

Conference Information

Venue	
Registration	IC&SR Corridor (in front of Hall-3)
All Sessions/CK-TC meeting	IC&SR Hall-3
Refreshments/Lunch	Annexe Dining Hall, IC&SR
Cultural programme and conference dinner on 25 th November 2025 at <u>GRT Grand</u> , T. Nagar	

Day 1, 25 November 2025

- 8:30-9:00: Reporting at the reception desk (Ground floor, IC&SR Building)
- 09:00-09:10: Inauguration
- 9:10-10:10: Invited Lecture 1:

Computational Kinematics 1993- ...

Professor Manfred HUSTY

- 10:10-11:30: Technical Session 1 (4 papers)
 - **Change of Kinematic Structures via Snapping Mechanisms**
Martin PFURNER, Daniel HUCZALA
 - **Exact and Approximate Ellipse Synthesis of the Planar 2R Mechanism**
Shashank RAMESH, Mark PLECNIK
 - **On the Classification of Local Extremum Distance Between Two Smooth Planar Curves**
Rama Krishna K.
 - **Synthesis of an Illusory Flapping Wing Mechanism for a Sculpture of Flying Crows**
Volkert van der WIJK
- 11:30-12:00: Interactions over tea/coffee/snacks (Annexe Dining Hall, IC&SR Building)

- 12:00-13:00: Technical Session 2 (3 papers)
 - **Multicriteria Synthesis of Stephenson II Linkage of a Crank Press**
Amandyk TULESHOV, Assylbek JOMARTOV, Moldir KUATOVA
 - **A New Chebyshev Approximation Method for Function Generating 4-Bar Linkage**
Gökhan KIPER
 - **Anisotropic Kinematics of Upright Manuscript Handwriting**
Fırat KARA, Gökhan KIPER
- 13:00-14:30: Lunch break (Annexe Dining Hall, IC&SR Building)
- 14:30-15:30: Invited Lecture 2:

The Expression of Motion - Kinetic Art Sculptures
Dr Volkert van der WIJK
- 15:30-16:00: Interactions over tea/coffee/snacks
- 16:00-17:20: Technical Session 3 (4 papers)
 - **Kinematic and Dynamic Modeling of a Metamorphic Exoskeleton for the Knee Joint**
Hongfei LIU, Yongpeng GUAN, Yuhang ZHU, Yusong XING, Jun WEI
 - **A Tale of Two Motion Problems**
Federico THOMAS, Jaume FRANCH
 - **Common Constraint in the Screw System of a Novel Cubical Kaleidocycle**
Haolin ZHANG, Lizi DENG, Zhao TANG, Jian S. DAI
 - **Transference Principle of Hyper - State on Kinematic Chain with Nilpotent Commutative Algebra**
Daniel CONDURACHE

- 17:30: Gathering in front of IC&SR Main Entrance – travel to GRT Grand by bus
- 18:30-22:00: Cultural programme, followed by conference dinner at GRT Grand
- 23:00: Return to the campus (by bus)

Day 2, 26 November 2025

- 09:00-10.00: Invited Lecture 3:

CK: Revisiting contributions in the past and an outlook for the future

Professor Ashitava GHOSAL

- 10:00-11:20 Technical Session 4 (4 papers)
 - **Computational Assessment of Impact Forces on the Humerus During Boxing Punches: Cross, Hook, and Uppercut**
Avinash S. PRAMOD, Ravichandran G. S., Santhakumar MOHAN, Asokan THONDIYATH
 - **Design of Single-Actuator Driven Upper Limb Shoulder Exoskeleton for Assisted Arm Elevation**
Adithya R. N., Avinash S. PRAMOD, Asokan THONDIYATH
 - **Comparison of Ankle Joint Dynamics During the Stance Phase of Recreational Walking and Running**
S. Edward JERO, Shyam Kumar S., D. Davidson JEBASEELAN, Sukant RAI, P. RAJINIKUMAR, Madhusudan PAL
 - **Optimal Robot Placement for Flexibility in Maxillofacial Surgery**
Ferdaws ENNAIEM, Juan SANDOVAL, Matthias SCHLUND, Med Amine LARIBI
- 11:20-11:50: Interactions over tea/coffee/snacks
- 11:50-13:10 Technical Session 5 (4 papers)

- **Kinematic and Static Analysis of Cable-Driven Spherical X-joints: a new cable-driven spherical 4R linkage**
Vimalesh MURALIDHARAN, Durgesh Haribhau SALUNKHE, Christine CHEVALLEREAU, Philippe WENGER

- **Inverse Kinematics of the 2-RRS-1-RRRR Cable Actuated Mechanism**
Isaac JOHN, Santhakumar MOHAN, Philippe WENGER

- **Forward and Inverse Kinematics of Cable-Driven Continuum Robots**
Soumya Kanti MAHAPATRA, Ashitava GHOSAL

- **Direct Geometrico-Static Problem of Underactuated Cable-Driven Parallel Robots with 3 Cables: Convergence Analysis**
Sara GABALDO, Edoardo IDÁ, Jean Pierre MERLET, Marco CARRICATO

- 13:10-14:10: Lunch break (at the Annexe Dining Hall, IC&SR)

- 14:10-15:30: Technical Session 6 (4 papers)

- **A Semi-Analytical Approach for Computing the Largest Singularity-Free Spheres of a 6-6 Stewart Platform Manipulator for Specified Orientation Workspaces**

Bibekananda PATRA, Sandipan BANDYOPADHYAY

- **Optimal Motion Planning for a Robotic Manipulator using Voxel-Based A* and Redundant IK Solutions**

Joseph JOSHY, Devika Anitha GOPAN, Bijo SEBASTIAN

- **Adaptive Admittance Control for Internal-Force Tracking in Dual-Arm Palm Grasping**

Filippo BRASINA, Roberto DI LEVA, Alessandro DE TONI, Massimiliano Edoardo PETRIOLI, Marco CARRICATO

- **Towards AI-enhanced control: a numerical technique for trajectory smoothing of a parallel robot for pancreatic surgery**

Iosif BIRLESCU, Alexandru PUSCA, Bogdan GHERMAN, Calin VAIDA, Damien CHABLAT, Doina PISLA

- 15:30-16:00: Interactions over tea/coffee/snacks
- 16:00-17:15: Open session – discussions on ongoing research/new problems
- 17:15-17:30: Concluding remarks & closure
- 17:45-18:45: Meeting of the CK Technical Committee