

**IN COLLABORATION
AND PARTNERSHIP WITH :**

المدرسة العليا للتكنولوجيا
HACH-LACHMANN-KRIMMICH
ECOLE SUPÉRIEURE DE TECHNOLOGIE



جامعة سيدي محمد بن عبد الله بشاري
S.A. LEI DIAI CLICC A @ A@P@L@O : X.O
UNIVERSITÛ MUHAMMAD BEN ABDELLAH DE B



ECOLE SUPERIEURE DE TECHNOLOGIE
BP 2427 ROUTE D'IMOUZZER 30000 FES
WWW.EST-USMBA.AC.MA



المدرسة العليا للتكنولوجيا
FACH HIGESCHULE FÜR TECHNOLOGIE
HOCHSCHULE FÜR ANGEWANDTE WISSENSCHAFTEN



پراساڈ سیدتی محمد بن عبد اللہ شاہی
NIZAM DIN CLIFFA IN VERBA : IL
UNIVERSITÀ DEL MONTAGNA SAN CARLOLO DE' R.



**2ND INTERNATIONAL SYMPOSIUM ON
MATERIALS, ENVIRONMENTAL
SCIENCES, AND HYGIENE**

ISMESH 2

Organized by the Laboratory of
Materials, Processes, Catalysis, Agrifood,
and Environment (LMPCAE)

October 16-17-18th, 2025



SCIENTIFIC COMMITTEE

ABRIAK Nor-Edine (IMT, Lille-France)
 ADDAOU Abdellah (EST, USMBA, Fez-Morocco)
 AKHAZANE Mohammed (EST, USMBA, Fez-Morocco)
 ALLALI Mustapha (ISPITS, Fez-Morocco)
 ANIS Khalil (EST, USMBA, Fez-Morocco)
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 BRAVETTI Pierre (Lorraine University, France)
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 EL BARI Mounir (Groupe GPC Carton, Ain Soltane, Morocco)
 EL GAIDOUMI Abdelali (EST, USMS, Khenifra-Morocco)
 EL HAISSOUFI Mohamed (FPT USMBA, Taza-Morocco)
 EL-HILALY Jaouad (Regional Center of Education and Training, Morocco)
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 MIYAH Youssef (ISPITS, Fez-Morocco)
 MOUACHA Youssef (SAUR, Montpellier, Occitanie, France)
 SOULIMANI Rachid (Lorraine University, France)
 TANJII Karim (UIT, Kenitra-Morocco)
 TAYBI Hanan (FPT USMBA, Taza-Morocco)
 TOUFIK Hamid (FPT USMBA, Taza-Morocco)
 ZAROUK Amine (PDG- FIRMATECH)

HONORARY COMMITTEE

President of the University Sidi Mohamed Ben Abdellah
Director of the Higher School of Technology of Fez
Dean of the Faculty of Medicine, Pharmacy, and Dental Medicine of Fez
Director of the Higher Institute of Nursing Profession
and Health Techniques of Fez
Director of the National Agency for Medicinal and Aromatic Plants
President of the Saïss Borough, Fez
General director president of GPC Paper and Cardboard and Ain Soltane
Director of the Fez-Meknes Chamber of Agriculture
President of the General Confederation of Moroccan Enterprises

2ND INTERNATIONAL SYMPOSIUM ON MATERIALS, ENVIRONMENTAL SCIENCES, AND HYGIENE ISMESH2



ORGANIZATION COMMITTEE

Professors

ADDAOU Abdellah (EST, USMBA, Fez-Morocco)
 ALLALI Mustapha (ISPITS, Fez-Morocco)
 BELAABED Raja (EST, USMBA, Fez-Morocco)
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 CHAHMI Naima (EST, USMBA, Fez-Morocco)
 EL ALAMI Souad (EST, USMBA, Fez-Morocco)
 EL AMRANI Soukaina (EST, USMBA, Fez-Morocco)
 EL MAIMOUNI Mohamed Amine (EST, USMBA, Fez-Morocco)
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 ZAHOUANI Chadia (ISPITS, Fez-Morocco)
 ZIANE Salma (EST, USMBA, Fez-Morocco)

COORDINATORS

Pr. LAIRINI Sanae (EST-USMBA-Fez)
 Pr. MIYAH Youssef (ISPITS-Fez)

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جامعة سيدي محمد بن عبد الله بفاس
جامعة سيدي محمد بن عبد الله بفاس
UNIVERSITÉ SIDI MOHAMED BEN ABDELLAH DE FES



2ND INTERNATIONAL SYMPOSIUM ON MATERIALS, ENVIRONMENTAL SCIENCES, AND HYGIENE

ISMESH 2 | October 16-17-18th, 2025
at the Higher School of Technology, Fez-Morocco

