

جامعة السلطان قابوس
Sultan Qaboos University



College of Engineering • كلية الهندسة



كلية الهندسة
College of Engineering



UVS-OMAN 2026
CONFERENCE

SULTAN QABOOS UNIVERSITY MUSCAT

9-11

FEB

2026

3rd International Conference on Unmanned Vehicle Systems
Intelligent Systems for Industrial Challenges

CONFERENCE TECHNICAL PROGRAM

9-11 Feb 2026

Sultan Qaboos University
Muscat, Oman



#UVSOman

@UVSOman

Conference website: <http://uvsc.om>





Organized by



Technically Supported by



Strategic Partners

سلطنة عُمان
وزارة النقل والاتصالات وتقنية المعلومات
Sultanate of Oman
Ministry of Transport, Communications and
Information Technology



Sponsors

Gold



Silver



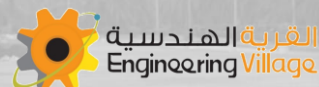
Bronze



Collaborators



Military Technological
College



3rd International Conference on Unmanned Vehicle Systems
Intelligent Systems for Industrial Challenges

9-11 Feb 2026
Sultan Qaboos University
Muscat, Oman





UVS-OMAN 2026
CONFERENCE
SULTAN QABOOS UNIVERSITY MUSCAT

9-11
FEB
2026



IEEE
OMAN SECTION



كلية الهندسة
College of Engineering



جامعة السلطان قابوس
Sultan Qaboos University
College of Engineering • كلية الهندسة

3rd International Conference on Unmanned Vehicle Systems Intelligent Systems for Industrial Challenges

9-11 Feb 2026
Sultan Qaboos University
Muscat, Oman

The range of targeted topics is very broad, but priority is given to subjects on real world applications; including: research, industry, business, and education. The Technical Program Committee is inviting proposals for paper presentations, demonstrations, and poster contributions on topic relevant to UVS.



Conference Tracks:



Technological Advances in Unmanned Vehicle Systems and Robotics



Intelligent Navigation, Control, and Decision-Making



Applications and Use-Cases of UVS and Robotics in Industry and the Public Sector



Integration with IoT, Smart Cities, and Urban Mobility



Data Analytics, Cybersecurity, and System Resilience



Education and Training of Unmanned Vehicle Systems (UVS) and Robotics



Regulatory, Ethical, and Societal Implications



Challenges and Future Trends in UVS and Robotics



3rd International Conference on Unmanned Vehicle Systems Intelligent Systems for Industrial Challenges

Conference - Day 2

Tuesday, 10th February 2026
Conference & Exhibition Halls, SQU

08:00 - 08:45

Registration

08:45 - 08:50

Recitation of Holy Quran

08:50 - 09:00

Welcome Address by the Dean

09:00 - 09:10

Opening Remarks by the Chair, Organizing Committee

09:10 - 09:30

Announcement of Design Competition Winners

09:30 - 10:00

Opening of Exhibition

10:00 - 10:30

Tea/Coffee Break

Keynote I

Chair: Prof Hadj Bourdoucen

10:30 - 11:15

(35 min + 10 min Q&A)

The Changing Cybersecurity Requirements in the Autonomous Era: When Can We Expect Level 5 Autonomy?

Presenter: Dr. Hans C. Mumm

Leader in Emerging and Disruptive Technologies; Former Division Chief for Cybersecurity, Office of the Director of National Intelligence (ODNI), USA

11:20 – 12:35

Industry Applications I — Aerial Robotics for Inspection, Monitoring, and Environmental Assurance

Chair: Dr. Alya Al-Hashim

11:20 - 11:35

(10 min + 05 min Q&A)

Industry Application (PDO)

Enhancing Powerline Inspection Through Multi-Sensor Drone Technology at PDO.

Presenter: Naseer Al-Bulushi

11:35 - 11:50

(10 min + 05 min Q&A)

Industry Application (OQGN)

AI-Assisted BVLOS Drone for Right-of-Way Inspection

Presenter: Nuha Al-Badi, Hiba Al Shuaibi

11:50 - 12:05

(10 min + 05 min Q&A)

Industry Application (OLNG)

Tackling Methane in Flight: Drone Technology Experience in Methane Management

Presenter: Firdouse Al Barwani

12:05 - 12:20

(10 min + 05 min Q&A)

Industry Application (NAMA / OETC)

Aerial Inspection for Overhead Transmission Lines

Presenter: Sulaiman Al Shuaibi

12:20 - 12:35

(10 min + 05 min Q&A)

Industry Application (Vale Oman)

Confined Space Inspection Using Drone Technology

Presenters: Adnan Al Sheidi, Ali Khamis Al Kharusi, and Mohammed Al Balushi



3rd International Conference on Unmanned Vehicle Systems Intelligent Systems for Industrial Challenges

Conference - Day 2 [Cont.]

