

# **Biomedical Engineering**

## *Seminar Announcement*

### **Computer Navigation in Joint Replacement Surgery**

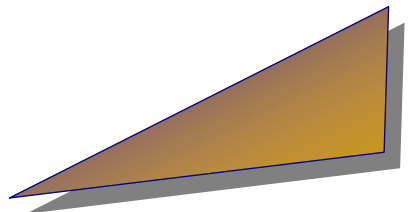


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Friday, October 26, 2007

10:30 AM

EC 2410



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Long term survival of hip and knee implants depends on adequate surgical technique, optimal manufacturing of implants, appropriate patient selection, and correct postoperative alignment of the components. The 10 to 15 year survival rate is somewhere between 90 to 95%. Research initiatives have been directed to improve the placement of component misplacement, which accounts for approximately 12% of current total knee revisions and up to 9% of all the hips. The relatively recent introduction of Computer Assisted Orthopedic Surgery (CAOS) intends to improve the postoperative alignment of the limb, leg length and the position of the femoral tibial and acetabular components by using imageless optical or electromagnetic devices to aid the surgeon during surgery. The history of CAOS as well as recent applications of the technology in surgery will be reviewed in addition several research projects done at the orthopedic institute be presented.