Artificial Intelligence for Science,
Research, and Innovation



Emerging Water Treatment Technologies
for Circular Economy and
Sustainable Development

Materials for Environmental
Quality,
Safety, and Health

Bioactive Molecules and
Advanced Biotechnologies



Pr. BOUSTA Dalila



Pr. BRAVETTI Pierre



Pr. SOULIMANI Rachid



PDG. EL BARI Mounir



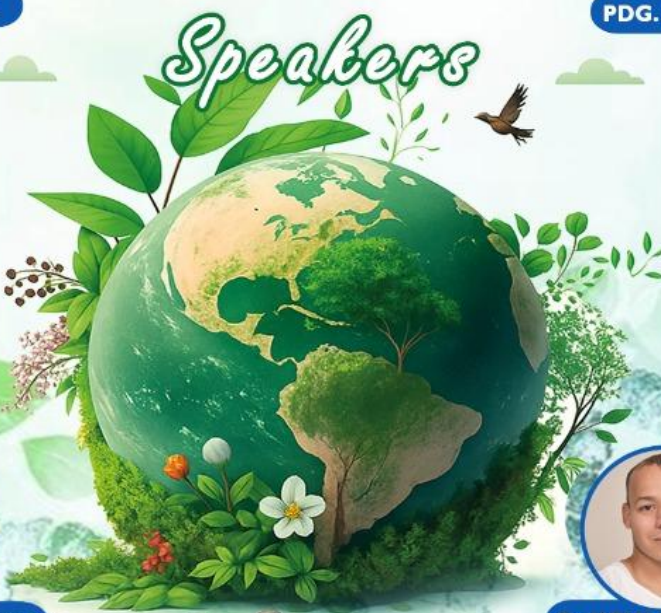
Dr. BELKADI
Mohamed Choukri



Pr. Belkadi Bouchra



Dr. BRAVETTI Mathieu



Pr. MIYAH Youssef



DG. ZAROUK Amine



Dr. MOUACHA Youssef

COORDINATORS



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UNIVERSITÉ SIDI MOHAMED BEN ABDELLAH DE FES



International Symposium Program



International Symposium on Materials, Environmental
Sciences and Hygiene 2 (ISMESH2)

**October 16-17-18, 2025, Higher School of
Technology, Fez-Morocco**

Organized by the Laboratory of Materials, Processes, Catalysis,
Agri-food, and Environment, Higher School of Technology
(EST), University Sidi Mohamed Ben Abdellah, Fez-Morocco

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Committees	
Honorary Committee	
President of the University Sidi Mohamed Ben Abdellah	Director of the National Agency for Medicinal and Aromatic Plants
Director of the Higher School of Technology of Fez	President of the Sais Borough, Fez
Dean of the Faculty of Medicine, Pharmacy and Dental Medicine of Fez	General Director President of GPC Paper and Cardboard and Ain Soltane
Director of the Higher Institute of Nursing Profession and Health Techniques of Fez	President of the General Confederation of Moroccan Enterprises
Scientific committee	Organization committee
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International Symposium on Materials, Environmental Sciences and Hygiene 2 (ISMESH2) – October 16, 2025

Scientific Program

1:00-2:00 pm

Reception of participants at the Hall of EST-Fez

Opening Speeches

2:00 pm

- ✓ USMBA President
- ✓ EST-Fez Director
- ✓ FMPDM-Fez Dean
- ✓ ISPITS Director
- ✓ EST-Fez Chairman International Symposium

Inaugural Conferences (Session 1)

2:30-3:50 pm

Moderators: Pr. Lairini Sanae; Pr. Lamchouri Fatima; Pr. Miyah Youssef

Pr. SOULIMANI Rachid

Lorraine University, France

Conference Title : Méthodologie d'évaluation des effets neurotoxiques des contaminants alimentaires et environnementaux

Mr. EL BARI Mounir

PDG. Groupe GPC Carton, Ain Soltane, Morocco

Conference Title : La production et le recyclage du papier, des enjeux stratégiques pour le Maroc

BRAVETTI Pierre

Lorraine University, France

Conference Title: Risques d'expositions toxiques au matériau de l'implantologie bucco-dentaire

Pr. BOUSTA Dalila

ANPMA and FSDM, USMBA, Fez-Morocco

Conference Title : Chaîne de valeur des plantes médicinales : de la ressource à l'innovation

3:50-4:20 pm

Coffee break

Inaugural Conferences (Session 2)

4:20-5:40 pm

Moderators: Pr. Lairini Sanae ; Allali Mustapha; Jawad El Hilali; Pr. Miyah Youssef

