Informatics Europe
Minerva Informatics Equality Award 2023

NOMINATION FORM

1	**Name and address of the applicant**
	Contact information for the *Innochange: Promoting Gender Equality and Equity* project Dr Márta TURCSÁNYI-SZABÓ Dean's Commissionaire for Educational Innovation Eötvös Loránd University Faculty of Informatics tszmarta@inf.elte.hu 1117 Budapest Pázmány Péter sétány 1/c. Hungary web: https://hu.linkedin.com/in/martaturcsanyiszabo, https://innochangeproject.eu **Contact information for the nomination:** Prof Tamás KOZSIK Dean Eötvös Loránd University Faculty of Informatics dekan@inf.elte.hu web: https://www.inf.elte.hu/en/
2	**Submission on behalf of**
	☐ an individual ☑ a group
3	**Brief Summary/Abstract (max. 100 words)**
	Innochange: Promoting Gender Equality and Equity Adopted in March 2020, the Gender Equality Strategy of the EU is a significant step towards achieving a gender equal Europe, but it only makes sense on a day-to-day practice if stakeholders take practical steps to put these ideas into practice. As part of the process, Horizon Europe, the EU's largest research framework programme, has even made it compulsory for higher education institutions to have a gender equality plan in order to receive EU funding. *Innochange: Promoting Gender Equality and Equity* is a self-paced course for students, academic and non-academic staff to better understand the notions and policies of such a plan and ultimately act accordingly suppporting the integration of gender dimension into education and research in STEM fields.
4	**Description of the initiative (max 2 pages)**
	The underrepresentation of women in informatics, and other STEM fields, is a complex issue with multiple factors contributing to it. While progress has been made in recent years, the gender gap in informatics still persists. According to the European Institute for Gender

Equality, women accounted for approximately 17% of ICT (Information and Communication Technology) specialists in the European Union in 2020. The proportion of women pursuing degrees in computer science and related fields varies across European countries. While some countries have seen an increase in female enrollment, gender disparities persist. For example, in 2019, women accounted for about 20-25% of computer science graduates in countries like Germany, France, and the United Kingdom, according to Eurostat. Women are often underrepresented in leadership positions within the informatics industry in Europe as well. The European Commission's Women in Digital Scoreboard reports that women occupy less than 20% of management roles in the digital sector in the European Union.

Adopted in March 2020, the Gender Equality Strategy of the European Union aims to contribute to achieving a gender equal Europe where women and men, girls and boys in all their diversity are equal. Horizon Europe, the EU's largest research framework programme, has even made it compulsory for higher education institutions to have a gender equality plan in order to receive EU funding.

What is a gender equality plan? What can be done to ensure that stakeholders in higher education institutions do not see it as just another piece of paper?

As part of the Innochange project a self-paced course on *Promoting Gender Equality and Equity* for students, academic and non-academic staff has been developed to better understand the notions and policies of such a plan and ultimately act accordingly suppporting the integration of gender dimension into education and research in STEM fields. The course raises awareness of global issues and local specificities and their implications from a broader perspective.

Chapters of the self-paced course are:

1) Gender inequality globally
2) Understanding factors leading to inequality
3) Highlighting the picture within the HE
4) Analysing the special case of STEM and especially informatics education
5) How to analyse own situation?
6) Possible actions towards equity
7) How could these actions contribute to Sustainable goals?
8) Summary of good practices
9) How can I become a change agent within my own level?

The learning objectives of the course are:

a) to become familiar with the basic concepts, terms and definitions linked to the integration of the gender dimention in teaching, research, as well as research-innovation,
b) to understand the need to integrate gender in their activity in terms of European and global trends and existing challenges, factors leading to inequality,
c) to have an enhanced awareness linked to the gender dimension in STEM-related topics and research and on the importance of including the gender dimension into education and research in STEM fields,
d) to be equipped with practical methods and techniques to be able to integrate the gender dimension into education (content, interaction, and teaching methods), research (design and delivery of research projects), as well as research and innovation (valorisation of R&D results, knowledge transfer,
e) to sensitise students and researchers linked to gender bias and gender relevance, and,
f) to have the tools and capability to support the integration of the gender dimension into education and research in STEM fields.

