

**CURRICULUM VITAE**

a) **Name:** Tamie L. POEPPING

**Rank:** Full Professor

**Tenured:** July 2011

**Full-time or adjunct status:** Full-time

<b>Degree</b>	<b>University / Department</b>	<b>Year</b>
PhD	University of Western Ontario, Medical Biophysics	2002
MSc	McMaster University, Medical Physics	1996
BSc (Honours)	University of Alberta, Physics	1994

c) **Employment History:**

<b>Date</b>	<b>Rank &amp; Position</b>	<b>Department / Institution</b>
Jul 2022–present	Full Professor	Physics & Astronomy, University of Western Ontario (Western)
Jul 2011–June 2022	Associate Professor	Physics & Astronomy, University of Western Ontario (Western)
2006–present	Cross-Appointment	Biomedical Engineering, Western
2006–present	Cross-Appointment	Medical Biophysics, Western
Jul 2005–Jun 2011	Assistant Professor	Physics & Astronomy, Western
2002–2004	Research Associate	Medical Physics, University of Edinburgh
1994–1996	Teaching Assistant	Physics & Astronomy, McMaster University
1993	Research Assistant	Rutherford-Appleton Laboratory, Council for the Central Laboratory of the Research Councils, Chilton, England
1992	Research Assistant	Centre for Subatomic Research, University of Alberta
1989–1990	Laboratory Assistant	Chemical & Geological Laboratories, Edmonton

d) **Honours:**

2020	Faculty of Science Award of Excellence in Undergraduate Teaching, Western University
2016	Department of Physics & Astronomy Service Award, Western University
2010-2015	Ontario Ministry of Research & Innovation Early Researcher Award (ERA)
2005-2010	University Faculty Award (UFA), NSERC
2001	J.R. Cunningham Young Investigator’s Award, Canadian Organization of Medical Physicists (COMP)
1999-2002	Canadian Institutes of Health Research (CIHR) & Heart and Stroke Foundation of Canada (HSFC) jointly sponsored Doctoral Research Award
1999-2001	University of Western Ontario Graduate Tuition Scholarship
1998-1999	University of Western Ontario Special University Scholarship

1997-1998	John P. Robarts Research Institute Graduate Student Award
1996	McMaster University Graduate Research Fellowship
1993	International Association for the Exchange of Students for Technical Experience (IAESTE) Research Internship (United Kingdom)
1992	NSERC Undergraduate Student Research Award, Government of Canada
1989	Governor General's Bronze Medal, Government of Canada
1988-1989	Alexander Rutherford Scholarship, Government of Alberta
1988	University of Alberta Early Admission Award

e) **Scholarly and Professional Activities:** (from 2003 to present)

**Editorial Positions:**

- Editorial Board for journal *Ultrasound*, 2010–2012 (stepped down for parental leave)
- Ad-hoc Associate Editor for journal *Medical Physics*, 2005–2012

**Significant University Administrative Duties:** (from 2003 to present)

**University**

- Promotion & Tenure Committee, Microbiology & Immunology (elected) 2016–2021
- Biomedical Engineering School Operating Committee (elected) 2016–2019
- Dept. of Mathematics Chair Selection Committee (elected), 2016–2017
- Biomedical Engineering Graduate Comprehensive Committee, 2011–2016
- Biomedical Engineering Graduate Program Structure Task Force, 2011–2015
- Classroom and Communal Space Committee, 2007–2009
- Medical Biophysics CRC Selection Committee, external member (appointed), June 2007
- Faculty of Science Rep., Faculty of Engineering Council, 2005–2008

**Faculty**

- Student Academic Orientation Counsellor, 2016
- Recruitment representative, Ontario Universities Fair (Toronto), Oct 2015
- Outreach Committee, Physics & Astronomy Rep., 2015 – 2016
- Graduate External Awards Committee, 2014 – 2015
- Educational Policy Committee (EPC) Rep., 2013 – 2014
- Graduate Student Planning Workshop, 2009
- New Faculty Network Development Committee, 2007 – 2009
- Nominating Committee, 2007 – 2009

**Department**

- NSERC CGSM and CGSD application vetting, 2021 – *present*
- Makerspace Coordinator, 2020 – *present*
- Outreach Coordinator, 2020 – *present*
- Freedom 22 Project, Member, 2016 – *present* (*Chair 2022 – present*)
- First-Year Physics Instructors Group, 2016 – *present*
- Mentor Group for female grad students, 2015 – *present*  
(mentor 2-4 grad students per year, acting as confidential advisor)

- Patrick Whippey Award for Science Outreach (founding member and selection committee), 2019 – 2021
- Promotion and Tenure Committee (elected), 2017 – 2021
- Freedom 22 Project, Chair, 2017 – 2018
- First-Year Physics Laboratory Review Group, Chair, 2016 – 2019 (project to review and modernize first-year physics labs)
- Council to the Chair (one of three advisors), 2015 – 2019
- Physics & Astronomy Chair Selection Committee (elected), 2014 – 2015
- Annual Performance Evaluation (elected), 2015 – 2017
- Outreach Committee, *Chair*, 2015 – 2016
- Outreach Committee, 2014 – 2016
- Undergraduate Recruitment Coordinator, 2014 – 2015
- Research and Awards Committee, 2014 – 2015
- Counselling Committee, 2013 – 2014
- Curriculum Committee, 2013 – 2014
- Annual Performance Evaluation (elected), 2010 – 2011
- Outreach Committee, 2010 – 2011
- NSERC USRA Ranking Committee, 2007 – 2011
- Curriculum Committee, 2007 – 2010
- Department Planning Committee, 2006–2008
- Graduate Affairs Committee, 2005–2007
- Appointments Committee (appointed), 2005 – 2006
- Outreach Committee, 2005– 2007

f) **Graduate Supervisions:** (Career Totals)

	<b>Number Successfully completed</b>	<b>Number In progress</b>
Doctoral Thesis	5	1
Master's Thesis	4	0
Post-Doctoral Fellows	2	0
Total number of PhD Advisory Committees served on	12	6
Total number of Master's Advisory Committees served on	23	2

**List Titles and Topics of Theses and Projects Supervised and Completed:** (from 2003 to present)

*Gender diversity:*                      *Graduate students:*                      *8/10 (80%) female*  
*PDF / technical:*                      *3/6 (50%) female*  
*Undergraduate:*                      *16/40 (40%) female*

**PhD (total: 6):**

- MOORE, Kevin *Real-time imaging of endothelial cell response to flow disturbances*, Sept 2020 – present (co-supervised with J.G. Pickering, Vascular Biology, Robarts Research Institute)
- MOHAMMED, Nadiya *Study of internal jugular vein valve mechanism function: post analysis of M-mode imaging and an experimental model under cardiac monitoring*, 2016 – 2018. (International PhD Student, Physics & Earth Sciences, University of Ferrara, Italy; co-supervised with M. Gambaccini, Physics & Earth Sciences, University of Ferrara)
- DiCARLO, Amanda *Investigation of compliance and impedance effects in the diseased carotid bifurcation using particle image velocimetry*, Sept 2011 – Dec 2018 (Physics) \*\* Awarded Ontario Graduate Scholarship (2011), CIHR-CGS Masters Research Award (2012)
- KEFAYATI, Sarah *PIV-based Investigation of Hemodynamic Factors in Diseased Carotid Artery Bifurcations with Varying Plaque Geometries*, Sept 2008 – Aug 2013 (Physics)
- HUSSAIN, Bushra *Methods for Improved Estimation of Low Blood Velocities Using Vector Doppler Ultrasound*, Sept 2007 – Apr 2017 (Physics)
- WONG, Emily *Development of a Doppler ultrasound technique for the study of carotid plaque ulcerations*, Sept 2005 – Feb 2011 (Medical Biophysics) (co-supervised with D.W. Holdsworth, Robarts Research Institute) \*\* Awarded Heart & Stroke Foundation and CIHR-CGS Doctoral Research Awards.
- MSc (total: 4):**
- MAGYAR, Thalia *Rheology of non-Newtonian polymers*, Sept 2018 – Aug 2020 (co-supervised with J. deBruyn, Physics & Astronomy, Western)
- ONAIZAH, Onaizah *Blood Supply to the Brain via the Carotid Arteries: Examining Obstructive and Sclerotic Disorders using Theoretical and Experimental Models*, Sept 2013 – Aug 2015 (Medical Biophysics) (co-supervised with M. Zamir, Applied Math, Western)
- POWELL, Janet *In vitro assessment of turbulence and recirculation in the carotid bifurcation using Doppler ultrasound*, Sept 2006 – Apr 2011 (Physics) \*\* Awarded OGSST (2009) award and OGS award (2010).
- YOUSIF, Majid *Development of a blood-mimicking fluid for particle image velocimetry with silicone vascular models*, May 2007 – Nov 2009 (Biomedical Engineering)
- Post-Doctoral Supervision:**
- THORNE, Meghan *Investigation of vascular resistance due to systemic disease*, May 2009 – May 2010 (Kinesiology, co-supervised with K. Shoemaker, Kinesiology)
- TESSIER, David *Development and testing of an in vitro Doppler ultrasound acquisition system*, Sept 2008 – Aug 2009 (Physics)
- Technical Supervision:**
- HASSANZADEH, Mona Engineering: “Implementation of a micro-PIV system”, Feb 2015 – Feb 2016, part time RA.
- ALEMZADEH, Milad Computer programming: “Development of a GUI for Doppler ultrasound data analysis.”, 2009 (part time).  
“Development of semi-automated in vitro acquisition system,” 2010 – 2013 (part time).

