

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

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 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*