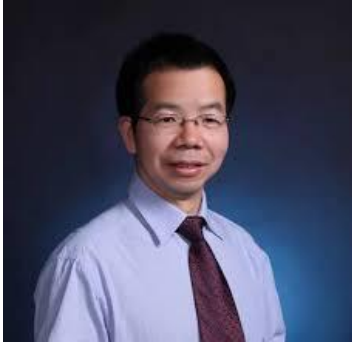# Seventh International Conference on ICT & Accessibility ICTA 2019
13th – 15th December, 2019
Hammamet, Tunisia

Conference Presentation

The seventh edition of ICTA 2019 will be held in **Hammamet**, Tunisia, and organized under the auspices of the **Arab League Educational, Cultural and Scientific Organization (ALECSO)** with the support of the Research Laboratory of Technologies of Information and Communication and Electrical Engineering (LaTICE) of the University of Tunis and the Tunisian association E-access. The conference explores several areas related to ICT, Accessibility of people with disabilities and education with special focus on Technology Enhanced Education for people with disabilities.

Keynote Speakers

Prof. Ronghuai Huang
Faculty of Education of Beijing Normal University
ICT and OER in education: Future Perspectives
The application of Information and Communication Technology (ICT) has created new opportunities to enhance learning experiences and provide smart learning environments for better learning outcomes. At the same time, the wave of open education using Open Educational Resources (OER) has facilitated knowledge sharing and brought new ways of learning. Therefore, this research reviews both ICT and OER application in education worldwide and specifically in China, as well as the gap in this field for better learning outcomes.

Dr. Lilia Cheniti Belcadhi
Associate professor of Computer Sciences at the Higher Institute of Computer Sciences and Communication Technologies, University of Sousse
Framework for Technology Enhanced Assessment based on Semantic Web
With the rapid development of distance learning, the assessment functionality becomes a key issue in the learning process. Indeed, it enhances the quality and timeliness of feedback, provides just-in-time problem solving aid and guides academic progress. Technology Enhanced Assessment (TEA) can be considered as a value-added service in technology enhanced learning environments, which aims at evaluating and measuring the outcomes of learning experiences. Providing learners with various assessment techniques that are appropriate to their profiles, context, needs and prior knowledge would guarantee an efficient learning process. The design of assessment tools in open environments demands effective personalization approaches which provide learners with guidance and individualized support. It also requires advanced approaches to assessment specific to open e-learning environments. Besides, with the emergence of mobile technology environments, the characteristics of assessment activities must change to support continuous monitoring of the learner. The assessment process should evolve as the learning environment while maintaining its principles and targeted goals. Besides, we observe, that semantic Web technologies have been increasingly used, the last few years, as a tool for generating, organizing and personalizing e-learning content, including e-assessment. Semantic Web provides a common framework that allows data, information and knowledge to be shared and reused across applications. In this presentation, we propose to give an overview on our research works related to Technology Enhanced Assessment, Scenarios designed and TEA frameworks developed based on semantic Web technologies.

Conference Thematic sessions

UNESCO Session:

Title: " No one left behind: Leveraging ICT and Education to enhance well-being and the inclusion of persons with disabilities "

Moderator: Mr. Paul Hector, Advisor for Communication & Information, UNESCO Regional Bureau for Sciences in the Arab States

Panelists:

- Mr. Karim Abdelghani, Programme Coordinator, Arab Regional Office, International Telecommunication Union (ITU)
- Mr. Basem A. Awadalla, Talking Books Producer & Narrator, Bibliotheca Alexandrina, Egypt
- Ms Nicole Choueiry, UNESCO Office for the Maghreb, Morocco
- Mr. Davison Muwidzi, Principal Lecturer, Nyadire Teachers College, Zimbabwe

Description: This 90-minute thematic session will feature various UNESCO supported initiatives – mainly from the African continent - that are using ICT and education to foster the socio-economic inclusion of persons with disabilities. During their interventions, Panelist will be:

- Highlighting projects/initiative implemented or being planned that use ICTs and education to promote the economic and social inclusion of persons with disabilities.
- Describing what impacts these project/initiatives have had and in particular their contribution to the 2030 SDGs and 2030 national strategies/visions?
- Highlighting the specific expertise, knowledge, resources developed by the initiative and how could it be effectively scaled-up or replicated?
- Sharing the gaps and challenges, their projects/initiatives faced and how they were they addressed or resolved?
- Identifying good practices, policy insights and key takeaways that could support effective scale-up, replication and further improve practice and research.