BRANDON, Shane Computer programming: “Development of a motor-controls and data acquisition interface,” Sept 2008 – May 2009. Co-op placement from Fanshawe College.

**Undergraduate Student Supervision (current: 6; career total: 43):**

SCOTT, Meghan Honours Physics thesis project: “Development of a microfluidic oxygen sensor”, **Sept 2022 – Apr 2023**

LORDFARD, Sanaz Western Undergraduate Summer Research Internship: “Characterization of a microfluidic system for real-time microscopy of live cells during high-frequency oscillatory shear stress”, **May 2022 – Aug 2022; continuing part-time**

ALI, Anorin Western Undergraduate Summer Research Internship: “Rheological characterization of blood-mimicking fluids for use in particle image velocimetry”, May 2022 – Aug 2022

FRIESSEN WALDNER, Eric Western Physics & Astronomy Summer Research Fellowship: “Rapid prototyping of PIV-compatible vascular models using 3D printing”, May 2021 – Aug 2021; Western Undergraduate Summer Research Internship, May 2022 – Aug 2022

McCURRY, Erin Honours Physics thesis project: “Generating and Measuring Oscillatory Flow in a Novel Microfluidic Device,” Sept 2021 – Apr 2022

HAUSER, Alexandra Medical Science research project: “Refinement of a medical image processing pipeline for the fabrication of patient-specific flow models”, May 2021 – Aug 2021

SHAH, Devarsh Medical science research project: “Development of an on-chip microfluidic oxygen sensor”, May 2021 – Apr 2022

ROBERTS, Andrew Medical Physics summer research internship: “Numerical modeling of microdroplet generation in a T-junction microfluidic device”, May – August 2020, May – August 2021

KAMAR, Farah Medical Biophysics summer research project, “Characterization of a microdroplet generator for tissue engineering”, May 2021 – Aug 2021  
 Medical Biophysics Honours thesis project, “Characterization of a microdroplet generator for tissue engineering”, Sept 2020 – Apr 2021  
 NSERC summer research award: “Adaptation of stereo-PIV system for detecting aneurysm wall vibrations”, May – August 2020  
 Scholar’s Electives project, 3<sup>rd</sup> year: “PIV measurements of flow-field differences in an aneurysm model, due to downstream impedance changes”, Sept 2019 – Apr 2020  
 Scholar’s Electives project, 2<sup>nd</sup> year: “Development of a modular flow system for in vitro aneurysm studies”, Sept 2018 – Apr 2019

BAO, Yuki Medical Biophysics research student (since 1<sup>st</sup>-year): “Development of a visual tutorial of flow disturbance shear-stress metrics”, **Sept 2019 - present**

TAHA, Alaa Medical Science research project: “Refinement of a medical image pipeline for the fabrication of patient-specific flow models”, Dec 2019 – Aug 2020

SIDORA, Gurnish Medical Physics summer research internship: “Design of a 3D Head Phantom for Incorporating Cerebrovascular Flow Inserts”, May – August 2020  
 Medical Biophysics third-year project: “Rapid prototyping of PIV-compatible vascular models”, Sept – Apr 2019

BISCHOF, Grace	Honours Physics thesis project: “Development of a microfluidic device for microbead generation,” Sept 2018 – Apr 2019 (co-supervised with J.R. de Bruyn, Physics & Astronomy)
NAIR, Chaithanya	Medical Science research volunteer (2 <sup>nd</sup> -year student): “Comparison study of 3D printing of microfluidic moulds”, Sept 2018 – Apr 2019
SACORANSKY, Ethan	Medical Biophysics research student (4 <sup>th</sup> -year student): “Flow field measurements using micro-PIV in a microfluidic device for cell mechanotransduction studies”, May 2019 – April 2020; “Development of an open-channel microfluidic device for varying shear stress on smooth muscle cells”, Sept 2017 – Apr 2019
WANG, Xin Yue	Medical Biophysics Honours thesis project, “Ultrasound velocity mapping in a neo-natal heart phantom,” Sept 2017 – Apr 2018 (co-supervised with J.C. Lacefield, Electrical & Computer Engineering)
MALIK, Shamir	Medical Science research volunteer (1st-year student): “Development of a cerebrovascular flow loop,” Jan–Apr 2018
SOON, Kayla	Biomedical Engineering Co-op project: “Micro-PIV measurements in microfluidic devices for cell biology studies”, Aug 2017–April 2018. Co-op student from Biomedical Engineering, Ryerson University,
CHURCHILL, Derek	Medical physics project: “Implementation of a high-power micro-PIV system,” May–Aug 2017 (NSERC USRA)
ROZIK, Peter	Summer research project: “Ultrasound attenuation measurements of tissue mimicking materials for medical ultrasound,” May–Aug 2016
RATHOD, Bhavini	Medical Biophysics projects: “Segmentation of micro-CT images of vascular phantoms,” Sep 2015 – Apr 2016; “Literature review on applications of ultrasound for fetal blood flow,” May-Aug 2015 (Work study)
FORTAIS, Adam	Honours Physics thesis project: “Rheological characterization of Newtonian and non-Newtonian blood-mimicking fluids,” Sept 2013–Apr 2015 (co-supervised with J.R. de Bruyn, Physics & Astronomy)
THOUVENOT, Audrey	Engineering Research Internship: “Acoustic characterization of various tissue mimicking materials for medical ultrasound,” Jan – Mar 2015, (Exchange student from Génie Biomedical, I.S.I.F.C., Besancon, France; co-supervised with Terry Peters, Elvis Chen at Robarts Research Institute)
LORD, Michelle	Medical physics project: “Clinical investigation of turbulence intensity in the carotid bifurcation,” May–Aug 2013 (NSERC USRA), “Development of a Doppler ultrasound spectrogram simulation tool,” Jan–May 2014
HOPKINS, James	Medical physics project: “In vitro flow system calibration and waveform characterization,” May–Aug 2011 (NSERC USRA)
BARGHI, Arvand	Medical physics project & Honours Physics thesis project: “Optimization and testing of an in vitro Doppler ultrasound acquisition system,” May–Aug 2010 (NSERC USRA) and Sept 2010–April 2011 (thesis)
CHIPPIN, Sam	Medical physics project & Honours Physics thesis project: “Development of an in vitro flow system to model vascular resistance,” May–Aug 2009 (NSERC USRA), Sept 2009–April 2010 (thesis), and May 2010 (project)
ROZIK, Anna	Medical physics project & Honours Physics thesis project: “Particle tracking in carotid artery models,” May–Aug 2009 (project), Sept 2009–April 2010 (thesis), May–Aug 2010 (NSERC USRA)

CVETKOVIC, Natasha	Medical physics teaching project: "Development of WebCT exercises and teaching material for physics," May 2008–Apr 2009
LENDZIAN, Roland	Medical physics project: "Ultrasound attenuation measurements using spectral analysis," May–Aug 2008
MOLAK, Anna	Medical physics project: "Experimental investigation of the ultrasound edge-shadowing artefact," May–Aug 2008 (NSERC USRA)
MARCHANT, David	Honours Physics thesis project: "An experimental characterization of the edge-shadowing artefact," Sept 2007–Apr 2008. ** Awarded the Don Hay Prize for highest standing in the fourth-year Honours research project.
McLACHLAN, Peter	Honours Physics thesis project: "Ultrasound attenuation measurements using spectral analysis," Sept 2007–Apr 2008
COX, Joel	Fellowship for Teaching Innovation: "Development of an ultrasound lab for teaching physics," May–Aug 2007
TAYLOR, Reggie	Fellowship for Teaching Innovation: "Development of an optical CT lab for teaching physics," May–Aug 2007 (co-supervised)
YOUSIF, Majid	Medical physics project: "Selection of an index-matching fluid for particle imaging velocimetry," May–Aug 2007
AGYEM, Kwesi	Medical physics project & Honours Physics thesis project: "Ultrasound intensity modeling in MatLab," May 2006–Aug 2007
PHILIPPI, Justin	Medical physics project & Honours Physics thesis project: "Mapping of ultrasound transducer focal zones," May 2006–Apr 2007
MARKOWSKI, M.	Medical physics project: "Experimental investigation of the edge-shadowing artefact," Apr–Sept 2006 (NSERC USRA) and Sept 2006–Apr 2009 (part-time research)
CORBACIO, Michael	Medical biophysics project: "Development of an ultrasound lab experiment for undergraduates," Jan–Apr 2006
O'REILLY, Kathleen	Honours Medical Biophysics thesis project: "A study of the viscoelastic properties of a hydrogel," Sept 2005–Apr 2006 and Sept 2006–Jan 2007
SNIR, Jonathan	Honours Physics thesis project: "Evaluation of <i>Field II</i> —An ultrasound simulation program," Sept 2005–Apr 2006

g) **Graduate Courses Taught:**

<u>Year</u>	<u>Course number &amp; name</u>
2019	Physics 9806 – Introduction to Microfluidics (co-taught with J. de Bruyn)
2015–2016	Physics Graduate Seminar course (co-taught with L. Goncharova)
2013–2014	Physics 9640b – Biomedical Ultrasound (co-taught with J.C. Lacefield) (cross-listed: Biomed 9650 / Biophysics 9640 / ECE 9204)
2013-2014	Biophysics 9573 – Advanced Studies in Biophysics (faculty mentor for student team developing new grad course on medical imaging; team taught)

