



# APSCO / AUASS INTERNATIONAL SYMPOSIUM-2022 SPACE EXPLORATION-MOON AND BEYOND

02 - 04 November, 2022  
Mafrq, Jordan

Supported by



أكاديمية الشارقة  
لعلوم وتكنولوجيا الفضاء والفلك  
SHARJAH ACADEMY FOR ASTRONOMY, SPACE  
SCIENCES AND TECHNOLOGY









**Asia-Pacific Space Cooperation Organization (APSCO)**  
**and**  
**Arab Union for Astronomy & Space Sciences (AUASS)**

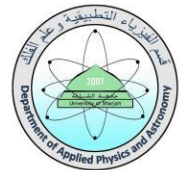
## **INTERNATIONAL SYMPOSIUM-2022**

### **Space Exploration: Moon and Beyond**

2-4 November, 2022

Mafrq, Jordan

Supported by  
Al al-Bayt University  
University of Sharjah (SAASST)





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**General Introduction**

Human has always looked at the heavens and wondered about the nature of the objects seen in the night sky. With the development of satellites, rockets and the advances in other technologies, it became possible to send machines and people above Earth's atmosphere into outer space. Considering the fast development of space sector and the challenging nature of the space activities, the role of international and regional organizations in space have certainly become more important.

The Symposium, co-organized by Asia-Pacific Space Cooperation Organization (APSCO) and Arab Union for Astronomy & Space Sciences (AUASS), will bring together leaders and decision-makers within the science and human exploration community – engineers, scientists, entrepreneurs, educators, agency representatives and policy makers. The leaders in the field will discuss recent results, current challenges and innovative solutions in space exploration from moon and beyond. And it will contain several opportunities to learn about how space exploration provides benefits as well as discuss how those activities can be implemented through thoughtful planning and cooperation.

Asia-Pacific Space Cooperation Organization (APSCO), as the Multilateral Inter-Governmental Organization, provides a platform for cooperative activities and capacity building in Member States in the field of space science, technology and its applications. APSCO contributes to building capacity in the field of space science and space law and policy in its Member States, and has been biennially organizing “International Symposium” since 2009 as part of its two knowledge-exchange platforms. These events provide a unique knowledge-sharing platform for the executives at the national space agencies and space authorities in the Member States of APSCO. The symposium aims to encourage the experts and specialists through open, voluntary participation to share the information and exchange the view on different space aspects.

The Arab Union for Astronomy & Space Sciences (AUASS) established in August 1998 as an outcome of the second Arab Conference on (AASS), held in Amman Jordan during 29th August- 1st of September 1998. The conference organized at the time by IAASS Institute of Astronomy & Space Sciences. Among the participants, there were more than 100 astronomers & scientist from 14 Arab countries, in addition to observers from France, Italy and USA. The participants decided to establish the Union and its head - quarter to be in Amman. The aim of the union is to develop (AASS) in the Arab countries through conferences, meeting, publication, joint research projects etc. with the cooperation of the International (AASS) institutions.

Founded in 1993, Al al-Bayt University is a non-profit public higher education institution located in the suburban setting of the large town of Mafraq (population range of 10,000-49,999 inhabitants). Officially recognized by the Ministry of Higher Education and Scientific Research of Jordan, Al al-Bayt University (AABU) is a large (uniRank enrollment range: 15,000-19,999 students) coeducational Jordanian higher education institution. Al al-Bayt University (AABU) offers courses and programs leading to officially recognized higher education degrees such as pre-bachelor degrees ( certificates, diplomas, associate or foundation), bachelor's degrees, master's degrees, and doctorate degrees in several areas of study. See the uniRank degree levels and areas of study matrix below for further details. This 29-year-old Jordanian higher-education institution has a selective admission policy based on students' past academic records and grades. International students are welcome to apply for enrollment. AABU also provides several academic and non-academic facilities and services to students such as the library, housing, sports facilities, financial aid or scholarships, studying abroad and exchange programs, and administrative services. It recently entered the Shanghai World Ranking as nursing ranked 204 globally.

