

Marconi Industry 4.0: training lab

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Industry 4.0 is often named “the fourth industrial revolution”. Indeed, the transformation, which is expected in manufacturing within the next couple of years, will be revolutionary.

The first Industrial Revolution, begun in UK at the end of the 18th century, represented an important shift-away from an agrarian economy to the one defined by the introduction of mechanical production methods. The second Industrial Revolution was in the 20th century, with the advent of industrial production and the birth of the so-called factory, and this represented the period of mass consumption. The third Industrial Revolution (late 1960s) consisted in the use of electronics and IT technology in industrial processes, where were introduced the concept of processes optimizing methodologies and automated production.

Now we are in the middle of the fourth industrial revolution: the “Internet of Things”, the “Smart production” and the “intelligent ICT-based machines” make “Industry 4.0” a reality where, the systems and the networks are able to exchange and to manage industrial production processes.

The main topics of Industry 4.0 are: Big data; advanced analytics; Internet of Things; digital modeling; additive manufacturing; computer integrated manufacturing;

“Industry 4.0 not only embraces each of these – and more - but combines them together in order to make a whole that is vastly greater than the sum of its parts.” Callum Bentley

The term “Industry 4.0” is also known in manufacturing as the “internet of things”, the “internet of everything” or the “industrial internet”, it is the vision of a smart factory describes the technological change of today’s production and defines the cyber physical production techniques. However, Industry 4.0 will create a new vision of organization and management over the entire value chain during the entire product life cycle. The aim of this revolution consists of creating a new factory, which can manage more complex systems, as we know today. In this context, the so-called “Intelligent Products” and “Production Equipment” are linked within the network and control the entire process from the product idea to the supply chain

and manufacturing.



The innovations described above are considered challenges for the workers of tomorrow and the institutions, as well as universities, have to be committed in order to supply new competences, multidisciplinary contents by means of innovative learning methods.

Guglielmo Marconi University is ready to gather this challenge, offering high-level multidisciplinary contents training courses to its students. At this purpose, Guglielmo Marconi University will organize six training sessions, in which the instructors and the students will have the possibility to investigate together, in a collaborative way, each of the above-mentioned main topics of Industry 4.0, creating, furthermore, interesting correlations between them, and offering new points of investigation and growing possibilities for the smart worker of tomorrow.

This unique multidisciplinary course is named "Innovation Training Lab" and is offered for free by Guglielmo Marconi University to everyone who want to know what Industry 4.0 will be before this new revolution will start. Moreover, during the first event of the Innovation Training Lab, scheduled on February 2017, a round table with some important industrial players will be realized not only to present these companies to our students but also to know how the different sectors will evolve and what they will expect from these new "smart workers".