

DR. ROBERT ZHONG

Department of Surgery Research Day

June 9, 2023

8:30 a.m. (Poster Session at 7:30 a.m.)

King's University College

Welcome

7:30 a.m.

Poster Session

1. *Big Data + Quality Improvement & Patient Centered Research*
Session Chair: **Dr. Luc Dubois** – Spriet Learning Commons
2. *Surgical Education + Fundamental Sciences and Surgical Innovation*
Session Chair: **Dr. Natasha Seemann** – Room KC-004

8:30 a.m.

Opening Remarks

Award Winning Resident Platform Presentations – (5 minutes each, 2 minutes for questions)

8:45 a.m.

Dr. Sasha Letourneau (Division of Plastic & Reconstructive Surgery)

Augmented Reality Hand-tracking: An Accessible Solution for Accurate and Reliable Remote Finger Joint Range of Motion Measurement

8:52 a.m.

Dr. Trevor Blanchard (Division of Orthopaedic Surgery)

Re-evaluation Pre-surgical Fasting Guidelines in Paediatric Patients – A Quality Improvement Initiative

9:00 a.m.

Dr. Ge Shi (Division of General Surgery)

Holographic Surgical Skills Training: Can We Use Holograms to Teach Surgical Hand Tying?

9:07 a.m.

Dr. Victoria Turnbull (Division of Urology)

The Use of Video Games for Improving Laparoscopic Surgical Skills: A Systematic Review

9:14 a.m.

Dr. Sami Houry (Division of Paediatric Surgery)

The Safety of the Laryngeal Mask Airway in Adenotonsillectomy: a Systematic Review and Meta-analysis

9:21 a.m. **Dr. Rhiannon Tracey** (Division of Vascular Surgery)
Pediatric Vascular Trauma in London Ontario

9:28 a.m. **Dr. Mohamad Rabbani** (Division of Cardiac Surgery)
Multi-phase Computed Tomography 3-Dimensional Myocardial Deformation Analysis
(3D-MDA): Prediction of Heart Failure Hospitalization or Death Following TAVR

9:40 – 10:00 a.m. BREAK (20 Minutes)

MSc Platform Presentation (*8 minutes, 2 minutes for questions*)

10:00 a.m. **Dr. Juan Bottan** – Establishing the Role of Near Infrared Spectroscopy in Epilepsy Surgery

Scilley Scholar Presentation (*15 minutes, 5 minutes for questions*)

10:10 a.m. **Dr. Andrew Simpson** – Open Tibial Fractures in Ontario: Does Treatment Location Matter?

Keynote Address (*30 minutes, 15 minutes for questions*)

10:30 a.m. **Dr. Victor Yang** – Applying Engineering Principles to Surgical Innovation

Panel Discussion: Innovation in Surgery (*45 minutes*)

11:15 a.m. **Dr. Victor Yang, Dr. Adam Power, Dr. Christopher Schlachta, Dr. Souzan Armstrong**
Panel Discussion Chair: **Dr. Michael Chu**

12:00 – 1:00 p.m. LUNCH (60 Minutes)

Node Speakers (*15 minutes each, including questions*)

1:00 p.m. **Dr. Luc Dubois**, *Big Data*
Risks of Proton Pump Inhibitors and Beta-Blocker Withdrawal in the Perioperative Period

1:15 p.m. **Dr. Rob Leeper**, *Surgical Education Research*
The Sim of Theseus

1:30 p.m. **Dr. Alp Sener**, *Fundamental Sciences and Surgical Innovation*
Hydrogen Sulfide Therapeutics in Organ Transplantation

1:45 p.m. **Dr. Mehdi Qiabi**, *Quality Improvement & Patient Centered Research*
Safety and Feasibility of an Outpatient Pulmonary Resection Program

Wrap Up

2:00 p.m. Presentation of the Walker Research Day Award and Best Resident/Fellow Research Oral
Poster presentation, Closing Remarks & Evaluation Form

Node Breakout Meetings (Faculty)

