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

Recommendations

The International Conference on Human-Centered Digitalization took place on 20./21. September 2019 in Graz, Austria. Six parallel workshops dealt with different aspects regarding the conference subject. Each workshop consisted of several contributions which led to intense discussions on the respective workshop subject. Finally, the workshop leaders presented in a final plenum discussion the recommendations on how to improve and enhance human-centered digitalization which were developed in the workshop discussions. In the following, short outlines of the workshop outputs are presented. A video of the whole final plenum discussion can be found here: https://tube.tugraz.at/paella/ui/browse.html?episode=1cfe1e1d-3af2-4475-91ba-3573121990bb

Workshop 1: Ethics in the Digitalized Era: Western and Eastern Contexts
The design and development of information and communication technology should be subject to core ethical values. Regulation and regulatory authorities are needed regarding the providers to monitor users' conduct, users need to act according to ethical values. Therefore, the users should be educated and trained at its best to use technology in a responsible manner. Ethical governance is significant and necessary regarding the design and development of information technology as well as the usage of technology.

Workshop 2: The EU-Japan Strategic Partnership Agreement - Prospects for Future EU-Japan Cooperation on Cyber Security and AI
Cyber Security is getting more and more important, as for example the connection between systems and the amount of data (and therefore the complexity) are continuously growing. Article 36 of the Agreement between Japan and the EU deals with cyber security, what is relevant for the relation between the EU and Japan? Norms should be established to define the cooperation regarding security. Communication is the key to reach a common strategy, politicians should meet more often and researchers and specialists should be exchanged. Basically, let the partner participate more and work closer together to find successful strategies.

Workshop 3: Future Role of Artificial Intelligence in Europe and Japan in Realizing Human-Centered Digitalization
AI is a very vast topic providing many application possibilities and different technologies, but every AI system needs data to work. The question is: What happens with this data? Do I really want speech recognition system detecting my emotion? The users need to know what happens with their data and should have detailed control over that.
Additionally, more research in machine learning techniques, especially considering human factors and the need for more education, is required.

Workshop 4: Innovating Digital Education and Skills in Different Cultures, on a Global Scope and in an Interdisciplinary Context
Collaboration is the keyword to build bridges. Digital literacy, data literacy, open access, awareness for the associates, communication skills, self-reflection, and self-regulated learning, for example, can build a strong

base for bridges between different disciplines and cultures. This base needs improvement to be an even stronger base for better collaboration and more powerful bridges. Newly built communities (for example arisen from a workshop) need help to climb this base and develop further, building a bridge on their own.

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?
For many people robots and AI are a new technology they don't know and may fear. One approach to gain trust could be creating a label assigned by a public authority. Another approach is that people need to understand and to learn how to interact with robots, for example social assisting robots, to trust them. As above, collaboration is likewise the key: Different research areas and disciplines should work together to make progress in creating trustworthy technologies to put an end to people's fear of robots, AI and digitalization.

Workshop 6: What are the Consequences of Digitalization for Economy, Society and Job Market in Europe and Japan?
In times of digitalization, one of the main questions for companies is how to stay competitive. User's data is a main resource in the economy affected by digitalization, small companies have to fight with competitors like Amazon, Facebook, and Apple, for example.
When technological change is directed, it should be directed toward a better society, but the question is how to define a better society.
Technological change and the effects of this in social and economic context should be taken into account for fellow research and financing opportunities.

Additionally, the executive committee of the European Japan Experts Association e.V. which co-organised the conference, added some remarks to the final plenum discussion.
EJEA was established in 1995, but faded a bit over the years. Now EJEA wants to revitalise, develop and strengthen its network between Europe and Japan. This conference on Human-Centered Digitalization is part of that purpose, offering a chance to meet other researchers, as for EJEA collaboration is an important aspect. Its aim is amongst others to connect researchers, universities, institutions and other associations. Therefore, EJEA strives for providing a network for communication and collaboration - one of the most important things in times of digitalization, as many workshops elaborated in their recommendations.

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