BJI SHOWCASE SERIES
(Virtual Showcase on Zoom)
Thursday March 11th
10:00am

Featuring CMHR CBJC Awardee & BJI Catalyst Awardee Update.

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BJI Members working to disseminate their research highlights within the Institute.
Showcase Series are open to both Faculty and Trainee presenters.
To be included in the series, please contact westerns.bji@uwo.ca directly.

Mr. Jakub Szmit
“An Investigation on the Influences of Radial Head Hemiarthroplasty Stem Fixation Techniques on Articular Mechanics”

Radial head hemiarthroplasty design has been extensively studied with a focus on utilizing the geometrical characteristics of the native radial dish as a guide of implant placement and design. Although implant design has been studied, optimal radial head implant fixation technique remains unknown. This work focused on the effect of stem fit on radiocapitellar contact mechanics, using both finite element and experimental bench-top approaches.

Ms. Elizabeth Norman - for Dr. Emily Lalone (Mid Term Catalyst Update)
“Development of a Total Wrist Arthroplasty System to Improve Patient Outcome”

Total wrist arthroplasty is an alternative to total wrist fusion for patients with end-stage arthritis at the wrist. The latest generation of implants have disappointing results with poor implant survival. We suspect that current TWA systems do not mimic native carpal/wrist motion and place excessive stress on bony attachment sites causing the implant to loosen and fail. In this study we will first examine dynamic healthy wrist motion in 10 healthy participants and then show preliminary data from a computational model which examines the stresses placed on the distal part of the implant to understand failure mechanisms of current implant designs.

Dr. Jay Stock - (Mid Term Catalyst Update)
“Design and validation of a portable cone-beam μCT scanner to study trabecular bone microarchitecture”

The aim of this project is to provide proof of concept for the development of a portable high resolution portable microCT scanner to enable research to investigate spatial and temporal variation in human bone quality. In this presentation we report on the progress of system design and validation, and raise challenges that we face in implementation and application of the system for a range of potential uses.