



ES Engineering & Consultancy



About Us



About Us

- We are a group of Electronics/Biomedical/Software Engineers & Surgeons
- With Strong Background in;
 - Systems&Software Engineering
 - Robotic Surgery
 - Medical System Design, Test and Integration
 - MR Guided Medical Systems
 - Project Management
 - Industrial Design
 - Engineering Law Consultancy ([Kaplan & Associates](#))



M. Özgür Erinmez

[Elec. Eng (M. Sc)]



Education

- Middle East Tech. University, Electrical and Electronics Engineering, B.Sc.
- Middle East Tech. University, Electrical and Electronics Engineering, M.Sc.
- University of Maryland, College Park USA, Electrical and Computer Eng., M.Sc.

Experience

- Erinmez System
- Turkish Aerospace Industries - Avionic Systems Lead Engineer/ Unmanned Systems Division
- Cybernetics InfoTech Inc. - Maryland USA
- Naval Surface Warfare Center - Maryland USA.

Skills

- Project Management
- Biomedical Systems Engineering
- Control Systems / Optimal Control
- Estimation and Detection
- Unmanned Systems
- Optimization
- Signal/Image/Video Processing
- C4ISR



Dr. Erol Yenziaras

[Biomedical. Eng (Ph. D)]



Education

- Middle East Tech. University, Mathematics, B.Sc.
- University of Houston USA, Biomedical Eng&Computer Science., Ph.D.

Experience

- MD Anderson Cancer Center - Houston Texas
- Research Assistant - University of Houston
- Turkish Aerospace Industries - Avionic Systems Software Engineer/ Unmanned Air Vehicles Division

Skills

- Robot-Assisted Procedures with MRI Guidance
- MRI-guided Robotic Intervention
- Software Engineering
- Control Systems
- Estimation and Detection
- Unmanned Systems



Medical Consultant

Assoc. Prof. Dr. Tunç Özdemir - MD



Education

- Ankara Numune Eğitim Ve Araştırma Hastanesi – Dept of Urology
- Gazi University, Medical Faculty

Experience

- Yeditepe University – Dept of Urology - Assoc Prof.
- Ankara Atatürk Eğitim ve Araştırma Hospital – Urology
- İzmir Atatürk Eğitim Ve Araştırma Hastanesi

Skills

- Surgical Urology
- Minimally Invasive Surgery
- Robotic Surgery.
- Laparoscopic Surgery





Project Engineer

Cansu İşit - [Ind. Eng. (B. Sc)]



Education

- Gazi University, Industrial Eng., B.Sc.
- Gazi Univ & Cukurova Univ, Ind Eng M. Sc - Ongoing

Experience

- Botaş
- Emek Elektrik
- Selnikel

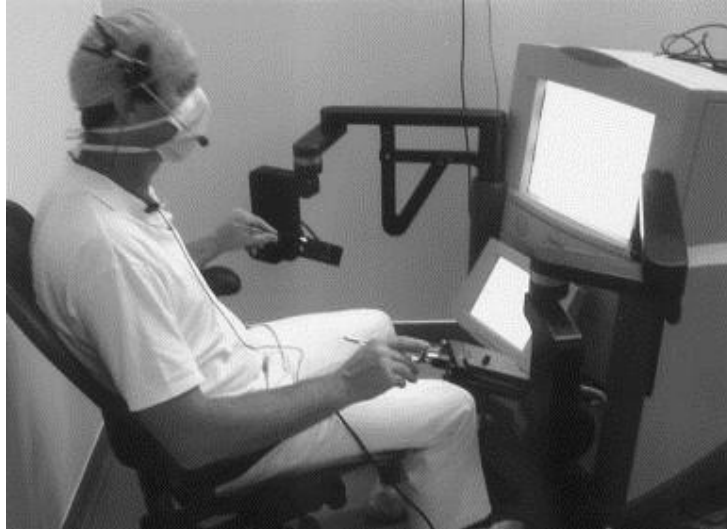
Skills

- Industrial Planning
- HMI
- Ergonomiy
- Business Process Modeling
- Artificial Intelligence
- Project Management

