



UQAR

Rimouski | Lévis



Algeria Section

The 2022 International Conference on Human-centric Smart environments for Health and well-being (IHS'2022)

Lévis (Québec), October 26-28th 2022



After the success of the previous 1st edition (1st International Workshop on Human-Centric Smart Environments for Health and Well-being IHS'2018) held at Médéa, Algeria on 24th-25th November 2018, and the 2nd edition was held at Boumerdès, Algeria on 9th-10th February 2021, the new 2022 edition is promoted to the rank of a conference entitled "The 2022 International Conference on Human-centric Smart environments for Health and well-being (IHS'2022)". It will be organized by the University of Quebec at Rimouski (UQAR, QC, Canada) in collaboration with the University of Sciences and Technology Houari Boumediene (Algiers, Algeria). It will be held in Hybrid at Lévis, Canada (QC) on October 26th-28th, 2022.

Smart environment for health and well-being may be defined as "a world that is richly and invisibly interwoven with smart devices (sensors, actuators, displays, etc.) that are continuously working to make humans' lives more comfortable and to improve their health and well-being". The aim of the conference IHS'2022 is to contribute to the scientific knowledge of building smart environments for health and well-being. This conference will provide an interesting multi-disciplinary collaborative forum for the active community of academics, researchers, and industrials from computer science, information technology, electrical engineering, biomedical engineering, and telecommunication.

The conference invites authors to present original works describing research results, theoretical, practical, or industrial solutions (prototype, formal modeling, augmented reality, machine learning, big data, web & internet of things, system theory, optimization, robotics, etc.) and discussing innovative ideas that have potentials to build human-centric smart environments for health and well-being. The conference will include plenary talks and oral/poster sessions.

IHS'2022 is Technically Co-Sponsored by IEEE and is planned as a hybrid event: some sessions in-person to be held in Lévis, Canada (QC) and some over the Internet. All accepted papers will be submitted for publication in IEEE Xplore Digital Library and indexed in DBLP, Web of Science, and Scopus.

Authors are invited to submit their contributions related, but not limited, to the following list of topics within the scope of the conference:

Track 1: e-health services

- Public health
- Primary health care
- Emergencies management
- Quality of Life
- Activities of Daily Living
- Telemedicine
- Remote monitoring
- Remote assistance
- Chronic and genetic diseases (management, follow-up, etc.)
- Diseases and epidemics (detection, control, prevention, etc.)

Track 2: Interaction with the environment

- Human/smart environment interactions and interfaces
- Human/robot interaction
- Interaction modalities (vision, audio, tactile, etc.)
- Pervasive computing
- Virtual, diminished and augmented reality
- Human factors and ergonomics
- Quality of Experience
- User experience and usability
- Localization and tracking

Track 3: Networking

- Distributed computing
- Mobile computing
- Cloud, Fog, and Edge computing
- Internet of Things, and Web of Things
- Sensors, body, home, vehicular and metropolitan networks
- Wireless network
- Software-defined network
- Network connectivity and access
- Network resources management
- Real-time network applications
- Quality of Service

Track 4: Artificial Intelligence

- Machine learning
- Medical decision-making
- Formalization and exploitation of medical knowledge
- Game theory
- Image, speech and signal processing
- Modeling and simulation of smart environment
- Deep learning
- Genetic algorithms
- Fuzzy-logic control

Track 5: Medical data

- Acquisition, representation, exploration and exploitation of medical data

- Storage and sharing of medical data
- Electronic medical record
- Big data, data warehouse, and data mining
- Data metrics and analytics
- Actionable medical data
- Medical data governance
- Trusted and accurate data
- Leveraging clinical data
- Medical data standards
- Data structures and ontologies
- Analysis of biomedical data

Track 6: Security and privacy

- Privacy aspects
- Network security
- Security and protection of medical data
- Healthcare data breaches
- Security in block-chain
- Trust models and trust policies
- Information dissemination control
- Phishing detection and prevention
- Threat intelligence
- Ransomware
- Cyber espionage
- Legal aspects for medical data
- Access Control

Track 7: Safety

- Computer forensics
- Health safety at work
- Child protection
- Physical safety
- Mental safety
- Incidents/accidents (prevention, detection, management, etc.)
- Dependent-persons safety
- Safety laws and regulations
- Proactive risk assessment
- Workplace incidents and hazards
- Living space incidents and hazards