Mr. BELKADI Mohamed Choukri

Secretary General CGEM, Fez-Meknes, Morocco

Conference Title : La materiovigilance 2.0 vers une hygiène connectée pour l'anticipation des risques

ZAROUK Amine

FIRMATECH President, Fez-Morocco

Conference Title : Découverte des systèmes d'irrigation intelligents pour une gestion durable de l'eau

BRAVETTI Mathieu

Lorraine University, France

Conference Title: Influence de l'environnement alimentaire sur les propriétés mécaniques et morphologiques des maxillaires

International Symposium on Materials, Environmental Sciences and Hygiene 2 (ISMESH2)– **October 17, 2025**

Scientific Program

Conference Planning

9:00-9:40 am
Moderators:
 Fadil Mohcine;
 Pr. Lairini Sanae;

MIYAH Youssef
 ISPITS of Fez, Morocco
Conference Title : Innovative nanotechnologies and materials
 for sustainable wastewater treatment
MOUACHA Youssef
 SAUR, Montpellier, Occitanie, France
Conference Title : Development of NF and RO membranes
 incorporating artificial water channels (AWC): challenge for
 water reuse and micro-pollutant elimination
BELKADI Bouchra
 Mohamed V University, Rabat-Morocco
Conference Title : Biosécurité au service de la durabilité
 environnementale

9:40 am-10:10 am

Coffee break and Posters Communications display (Parallel)
Jury Members: Pr. BOUDKHILI Meryem ; Pr. BOUSLAMTI
 Rabia; BOUDKHILI Meryem ; Pr. BELAABED Raja

Oral Communications 1: Four parallel workshops (Rooms A, B, C, and D)

10:10-12:30 pm

- ✓ **Room A:** Artificial Intelligence for Science, Research, and Innovation (BELMIR Fouzi; Pr. EL GAIDOUMI Abdelali; Pr. BELAABED Raja; Pr. EL-KHALFAOUY Redouan)
- ✓ **Room B:** Materials for Environmental Quality, Safety, and Health (Pr. EL HILALI Jawad; Pr. ALLALI Mustapha; Dr. ZAHOUANI Chadia)
- ✓ **Room C:** Bioactive Molecules and Advanced Biotechnologies (Pr. BOUDKHILI Meryem; Pr. MISBAHI Houria; Pr. SOULIMANI Rachid; Pr. BAKOUR Meryem)
- ✓ **Room D:** Emerging Water Treatment Technologies for Circular Economy and Sustainable Development (Pr. ADDAOU Abdellah; Pr. MIYAH Youssef; MEJBAR Fatiha)

1:00-2:30 pm

Lunch break

Oral Communications 2: Three parallel workshops (Rooms A, B, and C)

2:30-4:30 pm	✓ Room A: Online Communication (Pr. BELAABED Raja; Dr. EL AMRANI Soukaina) ✓ Room B: Materials for Environmental Quality, Safety, and Health (Pr. EL HILALI Jawad; Pr. MERABTI Abdelilah; Pr. ALLALI Mustapha; Dr. ZAHOUANI Chadia) ✓ Room C : Bioactive Molecules and Advanced Biotechnologies (Pr. BOUDKHILI Meryem; Pr. MISBAHI Houria; Pr. BAKOUR Meryem) ✓ Room D: Emerging Water Treatment Technologies for Circular Economy and Sustainable Development (Pr. ADDAOU Abdellah; Pr. MIYAH Youssef; MEJBAR Fatiha; Dr. Mohammed Benjelloun)
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International Symposium on Materials, Environmental Sciences and Hygiene 2 (ISMESH2)– October 18, 2025 (Ferme Pilote Green Open Lab, Sefrou)	
Technical Field Visit: Exploring Smart Irrigation Systems for Sustainable Water Management	
09:30-10:15 am	Welcome and Institutional Presentation Presenter: Chaimae El Koufi, Project Coordinator, Green Open Lab Foundation ✓ Foundation Overview: Mission and vision of Green Open Lab Foundation ✓ Sustainable Agriculture Programs: Innovation initiatives in rural Morocco
10:15-11:00 am	Guided Technical Tour of Firmatech Systems Led by: Amine Zarouk, Green Open Lab Foundation President
11:00-11:15 am	Refreshment Break
11:15-12:00 am	Technical Exchange Session Presenter: ARWA Solution ✓ AgriTech Solutions Presentation (30 min) ✓ Collaborative Discussion (15 min)
12:00 am: Closing Ceremony ISMESH II	
A visit to Jnane Sbil Garden and the Medina of Fez	