

Wednesday, 17 July 2019

Venue: Faculty of Sciences, Mohammed V University in Rabat

08:00 – 09:00 | **Registration and Words of Welcome**

09:00 – 10:30 | **Tutorials and Demos I**

**Anders Bergman**, Uppsala University, Sweden

*Atomistic Spin Dynamics*

**Abeer Abu Raed**, American University of

Ras Al Khaimah, United Arab Emirates

*Virtual Reality in Architecture*

10:30 – 10:45 | **COFFEE BREAK**

10:45 – 12:15 | **Tutorials and Demos II**

**Lalla Btissam Drissi**, Mohammed V University

Rabat and Hassan II Academy of Sciences and

Technology, Morocco & AGYA Alumna

*Application of DeepAIMD for Energy and*

*Environment*

**Asier Eiguren**, International Physics Center in

San Sebastian, Spain

*Visualization of Fermi Surfaces Using Wannier*

*Functions with Python Mayavi/Xcrysden*

*Packages*

12:15 – 14:00 | **LUNCH BREAK**

14:00 – 15:30 | **Tutorials and Demos III**

**Faycal Djeflal**, University Mostefa, Algeria

& AGYA Alumna

*Photovoltaic and Photodetector Devices: New*

*Design Approaches*

**Julen Ibanez**, Materials Physics Center in San

Sebastián, Spain

*New Features in Wannier90*

15:30 – 15:45 | **COFFEE BREAK**

15:45 – 17:15 | **Tutorials and Demos IV**

**Rachid Ahl Laamara**, CRMEF-Fes and

Meknes Center of Physics & Mathematics

in Rabat, Morocco

*Mathematical Computation Program for Big Data*

**Hamid Rassam**, University of Perpignan, France

*Applications of Nanomagnetization's Switching*

*in Medicine & Environment*

Thursday, 18 July 2019

Venue: Hassan II Academy of Sciences and Technology

09:00 – 09:45

**Welcome Addresses & Opening Remarks**

**Omar Fassi-Fehri**, Permanent Secretary of the

Hassan II Academy of Science and Technology

**Mosto Bousmina**, Chancelor of Hassan II

Academy of Science and Technology &

President of Euro-Mediterranean University of

Fes (UEMF)

