جامعة خليفة
Khalifa University

IFToMM



PARALLEL 2026

CONFERENCE PROGRAM

THE 5TH INTERNATIONAL CONFERENCE ON

Theory, Applications and Future Trends for

PARALLEL ROBOTIC MANIPULATORS

18–20 November 2026 • Fully online

Hosted from Abu Dhabi, United Arab Emirates

3 DAYS
24 papers

5 KEYNOTES
Global leaders

ONLINE
GST / UTC+4

www.pkm2026.info

All program times are Gulf Standard Time (GST, UTC+4)

Wednesday, 18 November 2026

Opening • Synthesis • Kinematics • Reconfigurable Mechanisms

GST / UTC+4	PROGRAM
14:00–14:25	Opening remarks — General Chair
14:25–14:30	Submission statistics — Publication Chair
14:30–15:15	**Keynote — Prof. Jian S. Dai**
15:15–15:30	Break
	TECHNICAL SESSION **Synthesis, Kinematics, and Reconfigurable Parallel Mechanisms** Chair: TBD, Co-Chair: TBD
15:30–15:45	**Reciprocal-Product Conditions for Singularity Identification of Reconfigurable Mechanisms** Haolin Zhang, Jiang Lin, Zhao Tang, Jian S. Dai
15:45–16:00	**A Bio-Inspired Reconfigurable Robot Unifying Jetting, Swimming, and Crawling Locomotion** Yafei Zhang, Can Lei, Wentao Yin, Zikun Qu, Haolin Zhang, Zhao Tang, Jian S. Dai
16:00–16:15	**Structural-Parametric Synthesis of a Parallel Manipulator with Two End-Effectors** Zhumadil Baigunchekov, Giuseppe Carbone, Damir Zhangabergen, Muerzhahan Yeerzhati, Aliya Kalimujiang, Salawat Kalbiyat
16:15–16:30	**Geometrical Workspace Determination of a Reconfigurable Parallel Kinematic Machine** Ahmed Alshinawee, Abdur Rosyid, Bashar Khasawneh
16:30–16:45	**Curvature Feasibility of a 3-SPS Steering–Propulsion Module** Aggelos Iliakis, George Nikolakopoulos, Panagiotis Koustoumpardis
16:45–17:00	**Examples of 3-DOF Translational Parallel Robots with Base-Mounted Actuators for High-Precision and Special Applications** Tigran Parikyan
17:00–17:15	**Type Synthesis of Single-Mode and Two-Mode Parallel Mechanisms by Merging Two 1-DOF Parallel Mechanisms** Xianwen Kong, Dongdong Chen
17:15–17:30	**Physics-Informed Neural Networks for Solving the Forward Kinematics of Underactuated Cable-Driven Parallel Robots** Matteo Dall'Olio, Edoardo Ida', Marco Carricato
17:30–17:45	**A Translational Parallel Continuum Robot Using Double-Beam Links** Enno Liermann, Reinhard Grassmann, Sven Lilge, Kefei Wen, Andrea Gotelli, Jessica Burgner-Kahrs
17:45–17:50	Announcements and conclusion of Day 1

Thursday, 19 November 2026

Mechanism Design • Calibration • Control • Engineering Applications

GST / UTC+4	PROGRAM
14:30–15:15	**Keynote — Prof. Stéphane Caro**
	TECHNICAL SESSION **Mechanism Design, Calibration, Control, and Engineering Applications** Chair: TBD, Co-Chair: TBD
15:15–15:30	**Concept and Design of Two Novel Types of Parallel Mechanisms** Huiping Shen
15:30–15:45	**An Underactuated Coupled-Linkage Gripper with Near-Linear Fingertip Approach and Object-Conforming Grasping** Chunyu Guo, Wenzeng Zhang
15:45–16:00	**Calibration of a Medical Parallel Manipulator Using a Wrench-Based Jacobian Model** Abdullah Aamir Hayat, Mohammad Zubair, Khalifa Harib
16:00–16:15	**Design and Kinematic Analysis of a Planar PKM with a Dedicated Spindle-Orientation Actuation Chain** Aamna Alshehhi, Abdur Rosyid, Bashar El-Khasawneh
16:15–16:30	**Parallel Kinematic Machines as a Pedagogical Platform for Systems Engineering in Capstone Design** Khalifa Harib, Vyshak Sureshkumar, Abdullah Hayat, Ezza Ahmed, Amna Alhammadi
16:30–16:45	**Hybrid Serial–Parallel Scissor–Pantograph Mechanism for Minimally Invasive Inspection of Honeycomb Structures** Marco Griffa, Jiří Janota, Tomáš Krajník, Cesare Stefanini, Donato Romano
16:45–17:00	Break
17:00–17:45	**Keynote — Prof. Clément Gosselin**
17:45–18:00	**Design and Analysis of a Collapsible Scissor-Based Reconfigurable 3-RPS Parallel Mechanism** Christian Figuracion
18:00–18:15	**Effects of Mass Variation, Cable Failure, and External Contact Friction on the Control Performance of Cable-Driven Parallel Robots on Spherical Surfaces** Maitha Alqaydi, Yahya Mohammed, Ahmad Alattar, Tarek Taha, Dongming Gan
18:15–18:30	**Adaptive Control of Cable-Driven Parallel Robots Using Dual-Agent Reinforcement Learning: A Comparative Study with Quadratic Programming and Sliding Mode Control** Pegah Nomanfar, Leila Notash
18:30–18:35	Announcements and conclusion of Day 2

Friday, 20 November 2026

Medical and Rehabilitation Applications • Awards • Closing

GST / UTC+4	PROGRAM
14:30–15:15	**Keynote — Prof. Dan Zhang**
	TECHNICAL SESSION **Parallel Robots for Medical and Rehabilitation Applications** Chair: TBD, Co-Chair: TBD
15:15–15:30	**Modeling and Design of a Gough–Stewart Platform-Based System for Six-Axis Orthopaedic Deformity Correction** Yogesh Pratap Singh, Kiran Saldanha, Ashitava Ghosal
15:30–15:45	**Development of a 2-DOF Ankle Rehabilitation Device with Enhanced Mechanical Stability** Zhetenbayev Nursultan, Aknur Duisebayeva, Assylbek Ozhiken, Aidos Sultan, Yerkebulan Nurgizat
15:45–16:00	**Kinematic Modeling of a 2-DOF Spherical Parallel Mechanism for the PercuCob-RCM Robot** Kevin Gaitan, Juan Sandoval, Amir Trabelsi, Stéphane Caro
16:00–16:15	**IMU-Based Joint-Space Trajectory Tracking of a Novel Parallel Robot for Ophthalmic Surgery** Ruihan Yao, Mien Van, Yan Jin
16:15–16:30	**Design and Control of a Self-Reconfigurable Parallel Ankle Rehabilitation Exoskeleton** Abdulaziz Alrais, Kun Wang, Jian S. Dai, Emmanouil Spyrakos-Papastavridis
16:30–16:45	**Design of 3-UPU Parallel Mechanism-Based Exoskeletons for Complex Biomechanical Joint Rehabilitation** Tayyab Ahmad Ansari, Ketao Zhang
16:45–17:00	Break
17:00–17:45	**Keynote — Prof. Sunil K. Agrawal**
17:45–18:00	Awards
18:00–18:15	Closing remarks