- 2010–2011      Physics 9640b – Biomedical Ultrasound (co-taught with J.C. Lacefield)  
(cross-listed: Biomed 9650 / Biophysics 9640 / ECE 9204)
- 2008–2009      Biophysics 9515/Biomed 9513 – Medical Imaging (Ultrasound module)

**Undergraduate courses taught:**

<i>Year</i>	<i>Course number &amp; name</i>
2022-2023	Physics 1502 – Enriched Introductory Physics I (45 students) Physics 3900 – Senior Physics Laboratory (16 students) Physics 4910 – Special Topics in Physics: Advanced Physics Projects (1 student)
2021-2022	Physics 1101 – Introduction to Physics I (Sec. 1; ~100 students) Physics 3900 – Senior Physics Laboratory (16 students) Physics 4910 – Advanced Physics Projects (1 student)
2020-2021	Physics 1028a – Physics for Biological Sciences I (Sec. 1 & 2; ~1400 students)* Physics 1301a – Introductory Physics I (Sec. 1 to 3; ~400 students)* *Taught online due to COVID-19 pandemic; team-taught with E. Wong, R. Sica
2019-2020	(sabbatical leave)
2018-2019	Physics 1028a – Physics for Biological Sciences I (Sec. 1; ~700 std) Physics 1028a – Physics for Biological Sciences I (Sec. 2; ~400 std)
2017–2018	Physics 1028a – Physics for Biological Sciences I (Sec. 1; ~700 std) Physics 1028a – Physics for Biological Sciences I (Sec. 2; ~400 std)
2016–2017	Physics 1028a – Physics for Biological Sciences I (Sec. 1; ~700 std) Physics 1028a – Physics for Biological Sciences I (Sec. 2; ~400 std)
2015–2016	Physics 2950/3950/4950 – Undergraduate Seminar Course (~50 students) Physics 3926a – Computer Simulations in Physics (~20 students)
2014–2015	Physics 1301a – Introductory Physics I (~100 students) Physics 1401a – Physics for Engineering Students I (~300 students) Physics 2600b – Introduction to Medical Physics (~20 students) Physics 3926a – Computer Simulations in Physics (~20 students)
2013–2014	Physics 2600b – Introduction to Medical Physics (~20 students)
2012-2013	(parental leave)
2011-2012	(sabbatical leave)
2010–2011	Physics 1301a – Introductory Physics I (Sec. 1, ~100 students) Physics 1301a – Introductory Physics I (Sec. 2, ~50 students) Physics 2600b – Introduction to Medical Physics (~20 students)

2009–2010	Physics 2600b – Introduction to Medical Physics (~20 students)
2008–2009	Med Bio Phys 4475 – Medical Imaging Physics 2600b – Introduction to Medical Physics Physics 1028a – Physics for the Biological Sciences I (Sec. 1) Physics 1028a – Physics for the Biological Sciences I (Sec. 2)
2007–2008	Physics 210b – Introduction to Medical Physics Physics 028a – Physics for the Biological Sciences I (Sec. 1) Physics 028a – Physics for the Biological Sciences I (Sec. 2)
2006–2007	Physics 210b – Introduction to Medical Physics Physics 028a – Physics for the Biological Sciences I (Sec. 1) Physics 028a – Physics for the Biological Sciences I (Sec. 2)
2005–2006	Physics 210b – Introduction to Medical Physics Physics 309a – Biomaterials I

**Additional Teaching:**

- Training seminar on Hemodynamics Studies for CIHR Strategic Training Program in Vascular Research, 2009
- Physics 4931: Physical Fluid Dynamics. Guest lecturer – “Hemodynamics,” Mar 2009
- Lecture (3 hr) on Arterial and Valve Biomechanics, Undergraduate Medical Education, Heart & Circulation Module, 2009
- Developed and delivered hands-on ultrasound workshop for CIHR Strategic Training Program in Vascular Research, 2008
- Training seminar on Vascular Modelling for CIHR Strategic Training Program in Vascular Research, 2007

h) **Research Funding:** (from 2003 to present)

If there are co-grants or group grants, list the total amount of the grant and, in brackets, the amount that is your component.

Start Date	End Date	P-I	Co-I	Granting Agency	Grant Title	Total Amount
2022	2026	<b>McIntyre</b>	36 co-applicants	Brain Canada	START (STiff ARteries)	\$2.175M
2021	2026	<b>Poepping</b>	Ellis, McGuire, Pickering	CIHR Project Grant	Mechanosensory discrimination of flow shear stimuli by endothelial cells	\$890,000
2020	2021	<b>Poepping</b>	de Bruyn, Flynn	Western CAMBR	Microfluidic Device for Generating Tissue-Engineering Microcarrier Beads	\$10,000

Start Date	End Date	P-I	Co-I	Granting Agency	Grant Title	Total Amount
2019	2021	Wong	Chambers, Allan, <b>Poepping</b>	LRCP Catalyst Grant	Toward modeling breast cancer metastases in microfluidic devices	\$25,000
2018	2023	<b>Poepping</b>		NSERC Discovery	Vascular Modelling of Complex Flow in Aneurysms and Endovascular Devices	\$135,000
2017	2018	<b>Poepping</b>	Ellis, Pickering	Western MHSRB Accelerator Research Grant	Investigating real-time response of endothelial cells to turbulence using microfluidics	\$50,000
2016	2018	Lacefield	<b>Poepping</b> , Peters	Western Innovation Fund	Spread-spectrum beamforming for ultrafast colour Doppler ultrasound imaging	\$25,000
2016	2017	<b>Poepping</b>	7 co-applicants	NSERC RTI	Micro-PIV System for Biomedical Microfluidics	\$150,000
2016	2017	Shoemaker	Lacefield, <b>Poepping</b>	NSERC RTI	Equipment to quantify human cerebrovascular bed mechanics	\$56,000
2015	2016	Shoemaker	Boulton, <b>Poepping</b>	NSERC RTI	Multidisciplinary investigation to quantify human cerebrovascular dynamics	\$20,000
2015	2018	Ellis <b>Poepping</b>	4 Co-applicants, 7 Knowledge Users	CHRP	Noninvasive Functional Biomarker for Early Detection & Continuous Monitoring of Microvascular Dysfunction	\$639,000
2013	2018	<b>Poepping</b>		NSERC Discovery	Hemodynamic study facility	\$105,000
2010	2015	<b>Poepping</b>		Ontario Ministry of Research & Innovation, Early Researcher Award (ERA)	Advanced DUS and particle imaging for vascular disease studies	\$150,000

Start Date	End Date	P-I	Co-I	Granting Agency	Grant Title	Total Amount
2008	2013	Poepping		NSERC Discovery	Ultrasonic systems development for flow characterization	\$160,000
2008	2013	Holdsworth Poepping	Rankin	Heart & Stroke Foundation	Investigation of flow in the stenosed carotid bifurcation, T-6427	\$587,000
2008	2010	Poepping		NSERC University Faculty Award (UFA)	Salary support (renewal)	\$80,000
2008	2009	Poepping		NSERC RTI	Electromagnetic flowmeter	\$15,625
2007	2011	Poepping		Canada Foundation for Innovation (CFI-LOF)	Ultrasound systems development laboratory	\$553,000
2007	2008	Chronik	7 others	Western IDI	Interface of Science and Medicine	\$20,000
2007	2008	Poepping	Chronik MacDonald Wong	Foundation Western Fellowship in Teaching Innovation Award	Development of undergraduate medical physics labs for teaching physics	\$10,000
2006	2009	Thompson	Poepping	Australian Research Council	Material boundaries in ultrasonics ...	\$285,810
2006	2007	Poepping		Western ADF Major	Ultrasound research system	\$90,000
2005	2007	Poepping		NSERC Discovery	Ultrasonic systems development for flow characterization	\$84,000
2005	2008	Poepping		NSERC UFA	Salary support	\$120,000
2005	2006	Poepping		Western	Start-up Funds	\$54,000

i) **Publications**

1) **Life-time summary (count) according to the following categories:**

Chapters in Books:	1
Papers in refereed journals:	30
Papers in refereed conference proceedings:	32
Presentations at professional meetings/workshops and others:	88
Invited talks, colloquia, seminars:	23

- 2) **Details:** (from 1999 to present – same categories as above)  
*Within each category, details in chronological order with full citation, including page numbers for books, chapters and journal articles and names of authors in the order in which they appear on the publication.*
- **Google Scholar** Profile for [Tamie L. Poepping \(OR6o7okAAAAJ\)](#)
  - **ORCID ID:** [0000-0002-4953-5204](#)
  - **Bibliometrics:** As of November 2022, according to the Google Scholar, my publications have been cited >1200 times and my h-index is 19.
  - **Key for publications below for individuals that I supervised: graduate students, undergraduate students.**

Chapters in Books:

1. Battista JJ, Poepping TL “Portable imaging systems for interactive teaching of radiography, computed tomography, and ultrasound imaging principles,” in Radiology Education, RK Chhem, et al. (eds.), Springer-Verlag Berlin Heidelberg, 2008.

