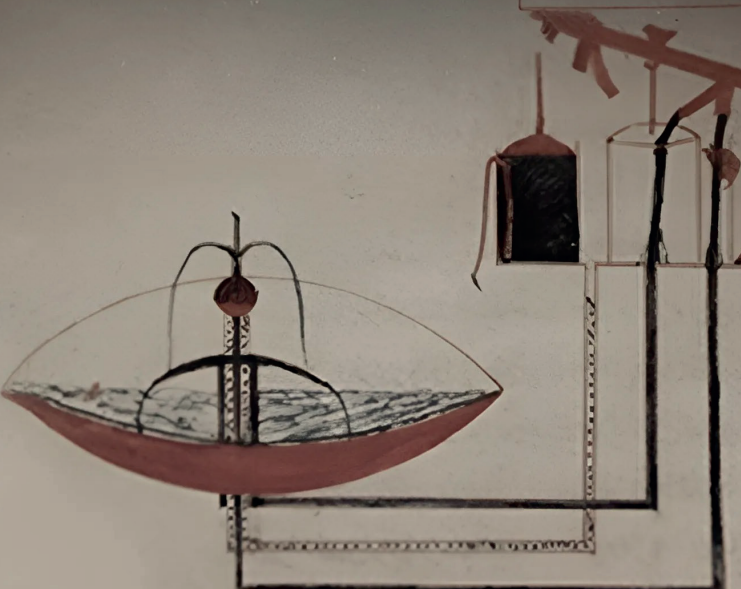


# 8<sup>TH</sup> INTERNATIONAL SYMPOSIUM ON HISTORY OF MACHINES AND MECHANISMS

HMM-2024

## TECHNICAL PROGRAMME



ANKARA (TÜRKİYE)

APRIL 18TH, 19TH, 20TH, 2024

# 8<sup>TH</sup> INTERNATIONAL SYMPOSIUM ON HISTORY OF MACHINES AND MECHANISMS

HMM-2024

ANKARA (TÜRKİYE)  
APRIL 18TH, 19TH, 20TH, 2024

## 17.04.2024 - WEDNESDAY

Welcome cocktail [afternoon or evening in the hotel]

## 18.04.2024 - THURSDAY

09:30 - 10:00

AKM venue all day

Registration

10:00 - 10:30

**Opening Act** by İrem Aslan Seyhan (chair of the organizing committee), Melek Dosay Gökdoğan (chair of the organizing committee and host institution), Gökhan Kiper (Chair of IFToMM Türkiye), Marco Ceccarelli (Chair of ISC-HMM), Zeki Eraslan (President of Atatürk Cultural Center), Necdet Ünüvar (Rector of Ankara University). Derya Örs (AMB upon their arrival).

10:30 - 12:15

**Session History of Teaching:** Chair: Marco Cocconcelli

3. History of Drawing Robots

*Lorenzo Scalera, Alessandro Gasparetto, Stefano Seriani, Paolo Gallina (Italy)*

7. Italian Teaching with Models From Mechanism Catalogues in 19th Century

*Marco Cocconcelli, Marco Ceccarelli (Italy)*

11. Newton's Mechanics Lectures in Cambridge

*Agamenon E. Oliveira (Brazil)*

22. Science of Mechanics in the Ottoman Classical Period (14-18th Century)

*Alper Atasoy (Türkiye)*

26. Ottomans' Mechanical Science Books in 19th Century

*İrem Aslan Seyhan (Türkiye)*

12:15 - 14:15

Lunch

14:15 - 16:15

**Session History of Machine Designs:** Chair: Teun Kotsier

9. Windmills in the Netherlands

*Teun Kotsier (Netherlands)*

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13. First Escalators and Their Inventors Until the End of the 19th Century

*Nenad Zrnica, Miloš Đorđević, Vlada Gasic (Serbia)*

18. The Evolution of Operating Machines for Ancient and Modern Huai'an Sluices

*Chu Yingjie (China)*

21. Fuzzy Logic-Based Evaluation of Ancient Topographic Measurement Instruments and Mechanisms

*José Antonio Hernández Torres, Juan Macías, Julio Jose Caparros Mancera, César Antonio Rodríguez-González, Angel Mariano Rodríguez-Pérez, José Macías (Spain)*

24. Construction Tools Used by Ottoman Architects and Engineers in the Classical Period

*Bihter Türkmenoğlu (Türkiye)*

28. From Wood to Steel. The Transformation of the Mining Machinery in Mexico

*Juan Carlos Jauregui (Mexico)*

16:15 - 16:30

Coffee Break

16:30 - 17:30

**Session Modern Reviews:** Chair: Rafael Lopez- Garcia

4. Reconstruction of the Snail of Demetrios of Phaleron at the Dionysia festival in Athens in 308 BC

*Thomas G. Chondros, Dimitris Korres, Kypros F. Milidonis (Greece)*

*Giovanni di Pasquale, Constantino Frontalini (Italy)*

16. Mechanical Heritage of China's Mountain Gun manufacturing in the 1940s: The SOMUA Rifling Machine at North Western Industrial Corporation

*Lyu Qingqi, Yibing Fang (China)*

20. An In-depth Analysis and 3D Reconstruction of the Farga Rossell Ironworks Mechanism

*Julio Jose Caparros Mancera, José Antonio Hernández Torres, César Antonio Rodríguez-González, Angel Mariano Rodríguez-Pérez (Spain)*

