

# JASPER ROLAND

6666 Cartier Street  
Vancouver, BC

(604) 255-555  
j.roland@gmail.com

---

## KEY COMPETENCIES

- Biomedical engineer with experience designing, performing and analyzing mechanical experiments, and designing and fabricating novel test apparatus using 3D CAD modelling, machine shop tools and rapid prototyping techniques.
- Experienced with computer coding in multiple languages including MatLab, Python, C++, HTML5, JavaScript and ImageJ Macro for analyzing and presenting large datasets.
- Successful track record of collaborating with international and interdisciplinary teams to develop computational models and detailed experimental validation

---

## EDUCATION

<b>PhD in Biomedical Engineering</b> <i>University of British Columbia</i>	2013-2018
<b>Master of Applied Science in Mechanical Engineering</b> <i>University of British Columbia</i>	2016 -2018
<b>Bachelor of Science in Mechanical Engineering</b> <i>University of Wyoming</i>	2010-2014

---

## CAREER HIGHLIGHTS

<b>Orthopaedic Engineering Consultant</b> University of British Columbia	2016-2018
<ul style="list-style-type: none"><li>• Developed image scaling software in MatLab and ImageJ to identify, mark and scale landmarks on over 1500 images at an average of 30 seconds/image</li><li>• Trained orthopaedic surgeons and residents to align images and make distance and angle measurements.</li></ul>	
<b>Doctoral Researcher</b> University of British Columbia	2013-2018
<ul style="list-style-type: none"><li>• Developed a novel technique to test isolated hip bones in physiological falls utilizing two protocols, six high speed cameras and 17 data signals.</li><li>• Collaborated with computational modellers in Canada and Switzerland to validate finite-element models of mechanical fracture tests.</li><li>• Designed, wrote and validated a C++ algorithm for strain measurement in bone</li></ul>	
<b>Engineering Intern</b> Zimmer GmbH, Switzerland	2017
<ul style="list-style-type: none"><li>• During a 6 month internship position, developed a protocol for cartilage friction testing which included harvesting, preparation, storage, and testing of cartilage specimens.</li><li>• Designed and constructed a cartilage friction testing machine capable of measuring friction coefficients of 0.01 under physiological loads.</li></ul>	