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AFJASSST

AFrica-JApan S ymposium on S ociety, S cience and T echnology

Preparatory meetings for TICAD8 Side Event
August 24 and 25, 2022

**Knowledge & Innovation
Investment for a New Africa**



Technical Sessions program



Wednesday, August 24, 2022

From 8h:00

Registration

Opening Ceremony

Master of ceremony: Dr. Majdi HAZAMI, CRTEn, Tunisia
Venue: Auditorium Ibn Khaldoun

08h:15 - 08h:45

- Prof. Chedly ABDELLELY, ANPR, Tunisia
- Prof. Adel BOUHOULA, Arabian Gulf University, Tunisia
- Prof. Aboubaker Chedikh BEYE, UCAD, Senegal
- Prof. Adel MNIF, AFJASSST Program Overview, Tunisia

Japan cooperation experiences: TJASSST, SATREPS, SCSS

Venue: Auditorium Ibn Khaldoun

Moderator: Dr. Majdi HAZAMI, CRTEn, Tunisia

Panelists:

08h45 - 9h45

- Mme Rim SAID (DGVR): Japan and Tunisia partnership
- Prof. Chedly ABDELLELY (ANPR)/Dr. Mohamed Kefi (CERTE) : History of Tunisia Japan Symposium on Science, Society and Technology (TJASSST)
- Prof. Mohamed Moncef HARRABI(INAT/UT)/Prof. Mitsutoshi NAKAJIMA (UT): The Foundation of The Alliance for Research on the Mediterranean and North Africa (ARENA)
- Prof. Hiroko ISODA(UT)/Prof. Riadh KSOURI (CBBC): Experience of SATREPS project in Tunisia
- Prof. Adel BOUHOULA (Arabian Gulf University): More than 26 years of fruitful scientific cooperation with Japan.

Panel 1: Energy (Energy transition, Alternative Energy Mix and Energy Efficiency)

Time: 09h:45-10h:45

Venue: Auditorium Ibn Khaldoun

Moderators:

- Prof. Balla Diop NGOM, Université Cheikh Anta Diop de Dakar, Senegal (UCAD)
- Prof. Radhouane CHTOUROU, CRTEn, Tunisia

Rapporteur:

- Dr Majdi HAZAMI, CRTEn, Tunisia

Global Theme and topic:

- Energy transition
- Alternative Energy Mix
- Energy Efficiency

Special guests:

- Society: ASSAD Batteries
- Society Agro-Techno Services (ATS)

Panelists:

- **Researchers (TN)**
 - Prof. Chiheb BOUDEN, ENIT
 - Prof. Brahim BESSAIS, CRTEn
 - Prof. Mongi BOUAICHA, CRTEn
- **Representative from the Continent:**
 - Prof. Balla Diop NGOM, UCAD
- **Industrial sector (TN)**
 - Dr. Ali KANZARI, Expert Senior, President of the Union Chamber of Photovoltaic Integrators (CSPV)
- **Decision maker (TN)**
 - STEG Renewable Energy
 - Mr. Abdelkader BACCOUCHE, Directeur de la direction du bâtiment et de l'unité PROSOL industrie et tertiaire, National Agency for Energy Management (ANME)
 - Prof. Elyes KCHOUK, representative of the municipality of Hammam-lif

General Debate: (Scientific and strategic discussions):

- Advanced Technologies
- Economic issues
- Environment issues
- Legislation and standards

Workshop 1: Energy (Energy transition, Alternative Energy Mix and Energy Efficiency)

Time: 14h:30-16h:30

Venue: Khawarizmi

Moderator:

- Dr. Majdi HAZAMI, CRTEn

Rapporteur:

- Prof. Daoued MIHOUBI, CRTEn

Global Theme and topic:

- Mix-Energies Systems,
- Energy Storage
- Energy transition,
- Photovoltaic, hybrid systems,
- Energy Efficiency
- Alternative Energy Mix

Keynote:

- **Keynote.1:** Prof. Balla Diop NGOM: African experience in the field of Energy transition & Alternative Energy Mix (UCAD).
- **Keynote.2:** Representative from STEG Renewable Energy (TN): Legislation and standards
- **Keynote.3:** Dr. Ali KANZARI, Expert Senior, President of the Union Chamber of Photovoltaic Integrators (CSPV)
- **Keynote.4:** Mr. Abdelkader BACCOUCHE, Director of the Directorate of Building and Unit PROSOL Industry and Tertiary, National Agency for Energy Management (ANME) (TN)
- **Keynote.5:** Prof. Chiheb BOUDEN (TN)
- **Keynote.6:** Prof. Brahim BESSAIS: Renewable energy: Advanced Technologies (TN)