19:00 - Social Event or Free Time Dinner



REPUBLIC OF TURKEY  
MINISTRY OF CULTURE AND TOURISM



THE REPUBLIC OF TURKEY  
MINISTRY OF CULTURE, LANGUAGE  
AND HISTORY



PRESIDENCY OF  
ATATÜRK CULTURAL CENTER



ANKARA UNIVERSITY  
1948



IFToMM



2011





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HMM-2024

ANKARA (TÜRKİYE)  
APRIL 18TH, 19TH, 20TH, 2024

## 19.04.2024 - FRIDAY

Ankara University, Tandoğan Campus, 100th Year Conference Hall

09:20 - 09:35

**Welcoming speeches** Melek Dosay Gökdoğan (chair of the organizing committee). Prof.. Dr. Mustafa Fener (Vice-Rector of Ankara University)

09:35 - 10:00

**Keynote Presentation** Derya Yılmaz (Ankara University Archaeology Department) -Technology, Innovation, Creativity, and Ideas Exchanged in Ancient Anatolia and the Near East.

10:00 - 11:00

**Session History of Theories: Chair:** Gökhan Kiper  
17. History of Planar Linkage Coupler Point Loci for Tracing Special Coupler Curves

*Prashant Shiwalkar (India), Marco Ceccarelli (Italy)*

27. A Historical Review of Polyhedral Linkages

*Gökhan Kiper (Türkiye)*

30. Structural Synthesis of the Trigger Mechanism in an Ancient Japanese Automaton “Ryomon Waterfall”

*Zhi-Jie Zhang, Hong-Sen Yan, Yu-Hsun Chen (Taiwan)*

11:00 - 11:15

**Coffee Break**

11:15 - 12:35

**Session History of People: Chair:** Melek Dosay Gökdoğan

10. Briefs on Buonaiuto Lorini's Fortificazioni (1609):

Geometry, Machines & Mechanics into Engineering during the Renaissance

*Raffaele Pisano (France), Julie Robarts (Australia).*

12. Refik Fenmen and His Work on Applied Mechanics

*Vural Başaran (Türkiye)*

15. New Views on The Famous Ottoman Engineer Taqî al-Dîn

*Melek Dosay Gökdoğan (Türkiye)*

29. Betancourt synthesis for three-position problem in

mechanism design

*Marco Ceccarelli (Italy), Juan Ignacio Cuadrado (Spain)*

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HMM-2024

ANKARA (TÜRKİYE)  
APRIL 18TH, 19TH, 20TH, 2024

12:35 - 14:00

Lunch; Meeting of International Scientific Committee for HMM

14:00 - 19:30

Visit to Cultural (Ankara Castle, Anatolian Museum and Roman ruins) and Technological site (Museum of Agriculture Faculty)

20:00 - Conference/Gala dinner with Award Ceremony

## 20.04.2024 - SATURDAY

Ankara University, Tandoğan Campus, 100th Year Conference Hall)

09:20 - 10:00

**Session History of Mechanism Designs: Chair:** Alessandro

Gasparetto

6. The Pantograph: Rare Models and Application

*Grigoriy Tikhomirov, Galina Bazanchuk, Sergey Kurakov, Olga Egorova (Russia)*

19. Historical Significance and Modern Impact of Al-Jazari's

Elephant Clock

*Tolga Cankurt, İlham Çelebi, İskender Giray (Türkiye)*

10:00 - 10:40

**Session Direct Memories: Chair:** Yibing Fang

2. Italy-Spain transfer of MMS in modern times

*Rafael López-García (Spain), Marco Ceccarelli (Italy)*

5. Three Technical Reports in the Trial of Enzo Ferrari for the 1957

Mille-Miglia Car Crash

*Marco Cocconcelli (Italy)*

10:40 - 11:00

**Coffee Break**

11:00 - 12:00

**Session Direct Memories: Chair:** Yibing Fang

14. Editorial Activity of the IFToMM-PC for the History of Mechanism and Machine Science in the Period 2018-2023

*Marco Cocconcelli, Alessandro Gasparetto, Marco Ceccarelli (Italy)*

23. A History of LARMBot Humanoid

*Marco Ceccarelli (Italy)*

25. Modeling, 3D printing and mechanical analysis of Roman

Patenotre

*Ana Maria Gómez Amador, Leopoldo Prieto, Higinio Rubio, Álvaro*

*Joya, Alejandro Quesada (Spain)*

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12:00 - 12:30

Closing Act (Marco Ceccarelli) and presentation of next event HMM2028

12:30 -

Lunch

Trip (Gordion Archeological Site)

## SOCIAL PROGRAMME

(for Companions)

17.04.2024-WEDNESDAY:

Welcome cocktail [afternoon or evening in the hotel]

18.04.2024-THURSDAY:

10:00-12.00 Anıtkabir

12:15 - 14:15 Lunch

14:15-18.30 Visit to Atakule and Tunalihilmi Street

19:00 – Dinner

19.04.2024-FRIDAY:

10:00-12.35 Etrography Museum

12:35 - 14:00 Lunch

14:00 – 19:30 Visit to Cultural (Ankara Castle, Anatolian

Museum and Roman ruins) and Technological site

(Museum of Agriculture Faculty)

20:00 – Conference/Gala dinner with Award Ceremony

20.04.2024-SATURDAY:

10:00-12.00 Visit to Kocatepe Mosque

12.30 Lunch

Trip (Gordion Archeological Site)