Papers in refereed journals:

1. Lorusso D, **Soon K, Sacoransky E, Bao Y**, Nikolov HN, Milner JS, de Bruyn JR, Pickering JG, Dixon SJ, Holdsworth DW, Poepping TL. A microfluidic system for real-time microscopic imaging of endothelial cell responses to laminar and disturbed fluid flow. *PI; contributed engineering design and fabrication, experimental design, editing. (In preparation for submission to Lab on a Chip)*
2. Lorusso D, Nikolov HN, **Lordfard S, Soon K**, Poepping TL, Sims SM, Dixon SJ, Holdsworth DW. A system for stimulating live cells with high-frequency oscillatory fluid shear during real-time microscopy. *Collaborator; contributed design modifications, micro-PIV flow-field verification, sections of writing, and editing. (In preparation for submission to Lab on a Chip)*
3. **Kamar F, Gillis C, Bischof G, Roberts A.**, Flynn L, Poepping TL. Production of decellularized adipose tissue microbeads using a novel microfluidic device. *Biofabrication. PI; contributed engineering design and fabrication, experimental design, substantial writing. (In preparation)*
4. **DiCarlo A**, Holdsworth DW, Poepping TL. (2022) Effects of flow waveform pulsatility on shear stress and flow disturbances in stenosed carotid artery models studied using particle image velocimetry. *Cardiovascular Engineering & Technology. PI, supervisor to graduate student DiCarlo; contributed to experimental design and editing. (In preparation)*
5. Arpino JM, Yin H, Prescott EK, Staples SCR, Nong Z, Li F, Chevalier J, Balint B, O'Neil C, Mortuza R, Milkovich S, Lee JJ, Lorusso D, Sandig M, Hamilton DW, Holdsworth DW, Poepping TL, Ellis CG, Pickering JG. (2021) “Low-flow intussusception and metastable VEGFR2 signaling launch angiogenesis in ischemic muscle”. *Science Advances* 7(48):eabg9509. DOI: [10.1126/sciadv.abg9509](#). PMID: 34826235; PMCID: PMC8626079. *Collaborator; contributed microfluidic design, fabrication, and optimization. Science Advances has an impact factor of 14+.*
6. Sancho M, Fabris S, Hald BO, Sandow SL, Poepping TL, Welsh DG. (2019) “Membrane Lipid-K<sub>IR</sub>2.x Channel Interactions Enable Hemodynamic Sensing in Cerebral Arteries” *Arteriosclerosis Thrombosis and Vascular Biology* 39:1072-1087. DOI: [10.1161/ATVBAHA.119.312493](#). *Collaborator; designed and optimized novel open-channel microfluidic device.*
7. **DiCarlo A**, Holdsworth DW, Poepping TL. (2019) “Study of the effect of stenosis severity and non-Newtonian viscosity on multidirectional wall shear stress and flow disturbances in the carotid artery using particle image velocimetry.” *Medical Engineering and Physics* 65:8-23. *PI; supervisor to graduate student DiCarlo; contributed to experimental design and editing.*
8. Liu Y, Lorusso D, Holdsworth DW, Poepping TL, de Bruyn JR. (2018) “Effect of confinement on the rheology of a yield-stress fluid.” *Journal of non-Newtonian Fluid Mechanics* 261:25-32. *Collaborator;*

*contributed to engineering design and fabrication, experimental design and analysis, manuscript review.* DOI: [10.1016/j.jnnfm.2018.08.002](https://doi.org/10.1016/j.jnnfm.2018.08.002)

9. **Onaizah O**, Poepping TL, Zamir M. (2017) "A model of blood supply to the brain via the carotid arteries: Effects of obstructive vs. sclerotic changes." *Medical Engineering and Physics*, 49:121-130. *PI; co-supervisor to graduate student Onaizah. Contributed to experimental design, simulations design, editing manuscript.* Open access. DOI: [10.1016/j.medengphy.2017.08.009](https://doi.org/10.1016/j.medengphy.2017.08.009)
10. Mansour O, Poepping TL, Lacefield JC. (2016) Spread-Spectrum Beamforming and Clutter Filtering for Plane-Wave Color Doppler Imaging. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, 63(11):1865-1877. *Collaborator; contributed to experimental design and analysis, editing manuscript.* DOI: [10.1109/TUFFC.2016.2593814](https://doi.org/10.1109/TUFFC.2016.2593814)
11. **Hussain B**, Yiu BYS, Yu ACH, Lacefield JC, Poepping TL. (2016) "Investigation of Crossbeam Vector Doppler Ultrasound for Accurate 3D Velocity Measurements" *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, 63(11):1786-1798. *PI, supervisor to graduate student Hussain; contributed to experimental design and analysis, substantial writing and editing.* DOI: [10.1109/TUFFC.2016.2597135](https://doi.org/10.1109/TUFFC.2016.2597135)
12. **Kefayati S**, Milner JS, Holdsworth DW, Poepping TL. (2014) "In vitro shear stress measurements using particle image velocimetry in diseased carotid artery models: Effect of stenosis severity, plaque eccentricity, and ulceration." *PLoS ONE* 9(7):e98209, [doi:10.1371/journal.pone.0098209](https://doi.org/10.1371/journal.pone.0098209). *PI and supervisor to grad student Kefayati; contributed to experimental design and editing.*
13. **Kefayati S**, Holdsworth DW, Poepping TL. (2014) "Turbulence Intensity Measurements Using Particle Image Velocimetry in Diseased Carotid Artery Models: Effect of Stenosis Severity, Plaque Eccentricity, and Ulceration." *J Biomech.* 47(1):253-63. *PI and supervisor to grad student Kefayati; contributed to experimental design and editing.*
14. **Wong EY**, Nikolov HN, Rankin RN, Holdsworth DW, Poepping TL. (2013) "Evaluation of distal turbulence intensity for the detection of both plaque ulceration and stenosis grade in the carotid bifurcation using clinical Doppler ultrasound." *Eur. Radiol.* 23(6):1720-1728. *PI and co-supervisor to grad student Wong; contributed to experimental design, analysis software, and editing.*
15. **Kefayati S** and Poepping TL (2013) "Transitional Flow Analysis in the Carotid Artery Bifurcation by Proper Orthogonal Decomposition and Particle Image Velocimetry." *Med. Eng. Phys.* 35(7):898-909. *PI, supervisor to grad student Kefayati; contributed to experimental design and editing.*
16. **Yousif MY**, Holdsworth DW, Poepping TL. (2011) "A blood-mimicking fluid for particle image velocimetry with silicone vascular models." *Experiments in Fluids* 50:769-774. *PI, supervisor to graduate student (Yousif); contributed to experimental design and analysis, substantial writing.*
17. Poepping TL, Rankin RN, Holdsworth DW. (2010) "Flow patterns in carotid bifurcation models using pulsed Doppler ultrasound: Effect of concentric versus eccentric stenosis." *Ultrasound Med Biol.* 36(7):1125-34. *Designed and performed all experiments, analysis and writing.*
18. **Wong EY**, Nikolov HN, **Thorne ML**, Poepping TL, Rankin RN, Holdsworth DW. (2009) "Clinical Doppler ultrasound for the assessment of plaque ulceration in the stenosed carotid bifurcation by detection of distal turbulence intensity: a matched model study." *European Radiology.* 19(11):2739-2749. *Co-investigator. Co-supervisor of graduate student Wong; contributed to experimental design and editing.*
19. **Thorne ML**, Poepping TL, Nikolov HN, Rankin RN, Steinman DA, Holdsworth DW (2009) "In vitro Doppler ultrasound investigation of turbulence intensity in pulsatile flow with simulated cardiac variability." *Ultrasound Med Biol.* 35(1):120-28. *Co-investigator. Advisor to graduate student Thorne; contributed to experimental design, analysis software, and editing.*
20. **Thorne ML**, Poepping TL, Rankin RN, Steinman DA, Holdsworth DW (2008) "Use of an ultrasound blood-mimicking fluid for Doppler investigations of turbulence in vitro." *Ultrasound Med Biol.*