General Debate: (Scientific and strategic discussions):

- Advanced Technologies
- Economic issues
- Environment issues
- Legislation and standards

Target: Elaboration of an action plan/road map for energy security in the continent

Panel 2: Materials and substance science

Time: 11h00-12h00

Venue: Auditorium Ibn Khaldoun

Moderators:

- Prof. Aboubaker Chedik BEYE, UCAD (Senegal), Prof. Ezzeddine SRASRA, CNRSM (Tunisia)

Rapporteur:

- Prof. Hichem HAMZAOUI, CNRSM (Tunisia)

Topic:

- Mineral beneficiation and value addition
- Extraction of matters and substances to be used in various industries
- Materials and environment
- Materials and energy
- Materials and agriculture, medicine, ...
- Nonmaterial and Biomaterials

Panelists:

- **Researchers (TN)**
 - Prof. Ahmed Hichem HAMZAOUI, CNRSM
 - Prof. Hafedh ABDEL MALEK (TN): Biomaterials
 - Prof. Ali MADOURI, CNRS: micro et nanotechnology
- **Representatives from the Continent:**
 - Prof. Malik MAAZA, South Africa (Online)
 - Prof. Agbaje LATEEF, Nigeria (Online)
- **Representative from Japan:**
 - Dr. Muhammad Monirul Islam (University of Tsukuba) (Online)
- **Industrial sector (TN)**
 - Mr. Abdelkader GHANNEM, SOIB Society

General Debate: (Scientific and strategic discussions):

- Diagnostic African Natural substances and economic development
- Synthetic Substances Targets
- Applications (Environment, energy, medical and industrials ...)
- Legislation

Workshop 2: Materials and substance science
Time: 14h30-16h30
Venue: Salle Ibn El Haïthem
Moderator:

- Prof. Ahmed Hichem HAMZAOU, CNRSM

Reporter:

- Prof. Wassim GHODBANE, INRAP

Global Theme and topic:

- Diagnostic and strategic African Natural substances and economic development.
- Synthetic Substances Targets.
- Industrial conversions to be recommended for better economic profitability and sustainable development in Africa.
- Legislation.

Keynote:

- **Keynote.1:** Prof. Nouri HATIRA (TN): Natural substances (Diagnostic and strategic);
- **Keynote.2:** Mr khaled LAGHA (Tunisian Chemical Group) (TN): Industrial Applications of Phosphate.
- **Keynote.3:** Prof. Aboubaker Chedik BEYE (Representatives from the Continent) : African experience in the field of synthetic Materials;
- **Keynote.4 :** Prof. Chérif DRIDI (CRMN) of Technopole de Sousse ;

General Debate: (Scientific and strategic discussions):

- Diagnostic and strategic African Natural substances and economic development
- Synthetic Substances Targets
- General applications to recommend to African countries for sustainable economic profitability
- Legislation

Panel 3: Health, Biology, Biotechnology and Agriculture
Time: 12h00-13h00
Venue: Auditorium Ibn Khaldoun
Moderators:

- Prof. Bruno ETO (University of Lille, France)
- Prof. Nadia FENINA (Ministry of Health, Tunisia)

Rapporteur:

- Dr. Akrem HAYOUNI (CBBC)

Global Theme and topic:

- Pharmaceutical and Medical sciences
- Agriculture and Food Security
- Agri-food byproducts: industrial and environmental challenges in the frame of circular economy
- Biotechnology and Bio-resources: opportunities for cutting edge industries development

Panelists:

- **Researchers (TN)**
 - Prof. Abderrazek BOUZOUITA (Directeur Général de la Santé, Tunisie)
 - Prof. Jalila BEN KHELIL (Hôpital Abderrahmen Mammi, Tunisie)
 - Prof. Khemaies ZAYANI (Directeur Général de l'Agence de la Valorisation et de la Formation Agricole, Tunisie)
- **Representative from the Continent:**
 - Prof. Abdoulaye SENE, Senegal
- **Representative from Japan:**
 - Prof. Hiroko ISODA (University of Tsukuba) (Online)
 - Prof. Kensuke FUKUSHI (UNU-IAS) (Online)

Keynotes :

