CALL FOR PAPERS
SPECIAL SESSION ON

Professional and Academic Training systems for industrial and Educational intelligent Upgrade

Session Co-Chairs:
- Khouloud Filai, Manager and founder of AcaROBOTICS, khouloud.filali.rejeb@gmail.com
- Emna Ouerteni, Professional Upgrad program developer, Co-Founder of AcaROBOTICS, ouerteniemna.93@gmail.com
- Rahma Ouelati, Academic Upgrad program developer, Co-Founder of AcaROBOTICS, oueslatirahma4@gmail.com

Session description:

The continuous technological development generates a constant industrial evolution, such as the industry 4.0 and soon enough the industry 5.0. However, the existing learning systems for industrial and academic training are not effective to present the needed workforce and the needed qualified personnel for the new industry. This weakness originates the EduTech, Education x.0 concepts as an intelligent technology-based teaching and learning methodologies. It presents different learning approaches such as game-based learning (GPL), Avatar-based learning (CBL), STEAM based system, virtual immersion technologies, eLearning systems and other intelligent and hybrid platforms. We consider this concept as the key of a successful upgrade approach from regular society to intelligent one and from industry x.0 to industry x+1.0. The main goal of this applied special session is to present theoretical and experimental results within the professional training and academic systems. Demonstrations of different tools regarding this topic will be presented and discussed. These demonstrations will be for both adults (student professionals and researchers) and juniors (kids from 8 to 17 years old).

The main topics planned to be covered are as follows, but are not limited to:

- Training and Academic Robotics
- Virtual immersion technologies : Augmented reality, virtual reality and mixte reality
- Gamification
- Emotion and mental state recognition
- Intelligent Game-based learning
- intelligent tutoring system Applications
- Avatar-Based Learning
- Personalized and adaptive learning
- Application within STEAM, STEM and PIE (Practical interdisciplinary education)
- E-learning, m-learning
- Training For industry 4.0

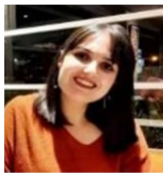
Within its activities, this session will be organizing a challenge to resolve an industrial situation. However, to clearly highlight our vision for training and upgrading approaches this completion will be under two categories: junior and senior

Khouloud Filali

She holds an engineer degree since 2015 from the national school of engineer of Carthage in Mechatronics engineering. She is the Founder of AcaROBOTICS. AcaROBOTCIS is the first Tunisian company that specialized in Education 4.0 with developing new training and learning technological tools and platforms. She is a member of the research laboratory: (LISI) at the National Institute of Applied Science and Technology, University of Carthage. She supervises many projects in the field of intelligent training robots and platforms. She taught in different private universities in Tunisia such as ITBS (IT business School) and ULT. She held an R&D department within AcaROBOTICS, which welcome every year 10 internship from engineering schools (INSAT & ENICArthage). Her applied research focus on intelligent learning systems and platforms. These systems focus on the contribution of robotics and artificial intelligence for the competence upgrade. Her main objective is to create platforms that ensure learning to learn and long-life learning.

Emna Ouerteni

She holds an engineer degree since 2017 from the national school of engineer of Carthage in Mechatronics engineering. She is a Co-founder of AcaROBOTICS and a member of its R&D department. She animate different workshops on embedded systems for professionals in the city of sciences in Tunis. She supervised different final year projects for engineering students in the field of electronic development of educational kits. She collaborates with different private establishment to implement AcaROBOTICS STEM approach in their technology course. She ensure the implementation of an interdisciplinary training approach within AcaROBOTICS clientele. She work on the development of a main project that implicate intelligent vocal communications with virtual assistance. Her main objective is to create platforms that ensure the contribution of artificial intelligence in competence upgrading for professional workforce.



Rahma Ouelati

She holds an engineer degree since 2017 from the national school of engineer of Carthage in Mechatronics engineering. She is a Co-founder of AcaROBOTICS and she is a member of its R&D department. She animate different workshops in STEM and STEAM in the city of sciences in Tunis. She supervises the development of projects that implicate avatar-based learning with augmented reality and monitor the impact of immersive technologies with learners. She presented AcaROBOTICS learning Factory layout for K-12, which is the first of a kind in Tunisia. She supervised different final year project for engineering students in the field of embedded development for training. She collaborates with different

private establishment from AcaROBOTICS clientele to implement Robotics as an independent subject within their curriculum. Her main objective is to create platforms that ensure intelligent upgrading for academic purposes.