TERA
Technion-Rambam Initiative in Medical AI

TECHNION
Israel Institute of Technology

RAMBAM
Health Care Campus

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TERA Seminar Series

Medical AI Deployment

19 May
2025
Spencer Auditorium,
Rambam HealthCare Campus

13:30 – 14:15	**Assistant Professor Moti Freiman,** Biomedical Engineering, Technion
14:15 – 14:40	**Presenting 2 TERA-PhD Awards**
14:40 – 15:00	**Food & Networking**

Lectures Abstract

Asst. Prof. Moti Freiman

Cardiac Imaging and Natural Language Processing for Radiology Report Analysis: Delivering AI Innovations to the Clinical Setting

This seminar presents two AI-driven innovations for clinical diagnostics: **MBSS-T1**, a deep learning model for motion-robust cardiac T1 mapping, and **SMP-BERT**, a framework for structured data extraction from radiology reports. **MBSS-T1** enhances myocardial tissue characterization by correcting motion in both breath-hold and free-breathing conditions, enabling more accurate cardiac staging and reducing reliance on invasive procedures. **SMP-BERT** applies advanced natural language processing to efficiently extract clinically relevant data from radiology reports, improving diagnostic accuracy in diseases like Crohn's. These technologies demonstrate the potential of AI to be seamlessly integrated into clinical workflows, enhancing diagnostic accuracy and patient outcomes in real-time.

MBSS-T1	Model-Based Subject-Specific-T1
SMP-BERT	Section Matching Prediction - Bidirectional Encoder Representations from Transformers

TERA-PhD Awardees

Eli Kravchik

Anat Rotschield

- ∞ **AI-driven Methods for Using Functional Super-Resolution Ultrasound Imaging to Guide Non-invasive Focused Ultrasound Treatments**. **Eli Kravchik**, PhD-student,
  Supervisor: **Asst. Prof. Avinoam Bar-Zion** (Technion),
  Co-supervisor: **Lior Lev-Tov,** MD (Rambam)

- ∞ **Coupling of Energy Demand and Production in Atrial Myocytes: Identifying the Triggers of Atrial Fibrillation After Bypass Surgery. Anat Rotschield,** PhD-student,
  Supervisor: **Prof. Yael Yaniv** (Technion),
  Co-supervisor: **Tom Friedman,** MD (Rambam)

Please **CLICK HERE** to confirm your participation
https://forms.gle/sSPFPut4cRWTWuHG6

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