**Mohammed Rhachi**, President of Mohammed

V University

**Mourad El Belkacemi**, Dean of Faculty of

Sciences, Rabat

**Lalla Btissam Drissi**, Mohammed V University

Rabat and Hassan II Academy of Sciences and

Technology, Morocco & AGYA Alumna

*Welcome and Introduction of AGYA*

09:45 – 10:15

**Introductory Lecture**

**Aawatif Hayar**, President of University Hassan

II-ENSEM, Casablanca

Chair of Casablanca IEEE Core Smart City

Project

Coordinator Solar Decathlon Africa Project

E-Co Dar

President of GreenTIC Research Centre

*E-Co Dar: A Moroccan Maslow Concept for*

*Affordable Social Sustainable Smart Housing*

10:15 – 10:45

**COFFEE BREAK & GROUP PHOTO**

10:45 – 12:45

**Session I: Big Data and Smart Cities**

**Antonio Puliafito**, University of Messina, Italy

*A Self-Configurable Control System for Software-*

*Defined Smart Cities*

**Ahmad Sakhrieh**, American University of Ras Al

Khaimah, United Arab Emirates & AGYA Member

*Energy Efficiency in Buildings*

**Assia Belbachir**, Polytechnic Institut for Advanced

Sciences, Sorbonne University, France

*Smart Mobility*

**Marc Ringel**, HFWU – Nuertingen-Geislingen

University, Germany & AGYA Member

*Digitisation and Big Data in the Energy Sector*

*in Germany*

12:45 – 14:00

14:00 – 15:30

15:30 – 15:45

15:45 – 17:45

**Abdelouahid Lyhyaoui**, Ecole des Sciences

Appliqués de Tanger, Morocco

*SmarTa Project: Scientific Contributions of LTI/*

*MedSoftworks*

Discussion

**LUNCH BREAK**

**Session II: Soft Computing in Energy & Health**

**Helder Araujo**, Institut for Systems and

Robotics, University of Coimbra, Portugal

*Localization and visual odometry for endoscopic*

*capsules with multiple cameras*

**Anders Bergman**, Uppsala University, Uppsala,

Sweden

*Realistic finite-temperature descriptions of*

*magnetic materials*

**Ismail Al Hinti**, German Jordan University,

Amman, Jordan

*Prospects of smart integration of photovoltaic*

*systems*

**Asier Eiguren**, International Physics Center

(DIPC), San Sebastian, Spain

*Efficient treatment of Fermi Surface dependent*

*physical propertie*

Discussion

**COFFEE BREAK**

**Session III: Data Mining & Machine Learning in Environment**

**Youcef Djenouri**, Department of Computer

and Information Science, NTNU,

Trondheim, Norway

*Data Mining Techniques for Smart City*

*Applications: Case Study on Intelligent*

*Transportation Systems*

**Dafir Mann**, Architect and Expert in Urban

Design, United Arab Emirates

*Sustainable Urbanism/ Urban Forms in The Gulf*

*Region*

**Julen Ibanez**, Materials Physics Center,

CSICUPV/EHU, Spain

*Nonlinear Photovoltaics in Non-*

*Centrosymmetric Materials from First Principles*

**Maisa Farahat**, University Tunis Al Manar, Tunisia  
*Support Vector Machine for PV System Efficiency Improvement*  
**Younes Raoui**, Faculty of Sciences, Mohammed V University in Rabat, Morocco  
*Spatial Navigation of Artificial Agents Using Machine Learning*  
 Discussion

Friday, 19 July 2019

Venue: Scientific Excursion to the City of Tanger for Speakers

07:00 – 10:00 | **BUS TRANSFER FROM HOTEL TO CITY OF TANGER**

10:00 – 13:00 | **Morning Excursions**

**Excursion I: Tanger Automotive City**  
 Visit to the wind farm “El Koudya Al Bida” as the first wind farm for wind turbine blades in the Middle East & Africa.  
**Excursion II: Tangier-Med Port**  
 Visit to the port known as an integrated competitiveness hub and as an industrial platform aggregating economic zones.

13:15 – 14:30 | **LUNCH BREAK**

14:30 – 18:30 | **Afternoon Excursions**

**Excursion III: Tangier Tech City**  
 Visit to the future Moroccan smart city.  
**Excursion IV: Faculty des Sciences Techniques**  
 Visit to the laboratories of FST in Tangier.  
**Excursion V: Ecole Nationale des Sciences Appliquées**  
 Visit to the laboratories of ENSA in Tangier  
**Excursion VI: City Rally Tangier**  
 Intercultural Team-Building Activity

19:00 | **DINNER AND RETURN TO THE HOTEL**

Workshop Organizers:

**Lalla Btissam Drissi**  
 Mohammed V University & Agya Alumna, Morocco  
**Ahmed Sakhrieh**  
 American University Ras Al Khaimah & AGYA Member, United Arab Emirates  
**Marc Ringel**  
 HFUW – Nuertingen-Geislingen University & AGYA Member, Germany

Conference Hotel

**Hotel Rabat**  
 21, Chellah Avenue, Hassan, Rabat, Morocco

Conference Venues

**Hassan II Academy for Sciences & Technology**  
 Km 4 Mohammed VI Avenue, Rabat, Morocco  
**Faculty of Sciences, Mohammed V University in Rabat,**  
 Avenue Ibn Battouta, Agdal, Rabat, Morocco

Contact: [agya@bbaw.de](mailto:agya@bbaw.de)  
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International Workshop of the Arab-German Young Academy of Sciences and Humanities (AGYA)

# Soft Computing and Data Mining for Energy, Environment & Health

17 – 19 July 2019

Rabat & Tanger, Morocco



In cooperation with the **College of Physical and Chemical Sciences, Hassan II Academy of Sciences & Technology**

The workshop is organized by the AGYA Working Group *Energy, Water and Environment*