euacde COUNCIL FOR DOCTORAL EDUCATION

2021 EUA-CDE THEMATIC WORKSHOP
Artificial intelligence, data management and the digital world of doctoral education

21-22 January 2021 | Online

Draft programme as of 9 November 2020

The annual EUA-CDE Thematic Workshop provides a forum for exchange of experiences, discussion and mutual learning between members.

The 2021 EUA-CDE Thematic Workshop, entitled "Artificial intelligence, data management and the digital world of doctoral education", will explore emerging issues related to digitalisation from the perspective of doctoral education.

The workshop will be of interest to anyone involved in doctoral education (either at the institutional, faculty or disciplinary level), including academic leaders, doctoral education professionals, supervisors and doctoral candidates.

Nowadays, digitalisation plays an important role in our society as it daily affects our lives. This is also true for the whole research process, including the collection and analysis of data, the interaction between researchers across geographical boundaries or the communication of results. In this context, artificial intelligence and data-driven research have increasingly been the focus of discussions as they provide new and unexpected opportunities, but also raise questions related to the risks attached to the development of such new technologies.

The 2021 EUA-CDE Thematic Workshop will focus on the role of doctoral education in the context of these rapid technological and conceptual changes, how doctoral schools are influenced and how they can make efficient use of emerging digital technologies. It will discuss the training and skills needs of doctoral candidates and provide a forum for an exchange of reflections and good practices.

Thursday, 21 January 2021

14.00 – 14.10 CET	**Welcome to the EUA-CDE Thematic Workshop online sessions**
14.10 – 15.15 CET	**Session I: webinar** **How artificial intelligence impacts and shapes doctoral education**

While no one can clearly determine what impact the current developments in the field of artificial intelligence will have on our lives and society, there is little doubt that the changes are already significant. The estimated yearly investment by private companies in the field of artificial intelligence exceeds 40 billion euros and this number is rising. We witness advanced technologies starting to replace humans in certain activities and we can expect them to do even more in the coming years. This

not only raises concerns about how to ethically use these kinds of technologies, it also makes it necessary to rethink job and career profiles in line with current and future skills needs. Doctoral schools need to anticipate these developments and to provide to early-career researchers with the ability to not only cope with the situation, but to take a proactive role. This includes providing appropriate trainings and raising algorithmic literacy, comprising the technical and ethical dimension.

At the same time, doctoral schools and similar structures will have to reflect on how artificial intelligence will impact on their functioning. Very soon they may make use of advanced algorithms for activities like candidate selection, program planning or risk mitigation – like the early detection of mental health issues.

This plenary session will address the main challenges in this area and discuss the roles of universities and doctoral education.

16.00 – 17.15 CET	**Session II** **Digital skills needs and training for early-career researchers** *Reserved for EUA-CDE members*

The increase of digitalisation in our societies, including in research, makes mastery or proficiency in digital skills a prerequisite for many careers within and outside of academia. This not only concerns highly specialised knowledge in areas like quantum computing or cybersecurity, but also a general understanding of the potential and functioning of digital technologies. There is often discussion about the so-called digital skills gap in Europe, which inhibits the continent in making full use of the potential of the next generation and in addressing the grand challenges our world faces.

In this members-only session, participants will come together to discuss possible ways to enhance the digital literacy of doctoral candidates. They will also exchange views on how doctoral schools can adapt their programmes in order to address the future skills needs of doctoral candidates. EUA-CDE members are invited to shortly present good practices at their institutions.

The outcomes of this session will serve as a basis to feed the discussion of the next day's plenary.

Friday, 22 January 2021

11.00 – 12.15 CET	**Session III: webinar** **FAIR data management and research data in doctoral education**

In the last decade, digitalisation has had a considerable impact on the way we work in everyday life. What is more, this technological advancement has also resulted in a substantial increase of data being produced worldwide. However, while the vast amount of data has brought many opportunities in many sectors including inside academia, it has also raised questions about the necessity to analyse, preserve, share

and reuse data to make the research process more efficient. Therefore, the concept of FAIR data management is currently a topic of interest in the research environment, with universities being increasingly aware of the need to provide trainings on data driven methods for doctoral candidates and early-career researchers. As an increased number of funders require data management plans as a part of project applications, doctoral schools are also requested to train and support early-career researchers in preparing such activities.

This online discussion will provide a platform to address the importance of FAIR data management practices for early-career researchers and explore whether the training offer of universities can meet the current skills needs of doctoral candidates in this field.

13.30 – 14.30 CET	**Session IV** **New challenges for research ethics and research integrity training in the digital era** *Reserved for [EUA-CDE members]*

Technology is advancing at an incredible pace. In the last two decades, the rise of the Internet has revolutionised the way we communicate and collect information. While the development of these new technologies certainly brings a lot of benefits, we need to acknowledge that they also raise new challenges in terms of privacy, as well as ethics-related issues every time a researcher has to make use of them.

At the same time, new technologies can introduce new ways of conducting questionable research practices and committing fraud, while also providing tools that promise to detect and possibly prevent these practices more easily. This may have a direct influence on the daily work of doctoral schools.

In this session, we will discuss what these developments mean for research ethics and research integrity training and facilitate a discussion with and among the participants.

14.30 – 15.30 CET	**Networking session** *Reserved for [EUA-CDE members]*

To end the day, participants will be divided into several virtual rooms where they can share their views and experiences on several topics related to doctoral education.