Track 8: Smart environment

- Microelectromechanical systems
- Embedded sensors
- Smart devices
- Social robots
- Drones
- Smart homes and buildings,
- Smart medical institutions
- Smart cars
- Smart cities
- Smart governance
- Social network

Important dates

Submission deadline (extended FINAL): August 05th, 2022
Notification: September 13th, 2022
Camera ready: October 5th, 2022
Conference date: October 26-28th, 2022

Paper submission

Authors are invited to submit full-length papers (6 pages max) written in English and formatted using the **IEEE template**: https://www.ieee.org/conferences_events/conferences/publishing/template_s.html.

The papers should be submitted electronically in PDF format at: <https://ihsh2022.edas.info/>.

All presented papers would be forwarded for publication in proceedings that will be indexed on **IEEE Xplore Digital Library**; authors of the best papers will be invited to submit extended versions of their articles for **publication in indexed Journals**.

Conference registration fee

		IEE member (USDS)	Non-IEEE member (USDS)
Researcher	Early bird	320\$	370\$
	Regular	370\$	420\$
Student	Early bird	220\$	270\$
	Regular	270\$	320\$
Online sessions	Early bird	120\$	150\$

Contacts and information

Web: <https://ihsh2022.uqar.ca/>
 Email: web.ihsh@uqar.ca

Sponsorship and partners



Honorary General Chairs

- Abdelkader Belkhir, USTHB, Algeria

General Co-Chairs

- Abdelfetah Hentout, CDTA, Algeria
- Allal Tiberkak, University of Medea, Algeria
- Mehdi Adda, UQAR, Canada

Local organization Chair

- Mehdi Adda, UQAR, Canada

Industrial innovationCo-Chairs

- Noureddine Chaib, Laghouat University, Algeria

Program committee

- Ahmed Kheldoun, University of Medea, Algeria
- Hamid Mcheick, University of Quebec at Chicoutimi, Canada
- Hocine Mokrani, University M'hamedBougara of Boumerdes, Algeria
- Mirna Atieh, Lebanese University, Lebanon
- Mounsiif Chetitah, University of Würzburg, Germany
- Nacim Ihaddadene, JUNIA, Lille, France
- Noureddine Derguini, Higher Normal School, Algeria
- Rachid Djerbi, University M'hamedBougara of Boumerdes, Algeria
- Sofiane TchoketchKebir, University of Medea, Algeria
- Sooraj KandathilBabu, University of Würzburg, Germany

Industrial innovationCo-Chairs

- Noureddine Chaib, Laghouat University, Algeria

Industrial innovationCo-Chairs

- Eric Chartré, University of Quebec at Rimouski, Canada
- Gabriel Morais, University of Quebec at Rimouski, Canada
- Hussein Ibrahim, UQAR/CEVI, Canada

Local committee

- Guillaume Gingras, UQAR, Canada
- Nadine Kashmar, UQAR, Canada
- Mohamed Aymen Saied, ULaval, Canada
- Mohamed Tarik Moutacalli, UQAR, Canada
- Mohammad Moshawrab, UQAR, Canada
- Yacine Benahmed, UQAR, Canada
- Yacine Yaddaden, UQAR, Canada

