



# INTERNATIONAL CONFERENCE ON SMART INNOVATION, ERGONOMICS AND APPLIED HUMAN FACTORS (SEAHF) 22-24 January 2019 Madrid Spain

## CONFERENCE AIM

The 1st edition of **SEAHF** conference targets different scientific fields and invites academics, researchers and educators to share innovative ideas and expose their works in the presence of experts from all over the world.

**SEAHF** focuses on original research and practice-driven applications. It provides a common linkage between a vibrant scientific and research community and industry professionals by offering a clear view on modern problems and challenges in information technology.

**SEAHF** offers a balance between innovative industrial approaches and original research work while keeping the readers informed of the security techniques, approaches, applications and new technologies. The conference is an opportunity for students, doctors, academics and researchers to open up to the outside world, make connections and collaborate with various domain experts. **SEAHF** particularly welcomes papers on the following topics:

### B.1 Topic 1: Smart technologies and Artificial Intelligence (SAI)

- Smart home and buildings
- Smart cities
- Smart grid technology
- Smart vehicles and transport
- Smart energy
- Internet of Things (IoT)
- Autonomous agents and multi-agent systems
- Prediction and decision-making
- Artificial neural networks
- Fuzzy systems
- Algorithms and methods
- Machine learning
- Deep learning

### B.3 Topic 3: Aerospace Engineering/Robotics and IT (AERIT)

- Control design
- Remote control
- Human machine systems
- Computer systems
- Automotive control
- Aerospace
- Marine systems
- Artificial neural networks
- Machine learning
- Deep learning Pattern recognition
- Radar Systems and Technology
- Aerospace engineering and Technology
- Aerospace and Electronics Systems
- Aerospace systems and software engineering
- Embedded Electronics and Computing

### B.4 Topic 4: Information Security and Mobile Engineering (ISME)

- Authentication and access control
- Cyber security
- Anonymity and privacy
- Cryptographic protection
- Human factors in security
- Multimedia security
- Network and mobile security
- Web and internet computing
- Distributed and parallel systems & algorithms
- Hardware and physical security
- Intelligent information & database systems
- Embedded system and software
- Networking and communications
- Mobile and ubiquitous computing
- Modelling and simulation
- Computer architecture and real time systems
- IT policy and business management

### B.2 Topic 2: Green Energy Production and Transfer Systems (GETS)

- Power Systems monitoring using novel sensor technologies
- Power plant Diversity in modern substations
- Substation automation and control
- Power system metering and protection
- Photovoltaic/ Wind energy systems
- Energy storage and distribution systems
- Energy management and transmission methodologies
- Dynamic performance of Power system
- Power System Operations, Planning & Economics
- Energy conversion and Electric machines
- Integration of AC and DC grids and microgrids
- Smart Transmission Grids
- Smart buildings, district and cities
- Power System Transients and Testing
- Smart Distributed and Autonomous Energy Systems

### B.5 Topic 5: IT for Bio-Medical Engineering and Smart Agronomy (BESA)

- #### IT & Bio-Medical Engineering
- Big-Data visualization
  - Signalling and computation
  - Biomedical imaging and image processing
  - Health informatics
  - Biosensors
  - Bio-robotics
  - Biological and medical systems

- #### IT & Smart Agronomy
- Crop physiology
  - Agro-ecosystems and environment
  - Organic farming
  - Agro climatology and modelling
  - Farming and cropping systems
  - Crop weed interactions and management
  - Computers and electronics in agriculture
  - Engineering in agriculture, environment and food
  - Agricultural systems and forest meteorology
  - Bio-systems engineering
  - Plant/soil relationships
  - Crop quality and post-harvest physiology

- Future Power distributions systems in ships and aircrafts
- Cyber-security technologies for robust solutions
- Cyber-physical systems modelling and simulation
- Home Area Network (HAN) / Home Energy Management Systems (HEMS)
- New energy policies for future power systems

### B.6 Topic 6: IT for Smart Marketing/Management & Tourism Policy (SMTPT)

- Tourism education and its role in managing tourism development
- Industry's role in managing growth
- Future of tourism
- Globalisation and tourism
- Economic/social/environmental/cultural impact of tourism
- Advances in tourism policy-making
- Tourism development and planning
- Public administration of tourism development
- Local government role and responses to tourism development
- European Union policies in tourism
- Tourism research and methodology
- Cross-cultural differences
- Sustainable tourism
- Alternative and special forms of tourism
- Marketing and management
- Economic development and planning
- Geography
- Sociology
- Psychology
- Anthropology
- Retailing
- Policy-making
- Public administration of tourist destinations

### B.8 Topic 8: Hydrogen & Fuel cell Energy Technologies (HFET)

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| <h4>Renewable &amp; clean energy</h4> <ul style="list-style-type: none"> <li>• Clean Energy Technologies and Systems</li> <li>• Renewable Energy Production &amp; clean fossil fuel Technologies</li> <li>• Modern power systems integration</li> <li>• Green/Sustainable supply chains</li> <li>• Energy efficiency</li> <li>• Energy use and consumption</li> <li>• Green/sustainable building construction</li> <li>• Energy and cost saving potential</li> <li>• Biomass (Bio fuels, bio gas)</li> </ul> | <h4>Fuel cells</h4> <ul style="list-style-type: none"> <li>• Hydrogen energy applications</li> <li>• Hydrogen safety</li> <li>• Hydrogen production &amp; storage</li> <li>• Hydrogen distribution systems</li> <li>• Electric Storage fuel cell</li> <li>• Smart Hydrogen vehicles</li> <li>• Fuel Cells, Hydrogen generation</li> <li>• CO<sub>2</sub> reduction with hydrogen</li> <li>• Theoretical modeling and simulation</li> <li>• Greenhouse gas</li> </ul> |
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### B.7 Topic 7: Technology & Educations (TE)

- E-Learning
- New learning and new technologies
- Ubiquitous learning
- Collaborative learning and collective intelligence
- Synchronous and asynchronous learning
- Learning by design
- Multimodal communications and multiliteracies
- Social media as learning tools
- Blended learning
- Transformative pedagogies
- Mobile learning
- Science education



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