- **Keynote 1 :** Prof. Nissaf BEN ALAYA (Observatoire national des maladies Nouvelles et Emergentes, Tunisie): The management of pandemics in Africa: feedback on the COVID experience as an example
- **Keynote 2 :** Dr. Tarek HAMMAMI (Chambre Nationale de l'Industrie Pharmaceutique : CNIP-UTICA) : Autosuffisance en médicaments en Afrique: état des lieux et perspectives.
- **Keynote 3:** Dr. Akrem HAYOUNI (Centre de Biotechnologie de Borj-Cédria): New non-conventional sources of proteins for food and feed: Future trends for food security

Workshop 3.1. Health and Biology

Time: 14h30-16h30
Venue: Amphi Ibn Khaldoun

Moderator:

- Mr. Sami DRIDI (IQVIA)
- Prof. Abderrazek BOUZOUTA (Directeur Général de la santé)
- Dr. Henda CHEBBI (Head of Emergency Medicine Unit, Ministry of Health, Tunisia)

Global Theme and topic

- The management of pandemics in Africa: feedback on the COVID experience as an example
- Drug industry development in Africa: strategies and challenges
- Emerging and vector-borne diseases: the challenges
- Trainings, Medical and healthcare systems: facts and future developments

Keynotes

- **Keynote 1** : Prof. Elyes ZHIOUA (Institut Pasteur de Tunis): The impact of illegal waste sites on the transmission zoonotic cutaneous Leishmaniasis in Central Tunisia and approach to control sandfly vectors.

Debate

- **Keynote 2**: Dr. Bousoffara THOURAYA (Institut Pasteur de Tunis): Pharmaceutical Industry: Prospects of Development of mRNA vaccines for Infectious disease in Africa.

Debate

- **Keynote 3**: Prof. Ikram GUIZANI (IPT): The Institute Pasteur de Tunis/JICA: Partnerships for Science, Technology and Innovation Platforms for Biomedical Research and Training in Africa

- **Keynote 4**: Mme Nadia FENINA (DG au Ministère de la Santé): Stratégie de l'État tunisien dans le domaine de la promotion de l'investissement et de l'exportation des services dans le secteur de la santé

Debate

Overall open General Debate and reporting: (Scientific and strategic discussions):

- The management of pandemics in Africa: feedback on the COVID experience as an example
- Drug industry development in Africa: strategies and challenges
- Emerging and vector-borne diseases: the challenges
- Trainings, Medical and healthcare systems: Facts and future developments health policies/legislation

Workshop 3.2. Biotechnology and Agriculture

Time: 14h30-16h30
Venue: Salle des Sciences

Moderator:

- Dr. Akrem HAYOUNI (Centre de Biotechnologie de Borj-Cédria)
- Dr. Imen OUESLATI (Centre de Biotechnologie de Borj-Cédria),
- Prof. Abdoulaye SENE, Senegal

Global Theme and topic:

- Agriculture and Food Security + Food security and self-sufficiency/self-sufficiency and security of seeds production
- Strategic approaches to agricultural transformation in Africa: Agriculture in the era of TIC/Intelligent agriculture + Changing agriculture and development of rural context in Africa (key notes 3 & 4)
- Development of value chains around local products, Controlled/Protected Designation of Origin (CDO) products: contribution to the emancipation of rural women and the resilience of rural populations + Agriculture as a mean of resilience and sustainable development in African countries
- Biotechnology and bio-resources: opportunities for cutting edge industries development + Establishment of value-chain in food and feed sectors

Keynotes

- **Keynote 1**: Dr. Arafat MANAI (Centre de Biotechnologie de Borj-Cédria): Quinoa as a challenging crop for food security in Africa:

Debate

- **Keynote 2** : Prof. Khemaies ZAYANI (DG AVFA, Tunisie): approches stratégiques de la transformation agricole en Afrique : L'agriculture à l'ère des TIC/Agriculture intelligente

- **Keynote 3** : Mohamed Chokri BEN REJEB (Ministère du Commerce, Tunisie): Développement des chaînes de valeur autour des produits du Terroir, des produits d'Appellation d'origine protégée (AOP): contribution à l'émancipation de la femme rurale et à la résilience des populations rurales

Debate

- **Keynote 4**: Prof. Bruno ETO Biotechnologies & bio-resources: CEO Laboratoires TBC) Natural Bio-resources future key for in Pharmaceutical Industry.

- **Keynote 5**: Prof. Olfa TEBBANE (Centre de Biotechnologie de Borj-Cédria) : Biotechnology and bioresources: opportunities for cutting edge industries development.

