Queen's SCHOOL OF Computing

Stepping onto the World Stage

4th Year

Grace Underwood

Rachael House

Zac Baum

Vinyas Harish

3rd Year

Anna Ilina

Christina Yan

Aniqah Mair

Vinith Suriyakumar

2nd Year

Hillary Lia

Nine undergraduate papers from the Queen's School of Computing's Perk Lab were accepted to the SPIE Medical Imaging: Image-Guided Procedures, Robotic Interventions, and Modeling conference in Orlando, Florida - one of the largest international conferences in the field of medical imaging. The 10-page papers will be published in the SPIE proceedings and presented at the conference on February 11-16, 2017. The research and the resulting papers were completed this past summer.

In addition to their own first-authored paper, Zac Baum co-authored 3 further papers and Vinyas Harish co-authored 2 further papers. Eden Bibic, co-author, was a grade 11 high school student on Queen's University Internships in Computing (QUIC). Rene Xu, co-author, contributed her work through CISC 500 undergraduate thesis.

SPIE. MEDICAL IMAGING

Training with Perk Tutor improves ultrasound-guided in-plane needle insertion skill – H Lia, Z Keri, MS Holden, V Harish, CH Mitchell, T Ungi, G Fichtinger.

Evaluation of an interactive ultrasound-based breast tumor contouring workflow – AT Mair, T Vaughan, T Ungi, A Lasso, CJ Engel, G Fichtinger.

Open-source software for collision detection in external beam radiation therapy – VM Suriyakumar, R Xu, C Pinter, G Fichtinger.

Patient-specific pediatric silicone heart valve models based on ultrasound – A Ilina, A Lasso, MA Jolley, B Wohler, A Nguyen, A Scanlan, Z Baum, F McGowan, G Fichtinger.

Usability of a real-time tracked augmented reality display system in musculoskeletal injections – Z Baum, T Ungi, A Lasso, G Fichtinger.

Evaluation of the Intel RealSense SR300 camera for image-guided interventions and application in vertebral level localization – R House, A Lasso, V Harish, G Fichtinger.

Skull registration for prone patient position using tracked ultrasound – G Underwood, T Ungi, Z Baum, A Lasso, G Kronreif, G Fichtinger.

Monitoring electromagnetic tracking error using redundant sensors – V Harish, E Bibic, A Lasso, MWS Holden, T Vaughan, Z Baum, T Ungi, G Fichtinger.

Study into the displacement of tumor localization needle during navigated breast cancer surgery – C Yan, T Ungi, G Gauvin, D Jabs, A Lasso, CJ Engel, J Rudan, G Fichtinger.