 4, 1995 by Japan experts from 11 European countries and from the European Commission for the participants of a Japan-fellowship program funded by Japanese companies.

It was strongly felt that such an association would help to generate and disseminate knowledge concerning Japan, especially within the European Union. In addition, meanwhile the association is dealing with further and broader challenges in face of the scientific, economic and political developments as well as organizational changes during the last 20 years.

Thus, EJEA currently aims:
- to be an “umbrella” for serving existing organizations
- to bundle European “voices” from a broad range of disciplines
- to be an international “platform” for discussions about Japan-Europe related topics

Conceived as an interdisciplinary, international association with a European profile and open to experts from academia, government and industry EJEA is performing as a sustainable interdisciplinary network. It develops initiatives on a European level for promoting cooperation, exchange, synergy and transfer of knowledge between Europe and Japan for reaching its aims and goals.

In the process of strengthening and expanding EJEA’s network between Japan and Europe, the Association establishes a more regular, annual conference series. The conference in the vicinity of Stockholm – embedded into the celebration of 150 years diplomatic relationship between Sweden and Japan – on April 13th and 14th 2018 on digitalization and society with the title “Integration and Disintegration in the Japanese Vision of Society 5.0: A Model for an Open Society in Europe?” is the first one of this annual conferences.

WEBSITE: www.ejea.eu

THE GRAZ UNIVERSITY OF TECHNICAL (TU GRAZ)

TU Graz has five internationally-recognized scientific Fields of Expertise. It maintains a balanced relationship between basic, scientific and applied research. TU Graz offers a diverse array of engineering, scientific and design programs. It places a focus on research-based, mainly English-language master’s and PhD programs that are based on bachelors programs that involve basic research. TU Graz provides its students with high-level training, promotes critical and creative thinking and responsible conduct and infuses students with enthusiasm for science and their careers. TU Graz highly values its em-
ployees and supports their personal development. As an innovative scientific and training partner, TU Graz contributes significantly to the attractiveness and development of Styria.

The principles of Graz University of Technology go to form the basis and guidelines which find special consideration in our daily work and association with each other. We are an achievement-oriented community of researchers, teachers, students, staff and alumni who work in an open and innovation-oriented atmosphere of intellectual freedom and responsibility. Our research and teaching results are a valuable commodity which we create and make use of as efficiently as possible – both economically and scientifically. We are committed to achievement and its evaluation in an inspiring environment full of creativity with equal opportunities for all. Our organization in the field of research and teaching is as decentralized as possible, and in the field of services and central administration as centralized as is necessary. We create an atmosphere of belongingness, partnership and solidarity with respect to Graz University of Technology. We actively communicate with the public about our achievements. We are aware of ourselves as a role model and feel committed to it.

Website: www.tugraz.at

THE UNIVERSITY OF GRAZ (UNIGRAZ)

As a comprehensive university, the University of Graz regards itself as an international institution for education and research committed to research and teaching for the benefit of society. It is our policy to maintain freedom in research and teaching, which permanently commits us to social, political and technological developments. Increasing flexibilization and globalization are the essential frame conditions.

Research

Basic and applied research belong to our excellences, based on the foundations of scientific and ethical integrity. We foster topical and methodological variety within an international cooperation network. We build our profile by determining research focuses under the consideration of socially relevant research questions. Innovative interdisciplinary research and cooperation are amongst the subjects especially encouraged. We involve our students in research in the context of research-based teaching. We cooperate with excellent European and non-European universities and participate in important networks. We actively provide our knowledge and the results generated through research to society.

Young Scientists

We regard ourselves as being a both nationally and internationally sought-after partner for young scientists. Our doctoral students and postdocs work in a research group network and acquire thorough preparation for successful careers as scientists in a global context. We support young scientists by providing special training and mobility programs as well as networking and cooperation with other scientific institutions and businesses.

Website: www.uni-graz.at
THE INSTITUTE FOR SECURITY AND DEVELOPMENT POLICY (ISDP)

Independent thinking, strategic solutions

The Institute for Security and Development Policy is a Stockholm-based non-profit and nonpartisan research and policy organization. ISDP is dedicated to expanding understanding of international affairs, focusing on the inter-relationship between security, conflict, and development. The Institute strongly believes in ethnic diversity, gender equality, and religious and political freedom and firmly stands for it in all aspects of its work.