General Concept of Operation – Robotic Surgery



Concept of Operation



Surgeon Benefits:

- Greater Surgical Precision,
- Increased Range Of Motion,
- Improved Dexterity,
- Enhanced Visualization,
- Improved Access,
- Fewer Complications,
- Reduced Hospitalization Costs,
- Less Fatigue

Patient Benefits

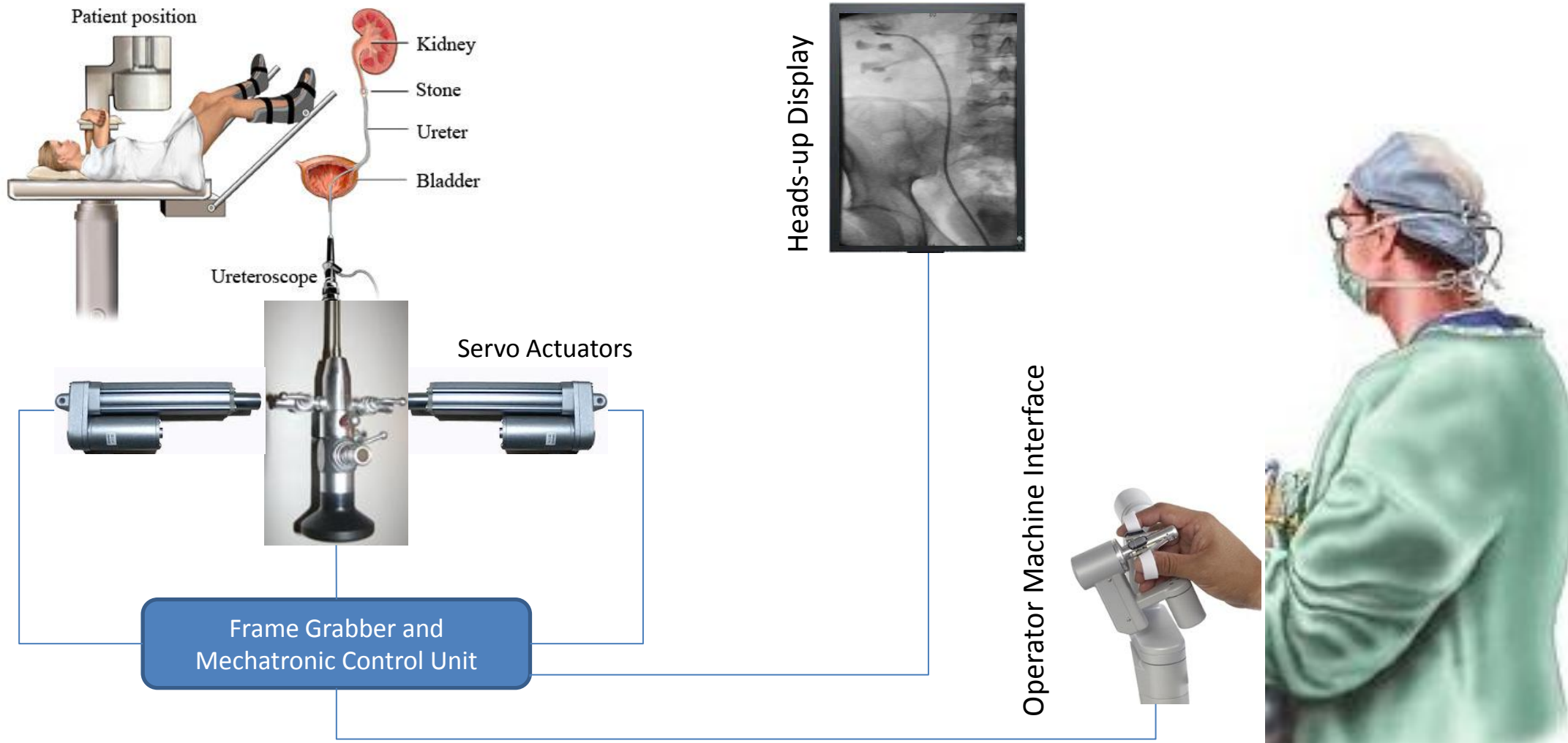
- Reduced Trauma,
- Less Pain,
- Less Risk Of Infection,
- Less Blood Loss,
- Fewer Transfusions,
- Less Scarring,
- Faster Recovery