ITU Session:

Title: "ICT Accessibility Policy in the Arab region"

Moderator: Mr. Karim Abdelghani, Programme Coordinator in the ITU Arab Regional Office

Speakers:

- Dr. Abeer Shakweer, Minister of ICT's Advisor for Social Responsibility and Services, Ministry of Communications and Information Technology of Egypt, abeershakweer@gmail.com
- Ms. Aljazi Aljabor, E-Accessibility Officer, MADA Qatar, aaljabor@mada.org.qa
- Ms. Amani Al Tamimi, Director of Access Programmes and Services, MADA Qatar, aaltamimi@mada.org.qa (remotely)
- Dr. Donal Rice, Expert on ICT Accessibility, donal.rice@gmail.com (remotely)

Description: This 90-minute thematic session will feature various UNESCO supported initiatives – mainly from the African continent - that are using ICT and education to foster the socio-economic inclusion of persons with disabilities. During their interventions, Panelist will be:

- Highlighting projects/initiative implemented or being planned that use ICTs and education to promote the economic and social inclusion of persons with disabilities.
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International OER Workshop
Organized by Smart Learning Institute of Beijing Normal University and ALECSO:

Title: "Mainstreaming OER for Inclusive and Equitable Quality Education"

Moderator: Ting-Wen Chang, Smart Learning Institute of Beijing Normal University

Enlightening presentations:
- Toward Promoting Access to Open Educational Resources for All , *Koutheair Khribi*
- The Current State of Open Educational Resources in the Arab Region: An investigation from 22 countries, *Mohamed Jemni and Ahmed Tlili*
- Systematic review of OER and OEP for disabled students, Xiangling Zhang

Paper presentations:
- The use of Open Educational Resources at Cadi Ayyad University, *Imane ZAATRI, Khadija EL KHARKI, Rachid BENDAOUD, Khalid BERRADA*
- Harnessing the Characteristics of Open Educational Resources to the Challenges of Rural Education: A Holistic Understanding, *Ahmed Tlili, Muhammad Yasir Mustafa, Ronghuai Huang, Jingjing Zhang, Mohamed Jemni, Ting-Wen Chang*
- Fostering Teachers-Led Open Education in Universities: Recommendations Emerging from Research, *Fabio Nascimbeni, Daniel Burgos, Ahmed Tlili*

D1	**11:00**	Registration		
	14:00 – 15:30	UNESCO Thematic Session		
	15:30 – 16:00	Coffee break		
	16:00 – 17:30	ITU Thematic Session		
D2	**8:00 – 9:00**	Registration		
	9:00 – 9:30	Opening Ceremony		
	09:30 – 10:00	Group Photo		
		Coffee break		
	10:00 – 11:00	Keynote 1	**10:00 – 11:30**	Deaf Forum in Arabic (Part I)
	11:00 – 13:00	OER Workshop	**11:30 – 13:00**	Deaf Forum in Arabic (Part II)
	13:00 – 14:00	Lunch	**13:00-14:30**	Lunch
	14:00 – 15:30	Session I.1	**14:30-16:00**	Deaf Forum in Arabic (Part III)
	15:30 – 16:00	Coffee break	**16:00-16:30**	Coffee break
	16:00 – 17:30	Session II.1		
D3	**08:30 – 9:30**	KeyNote2	**9:00 – 11:00**	Deaf Forum in Arabic (Part IV)
	09:30 – 11:00	Session I.2		
	11:00 – 11:30	Coffee break		
	11:30 – 13:00	Session II.2	Deaf Forum in Arabic (Part V)	
	13:00 – 14:00	Lunch		
	14:00 – 15:30	Session III	Deaf Forum in Arabic (Part VI)	
	15:30 – 16:00	Closing ceremony		
	16:00	Coffee break		

