

The 8th International conference on ICT & Accessibility

ICTA 2021

December 8th - 10th, 2021

ICTA is a bi-annual international conference on ICT & Accessibility. The eighth edition of ICTA 2021 will be held online due to the COVID-19 circumstances, 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.

Conference presentation



Prof. Tawfik Jelassi

Assistant Director-General for Communication and Information, UNESCO



Dr. Lisa Petrides

CEO & Founder, ISKME



Dr. Mohammed Ali Loutfy

Senior Advisor on Capacity Building and Advocacy at G3ict



Prof. Daniel Burgos

Vice-rector for International Research, Universidad Internacional de La Rioja

Keynote Speakers

Conference Thematic sessions

G3ICT/IAAP Session:

- **Title:** Professional Certification, Training
- **Moderator :** Lourdes Arreola Prado, CPABE, IAAP
- **Panelists:**
 - Colette Fransolet, CPABE, Inclusive Design
 - Aya Jibreal, CDMS, CPACC, AIQemam Consultants
 - Laine Amoureux, CPWA, IAAP

- **Description:** This thematic session will feature various G3ICT supported initiatives – The International Association of Accessibility Professionals (IAAP), a division of G3ict will highlight how special initiatives are working towards building the accessibility professionals through implementing Chapters and projects to expand professional certification and training globally, thus creating a network of skilled and knowledgeable professional.
During their interventions, Panelists will talk about :
 - IAAP Overview and Global Initiatives
 - Smart Built Environment Professional Certification
 - Certified Professional in Accessibility Core Competencies (CPACC)
 - Web Accessibility Specialist (WAS)
 - Smart Business for All Initiatives

Digital inclusion of Older Persons Special Session (HBKU & Mada):

- **Title:** Digital Inclusion of Older Persons in the Arab World
- **Moderator :** Dr. Dena Al-Thani, Hamad Bin Khalifa University
- **Panelists:**
 - Dr. Hajer Chalghoumi, AGE-WELL NCE, Canada
 - Dr. Achraf Othman, Mada Centre, Qatar
 - Dr. Suzanne Hammad, Independent Research Consultant and Adjunct Lecturer of Sociology
 - Ms. Asma Hassan, Hamad Bin Khalifa University
- **Description:** This thematic session will feature a discussion on digital Inclusion of Older Persons in the Arab World. Mada Centre partnered with an interdisciplinary group of researchers to study the access and use of information and communication technologies by older adults and their caregivers in Qatar. This project is led by Dr. Dena Al-Thani and funded by Qatar National Research Fund (QNRF) and Doha International Family Institute (DIFI) OSRA Grant. In this session, key findings and lessons learned on the engagement of older adults' engagement in research and technology development in the Arab region mainly in Qatar will be shared. Interdisciplinary perspectives on the subject will be brought forward and discussed by the team.

During their interventions, Panelist will talk about:

- Supporting older persons and their caregivers' digital inclusion in Qatari and Arab Families
- Results of recent scoping review on how older person access and use technologies in the Arab world
- Ethical issues in older adults' access and use of technology in the Arab region: a few context-specific challenges and considerations
- Mada's effort to deal with these concerns mainly MADA ICT-AID Competency Framework & Mada initiative Arab ICT Accessibility Expert Group AIAEG

Conference Agenda

Time zone: Tunisian local time (GMT+1)

D1	11:00 – 11:30	Conference Opening
	11:30 – 11:45	Keynote UNESCO
	11:45 – 12:15	Keynote ISKME
	12:15 – 12:30	Break
	12:30 – 14:00	Session 1
	14:00 – 14:15	Break
	14:15 – 15:45	Session 2
	15:45 – 16:00	Closing Day 1 & Remarks
D2	09:30 – 10:00	Opening Day2
	10:00 – 10:40	Keynote G3ICT
	10:40 – 11:30	G3ICT Thematic Session
	11:30 – 11:45	Break (Poster 1)
	11:45 – 12:30	Keynote Prof. Burgos
	12:30 – 14:00	Session 3
	14:00 – 14:15	Break (Poster 2)
	14:15 – 15:45	Sessionv4
	15:45 – 16:00	Closing Day 2 & Remarks
D3	11:00 – 11:30	Opening Day3
	11:30 – 12:30	Session MADA&HBKU
	12:30 – 12:45	Break (Poster 3)
	12:45 – 14:00	Session 5
	14:00 – 14:15	Break (Poster 4)
	14:15 – 16:15	Session 6
	16:15 – 16:30	Conference Closing