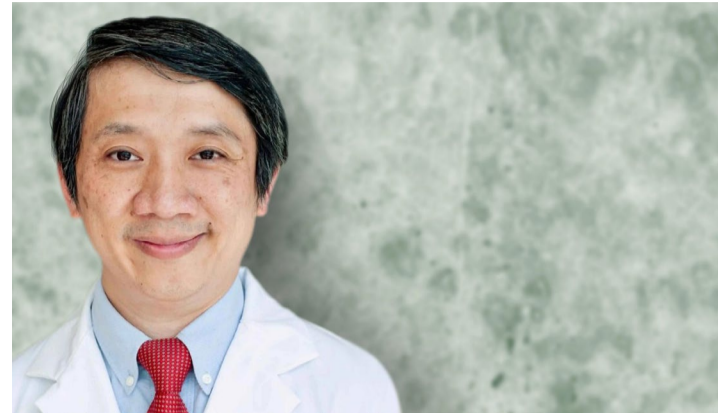
2:15 p.m. *Big Data* – Room KC-119
Surgical Education Research – Room KC-005
Fundamental Sciences and Surgical Innovation – Room KC-006
Quality Improvement & Patient Centered Research – Room KC-004

Keynote Address

Dr. Victor Yang, MD, PhD, FRCSC, FACS

Applying Engineering Principles to Surgical Innovation

Dr. Yang obtained his MD from the University of Toronto in 2006. He also holds a PhD in Medical Biophysics after completing a Master of Applied Science in Electrical and Computer Engineering. His research lab at Schulich Medicine & Dentistry focuses on the areas of photonics-based technology to treat neurovascular diseases and spinal cord injury, robotics and image-guided therapies, and developing advanced material-based therapeutics and treatments. In 2018, Dr. Yang's team was honoured with the Congress of Neurological Surgeons Innovator of the Year Award, and the Refined Manufacturing Acceleration Process (ReMAP) Commercialization Prize. In 2017, Dr. Yang and his team received the Frost & Sullivan New Product Innovation Award.



Session Specific Learning Objectives

1. By the end of this session, participants will be able to: describe ways to communicate and collaborate effectively with Biomedical Engineering to advance surgical care.

Program Learning Objective

1. Describe current research activities in the Department of Surgery.
2. Recognize the need for innovation led by surgeons in today's healthcare climate.
3. Describe strategies used for successful innovation in surgery.

(25% of this program is dedicated to participant interaction)

CME Credits

This event is an Accredited Group Learning Activity (Section 1) as defined by the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada, and approved by Continuing Professional Development, Schulich School of Medicine & Dentistry, Western University. You may claim a maximum of **5.0 hours** (credits are automatically calculated).

Each participant should claim only those hours of credit that he/she actually spent participating in the educational program.

This program was supported in part by educational grants from





Named in honour of Dr. Robert Zhong, a brilliant scientist and colleague who passed away in London, Ontario on September 8, 2006.

Dr. Robert Z. Zhong was born in Shanghai, China on January 16, 1946. He graduated from Shanghai No 1 Medical University and was then assigned by the government to work as a general surgeon in a community hospital. Dr. Zhong attended a seminar led by Dr. Sun Lee – considered to be the founding father of experimental microsurgery – and whom he would later credit to be one of the most important mentors of his life.¹ Dr. Zhong arrived in Canada first as a research fellow under the supervision of Drs. John Duff and Calvin Stiller in 1984. His persistence and vision led to a full-time appointment and microsurgical animal models that would be applied in human transplantation clinical practice.

Recognizing that molecular biology and transplant immunology were critical to the future of transplantation, Dr. Zhong began his study of these fields in Canada to become one of the world's leading experts in transplantation and microsurgery. He went on to become a Tier One Canada Research Chair in Transplantation and Experimental Surgery in 2004 and was appointed a full Professor in the Departments of Surgery, Pathology, and Microbiology & Immunology at The University of Western Ontario. Dr. Zhong was a scientist at the Robarts Research Institute; Director of the Microsurgery Laboratory at LHSC; and a scientist at the Lawson Health Research Institute. Dr. Zhong's influence into the fields of transplantation and microsurgery were profound and far-reaching. He was Past President of the International Society of Experimental Microsurgery; a member of the Canadian Society of Transplantation, American Society of Transplantation; and the American Society of Transplant Surgeons. Dr. Zhong was awarded the Lifetime Achievement Award by the Canadian Society of Transplantation posthumously in 2007.

¹Zhong T. (2007), Dr. Robert Zhen Zhong: A tribute by his daughter. *Microsurgery*, 27:214-215.