Ureteroscope Operator Interface Modernization (Phase-1)



- The system has four major components
 - Conventional Ureteroscope
 - Frame Grabber and Mechatronic Control Unit
 - Electromechanical Interface
 - Human Machine Interface (HMI)

Ureteroscope Operator Interface Modernization (Phase-1)



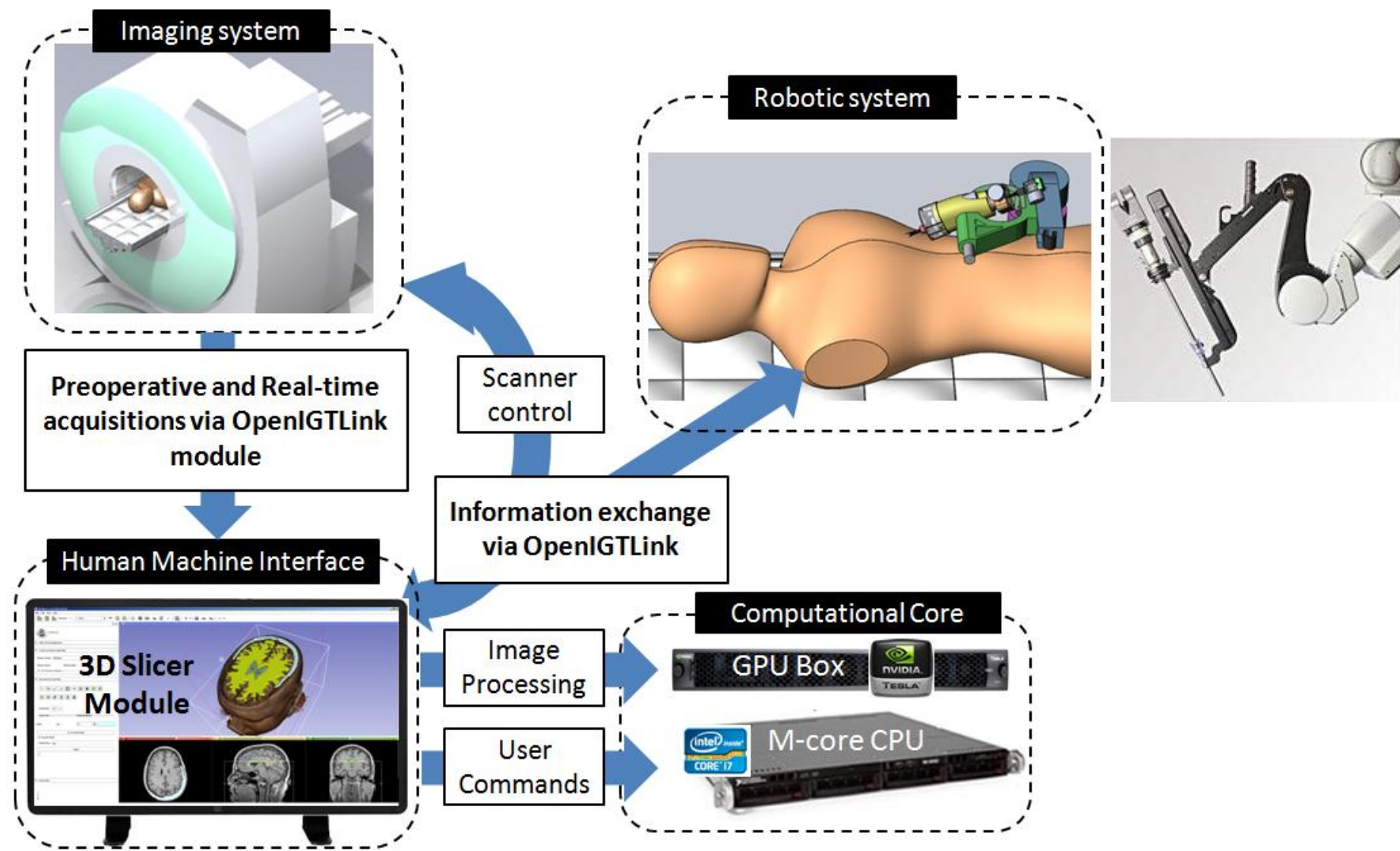
MRI Guided Robotic Surgery System (Phase-2)