ISDP’s work aims at providing strategic analysis and practical solutions to assist decision-makers in both public and private sectors to achieve their goals. ISDP holds firm to the conviction that an understanding of international affairs requires a deep and comprehensive knowledge of the culture and history of regions and countries under study, and continuous interaction with a broad cross-section of these societies. “ISDP holds firm to the conviction that an understanding of international affairs requires a deep and comprehensive knowledge of the culture and history of regions and countries under study, and continuous interaction with a broad cross-section of these societies.”

ISDP seeks to achieve its aims through the publication of its research and analysis in formats accessible to a broad audience, as well as through practical steps to promote dialogue.

ISDP presently has two major geographic areas of focus.

The Asia Program

The Asia Program focuses on the rimland of the Eurasian continent, including East, Southeast and South Asia. The aim of the Program is to function as a focal point for academic, policy, and public discussion of the region through its applied research, its publications, research cooperation, public lectures and seminars. The Asia Program publishes the Asia Paper series, as well as two shorter series. ISDP also runs an active guest researcher exchange program, which admits 10-15 researchers from amongst others China, Japan, Myanmar, North Korea, South Korea, Pakistan, and the United States every year.

The Silk Road Studies Program

The Silk Road Studies Program focuses mainly on the central and western parts of Eurasia, including Central Asia, the Caucasus, the northern tier of the Middle East, as well as Eastern Europe. Through this program, the institute operates a Joint Transatlantic Research and Policy Center with the American Foreign Policy Council in Washington D.C. It is the first Center of its kind in Europe and North America, and publishes the Silk Road Papers Series, as well as the biweekly Central Asia-Caucasus Analyst and Turkey Analyst.

WEBSITE: www.isdp.eu
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PRESS RELEASE 5 SEPTEMBER, 2019

SOCiETY 5.0: PUTTING HUMANS AT THE HEART OF DIGITALIZATION

Taking place on 20 and 21 September in Graz (Austria, Europe), the international conference “Human-Centered Digitalization” is devoted to interdisciplinary discussion of the safe and effective interplay of people and machines with a view to creating what is known as Society 5.0.

At the conference, which is taking place at Graz University of Technology (TU Graz), speakers from Europe and Asia will take a holistic view of this highly complex topic, putting people centre stage in the digital transformation. As one of the conference organizers, Dietrich Albert from the Institute of Interactive Systems and Data Science at TU Graz and the University of Graz’s Institute of Psychology explains: “If humanist and ethical aspects such as digital maturity, digital personality and digital competence are not taken into account, any attempt to find technological solutions will be extremely difficult.”

Human-robot coexistence

The topics on the agenda include the road to creating Japan’s ultra-smart, fully networked Society 5.0, and the role played by robots in the rapidly-aging society in the Land of the Rising Sun, as well as the requirements for trustworthy, human-centered artificial intelligence (AI). Smart ecosystems will shape societies in future, so all-pervasive digital connectivity in everyday life will require solutions tailored to citizens and their needs, expectations and capabilities.

A series of workshops on the second day will take an interdisciplinary look at ethics-related issues connected with digitalization, as well as contrasts between societies in the West and East. There is also an emphasis on opportunities for collaboration between Japan and Europe in terms of AI and cyber security, on innovative digital education formats, and more generally on the impacts of the digital transformation on the economy, society and the labor market.

According to Dietrich Albert: “This conference aims to highlight ways in which human integrity and values can be protected and preserved in an age shaped by ubiquitous technological developments, in which integrity and values are receiving less and less attention when it comes to the way technology functions.”

The cross-disciplinary agenda includes research topics from a variety of fields, from computer science, social science and business to philosophy, humanities, educational science and law. The event is open to representatives and students from all disciplines, as well as the general public.

Human-Centered Digitalization

International Conference
Date: 20 and 21 September
Venue: Graz University of Technology, Campus Inffeldgasse, Inffeldgasse 13/EG, 8010 Graz
Details on registration, program and the conference in general can be found at https://www.tugraz.at/events/international-conference-on-human-centered-digitalization/home/

From Europe to Asia

The conference is part of celebrations marking 150 years of diplomatic ties between Japan and Austria. The event is being organized jointly by the European Japan Experts Association (EJEA), TU Graz, the University of Graz and the Institute for Security and Development Policy (ISDP).
PRESS RELEASE

5 SEPTEMBER, 2019

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We connect: Graz with the world, the world with you

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Citycom Telekommunikation GmbH, Gadollaplatz 1, 8010 Graz, +43 316 887-6225, office@citycom-austria.com
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-Centred 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”

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