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Program

SIXTH ARAB-AMERICAN FRONTIERS
OF SCIENCE, ENGINEERING AND
MEDICINE SYMPOSIUM
Kuwait National Library

Day 1: Sunday November 4th

9:00 Opening Ceremony

9:45 Coffee Break & Group Picture

Session I: Big Data

10:15 **Session Chairs:**
Miriah Meyer, University of Utah, United States
Wei Lee Woon, Khalifa University, United Arab Emirates

Presentations:
Humans, machines and data: Understanding challenges and opportunities
Enrico Bertini, NYU, United States

Towards a unifying theory of learning and information
Ibrahim Alabdulmohsin, Saudi Aramco, Saudi Arabia

Computational social science: Using big data as a societal microscope
Kinga Makovi, NYU Abu Dhabi, United Arab Emirates

Machine learning driven biomarker discovery in the era of big data
Bobbie-Jo Webb-Robertson, Pacific Northwest National Laboratory, United States

11:45 Panel Discussion

12:30 Lunch

Session II: Water Systems

13:30 **Session Chairs:**
Hassan Arafat, Khalifa University, United Arab Emirates
Jeremy Guest, University of Illinois at Urbana-Champaign

Presentations:
Sustainable reuse options of wastewater in Oman
Mahad Baawain, Sultan Qaboos University, Oman

The who, where, and (somewhat) why of the drinking water microbiome
Ameet Pinto, Northeastern University, United States

A potential collaboration with Water Research Center of Kuwait Institute for Scientific Research on innovative desalination technologies
Mansour Ahmed, Kuwait Institute for Scientific Research, Kuwait

Sustainable bioinspired water purification
Manish Kumar, Pennsylvania State University, United States

15:00 Panel Discussion

15:40 Flash Talks [1-34]

16:15 Poster Session & Coffee Break

Day 2: Monday November 5th

Session III: The Microbiome

9:00	<p>Session Chairs: Hussain Mahdi Bahbahani, Kuwait University, Kuwait Leonard Pease, Pacific Northwest National Laboratory, United States</p> <p>Presentations: <i>Unraveling interactions between the microbiome and the host immune system to decipher mechanisms of disease.</i> Catherine Lozupone, University of Colorado, United States</p> <p><i>Antimicrobial activity of lactic acid bacteria and antimicrobial peptides from camel milk</i> Rita Rahmeh, Kuwait Institute for Scientific Research, Kuwait</p> <p><i>Functionality of the maternal microbiome</i> Jennifer Fettweis, Virginia Commonwealth University, United States</p> <p><i>Pharmacomicrobiomics: How our microbiome cloud affects precision therapeutics</i> Ramy Karam Aziz, Cairo University, Egypt</p>
10:30	Panel Discussion
11:15	Coffee Break
11:30	<p>NASEM Programs <i>NASEM International Activities</i> John Boright, Executive Director of International Affairs, National Academy of Sciences, United States</p> <p><i>Arab-American Frontiers Fellowships</i> Daniel Placht, National Academy of Sciences, Engineering, and Medicine, United States</p>
12:30	Lunch

Session IV: Air Quality

13:30	<p>Session Chairs: Christa Hasenkopf, Open AQ, United States George Mitri, University of Balamand, Lebanon</p> <p>Presentations: <i>Global air quality: Challenges and opportunities</i> Christine Wiedinmyer, University of Colorado, United States</p> <p><i>Examining the challenges in mainstreaming climate change in development plans: Lessons learned from Lebanon</i> Lea Kai, Ministry of the Environment, Lebanon</p> <p><i>New high-resolution global composition forecast</i> Emma Knowland, National Aeronautics and Space Administration, United States</p> <p><i>Putting air quality data to work – Opportunities and challenges of fine-grained spatial and temporal air quality information</i> Karim Tarraf, Hawa Dawa and Cairo University, Egypt</p> <p><i>Air Quality Data and Awareness in Kuwait</i> Bader Albusairi, Kuwait University</p>
15:00	Panel Discussion
15:40	Flash Talks [35-69]
16:20	Poster Session & Coffee Break

Day 3: Tuesday November 6th

Session V: Next Generation Buildings and Infrastructure

9:00	<p>Session Chairs: Laila Khodeir, British University in Egypt, Egypt Hussam Mahmoud, Colorado State University, United States</p> <p>Presentations: <i>Scalable architectural visions!</i> Raya Ani, American Institute of Architects-Middle East, United Arab Emirates</p> <p><i>Controlling thermal radiation for large scale energy applications</i> Xiaobo Yin, University of Colorado, United States</p> <p><i>Reimagining heritage and public space in Fez, Morocco</i> Aziza Chaouni, University of Toronto and Aziza Chaouini Projects (Fez), Morocco</p> <p><i>Programmable skins: A hygromorphic approach for low-cost adaptive building façades</i> Sherif Abdelmohsen, American University of Cairo, Egypt</p>
10:30	Panel Discussion
11:15	Coffee Break
11:30	<p>KFAS and Regional Research & Funding Opportunities <i>KFAS as a catalyst of change- Research Grants</i> Batoul M Dawi, Research Grants, Kuwait Foundation for the Advancement of Sciences, Kuwait</p> <p><i>KFAS as a catalyst of change- Collaborative Research Unit</i> Yousef Aleneze, , Kuwait Foundation for the Advancement of Sciences, Kuwait</p> <p><i>Importance of international collaborations in research and innovation programs: Examples from Oman</i> Ali Al Shidhani, The Research Council, Oman</p>
12:15	<p>Closing Remarks and Certificates Esra Aleisa Joy Ward</p>
12:30	Lunch