- 34(7):1163-73. *Co-investigator. Advisor to graduate student Thorne; contributed to experimental design, analysis software, and editing.*
21. **Wong EY**, Thorne ML, Nikolov HN, Poepping TL, Holdsworth DW. (2008) "Doppler ultrasound compatible plastic material for use in rigid flow models." *Ultrasound Med Biol.* 34(11):1846-1856. *Co-investigator. Co-supervisor of graduate student Wong; contributed to experimental design, analysis software and editing.*
  22. Poepping TL, **Thorne ML**, **Wong E**, Rankin RN, Holdsworth DW (2007) "Recent flow analysis in vascular models using Doppler ultrasound." *Canadian Acoustics* 35(2):25-34. (*Invited paper*) *Co-investigator. Graduate student co-supervisor (to Wong) and advisor (to Thorne).*
  23. Meagher S, Hoskins P, Poepping TL, Watts DM, Black RA, Sutcliffe CJ, Morgan RH, Wardlaw J, Connell M, Bastin ME, Marshall I, Ramnarine K (2007) "Anatomical flow phantoms of the non-planar carotid bifurcation." *Ultrasound Med Biol.* 33(2):303-310. *Designed phantoms. Assisted in design of experiments and writing of paper.*
  24. Dineley J, Meagher S, Poepping TL, McDicken WN, Hoskins PR (2006) "Design and characterization of a wall motion phantom." *Ultrasound Med Biol.* 32: 1349-57. *Advisor to graduate student (Dineley). Assisted in design of experiments and writing of paper.*
  25. Fraser KH, Poepping TL, McNeilly A, Megson IL, Hoskins PR (2006) "Acoustic speed and attenuation coefficient in sheep aorta measured at 5-9 MHz." *Ultrasound Med Biol,* 32:971-980. *Advisor to graduate student (Fraser). Assisted in design of experiments and writing of paper.*
  26. Khoshniat M, Thorne M, Poepping TL, Hirji S, Holdsworth DW, Steinman DA (2005) "Real-time numerical simulation of Doppler ultrasound in the presence of non-axial flow." *Ultrasound Med Biol,* 31:519-28. *Designed and performed all flow experiments and analysis.*
  27. Poepping TL, Nikolov HN, Thorne ML, Holdsworth DW (2004) "A thin-walled carotid vessel phantom for Doppler ultrasound flow studies." *Ultrasound Med Biol,* 30:1067-1078. *Designed phantoms. Performed all experiments and analysis.*
  28. Steel R, Poepping TL, Thompson RS, MacAskill AC (2004) "Origins of the refractile edge shadowing artefact in medical ultrasound—a theoretical and in vitro study." *Ultrasound Med Biol,* 30:1153-62. *Designed and performed experiments. Assisted with writing.*
  29. Poepping TL, Gill J, Fenster A, Holdsworth DW (2003) "MP3-compression of Doppler ultrasound signals." *Ultrasound Med Biol,* 29:65-76. *Designed and performed experiments. Performed all analysis and writing.*
  30. Poepping TL, Nikolov HN, Rankin RN, Lee M, Holdsworth DW (2002) "An in-vitro system for Doppler ultrasound flow studies in the stenosed carotid artery bifurcation." *Ultrasound Med Biol,* 28:495-506. *Designed and performed experiments. Performed all analysis and writing.*
  31. Steinman DA, Poepping TL, Tambasco M, Rankin RN, Holdsworth DW. (2000) "Flow patterns at the stenosed carotid bifurcation: Effect of concentric vs. eccentric stenosis." *Ann Biomed Eng,* 28:415-423. *Designed and performed flow experiments and analysis.*
  32. Poepping TL, Wyman DR, Sanchez-Sweatman OH, Chow TM. Long exposure growth of in-vivo interstitial laser photocoagulation lesions. *Lasers in Medical Science.* 14(4):297-306, 1999. *Designed and performed experiments. Performed all analysis and writing.*

Invited Talks & Colloquia:

1. "Small but mighty - microfluidic platforms for big jobs in a small world", colloquium, Department of Physics & Astronomy, October 2022
2. "Small but mighty - microfluidic platforms for big jobs in a small world", seminar, Bone and Joint Institute, Western University, June 2021 (online due to COVID-19 pandemic)

3. "Turbulent Times in the Vasculature - Studying Flow Disturbances and Cell Scrubbing", seminar, PM3 Simvascular Workshop, London, Ontario, September 2020 (online due to COVID-19 pandemic)
4. "Microfluidic Cell Scrubbers for Studying Endothelial Mechanobiology", seminar, Macromolecular Chemistry and Assembly in Confining Environments, London, Ontario, April 28-29, 2020 (postponed due to COVID-19 pandemic)
5. "Turbulent Times in the Vasculature - Studying Flow Disturbances and Cell Scrubbing", invited talk, Ontario on a Chip, Toronto, Ontario, May 2020 (cancelled due to COVID-19 pandemic)
6. "The Slinkiness of Ultrasound", invited workshop, Ontario Association of Physics Teachers (OAPT), York, Ontario, May 2017
7. "Vascular modelling and microfluidics", colloquium, Western Mechanical and Materials Engineering seminar, London, Ontario, March 2017
8. "Turbulent times in the cerebrovasculature – a closer look at flow disturbances", seminar, Charles G. Drake Symposium, London, ON, April 2016
9. "Evaluating Flow Disturbances in the Carotid Bifurcation", invited talk, CANCAM, London, Ontario, June 2015.
10. "Vascular modelling and hemodynamics research", seminar, CIHR Strategic Training Program in Vascular Research Seminar Series, London ON, Feb 2014.
11. "Hemodynamics modeling and measurements", colloquium, Physics & Astronomy Colloquium, Western, Oct 2010.
12. "Vascular modeling and measurement tools", seminar, CIHR Strategic Training Program in Vascular Research Seminar Series, London ON, Nov 2009.
13. "Vascular modelling and hemodynamics research using ultrasound and particle imaging", colloquium, Windsor ON, Mar 2009.
14. "Vascular modeling and hemodynamics research using ultrasound and particle imaging", invited talk, Canadian Association of Physicists, Quebec City, Canada, June 2008.
15. "A new medicine for physics: using medical imaging as a tactic for teaching physics", invited talk, Spring Perspectives on Teaching, Western, May 2008.
16. "Vascular modeling and flow visualization for stroke research", seminar, London Health Sciences Centre – Radiology Grand Rounds, London, ON, Dec 2007. (*Team presentation*)
17. "Vascular modeling and hemodynamics research using ultrasound and particle imaging", Faculty of Biomedical Engineering, Western, Nov 2007.
18. "Vascular modeling and stroke research", seminar, CIHR Strategic Training Program in Vascular Research Seminar Series, London ON, Sept 2007.
19. "Medical ultrasound: Vascular modeling and stroke research", seminar, Robarts Research Institute Summer Student Seminar Series, London ON, July 2007.
20. "Biomedical ultrasound: flow and tissue characterization", colloquium, London Regional Cancer Program, London ON, 2006.
21. "Five Little Mantras for New Faculty – A Year in Review", colloquium, Faculty of Science New Faculty Orientation, Sept 2006.
22. "Five Little Mantras for New Faculty – A Year in Review", colloquium, New Faculty Orientation at the Teaching Support Centre, Aug 2006.
23. "Ultrasound applications for investigating cerebrovascular disease", colloquium, Dept. of Physics & Astronomy, Western, 2003.
24. "Ischemic stroke and the hemodynamics of the carotid artery bifurcation", colloquium, Dept of Medical Physics Colloquium, University of Edinburgh, Scotland, 2003.

Papers in refereed conference proceedings (2003-present):