Conference Agenda

Registration starts from 11:00 – 18:00	
14:00 – 15:30	**ITU Thematic session:** **Title :** "ICT Accessibility Policy in the Arab region" **Moderator :** Mr. Karim Abdelghani, Programme Coordinator in the ITU Arab Regional Office **Speakers:** – Dr. Abeer Shakweer, Minister of ICT's Advisor for Social Responsibility and Services, Ministry of Communications and Information Technology of Egypt, abeershakweer@gmail.com – Ms. Aljazi Aljabor, E-Accessibility Officer, MADA Qatar, aaljabor@mada.org.qa – Ms. Amani Al Tamimi, Director of Access Programmes and Services, MADA Qatar, aaltamimi@mada.org.qa (remotely) – Dr. Donal Rice, Expert on ICT Accessibility, donal.rice@gmail.com (remotely)
15:30 – 16:00	**Coffee break**
16:00 – 17:30	**UNESCO Thematic session:** **Title:** " No one left behind : Leveraging ICT and Education to enhance well-being and the inclusion of persons with disabilities " **Moderator :** Mr. Paul Hector, Advisor for Communication & Information, UNESCO Regional Bureau for Sciences in the Arab States **Panelists:** – Mr. Karim Abdelghani, Programme Coordinator, Arab Regional Office, International Telecommunication Union (ITU) – Mr. Basem A. Awadalla, Talking Books Producer & Narrator, Bibliotheca Alexandrina, Egypt – Ms Nicole Choueiry, UNESCO Office for the Maghreb, Morocco – Mr. Davison Muwidzi, Principal Lecturer, Nyadire Teachers College, Zimbabwe

8:00 – 9:00	Registration
9:00 – 9:30	**Opening ceremony - Welcome and Opening Remarks** ▪ **Professor Mohamed Ould Amar: Director General of the Arab League Educational, Cultural and Scientific Organization (ALECSO)** ▪ **Professor Habib Sidhom: President of the University of Tunis** ▪ **Professor Souad Chebbi: Director of LATICE Laboratory** ▪ **Professor Ronghuai Huang: Dean of Smart Learning Institute, Faculty of Education of Beijing Normal University** ▪ **Dr. Sameer Samreen: World Association of Sign Language Interpreters**
9:30 – 10:00	**Group Photo**
	Coffee break
10:00 – 11:00	**Keynote :** **Prof. Ronghuai Huang: Faculty of Education of Beijing Normal University** **ICT and OER in education: Future Perspectives**
11:00 – 13:00	**OER Workshop**
13:00 – 14:00	**Lunch**
14:00 – 15:30	**Session I.1 : E-Accessibility** – **Hajer Chalghoumi, Amélie Gauthier-Beaupré, Rosalie Wang, Charlene Chu, Claudine Auger and Winnie Sun**: Access and use of information technology by persons with cognitive disabilities: Perspectives of older adults and their caregivers – **Iwao Kobayashi, Kiwamu Sato, Takahiro Uchida and Hiroshi Nunokawa**: Compact Calibration-Free Eye-Tracking System for Students with Severe Physical and Intellectual Disabilities – **Achraf Othman:** Mada Innovation Program: A Go-to-Market ecosystem for Arabic Accessibility Solutions – **Amina Ben Haj Amor, Oussama El Ghoul and Mohamed Jemni**: Sign language handshape recognition using Myo Armband