The University of Sharjah was established in 1997 with the aim and vision to contribute to the qualities shared by renowned universities around the world. The education and research programs they offer tend to be comprehensive and multi-disciplinary. UoS has 14 colleges and offers 122 programs across multiple academic disciplines. Courses are offered in a variety of fields ranging from Sharia and Law to Health Sciences, Medicine, Fine Arts and Design, Engineering, and Communication. We also offer a wide range of degree programs at the diploma, BSc/BA, MSc/MA, and Ph.D. Levels as well as the Executive MBA (EMBA) program. The University of Sharjah is an innovative world-class teaching, learning and research institution providing a distinctive, inspirational, creative and supportive environment.

## **Targeted Audience and Expected Participants**

The Symposium is planned for a total of 80-100 onsite participants including decision- and policy-makers from national space agencies, governmental bodies, experts from the space community, private sector representatives, researchers/students from academia that are involved in space activities, representing developing and developed nations from all economic regions from APSCO Member States, and Arab areas.

## **Symposium Objectives**

The objectives of the symposium will be as follows:

- (a) To gather scientists, practitioners, scholars and experts, to jointly at the same place discuss and envision the future development in space exploration in a holistic, global way.
- (b) To provide a platform for researchers, practitioners and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in the fields of space exploration.
- (c) To provide a key platform for the development of researchers with international and diversified knowledge and experiences, enhancing the quality decision-making of policymakers and promoting the highest utilization of research knowledge.





## Programme of the Symposium

### DAY 1 – WEDNESDAY, 2 NOVEMBER 2022

08:30- 09:30 Registration

#### OPENING SESSION

Onsite venue: Al al-Bayt University, Mafraq, Jordan

0930-1030 hrs	<p>Hosted by:</p> <ul style="list-style-type: none"><li>• Dr. Mohammad Shedifat, Al al-Bayt University AABU</li><li>• Ms. Aisha Jagirani, Director General of External Relations and Legal Affairs Department, APSCO</li></ul> <p><u>Keynote Addresses:</u></p> <ul style="list-style-type: none"><li>• Prof. Dr. Hamid M.K. Al Naimiy, Chancellor of University of Sharjah, President of AUASS, General Director of SAASST</li><li>• Ms. Yu Qi, Secretary-General, APSCO</li><li>• Dr. Awni Mohammad Khasawneh, Secretary-General AUASS, UoS, SAASST, BAU(Salt)</li><li>• Prof. Dr. Hani Aldmour, President of Al al-Bayt University</li></ul>
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*Group Photo and coffee break*

#### SESSION 1 Initiatives and Practices of APSCO and Arab Region in Space Exploration

onsite venue: Al al-Bayt University, Mafraq, Jordan

1030 – 1230 hrs	<p><u>Moderator</u> Prof. Dr. Osama Shalabiea, Member of AUASS Higher Council, Egypt.</p> <p><u>Rapporteur</u> Prof. Dr. Mashhoor Ahmed Al-Wardat, UoS, AABU, AUASS and SAASST</p> <p><u>Speakers (20 minutes for each talk including the discussion)</u></p> <ol style="list-style-type: none"><li>1. <b>All Mankind Unite and Strive to Realize the Second Great Migration</b>, Ms. Yu Qi, SG, APSCO</li><li>2. <b>The Early Universe with the James Webb Telescope and the Formation of the First Stars</b>, Prof. Dr. Munib-Eleid, American University of Beirut, Lebanon</li><li>3. <b>AUASS Achievements and Future Lunar Systems</b>, Dr. Saleh ALSHIDHANI, Sky Innovations Oman, and Member of AUASS Higher Council</li><li>4. <b>Progress On International Lunar Research Station (ILRS)</b>, Mr. Zhang Ding, CNSA-DSEL, China</li><li>5. <b>The Effects of the Space Environment on Space Objects</b>, Prof. Dr. Osama Shalabiea, Dean of the faculty of Space Science and Space Technology of Beni-Suef University, Egypt and Member of AUASS Higher Council</li></ol>
12:30-1400 hrs	Lunch Break

