Undergraduate students from the Perk Lab had their papers accepted to the 2016 SPIE Medical Imaging conference in San Diego, California - the internationally recognized premier forum for reporting state-of-the-art research and development in medical imaging. The conference addresses topics ranging from underlying fundamental scientific principles, to technology developments, scientific evaluation, and clinical application. The symposium covers the full range of medical imaging modalities including medical image acquisition, display, processing, analysis, perception, decision support, and informatics.

Christina Yan
1st year
Feasibility of a Portable Electromagnetically Tracked Ultrasound System in Scoliosis Monitoring

Vinyas Harish
2nd year
Study into Clinical Workflow for Spinal Curvature Measurement with Portable Ultrasound*

Emily Heffernan
2nd year
Accuracy of Lesion Boundary Tracking in Navigated Breast Tumor Excision

Aiden Baksh*
Grade 9
Measurement of Electromagnetic Tracking Error in a Navigated Breast Surgery Setup

Maggie Hess
3rd year
Visual Design and Verification Tool for Collision-free Dexterous Patient Specific Neurosurgical Instruments

Kyle Sunderland
4th year
Effects of Voxelization on Dose Volume Histogram Accuracy

Zac Baum
2nd year
Real-time Self-calibration of a Tracked Augmented Reality Display

Bence Linder*
1st year

* 2nd author
The School of Computing welcomed five high school interns who spent their summer immersed in computer science research and development.

- **Hope Yen** developed a web-accessible database for the Masters of Public Health (MPH) program to track student practicums. This system will be used by the MPH administrators and also by current students to brief them on the types of practicums that are available. Hope was supervised by Wendy Powley and Brenda Melles (Master of Public Health Program).
- **Sam McWhirter** was supervised by David Lamb and he spent the summer learning to develop Android applications using Android Studio. It is hoped that this will be introduced in our undergraduate curriculum at some point.
- **Michael Kwan Chow** left his home in Toronto to spend the summer with us in Kingston. He worked with Nick Graham analyzing data from a study of the use of exergames to improve social connection among children with cerebral palsy.
- **Kaitlynn Hodgson** worked with Manuela Kunz in the area of 3D modelling for image-guided surgery systems. She generated a database of virtual prosthesis components for hip and knee replacement procedures using a light scanning method. These virtual high-accurate 3D models will be used to improve pre-operative planning for surgical interventions.
- **Aidan Baksh** worked under the direction of Gabor Fichtinger on a project to measure electromagnetic tracking error in a navigated breast surgery setup.

**Eligibility Requirements**

- Grade 11 or 12 student
- Programming experience (high school courses and/or self-taught)
- Strong interest in developing new technologies
- Must have a Kingston area address (and transportation) for the months of July and August for your application to be considered

**How to Apply**

You’ll need:

- A cover letter that details your interest in the subject, as well as highlighting your experience in your desired area of study
- A detailed C.V.
- 2 letters of reference, preferably from your teachers
- An official transcript of your high school grades to date

Send it to:
Irene LaFleche
Queen’s School of Computing
Goodwin Hall, Room 557
25 Union Street
Kingston, ON K7L 3N6

If you have any questions, you can reach Irene at irene@cs.queensu.ca or by phone at 613-533-6050.