Overall Open General Debate and reporting: (Scientific and strategic discussions)

Thursday, August 25, 2022

From 8.00

Registration

9.00 – 9.15

Welcome messages and Brief wrap-up of Day 1

Panel 4: Water, Environment, Diversity and Sustainability

Time: 09h15-10h25
Venue: Auditorium Ibn Khaldoun

Moderators:

- Prof. Abdoulaye SENE, Senegal
- Prof. Ahmed GHRABI (CERTE), Tunisia

Rapporteur:

- Dr. Mohamed KEFI (CERTE)

Topic:

- Implementation of suitable and sustainable strategies based on multilevel partnership
- Development and application of Nature based-solution for water management
- Building resilient systems to combat Climate induced Natural Disaster
- Enhancement of innovation and technologies for water resource preservation and non-conventional water valorisation

Panelists:

- **Researchers (TN)**
 - Prof. Latifa BOUSSELMI (CERTE)
 - Prof. Hamza ELFIL (CERTE)
 - Prof. Sihem BENABDALLAH (CERTE)
- **Representatives from Japan:**
 - Prof. Taikan OKI (University of Tokyo)
 - Prof. Mitsutoshi NAKAJIMA (University of Tsukuba)
- **Industrial sector (TN)**
 - Mr Houcine BOUGHIMA (TPAP Company)
- **Decision maker (TN)**
 - Mr Rafik AINI (BPEH, MARHP)

Keynote 1 : Prof. Akissa BAHRI : The challenges of transforming the water sector in Africa and the opportunities for building new bridges of cooperation

Keynote 2 : Prof. Abdoulaye SENE : Overview of the main outcomes of World Water Forum 9 in Senegal

Keynote 3 : Mr Rafik AINI (BPEH, MARHP): Water 2050, Tunisia Strategy

General Debate: (Scientific and strategic discussions)

- Advanced Technologies
- Water: Post-COVID19
- Accelerating the Achievement of SDG6

Workshop 4: Water, Environment, Diversity and Sustainability

Time: 14h30-16h30
Venue: Khawarizmi

Moderator:

- Prof. Akissa BAHRI
- Prof. Abdoulaye SENE

Rapporteur:

- Dr. Mohamed KEFI

Global Theme and topic:

- Reservoir management
- Water Transfer and hydraulic structure
- Disaster mitigation and resilience
- Renewable energy and desalination for drinking water and agriculture
- Innovation technology for desalination process
- Brine management and valorisation
- Nature based-solution for wastewater treatment
- Local water management based on innovative technologies
- Sustainable City

Topic 1: Water security and Climate Change Adaptation: Prof. Sihem BENABDALLAH / Dr. Haykel SALLEMI

Topic 2: Sustainable Desalination: Prof. Hamza ELFIL / Dr. Ali BOUBAKRI

Topic 3: "Renewed water", Treatment and Valorisation: Prof. Latifa BOUSSELMI / Prof. Ahmed GHRABI.

General Debate: Elaboration of action plan and road map for water security and water saving

Panel 5: Technology Transfer, Industrialization of Research Results, and New Professions

Time: 10h45-11h55

Venue: Auditorium Ibn Khaldoun

Moderator:

- Prof. Chedly ABDELLELY (ANPR), Tunisia

Topics:

- National Technology Transfer system ...
- Industrialisation of research Results process,
- New Professions,

Panelists:

- **Researcher (TN)**
 - Prof. Chedly ABDELLELY, ANPR, The national research and innovation system: Components, international positioning, and priority
- **Representative from the Continent:**
 - Prof. Cheikh Mouhamadou MBACKÉ LO (ANRSA) Senegal: The policy of the State of Senegal in terms of research and innovation for the valorization, popularization, and protection of the result
- **Representative from Japan:**
 - Dr. Khaoula BENSALIDA, University of Kyushu, International Cooperation and J-MENA program
- **Decision maker (TN)**
 - Mme RIM SAIED, DG-VR (MHESR): Les mécanismes de financement et de la valorisation de la recherche scientifique
 - Mr Omar BOUZAOUADA (APII), « le rôle des institutions d'appui dans le transfert de la technologie (the role of the supporting institutions in the technology transfer) ».