#### SESSION 2 Initiatives and Practices of APSCO and Arab Region in Space Exploration

onsite venue: Al al-Bayt University, Mafraq, Jordan

1400 -1600 hrs	<p><u>Moderator</u> Prof. Ahmed Al-Jamel, Dean of the faculty of Sciences, Al al-Bayt University, Jordan</p> <p><u>Rapporteur</u> Dr. Ali Nouh, Department of GIS &amp; RS, AABU</p> <p><u>Speakers (20 minutes for each talk including the discussion)</u></p> <ol style="list-style-type: none"><li>1. <b>The United Nations Group of Experts and the problem of the standardization of the names of topographic features which extend beyond the same sovereignty and more particularly the standardization of the names of extra-terrestrial topographic features</b>, Prof. Dr. Brahim ATOUI, AUASS and Dr. Awni Mohammad Khasawneh, Secretary-General, AUASS and Balqa University, Jordan</li></ol>
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	<ol style="list-style-type: none"> <li><b>UAE Exploration on Mars</b>, Prof. Dr. Hamied Al-Naimy, Chancellor of University of Sharjah, President of AUASS, General Director of SAASST</li> <li><b>Surviving on Mars - How to Engage Public in Sustainable Space Exploration</b>, Dr. Jasmina Lazendic-Galloway, aastrophysicist and educationalist, Eindhoven University of Technology (Netherlands) &amp; Monash University (Australia)</li> <li><b>Thai Space Consortium (TSC)'s Aim to the Moon in 2029</b>, Mr. Aukkaravittayapun Suparerk, Director of Graduate Studies, National Astronomical Research Institute of Thailand</li> <li><b>APSCO Initiatives and Practices in Space Exploration</b>, Dr. Manop Aorpimai, Director General of Strategic Planning and Program Management Department, APSCO</li> </ol>
1900 hrs	Reception/Banquet hosted by APSCO
<b>DAY 2 - Thursday, 3 NOVEMBER 2022</b>	
<b>SESSION 3 Emerging Trends and Changing Dynamics in Space Exploration</b> <b>onsite venue: Al al-Bayt University, Jordan</b>	
1000-1300 hrs	<p><b>Moderator</b> Dr. Ferhat Fikri Özeren, Deputy Secretary-General, APSCO</p> <p><b>Rapporteur</b> Dr. Ghalib Faour, Director of Lebanese National Center for Remote Sensing, Lebanon Dr. Mohammad Salim, Al al-Bayt University, Jordan</p> <p><b>Speakers (20 minutes for each talk including the discussion)</b></p> <ol style="list-style-type: none"> <li><b>Space Technology IoT Applications on Earth: A Disruptive Technology That Merges Space4.0 with Industry4.0</b>, Dr. Khaled, Vice Dean of Faculty of Navigation Science and Space Technology, Cairo University, Egypt</li> <li><b>Commercial Spaceflight – Risk and Reward</b>, Dr. Rowena Christiansen, Physician, the University of Melbourne, Australia</li> <li><b>Space Explorations: Parallax Measurements from Hipparcos to Gaia</b>, Prof. Dr. Mashhoor Ahmed Al-Wardat, UoS, AABU, AUASS and SAASST</li> <li><b>The Lucy Mission to the Trojan Asteroids</b>, Dr. Adriana C. Ocampo Uria, Program Manager of NASA Headquarters Science Mission Directorate (SMD)</li> <li><b>The Shielded Zone of the Moon and RF Interference</b>, Mr. Ibrahim Küçük, Head of Space Sciences Department, Turkish Space Agency</li> <li><b>Space Exploration; Past, Present and Future</b>, Mr. Imran Muhammad, Manager (International Affairs Division), Pakistan Space and Upper Atmosphere Research Commission (SUPARCO)</li> </ol>
13:00-1400 hrs	<b>Lunch Break</b>
<b>SESSION 4 Space Utilization – Prospects for Developing Countries</b> <b>onsite venue: Al al-Bayt University, Jordan</b>	
1400-1700 hrs	<p><b>Moderator</b> Dr. Saleh ALSHIDHANI, Sky Innovations Oman, and Member of AUASS Higher Council</p> <p><b>Rapporteur</b> Dr. Khaled, Vice Dean of Faculty of Navigation Science and Space Technology, Egypt Dr. Alaa Azam, Jordan University</p> <p><b>Speakers (20 minutes for each talk including the discussion)</b></p> <ol style="list-style-type: none"> <li><b>The Role of Space Science in Supporting the National Disaster Management Information System-the Jordanian Experience</b>, Dr. Ali Noah, Al al-Bayt University</li> <li><b>Space Exploration and Making of International Space Law: An Analysis on Artemis Accord</b>, Dr. Shakeel Ahmad, Erin J.C. Arsenault Research Fellow, McGill University, Canada</li> <li><b>Solar Wind Magnetosphere Moon Coupling and Tracking of Oxygen and Hydrogen from Upper Ionosphere up to the Lunar Surface from 3D Kinetic Simulation</b>, Dr. Suleiman M Baraka, Department of Physics and Astronomy, University of Calgary, Canada.</li> </ol>