Day 1: 08/12/2021

Day 1 starts from 11:00 to 16:00

Opening ceremony - Welcome and Opening Remarks

- 11:00 – 11:30**
- Professor Mohamed Ould Amar, Director General of the Arab League Educational, Cultural and Scientific Organization - ALECSO
 - Professor Mohamed Jemni, ICT Director, ALECSO
 - Dr. Mohamed Koutheair Khribi, ICTA Program Chair

Keynote address

- 11:30 – 11:45** Prof. Tawfik Jelassi, Assistant Director-General for Communication and Information, UNESCO

Keynote speech

- 11:45 – 12:15** Dr. Lisa Petrides, CEO & Founder, ISKME
Creating Equitable and Inclusive Learning Environments Through the Use of OER

- 12:15 – 12:30** Break

Session ICT Accessibility

Chair:

- 12:30 – 14:00**
- Lundy Lewis and Andre Vellino. Helping Persons with Cognitive Disabilities using Voice-Activated Personal Assistants
 - Dena Al Thani, Asma Hassan, Suzanne Hammad, Achraf Othman and Hajer Chalghoumi. Addressing the Digital Gap for the Older Persons and their caregivers in the State of Qatar: A Stakeholders' Perspective
 - Madhuransi Agrahere Gamage, Sawandi Naotunna, Tharushi Matara Arachchi, Tharushi Rubasinghe, Chamari Silva and Samantha Siriwardhane. Academic Depression Detection using Behavioral Aspects for Sri Lankan University Students
 - Yosra Bouzid and Mohamed Jemni. The Deaf Experience in Remote Learning during COVID-19

- 14:00 – 14:15** Break

Session 2 ICT in Education

Chair:

- 14:15 – 15:45**
- Arini Amarasinghe, Harshani Perera and Nirosha Wedasinghe. Use of Mobile Application to Design Improve Student Performance among Primary School Students in Sri Lanka
 - Mouna Denden, Ahmed Tlili, Ted Krahn, Maiga Chang, Rita Kuo, Mourad Abed and Mohamed Jemni. Predicting Students' Achievements in an Online Course through a Behaviour Analytics - Moodle Plugin: A Pilot Study
 - Makram Soui. Intelligent Personalized E-Learning Platform using Evolutionary Algorithms
 - Yosra Mourali, Ramzi Farhat, Maroi Agrebi, Mohamed Jemni, Christophe Kolski and Houcine Ezzedine. An educational decision support system: case of learners clustering