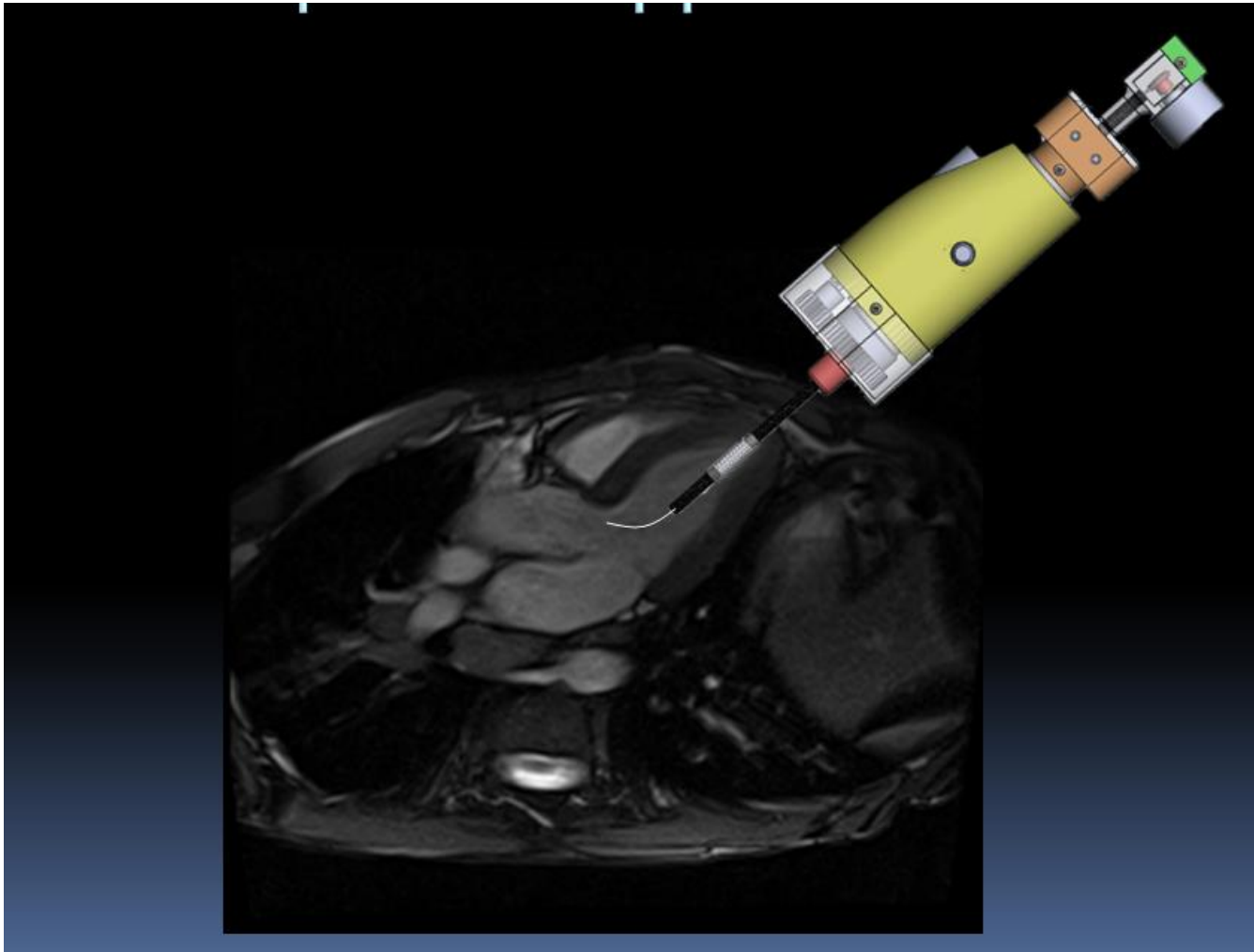
- The system has four major components
 - Imaging System
(MR Scanner with Custom Protocols and Communication Software),
 - Human Machine Interface (HMI)
 - Computational Core (Mathematical Engine)
 - Robotic System.