	<p><b>4. Monitoring Urban Expansion using Remote Sensing in a Fragile and Conflict-Affected Country: The Case of Lebanon between 1963 and 2017</b>, Dr. Ghalib Faour, Director of Lebanese National Center for Remote Sensing, Lebanon</p> <p><b>5. The Role of AUASS in Astronomy and Space Science Education</b>, Dr. Awni Mohammad Khasawneh, Secretary-General, AUASS and Balqa University, Sharjah University UoS</p>
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	<i>coffee break</i>
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## DAY 3 –FRIDAY, 4 NOVEMBER 2022

### CONCLUSION (online)

<b>0900 -1030 hrs</b>	<p><b>Presented by Moderator of:</b></p> <ol style="list-style-type: none"> <li>1. Session-1</li> <li>2. Session-2</li> <li>3. Session-3</li> <li>4. Session-4</li> </ol>
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### CLOSING CEREMONY (online)

<b>1030-1100 hrs</b>	<p><b>Closing Remarks</b></p> <ol style="list-style-type: none"> <li>1. Prof. Dr. Mohammed S. Alharahsheh, Vice President of Academic Affairs, AABU</li> <li>2. Ms. Yu Qi, Secretary-General, APSCO</li> <li>2. Dr. Awni Mohammad Khasawneh, Secretary-General, AUASS</li> <li>3. Prof. Dr. Mashhoor Ahmed Al-Wardat, UoS, AABU, AUASS and SAASST</li> </ol>
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<b>1400-1700 hrs</b>	<b>Cultural Tour/Technical Visit</b>
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# Information for Participants



## Organizers

Asia-Pacific Space Cooperation Organization (APSCO)  
Arab Union for Astronomy & Space Sciences (AUASS)

## Supported by

Al al-Bayt University  
University of Sharjah (SAASST)



## Date & Place

**APSCO/AUASS International Symposium will be held on 2-4 November 2022, at AL aL-BAYT UNIVERSITY, Mafraq, Jordan.**

**Onsite Venue:** Al al-Bayt University is located on the outskirts of the city of Mafraq, 65 Kilometers to the north-east (about 45 minutes driving) of the capital Amman - Jordan.

## Accommodation



Accommodation is in the **Le Royal Amman** which located in 3rd Circle, Zahran Street, 11183 Amman, Jordan.

For APSCO sponsored delegate, APSCO emphasizes that APSCO will be responsible for single room rent only. Any extra charges such as telephone, laundry, mini bar etc. will be borne by participants themselves.



## Meals

- Open buffet breakfast and dinner will be provided in the Le Royal Amman. Coupons will be distributed at registration.
- Lunch will be provided at the symposium venue.

## Check In- Check-out

Check-in at Le Royal Amman is from 14:00, and check-out is until 12:00.

## Transportation

Transportation for all sponsored participants between the airport and hotel will be provided by organizers. Someone will meet you at the airport with a Welcome Sign "APSCO/AUASS International Symposium." Please find them with care.

Daily transportation between hotel and symposium venue will also be provided by organizers.

## Weather

The weather in Amman in November is pleasant. The average temperatures are between 10°C and 25°C.

## Currency

The local currency is Jordanian Dinar (JOD). The exchange rate for 1 JOD equals to 1.35 Dollar

## Reimbursement

For the delegate sponsored by APSCO and who book the flights by themselves, **please bring the original invoice and your flight itinerary for reimbursement.**

## Health & Anti-covid-19 requirements

All participants are required to check with the local embassy/travelling agency/airline company for getting the required policy and measures for travelling to Jordan on Covid-19.

## Registration

APSCO staff will welcome you at the lobby of the hotel.  
The registration will be arranged at Al al-Bayt University.

### Contact Person in Jordan

**Prof. Hamid M.K. Al Naimiy**

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