

مهرجان
عُمان للعلوم
Oman Science
Festival



Introduction

The discussion sessions at Oman Science Festival 2022 present an additional value to this great scientific event organized over six days by the Sultanate of Oman for the third time. The discussion sessions will host prominent local and global speakers from October 12 - 13 to shed light on major contemporary scientific topics and issues faced by the world, and which directly affect human beings. A set of working papers will be presented during the discussion sessions, covering four main themes: Food Security, Cybersecurity, Climate Change and its impacts, and Astronomy.

The importance of discussion sessions accompanying Oman Science Festival 2022

The importance of discussion sessions lies in the dynamic dialogue and solutions resulting from the experiences of the presenters of the working papers. This approach involves multiple benefits, especially in relation to finding solutions to the challenges facing society or reaching consensus over the best alternatives to deal with contemporary scientific issues. In addition, discussion sessions will provide decision-makers and officials with the opportunity to become acquainted with the latest developments in the four themes and collect the views of interested stakeholders under a positive and stimulating environment. These sessions will allow officials to closely discuss with specialists and experts.

Objectives

- 1- Getting acquainted with the most important developments relevant to the topics and issues covered in the discussion sessions.
- 2- Providing opportunities for students and interested people to discuss with local and foreign scholars, academics and specialists.
- 3- Proposing appropriate solutions to the issues and topics discussed in the discussion sessions or reaching agreement on the best alternatives.
- 4- Giving stakeholders the opportunity to closely discuss with specialists, which adds additional value to OSF.

Themes

Theme 1

Food Security (12 October 2022)

Food security refers to the sufficient availability of food for individuals. Food security is realized when individuals are not afraid of or exposed to hunger. It is used as a criterion to prevent future food shortages or interruptions due to dangerous factors, such as drought and other problems affecting food security. The United Nations' Food and Agriculture Organization (FAO) has identified four pillars for food security: availability, access, utilization, and stability.

Theme 2

Cybersecurity (12 October 2022)

Cybersecurity is the process of protecting systems, networks, and programs against digital attacks that usually aim at accessing, changing, or destroying sensitive information. These attacks target extorting money from users or interrupting normal business operations. Therefore, implementing cybersecurity measures is a major challenge today as devices outnumber people. Add to that, attackers are becoming more innovative in today's highly interconnected world. Since all people depend on vital infrastructure such as power stations, hospitals and financial services companies, everyone benefits from advanced cyber defense programs. Securing such entities is essential for our society to function.



Theme 3

Climate Change and Its Impacts (13 October 2022)

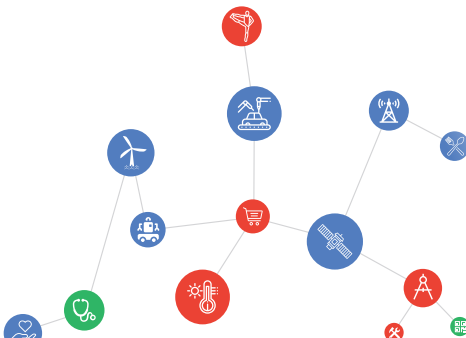
Climate change is the defining issue of our time, since its global impacts are extensive and unprecedented in terms of scale, ranging from changed weather patterns that threaten food production to rising sea levels that increase the risk of catastrophic floods. Adapting to these effects will be more difficult and costly in the future if drastic action is not taken now.

Human actions can determine the future course of the climate and actions to be taken in order to reduce the negative impacts of climate change. In this session, these procedures will be discussed from the point of view of experts and specialists.

Theme 4

Astronomy and Space Sciences (13 October 2022)

In various civilizations, early astronomers monitored the movements of the stars, sun, moon and planets, and used them as a basis for clocks, calendars, and sea navigation compasses. The human interest in discovering the sky was universal and unlimited, since man has always sought to explore the unknown, discover new worlds, transcend scientific and technical boundaries, and delve further. The desire to discover and transcend their own limits and geography has resulted in gains for societies over centuries. The discovery of space has also helped answer the fundamental question about man's place in the universe and the history of the solar system. And it is because of the challenges faced in space exploration, technology has developed and new industries have come into existence.



12 October 2022

First Session: Food Security Keynote addresses – setting the scene agrifood systems transformation

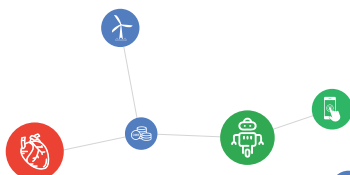
Moderator Dr. Mohammed Al-Rizeiqi, SQU

Speaker	Paperwork	Timing
Dr. Abdoulaye Saley Moussa Natural Resources Officer, FAOS-NG, UAE	Food security in GCC countries: status, challenges and opportunities for regional cooperation in science, technology and innovation	9:00-9:15
Dr. Mahira bint Ali Alzadjali Ministry of Agriculture, Fisheries and Water Resources, Oman	Oman's national pathway for food systems transformation	9:15-9:30

Sub-session 1: Science, technology and innovations for agrifood systems transformation