- 15:45 – 16:00** Closing Day 1 & Remarks

Day 2: 09/12/2021

Day 2 starts from 09:30 to 16:00

09:30– 10:00	Opening Day2
10:00 – 10:40	Keynote speech Dr. Mohammed Ali Loutfy, Senior Advisor on Capacity Building and Advocacy at G3ict “DARE Index: Monitoring the Progress of Digital Accessibility around the World”
10:40 – 11:30	G3ICT/IAAP Session: <ul style="list-style-type: none">– Title: Professional Certification, Training– Moderator : Lourdes Arreola Prado, CPABE, IAAP– Panelists:<ul style="list-style-type: none">• Colette Fransolet, CPABE, Inclusive Design• Aya Jibreal, CDMS, CPACC, AIQemam Consultants• Laine Amoureux, CPWA, IAAP
11:30 – 11:45	Break (Poster 1)
11:45 – 12:30	Keynote speech Prof. Daniel Burgos, Vice-rector for International Research, Universidad Internacional de La Rioja “Digital inclusion as a key for social inclusion. ICT and functional diversity in online education”
12:30 – 14:00	Session 3 ICT Accessibility Chair: <ul style="list-style-type: none">– Bilikis Banire, Dena Al Thani and Marwa Qaraq. INFORMING THE DESIGN OF ATTENTION ASSESSMENT SYSTEM FOR CHILDREN WITH AUTISM SPECTRUM DISORDER: A THEMATIC ANALYSIS APPROACH– Aljazi Aljabor, Fadi Adnan, Mike Park and Achraf Othman. Mada Web Accessibility Monitor Tool– Sanda Hammedi, Fathi Essalmi and Mohamed Jemni. Covid-19 Awareness Game for Deaf Children– Ouiame Azzaoui and Abdelhak Lakhouaja. Statistical Study to Measure the Accessibility of Websites in Morocco: Evaluation of Three Categories of Websites
14:00 – 14:15	Break (Poster 2)
14:15 – 15:45	Session 4 ICT in Education Chair: <ul style="list-style-type: none">– Prof Mosa Alokla, Dr. Mais Alkhateeb and Mohammad Alokla. Hybrid Learning Aided Technology-Rich Instructional Tools - A Case Study: Community College of Qatar– Mbarek Dhahri and Mohamed Koutheair Khribi. Towards ICT-CFT aligned Open Educational Resources Recommendations Based on Elicited Teachers’ ICT Competencies– Nesreen Mejbri, Fathi Essalmi and Mohamed Jemni. Investigating 5th-grade students’ opinions and attitudes towards using an Arabic pedagogical agent– Kifah Imara, Fahriye Altinay and Zehra Altinay. Beyond the Pandemic: Reflections on Teachers' Competencies
15:45 – 16:00	Closing Day 2 & Remarks

Day 3: 10/12/2021

Day 3 starts from 11:00 to 16:30

11:00– 11:30	Opening Day3
11:30 – 12:30	HBKU&MADA Session <ul style="list-style-type: none">- Title: Digital Inclusion of Older Persons in the Arab World- Moderator : Dr. Dena Al-Thani, Hamad Bin Khalifa University- Panelists:<ul style="list-style-type: none">• Dr. Hajer Chalghoumi, AGE-WELL NCE, Canada• Dr. Achraf Othman, Mada Centre, Qatar• Dr. Suzanne Hammad, Independent Research Consultant and Adjunct Lecturer of Sociology• Ms. Asma Hassan, Hamad Bin Khalifa University
12:30 – 12:45	Break (Poster 3)
12:45 – 14:00	Session 5 ICT Accessibility <p>Chair:</p> <ul style="list-style-type: none">- Mohamed Koutheair Khribi, Achraf Othman and Aljazi Nasser Al Jabor. Fostering ICT accessibility proficiency through Mada ICT-AID Competency Framework- Achraf Othman and Oussama El Ghoul. Intra-linguistic and extra-linguistic annotation tool for the “Jumla Dataset” in Qatari sign language- Amina Ben Haj Amor, Oussama Elghoul and Mohamed Jemni. A deep learning based approach for Arabic Sign language alphabet recognition using electromyographic signals
14:00 – 14:15	Break (Poster 4)
14:15 – 16:15	Session 6 Innovative Computer Technologies and Applications <p>Chair:</p> <ul style="list-style-type: none">- Márcio Martins, Francisco Godinho, Pedro Gonçalves and Ramiro Gonçalves. EN 301 549: Parameter decoding, evolution and translation into European Portuguese- Aouadi Nabil. Handwritten Arabic Touching and overlapping Characters Separation Methods- Bojitha Mindula, Malith Ranasinghe, Rushdy Ahamed, Jayani Tennakoon, Chamari Silva and Geethanjali Wimalarathne. Image and Video Processing based Expressway Traffic Rules Violation Detection- Gurpreet Kaur. Effect of think -pair -share strategy on achievement in mathematics in relation to mathematical creativity- Aouadi Nabil. Combination of Hough Transform and Neural Network on recognizing mathematical symbols- Boulus Shehata, Ahmed Tlili and Ronghuai Huang. An Analysis of International Conference Proceedings on Artificial General Intelligence (AGI) from 2008 to 2020: A Data-Mining Mapping Analysis
16:15 – 16:30	Conference Closing