Treasurer

- Said Echchakoui, UQAR, Canada

Technical program committee

- Abdelfetah Hentout, Center for the Development of Advanced Technologies, Algeria
- Abdelhakim Idir, University M'hamed Bougara of Boumerdes, Algeria
- Abdelhamid Mellouk, University Paris-Est-Créteil-Val-de-Marne, France
- Abdelkader Belkhir, University of Science and Technology Houari Boumediene, Algeria
- Abdelkader Bellarbi, Infinite research and development, France
- Abdelkader Laouid, El-Oued University, Algeria
- Abdelkrim Abdelli, University of Science and Technology Houari Boumediene, Algeria
- Abdelkrim Boukabou, Mohamed Seddik Ben Yahia University of Jijel, Algeria
- Abdellah Rezoug, University M'Hamed Bougara of Boumerdes, Algeria
- Abdelmadjid Boukra, University of Science and Technology Houari Boumediene, Algeria
- Abdelmalek Toumi, National Institute of Advanced Technologies of Brittany, France
- Abdenour Bouzouane, University of Quebec at Chicoutimi, Canada
- Abdenour Hadid, University Polytechnique Hauts-de-France, France
- Abderraouf Maoudj, University of Southern Denmark, Denmark
- Abdessamad Réda Ghomari, National School of Computer Science, Algeria
- Ahmad Fadlallah, University of Sciences and Arts in Lebanon, Lebanon
- Ahmed Bouabdallah, IMT-Atlantique, France
- Ahmed Guessoum, University of Science and Technology Houari Boumediene, Algeria
- Ahmed Kheldoun, University of Medea, Algeria
- AimadAhriche, University M'hamed Bougara of Boumerdes, Algeria
- Ali Mansoul, Center for the Development of Advanced Technologies, Algeria
- Ali Raad, Islamic University of Lebanon, Lebanon
- Allal Tiberkak, University of Medea, Algeria
- Alvaro Rocha, University of Lisbon, Portugal
- Amar Aissani, University of Science and Technology Houari Boumediene, Algeria
- Amar Ramdane-Cherif, University of Versailles Saint-Quentin-en-Yvelines, France
- Amina Chentir, University of Blida 1, Algeria
- Andree-Anne Parent, University of Quebec at Rimouski, Canada
- Ayan Chatterjee, University of Agder, Norway
- Behnam Farzaneh, Isfahan University of Technology, Iran
- Belkacem Abdelkader Nasreddine, United Arab Emirates University, AEU
- Brahim Benaissa, Toyota technological Institute, Japan
- BrankaRodić, Academy of applied studies Belgrade, Serbia
- Bruno Bouchard, University of Quebec at Chicoutimi, Canada
- Carlos Luis Sánchez Bocanegra, Universitat Oberta de Catalunya, Spain
- Carme Carrion Ribas, University ouverte de Catalogne, Spain
- Cheikh Kherici, Ibn Khaldoun University of Tiaret, Algeria
- Clémence Dallaire, University of Laval, Canada
- Dalila Boughaci, University of Science and Technology Houari Boumediene, Algeria,
- Dimitrios G. Katehakis, FORTH, Institute of Computer Science, Greece,
- Djamil Belazzougi, Research Center for Scientific and Technical Information, Algeria,
- Emmanuel Benoist, Bern University of Applied Sciences, Switzerland,