Moderator Dr. Abdoulaye Saley Moussa, FAO

Speaker	Paperwork	Timing
Dr. Hashimoto Makoto Deputy Director, Radiation Protection Division, Orai Research and Development Institute, Japan Energy Agency	The role of peaceful nuclear science technology in the field of food security	9:45 – 10:00
Dr. Khaled Aljoumaa Head of industrial irradiation department, Department of Radiation Technology, Syrian Atomic Energy Authority	Nuclear technologies in the field of food security	10:00- 10:15
Dr. Mohammed Al-Rizeiqi Lecturer at the College of Agricultural and Marine Sciences, SQU	The role of SQU Innovation Technology Transfer Centre in promoting innovation culture and managing new food products development	10:15-10:30



Sub-session 2: Youth in agrifood systems transformation

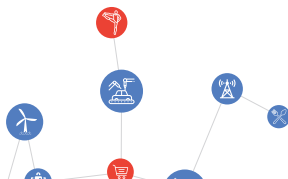
Moderator: Dr. Dawood Al Yahyai, MAFWR

Speaker	Paperwork	Timing
Dr. Abeer Ali Al Kalbani Lecturer at the University of Technology and Applied Sciences	Omani youth on the innovative lead to enhance national food security	10:35-10:50
Ali Shaker Head of Business Development & Partnership, Zubair Enterprize Development Center	Cultivating ecosystems which nurture innovation in entrepreneurship (with focus on youth)	10:50-11:05
Muzna Saif Al Hatmi CEO of Lawamis Company	Empowering coastal women through entrepreneurship development	11:05-11:20

Sub-session 3: Blue transformation towards sustainable aquatic agrifood systems

Moderator Dr. Lionel Dabbadie, FAO

Speaker	Paperwork	Timing
Dr. Lionel Dabbadie Senior Fisheries and Aquaculture Officer, FAO subregional office for GCC States and Yemen	Introduction to blue transformation	11:25-11:40
Dr. Dawood Al Yahyai Director General of Fisheries Research, Ministry of Agriculture, Fisheries and Water Resources	Aquaculture in Oman: status, challenges and opportunities	11:40-11:55
Mohammed Al Huseini Behar Platform Founder	Behar Platform and its role in Fisheries sector digital transformation	11:55-12:10
	Tasting of aquaculture dishes Discussion	12:10-12:25



12 October 2022

Second Session: Cyber Security

Session moderator: Ali Al-Humairi
Lecturer at German University

Speaker	Paperwork	Timing
Dr. Adel Abdullah Smeda Expert in Science and Technology Sector of the Islamic World Educational, Scientific and Cultural Organization (ISESCO) in Rabat.	Cybersecurity: Insights, Resources, and best Practices	1:30 – 1:50
Dr. Ahmed bin Hammad Al Kalbani Dean of the Academy of Advanced Cyber Security- Oman	Behavioral Analysis in Cybersecurity	1:50 – 2:10
Dr. Paul Theron Founder and First Chair of the AICA IWG International Working Group on Independent Intelligent Defense Agents	Autonomous Cyber Defense: A Fantastic Opportunity and Must-have Technology	2:10 – 2:30
Rashid bin Salem Al Salmi CEO, Insight Information Security	Cyber Security Operations	2:30- 2:50
Discussion		2:50 – 3:20

October 13, 2022

Third Session: Climate Change and its Effects

Session moderator: His Excellency Prof. Abdullah bin Khamis Ambosaidi
Undersecretary of the Ministry of Education for Education

Speaker	Paperwork	Timing
Dr. Badaoui Rouhban Adviser at the United Nations (UNESCO)	Natural Disasters and Climate Change: Enhancing Adaptation and Resilience	10:00 – 10:20

Speaker	Paperwork	Timing
Dr.-Eng Foued El Ayni Expert in ESICO Environment expert	Green Transformation and Facing Climate Changes	10:20 – 10:40
Dr. Micheal Hoch Scientist and physicist, founder of the Science and Art Program at the European Organization for Nuclear Research (CERN)	How to Prepare the Younger Generation to Face the Effects of Climate Change	10:40 – 11:00
Dr. Malik bin Mohammed Al-Wardi Associate Professor at Sultan Qaboos University - Department of Soil, Water and Agricultural Engineering	Climate Change in the Sultanate of Oman: Future Expectations and Adaptation Strategy	11:00- 11:20
Discussion		11:20 – 12:00

October 13, 2022

Fourth Session: Astronomy and Space Sciences

Session moderator / Professor Suleiman Mohammed Al Balushi
Professor of science curricula and teaching methods
Sultan Qaboos University

Speaker	Paperwork	Timing
Ammar bin Salim Al-Rawahi Space Projects Consultant - Ministry of Transport, Communications and Information Technology	Space Economy Between Technologies and Future Foresight	1:30 – 1:50
Dr. John Collick Head of International Education Strategy	New Worlds and New Civilizations: The Search for Alien life in Science and Culture.	1:50 – 2:10
Prof. Martin Hendry Professor of Astrophysics and Cosmology at the University of Glasgow	Exploring Einstein's Universe: the Dawn, and Exciting Future, of Gravitational-wave Astronomy	2:10 – 2:30
Dr. Klute Markus A professor in Karlsruhe Institute of Technology- Germany (one of the largest research and teaching institutions in Germany-)	The Large Hadron Collider (LHC) Legacy and Prospects	2:30 – 2:50
Discussion		2:50 – 3:20

Conclusion