1. Holness FB, Poepping TL, Price AD. Additive manufacturing of electroactive polymer actuated patient-specific arterial phantoms simulating stenosis and dilation. CSME Congress, London, ON, June 5, 2019.
2. Sancho M, Fabris S, Hald BO, Sandow SL, Poepping TL, Welsh DG. Lipid Regulation of KIR2.x Channels and the Enabling of Hemodynamic Sensing in Cerebral Arteries. In: 3rd Joint Meeting of the European-Society-for-Microcirculation and the European-Vascular-Biology-Organization. Maastricht, Netherlands: Journal of Vascular Research, Apr 15-18, 2019.
3. Holness FB, Poepping TL, Price AD. Additive manufacturing of arterial phantoms with integrated electroactive polymer actuators: effect of stenosis and dilation on flow characteristics. In: Bar-Cohen Y, Anderson IA, Johnson NL, eds. 21st Conference on Electroactive Polymer Actuators and Devices (EAPAD) XXI. Denver, CO: SPIE-INT SOC OPTICAL ENGINEERING, Mar 4-7, 2019.
4. Boone N, Lacefield JC, Moore J, Ginty O, Wang XY, Poepping TL, Bainbridge D, Peters T. A dynamic neonatal heart phantom for ultrafast color Doppler echocardiography evaluation. Proc. of SPIE Medical Imaging. San Diego, USA. Feb 16-24, 2019
5. Holness FB, Poepping TL, Price AD. Polymer Actuated Patient-Specific Artery Phantoms for Simulating Stenosis and Dilation. Actuator 2018 Conference, Bremen, Germany. June 25-27, 2018
6. Mansour O, Poepping TL, Lacefield JC. An improved spread-spectrum method for high-frame-rate color Doppler ultrasound imaging. IEEE Ultrasonics Transactions, Washington, USA. Sep 6-9, 2017.
7. Mansour O, Poepping TL, Lacefield JC. A beam-forming method for plane wave Doppler imaging of high flow velocities. Proc. of SPIE Medical Imaging: Ultrasonic Imaging and Tomography, vol. 9790. San Diego, USA. Feb 27-Mar 3, 2016. DOI: 10.1117/12.2217226.
8. **Thouvenot A**, Poepping TL, Peters TM, Chen ECS. Characterization of Various Tissue Mimicking Material for Medical Ultrasound Imaging. Proc. of SPIE Medical Imaging: Ultrasonic Imaging and Tomography, vol. 9790. San Diego, USA. Feb 27-Mar 3, 2016
9. **DiCarlo AL**, Poepping TL Investigation of flow and turbulence in carotid artery models of varying compliance using particle image velocimetry. World Congress on Medical Physics and Biomedical Engineering. Toronto, Ontario, Canada. June 7-12. IFMBE Proceedings Vol. 51 p1743-1746
10. **Onaizah O**, Poepping TL, and Zamir M. Obstructive vs Sclerotic Disorders Affecting Carotid Blood Flow to the Brain. *World Congress of Medical Physics and Biomedical Engineering*. Toronto, ON, July 2015
11. **Fortais AJ**, de Bruyn JR, Poepping TL. Non-Newtonian Blood-Mimicking Fluid for Particle Image Velocimetry. *Canadian Congress of Applied Mechanics*. London, ON, June 2015.
12. **Onaizah, O**, Poepping, TL, and Zamir, M. Lumped Parameter Model of Flow through the Carotid Bifurcation. *Canadian Congress of Applied Mechanics*. London, ON, June 2015.
13. Poepping TL, **DiCarlo AL**, **Onaizah O**, Zamir M. Evaluating Flow Disturbances in the Carotid Bifurcation. *Canadian Congress of Applied Mechanics*, London, ON, June 2015.
14. **Kefayati S**, Holdsworth DW, Poepping TL. Application of stereoscopic PIV for hemodynamic studies of life-sized carotid artery models under pulsatile flow conditions. Proceedings of PIV13 Conference, Delft, Netherlands, Jul 2013.
15. **Hussain B**, **Wong EY**, Poepping TL. Numerical assessment of multiple-receive vector Doppler ultrasound configurations for accurate flow characterization. IEEE Ultrasonics Transactions, Dresden, Germany, October 2012
16. **Kefayati S**, **Powell JL**, **Wong EY**, Poepping TL. Investigation of the effect of geometrical features of carotid artery plaque on turbulence intensity using Doppler ultrasound and particle image velocimetry. IEEE Ultrasonics Transactions, Dresden, Germany, October 2012

17. **Powell JL**, Poepping TL. Turbulence intensity in a region of interest 2cm distal to the carotid bifurcation in a family of seven anthropomorphic flow phantoms. Proc. SPIE Symposium on Medical Imaging, Orlando, FL, Feb 2011
18. **Hussain B**, Poepping TL. Numerical evaluation of velocity measurement accuracy with a vector Doppler ultrasound system. IEEE Ultrasonics Transactions Conference, San Diego CA, Oct 2010.
19. **Kefayati S**, Poepping TL. Flow characterization and shear stress in a stenosed carotid artery model using stereoscopic PIV. IEEE Engineering in Medicine and Biology, Buenos Aires, Argentina, Aug 2010.
20. **Wong EY**, Milner JS, Steinman DA, Poepping TL, Holdsworth DW. Characterization of 3-D flow structures in the stenosed carotid bifurcation with plaque ulceration. IEEE International Ultrasonics Symposium, Medical Ultrasonics: Blood Flow II, Rome, Italy, Oct 2009.
21. **Yousif MY**, Holdsworth DW, Poepping TL. Deriving a blood-mimicking fluid for particle image velocimetry in Sylgard 184 vascular models. 31<sup>st</sup> Annual IEEE Engineering in Medicine and Biology conference Minneapolis MN, Sept 2009.
22. **Wong EY**, Milner JS, Steinman DA, Poepping TL, and Holdsworth DW. Numerical analysis of the hemodynamic effect of plaque ulceration in the stenotic carotid artery bifurcation. Visualization, Image-guided Procedures and Modeling, Proc. SPIE Symposium on Medical Imaging, Orlando FL, Feb 2009.
23. **Wong EY**, Milner JS, Thorne ML, Nikolov HN, Poepping TL, Rankin RN, Holdsworth DW. Doppler ultrasound and numerical analysis for the assessment of hemodynamic disturbances in ulcerated carotid arteries. Medical Ultrasonics: Blood Flow Measurement, Proc. IEEE International Ultrasonics Symposium, Beijing, China, Nov 2008.
24. Soto E, Karnik V, Gyacskov I, Gardi L, Campbell G, Poepping TL, Fenster A, McKenzie CA. Assessment of registration accuracy between magnetic resonance imaging and three-dimensional trans-rectal ultrasound imaging of prostate cancer. ISMRM, Toronto ON, May 2008.
25. **Wong EY**, Thorne ML, Nikolov HN, Poepping TL, Rankin RN, and Holdsworth DW. Investigation of Doppler ultrasound turbulence intensity for carotid plaque ulceration geometry using in vitro flow models. IEEE Ultrasonics Symposium, New York NY, Oct 2007.
26. **Wong EY**, Thorne ML, Nikolov HN, Poepping TL, Rankin RN, Holdsworth DW. Investigation of Doppler ultrasound velocity-based indices for carotid plaque ulcerations using in vitro flow models. IEEE Ultrasonics Symposium, Vancouver BC, 2006.
27. Steel R, Poepping TL, Thompson RS, MacAskill AC. Edge shadows around rigid, absorbing and non-absorbing cylinders. IEEE Ultrasonics, Ferroelectrics, and Frequency Control, Montreal QC, May 2004.
28. Meagher S, Cosgrove J, Poepping TL, Greated C, Hoskins PR. Accuracy of blood velocity measurements using ultrasound. IEEE Biomedical Imaging, Washington DC, Apr 2004.
29. Chen C, Poepping TL, Beech-Brandt JJ, Hammer SJ, Baldock R, Hill B, Allan P, Easson WJ, Hoskins PR. Segmentation of arterial geometry from ultrasound images using balloon models. IEEE Biomedical Imaging, Washington DC, Apr 2004.
30. Khoshniat M, Thorne M, Poepping TL, Holdsworth DW, Steinman DA. Real-time virtual Doppler ultrasound. SPIE Medical Imaging 2004: Ultrasonics Imaging and Signal Processing, 5373, Feb 2004. San Diego CA.
31. Thorne ML, Poepping TL, Rankin RN, Nikolov HN, Holdsworth DW. Doppler ultrasound in vitro modeling of turbulence in carotid vascular disease. SPIE Medical Imaging 2004: Ultrasonics Imaging and Signal Processing, 5373, Feb 2004. San Diego CA.
32. Hammer SJ, Beech-Brandt J, Chen C, Poepping TL, Easson W, Hoskins PR. Design and development of a 3D ultrasound phantom scanner. IEEE Engineering in Medicine and Biology Society, Cancun MX, Sept 2003.

Presentations/Abstract at professional meetings/workshops and others (2003-present):

1. Arpino JM, Yin H, Prescott EK, **Staples SCR**, Nong Z, Li F, Chevalier J, Balint B, O'Neil C, Mortuza R, Milkovich S, Lee JJ, Lorusso D, Sandig M, Hamilton DW, Holdsworth DW, Poepping TL, Ellis CG, Pickering JG. Angiogenesis in ischemic muscle is dominated by low-flow intussusception, not sprouting, and launched by flow-seeking endothelial cells. International Vascular Biology Meeting, San Francisco, USA. <https://www.ivbm2022.org> October 2022.
2. **Moore KRJ**, Grol MW, Holdsworth DW, Pickering JG, Poepping TL. Assessing endothelial cell mechanosensory response to multi-directional wall shear stress [Conference Presentation]. International Vascular Biology Meeting, San Francisco, USA. <https://www.ivbm2022.org> October 2022.
3. **Staples S**, Yin H, Prescott E, Poepping TL, Pickering JG. Modeling intussusceptive angiogenesis in a vessel-on-a-chip. International Vascular Biology Meeting, San Francisco, USA. <https://www.ivbm2022.org> October 2022.
4. **Moore KRJ**, Grol MW, Holdsworth DW, Pickering JG, Poepping TL. Assessing Endothelial Cell Mechanosensory Response to Multi-directional Wall Shear Stress in Microfluidics [Conference Presentation]. NanoCanada: From Earth to Space, Edmonton, Canada. June 2022.
5. **Moore KRJ**, Grol MW, Holdsworth DW, Pickering JG, Poepping TL. (2022, March 22-24). Imaging Endothelial Cell Mechanosensory Response to Wall Shear Stress at Varying O<sub>2</sub> Tensions [Conference Presentation]. Imaging Network of Ontario. <https://imno.ca>
6. **Kamar F**, **Bischof G**, **Roberts A.**, DeBruyn JR, Flynn L, Poepping TL. Production of Decellularized Adipose Tissue Microbeads Using a Novel Microfluidic Device. Western's Centre for Advanced Materials and Biomaterials Research (CAMBR) Day, June 2021
7. **Kamar F**, **Bischof G**, **Roberts A.**, DeBruyn JR, Flynn L, Poepping TL. Production of decellularized adipose tissue microbeads using a novel microfluidic device. London Health Research Day 2021, May 2021.
8. **Kamar F**, **Bischof G**, **Roberts A.**, Flynn L, Poepping T. Production of decellularized adipose tissue microbeads using a novel microfluidic device. A.C. Burton Day – Medical Biophysics Research Symposium, March 30, 2021.
9. Lorusso D, **Soon K**, **Sacoransky E**, **Bao Y**, Nikolov HN, Milner JS, de Bruyn JR, Pickering JG, Dixon SJ, Holdsworth DW, Poepping TL. Real-time microscopic imaging of endothelial cell responses to laminar and disturbed fluid flow. Imaging Network Ontario Symposium, 2020. (online conference due to COVID pandemic) *\*\* Won 1st prize for best poster award.*
10. **Magyar T**, de Bruyn JR, Poepping TL. Complex fluids in microfluidic channels. Viscoplastic Fluids: from Theory to Application. Cambridge, U.K. Sept 2019
11. Lorusso D, **Soon K**, Nikolov HN, Milner JS, de Bruyn JR, Pickering JG, Dixon SJ, Holdsworth DW, Poepping TL. A novel microfluidic device for real-time microscopic imaging of endothelial cell responses to laminar and disturbed fluid flow. London Health Research Day, London CAN, April 2019
12. Lorusso D, **Soon K**, Nikolov HN, Milner JS, de Bruyn JR, Pickering JG, Dixon SJ, Holdsworth DW, Poepping TL. A novel microfluidic device for real-time microscopic imaging of endothelial cell responses to laminar and disturbed fluid flow. Imaging Network Ontario Symposium, March 2019
13. Sancho M, Fabris S, Hald BO, Sandow SL, Poepping TL, Welsh DG. Membrane lipid-K(IR)2.x channel interactions enable hemodynamic sensing in cerebral arteries. In: 29th International Symposium on Cerebral Blood Flow, Metabolism and Function / 14th International Conference on Quantification of Brain Function with PET (BRAIN and BRAIN Pet) Yokohama, JAPAN: Journal of Cerebral Blood Flow and Metabolism, July 4-7, 2019.

