Tool Tracking for Periacetabular Osteotomy using CamC

• **Background**
  - Periacetabular Osteotomy (PAO) is an orthopedic surgery that reorients the patient’s acetabulum to provide better coverage for the femoral head.

• **Motivation**
  - Previous tracking methods involve multiple x-ray images which are harmful and time consuming.
  - Track the tool intra-operatively in order to improve the accuracy of bone alignment.

• **Methods**
  - Use RGBD camera augmented mobile C-arm (CAMC) to reduce the amount of X-ray images needed.

• **Results**
  - Max error length-wise is 11 mm
  - Max error width-wise is 2mm

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