Let's talk about Quanta!

Models for today's teaching

Moderation: Alexander Krukenfellner, *Project Director and Head of the German Language Section of the Goethe-Institut Dublin*, Clíona Weltecke, *project coordinator* and TüftelLab, *a non-profit German education company focussing on maker education and STEM education*

9:30 – 9:45 Welcome speech

9:45 – 10:15 Flavio Venturini, *business intelligence and performance management expert, initiator of the Big Data Analytics Master programme, DEI*

Future Education Modena's experience in mastering the skills needed for digital transformation

Increasing abstraction capabilities is one of the most critical aspects ot today's tuition.
This is particularly important in a world where Data Science and Artificial Intelligence needs to be understood even by not specialist, as their usage will be spreading very quickly.
In this context, I will present the experience of Future Education Modena (FEM). FEM is an international center for innovation and R&D in education. It is, at the same time, an EdTech venture builder, an Academy and a testbed network. We will go through all its various activities dedicated to schools, teachers and educators.

10:15-10:45 *Karriere Quantum. The Project*

Goethe-Instituts from five European cities have launched the Karriere Quantum project (www.goethe.de/kq) with TüftelLab, a non-profit German education company focussing on maker education and STEM education. We are inviting 16- to 18-year-old European students and their teachers to take part in one of five one-week camps centred around quantum technologies and the German language.

10:45-11:30 *Science slam: Teacher Ambassadors' Programme*

11:30 – 11:45 Coffee break

11:45 – 12:15 Maria Bondani, *CNR-IFN researcher, coordinator of the Italian Quantum Weeks project*

Italian Quantum Weeks project: outreach activities to enhance quantum awareness

With the rise of quantum technologies, Quantum Mechanics' unique features are now being used to design new devices and applications, like quantum computers, secure communication systems, simulations of complex systems, and ultra-precise sensors.
Since 2021, the Italian Quantum Weeks project offers activities for students and the public to explore the basics and uses of Quantum Mechanics. These include exhibitions, educational games, interactive activities, workshops, lectures, and guided lab tours. The aim is to provide an interactive experience of the strange behavior of the quantum world and its potential applications.
Over 130 researchers from 40 organizations in 23 Italian cities are working together to create accurate and engaging content and to evaluate how effective the communication is.

12:15 - 12:45 *Panel discussion on STEM subjects at school*

With
Marco Garbini, *researcher at the Historical Museum of Physics and Study and Research Centre 'Enrico Fermi'-CREF and head of outreach with schools*
Chiara Oppedisano, *NFN researcher, national leader of the 'Science for All' project*
Fabio Chiarello, *CNR-IFN researcher, coordinator of the 'Photonics in Play' competition for schools*

12:45 – 13:15 Exhibition of students' work during the camp