14. Lorusso D, Nikolov HN, **Soon K**, Poepping TL, Sims SM, Dixon SJ, Holdsworth DW. A system for stimulating live cells with high-frequency oscillatory fluid shear during real-time microscopy. Imaging Network Ontario Symposium, 2018
15. Uren D, Allan AL, Chambers AF, Poepping TL, Wong E. Hybrid fabrication of microfluidic organ-on-chip devices for human breast cancer dormancy and metastasis analysis. CaRTT 2018 Oncology Research & Education Day. London Canada. June 8, 2018
16. **Soon K**, Lorusso D, Dixon SJ, Holdsworth DW, Pickering JG, Poepping TL. A Novel Microfluidic Device to Study Multi-Directional Shear Stress Response in Endothelial Cells. Ontario on a Chip Conference, Toronto Canada. May 24-25, 2018
17. Lorusso D, Nikolov HN, **Soon K**, Poepping TL, Sims SM, Dixon SJ, Holdsworth DW. Dynamic mechanostimulation of live cells with high-frequency oscillatory fluid shear during real-time microscopy. Canadian Connective Tissue Society. Toronto Canada. May 23-25, 2018
18. Uren D, Van Sas F, Allan A, Chambers A, Poepping TL, Wong E. Hybrid manufacturing method for organs-on-chips. Keystone Symposia on Molecular and Cell Biology: Organs- and Tissues-on-Chips. Big Sky, Montana, USA. Apr 8-12, 2018
19. **DiCarlo A**, Holdsworth DW, Poepping TL. Analysis of flow and oscillating wall shear stress in the carotid bifurcation using particle image velocimetry: Effects of stenosis severity and waveform pulsatility. Imaging Network of Ontario. Toronto, Canada. Mar 28-29, 2018.
20. Lorusso D, Nikolov HN, **Soon K**, Poepping TL, Sims SM, Dixon SJ, Holdsworth DW. A system for stimulating live cells with high-frequency oscillatory fluid shear during real-time microscopy. Imaging Network of Ontario. Toronto, Canada. Mar 28-29, 2018.
21. **Soon K**, Poepping TL. 3D Verification of Flow in Microfluidic Devices Using Micro-PIV. Imaging Network of Ontario. Toronto, Canada. Mar 28-29, 2018.
22. de Bruyn JR, Liu Y, Lorusso D, Holdsworth DW, Poepping TL. Confinement effects on the rheology of Carbopol in microchannels. Viscoplastic Fluids: from Theory to Application. Rotorua, New Zealand. Oct 30-Nov 3, 2017.
23. **DiCarlo AL**, Poepping TL. Turbulence in the Carotid Bifurcation Measured Using Particle Image Velocimetry – Role of Compliance. 11<sup>th</sup> International Symposium on Particle Image Velocimetry. Santa Barbara, CA. Sept 14-16, 2015.
24. **Thouvenot A**, Peters TM, Poepping TL, Chen ECS. Acoustic Characterization of Various Tissue Mimicking Materials. London Health Research Day. Apr 2015.
25. **Onaizah O**, Poepping TL, and Zamir M. Obstructive vs Sclerotic Disorders Affecting Carotid Blood Flow to the Brain. London Health Research Day. Apr 2015.
26. **Onaizah O**, Poepping, TL, and Zamir M. Obstructive vs Sclerotic Disorders Affecting Carotid Blood Flow to the Brain. Poster presented at: 13th Imaging Network Ontario Symposium. (\*\* Won 1st prize for best poster award)
27. **DiCarlo AL**, Poepping TL. Turbulence in the Carotid Bifurcation Measured Using Particle Image Velocimetry" Imaging Network of Ontario. London, Ontario, Canada. March 30-31
28. **Thouvenot A**, Peters TM, Poepping TL, Chen ECS. Acoustic Characterization of Various Tissue Mimicking Materials. Imaging Network Ontario Symposium. March 30-31, 2015.
29. **Onaizah O**, Poepping TL, and Zamir M. (2014) Lumped Parameter Model of Flow through the Carotid Bifurcation. Western Interdisciplinary Science Research Showcase.
30. **DiCarlo A** and Poepping TL. Investigation of the Effect of Compliance on Hemodynamics in Carotid Artery Bifurcation Models using Particle Image Velocimetry. London Imaging Discovery Day, London, Canada, Jun. 26, 2014

31. **Lord ML** and Poepping TL. Multigate spectral Doppler displays of simulated flows. London Imaging Discovery Day, London, Canada, Jun. 26, 2014
32. **Onaizah O**, Poepping TL, Zamir M. Lumped Parameter Model of Flow through the Carotid Bifurcation. London Imaging Discovery Day, London, Canada, Jun. 26, 2014 (Invited talk)
33. **DiCarlo A, Kefayati S**, Poepping TL. Effects of Compliance on Flow and Shear Stress in Carotid Artery Phantom Models using Particle Image Velocimetry. 9<sup>th</sup> International Symposium on Biomechanics in Vascular Biology and Cardiovascular Disease. Montreal, Quebec, Canada. April 28-29, 2014.
34. **Onaizah O**, Poepping TL, Zamir M. Modified Windkessel Model (MWM) of the Carotid Bifurcation. London Health Research Day. London, ON March 18, 2014
35. **Kefayati S**, Poepping TL. Proper orthogonal decomposition analysis for transitional flow of the carotid artery bifurcation based on stereoscopic PIV. AFDAR Workshop on TOMO-PIV and TR-PIV, Delft, Netherlands, June 2013.
36. Poepping TL. Turbulence mapping using DUS and PIV. Artimino Ultrasound Conference, Lake Windermere, Canada, June 2013
37. **Hussain B, Wong EY**, Poepping TL. *Geometrical optimization of vector Doppler ultrasound for accurate 3-D measurements of complex flow*. Artimino Conference on Medical Ultrasound Technology, Florence, Italy, June 2011
38. **Kefayati S**, Poepping TL. *Hemodynamics of the carotid artery bifurcation using stereoscopic particle image velocimetry*. Artimino Conference on Medical Ultrasound Technology, Florence, Italy, June 2011
39. **Hussain B**, Poepping TL. *Design and numerical evaluation of a vector Doppler ultrasound system for accurate 3-D flow velocity measurements*. London Imaging Discovery conference, London ON, June 2010.
40. **Kefayati S**, Poepping TL. *Flow characterization and shear stress in a stenosed carotid artery model using stereoscopic PIV*. London Imaging Discovery conference, London ON, June 2010. (\*\* Won 1st prize for best poster award)
41. **Powell JL**, Poepping TL. *Volumetric extent of spectral broadening index and turbulence intensity*. London Imaging Discovery conference, London, ON, June 2010.
42. Rozik A, Poepping TL. *Development of a particle tracking velocimetry methodology for the study of in vitro carotid artery blood flow*. London Imaging Discovery conference, London ON, June 2010.
43. **Wong EY**, Nikolov HN, Rankin RN, Poepping TL, Holdsworth DW. *An in vitro flow study on the interrelationship of carotid plaque surface ulceration and stenosis severity on Doppler ultrasound turbulence intensity*. London Imaging Discovery conference, London ON, June 2010.
44. **Hussain B**, Poepping TL. *Design of a vector Doppler ultrasound system for accurate 3-D flow velocity measurements*. Canadian Association of Physicists Congress, Toronto ON, June 2010. (\*\*Top 10 semi-finalist for best student paper)
45. **Kefayati S**, Poepping TL. *Flow characterization and shear stress in a stenosed carotid artery model using stereoscopic PIV*. Canadian Association of Physicists Congress, Toronto ON, June 2010.
46. **Wong EY**, Nikolov HN, Rankin RN, Poepping TL, Holdsworth DW. *An in vitro flow study on the interrelationship of carotid plaque surface ulceration and stenosis severity on Doppler ultrasound turbulence intensity*. European Stroke Conference, Barcelona, Spain, May 2010.
47. **Hussain B**, Poepping TL. *Design of a vector Doppler ultrasound system for accurate 3-D flow velocity measurements*. J. Allyn Taylor Cardiovascular Research Symposium, London ON, 2009.
48. **Wong EY**, Milner JS, Steinman DA, Poepping TL, Holdsworth DW. *Numerical analysis of the hemodynamic effect of plaque ulceration in the stenotic carotid artery bifurcation*. J. Allyn Taylor