- Et-Tahir Zemouri, Center for the Development of Advanced Technologies, Algeria
- Faissal El Bouanani, Mohammed V University, Morocco
- Fatma-Zohra Bouchibane, Center for the Development of Advanced Technologies, Algeria
- Fouad Yacef, Center for the Development of Advanced Technologies, Algeria
- Fouzi Lezzar, University Constantine2- Abdelhamid Mehri, Algeria
- Frédéric Banville, University of Quebec at Rimouski, Canada
- Gerald Bieber, Fraunhofer-IGD, Germany
- Günter Alce, Lund University, Sweden
- Hadjira Belaidi, University M'hamed Bougara of Boumerdes, Algeria
- Hakim Mitiche, University of Djelfa, Algeria
- Hamid Azzoune, University of Science and Technology Houari Boumediene, Algeria
- Hamid Mcheick, University of Quebec at Chicoutimi, Canada
- Hamza Akroum, University M'hamedBougara of Boumerdes, Algeria
- Hamza Yous, Intel Research and Development Ireland Limited, Ireland
- Hocine Mokrani, University M'hamed Bougara of Boumerdes, Algeria
- Hussein Ibrahim, Centre d'entrepreneuriat et Valorisation des Innovations de Sept-Îles, Canada
- Jean Meunier, University of Montreal, Canada
- Jean-Christophe Cexus, National Institute of Advanced Technologies of Brittany, France
- Joan Torrent Sellens, Universitat Oberta de Catalunya , Spain
- Karim Baiche, University M'hamed Bougara of Boumerdes, Algeria
- Karim Sebaa, University of Medea, Algeria
- Kevin Bouchard, University of Quebec at Chicoutimi, Canada
- Khaled Harrar, University M'hamed Bougara of Boumerdes, Algeria
- Lily Lessard, University of Quebec at Rimouski, Canada
- Lorenzo Carnevale, University of Messina, Italy
- Luis Anido-Rifon, Universida de de Vigo, Spain
- Lyes Khelladi, Research Center for Scientific and Technical Information, Algeria
- Maurice Mars, University of KwaZulu-Natal, South Africa
- Mehdi Adda, University of Quebec at Rimouski, Canada
- Mehdi Gheisari, Islamic Azad University, Iran
- Messaoud Rahim, University of Medea, Algeria
- Mirna Atieh, Lebanese University, Lebanon
- Mohamed Aymen Saied, University of laval, Canada
- Mohamed Maazouz, University of Medea, Algeria
- Mohamed Ahmed Nacer, Research Center for Scientific and Technical Information, Algeria
- Mohamed Ould-Khaoua, University Saad Dahlab of Blida, Algeria
- Mohamed Soltane, University of Medea, Algeria
- Mohamed Tarik Moutacalli, University of Quebec at Rimouski, Canada
- Mohamed Zinelabidine Doghmane, University M'hamed Bougara of Boumerdes, Algeria
- Mohammed Ammar, University M'hamed Bougara of Boumerdes, Algeria
- Mounsiif Chetitah, University of Würzburg, Germany
- Mounir Bouhedda, University of Medea, Algeria
- Mustapha Aouache, Center for the Development of Advanced Technologies, Algeria
- Nacéra Laiche, University of Science and Technology Houari Boumediene, Algeria
- Nacim Ihaddadene, JUNIA, Lille, France
- Nadine Kashmar, University of Quebec at Rimouski, Canada
- Najeeb Al-Shorbaji, Peter L. Reichertz Institute for Medical Informatics, Germany
- Noureddine Chaib, Laghouat University, Algeria
- Noureddine Messaoudi, University M'hamed Bougara of Boumerdes, Algeria
- Oussama Kerdjij, Center for the Development of Advanced Technologies, Algeria
- Payam Porkar, Damavand Branch of Azad University, Iran
- Peter Foltz, University of Colorado Boulder, USA
- Rabie Riadh Benrezki, Center for the Development of Advanced Technologies, Algeria
- Rachid Djerbi, University M'hamed Bougara of Boumerdes, Algeria
- Rachid Saadane, Hassania School of Public Works, Morocco
- Razika Lounas, University M'hamed Bougara of Boumerdes, Algeria
- Riad Akroum, Aalto university, Finland
- Saeideh Valizadeh-Haghi, Shahid Beheshti University of Medical Sciences, Iran
- Samaneh Madanian, Auckland University of Technology, New Zealand
- Samia Belkacem, University M'hamed Bougara of Boumerdes, Algeria
- Samia Ourari, University M'hamed Bougara of Boumerdes, Algeria
- Samir Benbelkacem, Center for the Development of Advanced Technologies, Algeria
- Sebastian von Mammen, University of Wurzburg, Germany
- Shahabedin Rahmatzadeh, Shahid Beheshti University of Medical Sciences, Iran
- Shegaw Anagaw Mengiste, University of South-Eastern Norway (USN), Norway
- Sid Ali Fellag, University M'Hamed Bougara of Boumerdes, Algeria
- Sofiane TchoketchKebir, University of Medea, Algeria
- Sooraj Kandathil Babu, University of Würzburg, Germany
- Soufiane Tebache, National Polytechnic School, Algeria
- Soundes Belkacem, University of batna2, Algeria
- Tunc Asuroglu, Tampere University, Finland
- Tewfik Kernane, University of Science and Technology Houari Boumediene, Algeria
- Udhaya Kumar Dayalan, Trane Technologies, USA
- Wassila Dib, Center for the Development of Advanced Technologies, Algeria
- Yacine Benahmed, University du Québec à Rimouski, Canada
- Yacine Yaddaden, University du Québec à Rimouski, Canada
- Yasmine Guerbai, University M'hamed Bougara of Boumerdes, Algeria
- Yassine Himeur, Qatar University, Qatar
- Yassine Meraihi, University M'hamed Bougara of Boumerdes, Algeria
- Youcef Djenour, SINTEF Digital, Norway
- Youcef Hammal, University of Science and Technology Houari Boumediene, Algeria
- Zehra Aysun Altikardes, Marmara University, Turkey
- Zeleke Abebaw Mekonnen, University of Gondar, Ethiopia