15:30 – 16:00	Coffee break
16:00 – 17:30	**Session II.1 : ICT in Education** – **Qasim Alajmi and Mohammed A. Al-Sharafi**: Cloud computing services and its Effect on tertiary education: Using Google Classroom. – **Esraa Mosalam, Ghada El Khayat, Lilia Cheniti, Bilal Said and Shaimaa Lazem**: Assessing modelling readiness in a games environment – **Mabrouka Ben-Sghaier, Wided Bakari and Mahmoud Neji**: Ar-SLoTE: A Recognizing Textual Entailment Tool for Arabic Question/Answering Systems – **Imane Zaatri, Khadija El Kharki, Rachid Bendaoud and Khalid Berrada**: The use of Open Educational Resources at Cadi Ayyad university – **Heyam Al-Baity, Duaa Alsaeed and Henda Ouertani**: A Streamlined Continuous Improvement Process Based on Learning Analytics: Insights from the IT Program at King Saud University

8:30 – 9:30	**Keynote:** **Dr. Lilia Cheniti Belcadhi : Associate professor, University of Sousse** **Framework for Technology Enhanced Assessment based on Semantic Web**
9:30 – 11:00	**Session I.2 : E-Accessibility** – **Imen Lagha**:Understanding Prosodic Pauses in Sign Language from Motion-Capture and Video-data – **Hajer Chalghoumi, Jessica Rocheleau, Virginie Cobigo, Jeff Jutai, Fatoumata Bah, Yves Lachapelle, Dinis Cabral and Stephen Nicholl**: Reconciling Needs and Feasibility When Developing Technologies for Persons with Cognitive Disabilities: A Case Study – **Ahmed Elsheikh**: Mada Tawasol Symbols & Mobile App – **Aljazi Aljabor**: Mada User Interface and User Experience Repository
11:00 – 11:30	**Coffee break**
11:30 – 13:00	**Session II.2 : ICT in Education** – **Rahma Ben Daamech, Mohamed Koutheair Khribi**: Towards A Framework For Building Automatic Recommendations Of Answers In Moocs' Discussion Forums – **Mohamed Ali Khenissi, Fathi Essalmi, Mohamed Jemni, Kinshuk and Nian-Shing Chen**: The effects of using popular computer games on second language vocabulary learning performance: the difference in spoken words and written words – **Olfa Jeblaoui, Mohamed Ali Khenissi, Fathi Essalmi and Maiga Chang**: Modelling the Learner's Values with Computer-based Educational Game – **Rabiaa Mejbri, Fathi Essalmi and Alaa Qaffas:** Towards modeling the learner's concentration in e-learning environments

	− **Aymen Ghannem, Mohamed Ali Khenissi, Fathi Essalmi and Alaa A. Qaffas**: Educational Computer Game for learning History: Impact on learners' level of knowledge and learners' satisfaction − **Baraâ Jebali, Ramzi Farhat** : Learners' clustering into MOOCs.
13:00 − 14:00	**Lunch**
	Session III : Inovative Computer Technologies and Applications
14:00 − 15:30	− **Tasnim Abar, Asma Ben Letaifa and Sadok Elasmi**: Real Time Anomaly detection-Based QoE Feature selection and Ensemble Learning for HTTP Video Services. − **Hejer Khlif Hachicha, Sarra Ben Rebah and Safa Bhar Layeb:** A New MILP-based Decision Support System for the Fuel Distribution − **Haifa Degachi, Ameni Yengui and Mahmoud Neji**: Towards a Multimedia Ontology for Tunisian Archaeology Field − **Mabrouka Ben-Sghaier, Wided Bakari and Mahmoud Neji**: Ar-SLoTE: A Recognizing Textual Entailment Tool for Arabic Question/Answering Systems − **Nader Trabelsi and Rim Moussa**: UVCA: a Unified Vocal Commands Approach for Mobile Applications − **Ahlem Rhayem, Mohamed Ben Ahmed Mhiri and Faiez Gargouri**: Complex-Event Processing for diabetic patients in the Internet of Medical Things : Semantic-based Approach
15:30 − 16:00	**Closing ceremony**
16:00	**Coffee break**