



## MEET OUR TEAMS

### Universitat Politècnica de Catalunya

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The Institute is known within UPC BARCELONA TECH as ICE (Institut de Ciències de l'Educació - Institute of Education Sciences). Our Mission is contributing to the enhancement of quality education at UPC by means of promoting improvement and innovation in teaching and learning in higher education and by providing training for academic staff in the use of new educational resources.

Therefore, our main goal is to provide academic staff with practical solutions to facilitate an easy use of ICT (Information and Communication Technologies) in teaching activities and an effective adoption of proved teaching and learning methods that help focus on the significant student learning. To achieve this goal the Institute is organized in 3 lines of action: Training of Academic Staff, Promotion of Innovation and Research in the field of engineering education.

#### How does TEACH4EDU4 project fit into this mission?

This project has an objective to respond to the need of Industry 4.0 with the strategic partnership that will develop and nurture the vision and solutions of how to accelerate the corresponding transition within HEIs - in the field of Computer Science and related disciplines - towards Education 4.0.

So, this project is searching among the same areas of interest that we have, as Institution of a Technological University, specifically: European Higher Education Area implications on organising teaching, Teaching and Learning, Course planning and development, Curriculum development and the Roles of academics: Teaching, Research, Transfer, and Management.

#### What is your role in the TEACH4EDU4 project?

We are involved in all intellectual outputs of the project but particularly we are co-leaders of the IO1-Catalogue of new forms of teaching, learning and assessment in CS in Edu 4.0 and related

teachers skills and competences. Moreover, we are deeply involved in maintaining the best cooperation with the enterprises and external partners collaborating in this project. As the project coordinator at UPC, I am involved in achieving the planning we have in order to obtain the main objectives in the most effective manner. Nevertheless, I am able to do it, because I have a great UPC team enrolled and motivated to help me in this planning.

#### What is the most exciting aspect of taking part in TEACH4EDU4?

For my point of view, the most exiting aspect of taking part in TEACH4EDU4 is the international commitment and the relationship with other professors who work in the same fields. Because, over all, this is a way to grow as teaching professionals in tech universities and to improve our research goals.

#### In your opinion, which of the competences expected by the Industry 4.0 do you find most important?

During the past 10 years, we have examined if the training expectations of the ICT sector are aligned with the theoretical approach regarding strategic decisions and methods for maintaining competitive advantage. If two of the potential strategies to maintain competitive advantage in dynamic markets such as the ICT are through innovation and creativity, it seems reasonable to argue that workers in this sector must possess such abilities. Notwithstanding, based on our results, we observe that the ICT sector continues underestimating skills such as creativity and innovation, which are expected to drive business success. At this point, it is worth questioning through which factors does the European ICT sector expects to base its future strategy and competitive advantage. Creativity and innovation are increasingly more highly valued, yet at a low pace.

#### How can we can make students more engaged and motivated to develop these competences?

It is worthwhile clarifying the expectations of businesses and employers regarding the main educational parameters that respond to the labour needs of the ICT marketplace; and then reflect on and evaluate whether universities are performing their role effectively.

We should be able to explain to our students this gap and how to fulfil it, and how to prepare to face the current business environment better, faster and more dynamic. It is particularly noticeable in the ICT sector that we are going to engage them then.

Because within this new paradigm it is necessary to reconsider the existing models of competitiveness, especially those that refer to resource and HR management and curricula development, for ICT researchers.

If we still believe the European competitive advantage is based on a knowledge-based economy, the technological activities and knowledge are a real resource and, so, we must establish more clearly what has to be contributed, and as a consequence, how we should train our computer engineers.

*January, 2022*