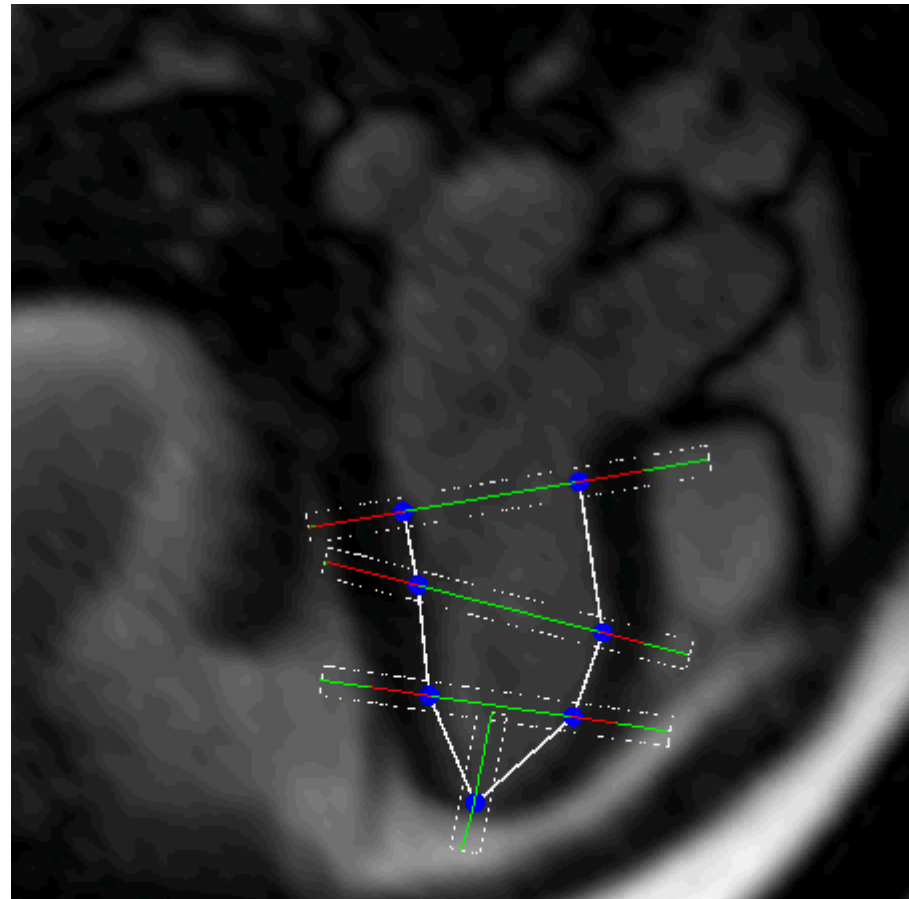
MRI Guided Robotic Surgery System (Phase-2)



MRI Guided Robotic Surgery System (Phase-2)



MRI Guided Robotic Surgery System (Phase-2)





How to Collaborate

We provide:

- Know-how
- Biomedical Systems Engineering
- Design, Test and Evaluation
- Prototyping
- Analysis, Modeling and Simulation
- Intellectual Law Consultancy

We seek:

- Partners
- Funds, Grants and Incentives



Special Thanks to;

- Oğuz Ünal – Ostim Medikal Küme
- Dr. Kemal Şerbetçi – Atatürk Eğitim ve Araştırma Hastanesi
- Dr. Sinan Korukoğlu– Atatürk Eğitim ve Araştırma Hastanesi
- Prof. Ergin Atalar – UMRAM

for their valuable guidance.



Contact



For Questions & Comments

Contact Person

Mehmet Ozgur ERINMEZ

Tel

+90 (532) 310 09 49

E-mail

ozgur@erinmez.com.tr

Web

www.erinmez.com.tr