Tuesday, 10th February 2026
Conference & Exhibition Halls, SQU

Invited Talk I

Chair: Dr. Nasr Al Hinai

12:35 - 13:05

(25 min + 05 min Q&A)

The Future of Defense: Advances and Trends in Military Drone Technology

Presenter: Prof. Muhammet Deveci

Turkish Naval Academy (National Defense University), Turkey

13:05 - 14:15

Lunch Break

14:20 – 16:00

Parallel Session # 1

Chair: Dr. Nasra al-Maskari

Parallel Session # 2

Chair: Dr. Riadh Zaier

14:20 - 14:40

(15 min + 05 min Q&A)

Design and Implementation of a Hybrid Fuel Cell-Battery-Supercapacitor System for the Long-Endurance Stork UAV

Tedjani Mesbahi, Thomas Pavot, Renaud Kiefer, Edouard Laroche (France)

Prescribed Performance Cooperative Design for the UAV-UGV System: Vision-based Guidance Control Approach

Jawhar Ghommam (Oman), Ibrahim Naimi (Oman), Saif-sinan Al-Abduljaleel Saif (Canada), Maarouf Saad (Canada)

14:40 - 15:00

(15 min + 05 min Q&A)

Early Exiting U-Net for Efficient Processing on UAVs: A Case Study in Environmental Monitoring

Luca Sartori Boni, Mohamed Moursi, Norbert Wehn, Bilal Hammoud (Germany)

Resilient Reconfiguration and Fault-Tolerant Cooperative Control of MAS under Permanent Link Failures within a Hybrid-Systems Framework

Estrada Jonathan (France), Mohamed Djemai (France), Bernardino Castillo-Toledo (Mexico), Michael Defoort (France)

15:00 - 15:20

(15 min + 05 min Q&A)

A Robust Model-Based Corrector Iterative Learning Control for Mecanum Robots: Comparative Analysis of Adaptive Architectures

Nayan Banik (USA), Jawhar Ghommam (Oman), Mohammad habibur Rahman (USA)

Sustainable Flight Path Optimization for UAVs in Variable Environments

Keerthana Perumal (Oman)

15:20 - 15:40

(15 min + 05 min Q&A)

Design Methodology and Aerodynamic Validation of an In-House 3D-Printed Fixed-Wing UAV Using XFLR5 and CFD Simulation

Hamed Al Subhi, Nasra Al-Maskari (Oman)

Drone-based Estimation of Chlorophyll-a in Reservoirs: A Cubist-based Ensemble Model

Soheil Ghasemnezhad (Iran), Mohammad Reza Nikoo (Oman), Mahmoud Mashal (Iran), Malik Al-Wardy (Oman)

15:40 - 16:00

(15 min + 5 min Q&A)

Experimental Validation of Finite-Time Robust Control for Autonomous Vehicles using Qcar

Younes Lahiouel (Canada), Yassine Kali (Canada), Maarouf Saad (Canada), Baptiste Bancel (Canada), Jawhar Ghommam (Oman).

AI-Enabled Unmanned Vehicle Systems for Transforming Healthcare Delivery: Strategic Applications and Roadmap for Oman's Public Health System

Anas Ansari (Taiwan), Abdullah Ansari (Oman), Khalifa Al Jabri (Oman), Jing-Ming Guo (Taiwan), Abdul Rahman Ansari (India), H.E. Khodke (India)



3rd International Conference on Unmanned Vehicle Systems Intelligent Systems for Industrial Challenges

Conference - Day 3

Wednesday, 11th of February 2026
Conference & Exhibition Halls, SQU

Keynote II

Chair: Dr. Said Al-Abri

08:30 – 09:15

(35 min + 10 min Q&A)

Design, Control, and Applications of Bioinspired Drones

Presenter: Prof. Dario Floreano

Director, Laboratory of Intelligent Systems

École Polytechnique Fédérale de Lausanne (EPFL), Switzerland

Invited Talk II

Chair: Prof. Lazhar Kheriji

09:20 - 9:50

(25 min + 5 min Q&A)

From Import to Innovation: Localizing UAV Development in Oman

Presenter: Engr. Majid Al-Hinai

CEO of Sinan Advanced Industries, Oman

10:00 - 10:30

Tea/Coffee Break

10:30 – 10:45

Industry Applications II Chair: Dr. Rashid Al-Hajri

Autonomous Systems for Safety, Inspection, and Operations

10:30 - 10:45

(10 min + 5 min Q&A)

Industry Application (SOHAR Port & Freezone): Underwater Inspection of Marine Assets Using ROVs

Presenter: Musaab Al-Maqbali

10:45 - 11:00

(10 min + 5 min Q&A)

Industry Application (OQGN): Tethered Drone for Emergency Response

Presenter: Nuha Al-Badi

11:15 - 11:30

(10 min + 5 min Q&A)

Industry Application (PDO): Validating Robots for Routine Assurance Tasks in PDO

Presenter: Issam Alnaaimi

11:30 - 11:45

(10 min + 5 min Q&A)

