Education 4.0: How can Educators meet Industry 4.0 and today's Learners?

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Guest Speaker—

Dr. Ilhem Kallel is an A. Professor with the Department of Computer Science Engineering in Higher Institute of Computer Science and Multimedia of Sfax, and a senior researcher with REGIM-Lab in National school of Engineers of Sfax (university of Sfax-Tunisia). She had many leadership positions and a rich professional experience dealing with developing and managing enterprise information systems within an industrial company, teaching fields of computer science and training of teachers. Her research interests are mainly in collective and hybrid intelligence, pedagogical innovation in education, intelligent multirobot systems, fuzzy modeling, swarm intelligence, multiagent systems, and systems' quality assessment. Since 2017, she is focusing on education engineering and intelligent tutoring systems on both associative IEEE activities and scientific research activities.

Dr. Ilhem Kallel is an IEEE member since 2001: from graduate student Member, to member, to senior member on 2014. She is serving as a chair of Education Tunisia chapter for 2017-2020 (http://education.ieee.tn/), Tunisia-section Chair-Elect for 2019-2020 and next chair for 2021-2022 (http://ieee.tn/).

On 2009, she founded and chaired for four years the affinity group IEEE Tunisia "Women In Engineering", and currently she is a member of the Region 8 WIE SubCommittee (https://ieeer8.org/category/member-activities/women-in-engineering/wie-committee/) ; among others, she was one past chair of IEEE "Systems, Mans and Cybernetics", and "Computational Intelligence" Tunisia Chapters, the chapters' coordinator in Tunisia Section for 2015-2016. She volunteered and was invited in many international programs. She is the winner of the 2011 the prestigious WIE Clementina Award for Region 8 (Europe, Africa and Middle-East) for her professional and personal achievements; this award attests that she can serve as a role model for combining professional achievements and family life. She was also recognized for the 2018 R8 Outstanding Women In Engineering Section Volunteer Award.

ABSTRACT

With the exponential growth of Information technologies (Internet of Things, Big Data, Artificial Intelligence, Augmented Intelligence, etc.) and the evolution of Industry from 1.0 to 4.0, many working domains (or fields) are being deeply affected. As a result, employment trends are changing, affecting in turn the students' attitudes and behaviors. That's why it is important for youth to keep up with such progress and gain skills to benefit from it in every aspect of their lives including (or especially) the way they are taught, hence the evolution of Education from 1.0 to 4.0. Here comes a new challenge for educators on how to undertake the needed adaptations. Educators are then, bound to shift their focus to learning by redesigning the learning process and recognizing the diversity of HOW, WHEN and WHERE students want to learn. Using creative approaches and educational innovation educators will help to upgrade future learning and meet the requirement of Education 4.0.