Interactive Medical Simulation Toolkit (iMSTK) is a high-quality open-source toolkit designed to aid rapid prototyping of interactive multi-modal surgical simulations. iMSTK’s collection of high-performance, interactive physics-based simulation models allow recreation of a wide variety of surgical scenarios in skill and procedural trainer workflows.

Features:
- Comprehensive physics modules
- Designed to extend easily
- C, C# API available
- Automated scene parallelization
- Integrations: Unity, 3S Slicer, Pulse

Software:
- Simple and modular API
- Permissive license
- Automated build and testing
- Cross platform
- Comprehensive documentation

Support:
- Academic and product R&D consulting
- Highly qualified support team
- Open discussion and code review forums
Anesthesia Simulator

Virtual Osteotomy Trainer

Renal Biopsy Trainer

Virtual Rotator Cuff Repair Trainer

Applications and Tools
The engine can be used standalone or integrated with simulators, sensor interfaces, and models of all fidelities.

About Kitware
Our mission is to advance the frontiers of understanding by developing innovative open source software platforms and integrating them into research, processes, and products. We provide world-class support, training, and custom software development. By using a flexible, open source base product, the software can be readily adapted to meet your specific needs.

Join the IMSTK community
External contributions to the codebase are welcome. We are actively pursuing collaboration partners, customers that require tailored solutions, and strategic partners. Contact us to discuss how we can help you leverage a high quality software process to enhance and improve your existing medical solutions.