Industry Application (Sohar Aluminium): Intelligent Navigation, Control, and Decision-Making through IVMS and Driver Fatigue Management Systems

Presenter: Muktesh SARPOTDAR

11:45 - 12:00

(10 min + 5 min Q&A)

Industry Application (ESBAAR): Automating Oil and Gas Operations using Autonomous Drone Stations

Presenter: Eng. Mohamed Al Hinai

12:00 – 13:00

Parallel Session # 3

Chair: Dr. Ibrahim Al-Naimi

Parallel Session # 4

Chair: Dr. Majid Al-Maharbi

12:00 – 12:20

(15 min + 5 min Q&A)

DookFlight: A Drone Simulator Platform for Studying Advanced Controllers

Navid Nasiri (Oman), Morteza Mohammadzahari (Oman)

Transportation of the future: the idea behind the integration of alternative energy sources and autonomous systems
Agnes Csiszár-Kocsir (Hungary), János Varga (Hungary)

12:20 – 12:40

(15 min + 5 min Q&A)

Reliability Analysis of Aeronautical Structures: A Stochastic Approach to Periodic Structures

Mohamed Guedri (Tunisia)

Integrated UAV-based Mapping and Cloud-Based System for Digital Twin Creation of Historical Sites: A Case Study of Mutrah Fort
Mohammed Eldiasty (Oman), Alya Al-Hashim (Oman)

12:40– 13:00

(15 min + 5 min Q&A)

Practical PID Tuning for Quadcopter Stability: Experimental Results

Aybak Ahmad (Jordan), Sereen N Alzu'bi (Jordan), Tarek A. Tutunji (Jordan)



3rd International Conference on Unmanned Vehicle Systems Intelligent Systems for Industrial Challenges

Conference - Day 3 [Cont.]

Wednesday, 11th of February 2026

Conference & Exhibition Halls, SQU

13:00 – 14:10

Lunch Break

Invited Talk III

Chair: Dr. Mansur Celebi

14:10 – 14:40

(25 min + 5 min Q&A)

From Vision to Impact: Building AI and Drone Capabilities at the EIVS Lab

Presenter: Dr. Ahmed Al-Maashri

Head, Department of Electrical & Computer Engineering

Sultan Qaboos University, Oman

14:40 – 16:00

Parallel Session # 5

Chair: Dr. Majdi Mansouri

Parallel Session # 6

Chair: Dr. Jawhar Ghommam

Auto Road Inspector: Road Damage Recognition and Reporting System

Wahaj Hoti (Oman), Asma Ismail Al Balushi (Oman), Ruba Said Al Humaidi (Oman), Ragavesh Dhandapani (Oman)

YOLO-Powered UAV Imaging for Precise Detection of Fungal Infections in Palm Trees

Omer Eldirdiry (Oman), Mawadda Khalifa Alwardi (Oman), Alhasan Hilal Alshekaili (Oman), Hamza Abdullah Alismaili (Oman), Alwaleed Aldahmani (Oman)

14:40- 15:00

(15 min + 5 min Q&A)

Real-Time Fault Detection and Reconstruction for Autonomous Vehicles: A KPCA Digital Twin Approach

Romdhane Nasri (Tunisia), Majdi Mansouri (Oman), Zouhaier Affi (Tunisia), Vicenç Puig (France)

Drone Thermal Cameras System for Accurate Temperature Measurements in Oil Fields Using AI

Salim Almamari (Oman), Moudafer Alwahibi, (Oman), Abdullah Alshehhi (Oman), Ahmed Tabook (Oman), Ahmed Al Maashri (Oman), Hadj Bourdoucen (Oman)

15:00 – 15:20

(15 min + 5 min Q&A)

Stable Fault-Tolerant Control for Autonomous Vehicles: Model Predictive Control with Digital Twin Integration

Romdhane Nasri (Tunisia), Majdi Mansouri (Oman), Zouhaier Affi (Tunisia), Vicenç Puig (France)

Assessment of Drone Imagery for Water Quality Estimation in Wadi Dayqah Reservoir

Sadegh Nehi (Iran), Mohammad Reza Nikoo (Oman), Malik Al-Wardy (Oman), Sadegh Vanda (Iran), R. Kerachian (Iran), Navid Nasiri (Oman)

15:20 – 15:40

(15 min + 5 min Q&A)

Machine Learning-Based Fault Classification for KPCA Digital Twin Model Predictive Control in Autonomous Vehicles

Romdhane Nasri (Tunisia), Majdi Mansouri (Oman), Zouhaier Affi (Tunisia), Vicenç Puig (France)

Traffic congestion perdition using vehicle trajectories from Drone and combined Graph Attention and Temporal Convolutional Network

Hana Gharrad (France), Nesrine Ouled Abdallah

15:40 – 16:00

(15 min + 5 min Q&A)

Conference Banquet

Wednesday, 11th of February 2026

Novotel Muscat Airport