General Debate: (Scientific and strategic discussions)

- National & African Strategy
- Legislation and standards
- Elaboration of an action plan/road map

Workshop 5 (Technology Transfer, Industrialization of Research Results, and New Professions

Time: 14h30-16h30

Venue: Ibn Haythem

Moderator:

- Prof. Chedly ABDELLELY (ANPR)

Rapporteur: Mme Afifa Ben EZZINE

Global Theme and topic:

- African Scientific Research and Market Realities: Difficulties to valorize of Scientific Research results
- The different African/Tunisian experiences: Startup act incubators, university spin-offs, technoparks
- Financial obstacles and the importance of a found of African funds. For the industrialisation of SR

- Keynotes

- **Keynote.1:** Prof. Mahamadou Lamine SAGNA: TT Obstacles & opportunity's: socio-cultural point of view
- **Keynote.2:** Ms Omar BOUZAOUADA APII "Industrialization of Research Results process & obstacles"
- **Keynote 3:** Mrs Afifa BEN EZZINE (ANPR)-Tunisia "The creation of spin-offs / start-ups: a relevant approach for the creation of added value."
- **Keynote 4:** Prof. Ines ZIDI, University of Tunis El Manar. "Toward competitive innovation clusters: A need for evaluation indexes"
- **Keynote 5:** Prof Hamouda KECHINI (ENSTAB) "Technology Transfer and new professions: Professional Master in TT from ENSTAB"

General Debate: (Scientific and strategic discussions):

- National & African Strategy
- Legislation and standards
- Elaboration of an action plan/road map

Panel 6: AI and advanced ICT applications (Cyber Security, Smart Cities, Healthcare, ...)

Time: 11h55-13h00

Venue: Auditorium Ibn Khaldoun

Moderator:

- Prof. Adel BOUHOULA, Arabian Gulf University, Bahrain

Rapporteur:

- Dr. Mohamed-Bécha KAÂNICHE, University of Carthage, Tunisia

Global Theme and topic:

- Artificial Intelligence
- Cyber Security
- Smart Cities
- Health IT
- Applied ICT

Panelists :

- Researchers (TN)

- Prof. Adel BOUHOULA, Arabian Gulf University, Bahrain
- Prof. Narjes BELLAMINE BEN SAOUD, University of Manouba, Tunisia.
- Dr. Mohamed-Bécha KAÂNICHE, University of Carthage, Tunisia
- Dr. Faten AYACHI, University of Carthage, Tunisia
- Dr. Faouzi JAIDI, University of Carthage, Tunisia

- Representative from the Continent :

- Dr Amer DAERI, Zawia university, Libya

- Representative from Japan :

- Prof. Atsushi ASANO, University of Aizu, Japan

- Industrial sector

- Dr. Housseem CHATBRI, Bank of New York Mellon, Dublin, Ireland
- Mr Nacer KCHAOU, Poulina innovation, Tunisia

Keynotes:

- Prof. Adel BOUHOULA, The latest developments in ICT between challenges and opportunities
- Prof. Atsushi ASANO, Smart city, an example of Industry-Academia-Government Collaboration in Japan
- Dr. Housseem CHATBRI, Seize the innovation moments – An AI perspective
- Mr. Nacer KCHAOU, Data Center Management

General Debate: (Scientific and strategic discussions):

- QA session about Keynote
- Insights about potential challenging African Japan ICT projects

Workshop 6: AI and advanced ICT applications (Cyber Security, Smart Cities, Healthcare, ...)

Time: 14h30-16h30

Venue: Salle des Sciences

Moderator: Prof. Adel BOUHOULA, Arabian Gulf University, Bahrain

Rapporteur: Dr. Mohamed-Bécha KAÂNICHE, University of Carthage, Tunisia

Global Theme and topic:

- Artificial Intelligence
- Cyber Security
- Smart Cities
- Health IT
- Applied ICT

Keynotes:

- Prof. Narjes BELLAMINE BEN SAOUD, ENSI Academic Incubator Experience : among needs and challenge
- Dr. Mohamed-Bécha KAÂNICHE, Multimodal Behavior Understanding and Monitoring for people safety and security
- Dr. Faouzi JAIDI, Advanced security for smart health: challenges, applications and opportunities

PhD Session : Session Chair: Prof. Narjes BELLAMINE BEN SAOUD

- Safa MEFTEH, University of Carthage, Human Posture Recognition based on a novel vision transformer using a multispectral Lab-D HoG Descriptor
- Marwa BEN AMMAR, University of Tunis El Manar, Medical decision support system: aiding the diagnosis and prognosis of breast cancer in women
- Sondes KSIBI, University of Carthage, Cyber Security Risk Management for Reliable Internet of Medical Things "IoMT" Applications
- Mehdi HOUICHI, University of Carthage, Security Enhancement within Smart Cities: Challenges Analysis and Artificial Intelligence-based Approach Proposal
- Amina SAHBI, University of Carthage, Artificial Intelligence for Incident Detection within SDN / NFV Networks.

General Debate:

- QA session about keynotes
- Develop an action plan/roadmap on challenging Japan-Africa ICT projects