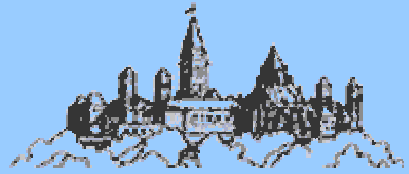




IEEE

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Section**



Fracture Repair of the Aging Skeleton

Dr. Hanspeter Frei

*Assistant Professor, Department of Mechanical and Aerospace Engineering
Carleton University*

Osteoporosis related fractures are among the most common causes of disability and are a major contributor to medical care cost in many parts of the world. Osteoporosis affects 28 million Americans with an estimated direct cost of 14 billion dollars per year. The surgical treatment of osteoporotic fractures usually requires the fixation of bone fragments with screws, which remains a significant clinical challenge. Bone screw fixations anchored in osteoporotic bone have a failure rate of up to 35%. In this talk an interdisciplinary approach will be discussed that combines a novel bone screw anchor, "smart" orthopaedic implants and tissue engineering to address these clinical challenges.



Sept 14, 2009

admission is free
18:00 – 19:30 pm
Mackenzie Building 4359
Carleton University

Light refreshment will be served

As biomedical engineer, Dr. Frei joined the Department of Mechanical and Aerospace Engineering at Carleton University from the Biomedical Research Centre at the University of British Columbia where he developed novel strategies for the regeneration of bone using tissue engineering approaches. Dr. Frei has also an extensive background in orthopaedic biomechanics, orthopaedic implant design and evaluation. In his research, Dr. Frei combines his biomechanics and tissue engineering background to develop new interdisciplinary approaches for fracture fixation and bone regeneration.



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