	The course can be fulfilled in two levels: - BASIC level 20 minutes per chapter, that is about the total of 3-4 hours. - ADVANCED level 45 minutes per chapter, that is about the total of 6-8 hours. Effective work equals 30 workload hours. What are the learning outcomes? Students, academic and non-academic staff alike will acquire theoretical and practical knowledge to promote gender equality in education and research. They will be able to BASIC level: a) contribute to the achievement of institutional gender equality objectives and thus to the policy objectives at the level of the EU and UN, b) identify the different terminology used in relation to gender inequality issues, c) recognise discrimination and harmful discrimination against women, d) adopt and strengthen sound policies, e) take action towards the promotion of gender equality and the empowerment of women, ADVANCED level: f) become agents of change towards achieving gender equality in academia and research-innovation in their own institution and within their own Knowledge and Innovation Community (KIC), g) analyse situation and explore causes, special cases in order to identify key issues to deal with and h) measure and evalute using practical methods and techniques to integrate the gender equality dimension into education and research, especially in STEM. Ensuring gender equality in education, research and innovation and the European Education Area, and enabling women to succeed as entrepreneurs and investors and to participate fully in the digital transition, these are the priorities of the Innochange project and its „Promoting Gender Equality and Equity" course.
5	Evidence of the impact (max 2 pages)
	The course was initially open only for a month as a pilot, but some universities have already expressed their intention to introduce it to their Faculty later on. So, we decided to open it up from September onwards, allowing participants to look into the mirror and identify gaps in their own fields that might hinder progressive innovation in HEI closing the gender equality gap. The feedback we have received from those completed the course is very positive. They find the materials relevant, well-organised and easy-to-understand. They find that the learning objectives and the outcomes associated with the modules are well-defined and clear. All this did not come out of the blue. The *Promoting Gender Equality and Equity* course of the Innochange project was initiated and coordinated by Dr Márta TURCSÁNYI-SZABÓ, ELTE Faculty of Informatics within the frame of the Innochange: Driving Change and Capacity Building Towards Innovative, Entrepreneurial Universities project. Dr Turcsányi-Szabó has extensive experience in IT teacher training, with a particular focus on gender equality issues and reaching out to girls in STEM education. The Promoting Gender Equality and Equity course builds on her longterm experience in the field.

	The course impact is closely related to her previous initiatives/projects focusing on reaching out to girls in Informatics (https://www.youtube.com/watch?v=QLpc_iOb6UA). Such initiatives include: - KIDLOGO: introduced in 1985 the programme used Commodore 64 in the universities kindergarten, which allowed children to develop drawings, music and animation in a modular way (as modular programming) using metaphors of that age, yet motivating them to use letters and angles in their work. It ended up with a two direction learning curve: besides developing children, future teachers learnt about the huge potential in kids IF using a proper metaphor. It became also evident from this experience how Informatics can be made a fun activity even for small kids. - HÁLOGO: The first open interdisciplinary programming course was launched in 2000, which tackled developmental programming in different disciplines (language, storytelling, maths, drama and games using Comenius Logo). Children often used it with their parents or teachers made use of modules in their classes. Future teachers developed modules as course submission and tried them out is schools to see the reaction of children and teachers. - Creative Classroom: Informatics learning material (similar to HÁLogo portal, but using Imagine) was officially integrated into the public education portal and it's English version entered the UK markets too. All the materials are free of charge to use and a lot of transfer effects can be seen as many new companies emerged teaching (using similar materials and methodology, borrowed from us) hiring our students too for teaching. - TeaM Challenge: between 2000-2010 TeaM Challenge games have been developed on different most relevant themes together with the students (developing it in the first semester, launching and managing it through the second semester). These games made aware of the most relevant problems of the year and initiated complex problem-solving using ICT tools (e.g. Just before the EU referendum in Hungary in 2003 we prepared society for a thoughtful vote). Children not only loved to take part and pushed teachers to teach them the needed tools before submitting projects but declared that they liked to take part in it, „because they did not have to learn during that time". Teachers were shocked to hear that, since they have never seen their students working that hard before! - GIRLS DAYS: the annual Girls' Night event at the ELTE Faculty of Informatics organised especially for girls to showcase that informatics is for them as well. - E-HÓD: Classes led by Zsuzsa Pluhár (by now as an individual project), develops the yearly competition for computational thinking, in which more that 37 thousand students took part in 2022. These competitions contain fun tasks (without computers) yet needing computational thinking to solve them, that were initiated by the Bebras community. - T@T KUCKÓ: The venue of T@T lab is called „Kuckó", which is „hut", that provides a space for our internal activities (classes as well as open events). Families are thrilled to come for open days, letting the generations explore IT gadgets and consult with us on issues at home and that of learning. As Dr Turcsányi-Szabó focuses on the inclusion and empowerment of girls in informatics, all these previous experiences have been incorporated into the *Promoting Gender Equality and Equity* course to achieve a greater impact.

6	Reference list/supporting materials
	Innochange: Driving Change and Capacity Building Towards Innovative, Entrepreneurial Universities https://innochangeproject.eu/blog/for-students-and-phds/ Innochange: Promoting Gender Equality and Equity - Introduction https://www.youtube.com/watch?v=_iBuHFt3Pwg **Access to course:** https://elteik.edu20.org/user_catalog_class/show/3808762 **Access code:** VYBD-EFNW
7	Letters of Support
	a) Letter of Support of Dr Tamás Kozsik, Dean, Eötvös Loránd University Faculty of Informatics b) Letter of Support of Ms Zsuzsa Pluhár, Assistant Lecturer, Eötvös Loránd University Faculty of Informatics, former female student of Márta Turcsányi-Szabó
8	Runner up option
	☑ yes ☐ no

Budapest, 15 July 2023