- Cardiovascular Research Symposium, London ON, 2009. (\*\* *Won 1st Place Poster Award in Imaging Division*)
49. Thorne ML, Poepping TL, Nikolov HN, Rankin RN, Steinman DA, Holdsworth DW. In vitro Doppler ultrasound investigation of turbulence intensity in pulsatile flow with simulated cardiac variability. J. Allyn Taylor Cardiovascular Research Symposium, London ON, 2009. \*\* *Won 1st Place Poster Award in Imaging Post-doc Division*
  50. **Hussain B**, Poepping TL. Design of a vector Doppler ultrasound system for accurate 3-D flow velocity measurements. London Imaging Discovery conference, London ON, June 2009.
  51. Soto E, Karnik V, Gyacskov I, Gardi L, Poepping TL, Campbell G, Fenster A, McKenzie CA. Assessment of the accuracy of registration between magnetic resonance imaging and three-dimensional trans-rectal ultrasound imaging of prostate cancer, London Imaging Discovery conference, London ON, June 2009.
  52. **Yousif MY**, Holdsworth DW, Poepping TL. A novel blood-mimicking fluid for particle image velocimetry in silicone vascular models. London Imaging Discovery conference, London ON, June 2009.
  53. **Yousif MY**, Holdsworth DW, Poepping TL. Refractive index matching for particle image velocimetry in vascular models. Institute of Circulatory and Respiratory Health Young Investigators Forum, Ottawa ON, May 2009.
  54. **Yousif MY**, Holdsworth DW, Poepping TL. Refractive index matching for particle image velocimetry in vascular models. Molecular Function & Imaging Symposium, Ottawa ON, May 2009.
  55. Soto E, Karnik V, Gyacskov I, Gardi L, Poepping TL, Campbell G, Fenster A, McKenzie CA. Assessment of the accuracy of registration between magnetic resonance imaging and three-dimensional trans-rectal ultrasound imaging of prostate cancer. Canadian Medical and Biological Engineering Society, Calgary AB, May 2009.
  56. Soto E, Karnik V, Gyacskov I, Gardi L, Campbell G, Poepping TL, Fenster A, McKenzie CA. Assessment of registration accuracy between magnetic resonance imaging and three-dimensional trans-rectal ultrasound imaging of prostate cancer. Margaret Moffat Graduate Research Day, London ON, March 2009.
  57. **Yousif MY**, Holdsworth DW, Poepping TL. Refractive index matching for particle image velocimetry in vascular models. Margaret Moffat Graduate Research Day, London ON, Mar 2009.
  58. Soto E, Karnik V, Gyacskov I, Gardi L, Poepping TL, Campbell G, Fenster A, McKenzie CA. Assessment of accuracy between magnetic resonance imaging and three-dimensional trans-rectal ultrasound imaging of prostate cancer. Imaging Network of Ontario, Toronto ON, 2009.
  59. Soto E, Karnik V, Gyacskov I, Gardi L, Campbell G, Poepping TL, Fenster A, McKenzie CA. Assessment of registration accuracy between magnetic resonance imaging and three-dimensional trans-rectal ultrasound imaging of prostate cancer. Imaging Network of Ontario, Toronto ON, Sept 2008.
  60. **Wong EY**, Milner JS, Poepping TL, and Holdsworth DW. Analysis of hemodynamic disturbances and thrombogenic factors in ulcerated atherosclerotic carotid arteries. Margaret Moffat Graduate Research Day, London ON, March 2008. \*\* (*Won the Margaret Moffat Research Day Award for Best Poster in Imaging and Medical Biophysics*).
  61. **Wong EY**, Milner JS, Poepping TL, and Holdsworth DW. Analysis of hemodynamic disturbances and thrombogenic factors in ulcerated atherosclerotic carotid arteries. Western Research Forum, London ON, Feb 2008. \*\* (*Won 3<sup>rd</sup> place award for oral presentation in Bioscience Division*).
  62. Cox J, Chronik B, Wong E, Poepping TL. A Hand-Held Imaging System for Teaching Ultrasound Imaging Principles. International Conference on Expanding Scholarship in Radiology Education, London ON, Aug 2007. (Physics Education)

63. Battista J, Poepping TL. Portable Imaging Systems for Interactive Teaching of Radiography, CT, and Ultrasound Principles. International Conference on Expanding Scholarship in Radiology Education, London ON, Aug 2007. (Physics Education; joint presentation)
64. **Powell JL**, Poepping TL. Volumetric extent of spectral broadening index and turbulence intensity. London Imaging Discovery conference, London ON, June 2007.
65. **Wong EY**, Thorne ML, Nikolov HN, Poepping TL, Rankin RN, Holdsworth DW. Doppler-ultrasound compatible plastic material for use in rigid flow models. London Imaging Discovery conference, London ON, June 2007.
66. Poepping TL, Hoskins PR, Easson WJ. Hybrid konjac-carrageenan hydrogel for use as an ultrasound TMM. New England Doppler Conference, Maastricht, Netherlands, May 2007.
67. Poepping TL, Markowski M, Thompson RS. Magnitude and phase measurements of the edge-shadow artefact, New England Doppler Conference, Maastricht, Netherlands, May 2007.
68. **Powell JL**, Poepping TL. Volumetric extent of spectral broadening index and turbulence intensity. New England Doppler Conference, Maastricht, Netherlands, May 2007.
69. **Wong EY**, Thorne ML, Nikolov HN, Poepping TL, Rankin RN, Holdsworth DW. Investigation of velocity-based indices for the detection of carotid plaque ulcerations. New England Doppler Conference, Maastricht, Netherlands, May 2007.
70. **Wong EY**, ML Thorne, HN Nikolov, TL Poepping, RN Rankin, and DW Holdsworth. Investigation of Doppler-ultrasound turbulence intensity for carotid plaque ulceration geometry using in vitro flow models. Margaret Moffat Graduate Research Day, London ON, March 2007. \*\* (*Won the Margaret Moffat Research Day Award for Best Poster in Imaging and Medical Biophysics.*)
71. Agyem K, Thompson RS, Poepping TL. Computer simulation of the effect of a cylindrical refractive interface on ultrasound intensity. Canadian Undergraduate Physics Conference, Fredericton NB, 2006.
72. **Wong EY**, Thorne ML, Nikolov HN, Poepping TL, Rankin RN, Holdsworth DW. Investigation of Doppler-ultrasound velocity-based indices for carotid plaque ulcerations using *in vitro* flow models. IEEE International Ultrasonics Symposium, Vancouver BC, October 2006.
73. **Wong EY**, Thorne ML, Nikolov HN, Poepping TL, and Holdsworth DW. Doppler ultrasound compatible plastic material for use in rigid flow models. London Imaging Discovery conference 2006, London ON, June 2006.
74. Thorne ML, Poepping TL, Nikolov HN, Rankin RN, Steinman DA, Holdsworth DW. Investigation of turbulence intensity in unsteady flow using Doppler ultrasound. *Exp Clin Cardiol* 11.1:69, 2006.
75. Thorne ML, Poepping TL, Steinman DA, Rankin RN, Nikolov HN, and Holdsworth, DW. In vitro investigations of turbulence using Doppler ultrasound. *Exp. Clin. Cardiol.* 10.1:52, 2005
76. Poepping TL, Hoskins PR, Easson WJ. Development of a new tissue-equivalent gel for wall-less flow and wall motion phantoms. 3<sup>rd</sup> International Conference on the Ultrasonic Measurement and Imaging of Tissue Elasticity, Lake Windermere, Cumbria UK, 17-20 Oct 2004.
77. Dineley JA, Poepping TL, Hoskins PR. Design and characterization of a vascular phantom of varying elasticity for ultrasound investigation of arterial wall motion. 3<sup>rd</sup> International Conference on the Ultrasonic Measurement and Imaging of Tissue Elasticity. Lake Windermere, Cumbria UK 17-20 Oct 2004.
78. Fraser K, Poepping T, McNeilly A, Megson I, Easson W, Hoskins P. Measurement of the acoustic properties of sheep aorta with a scanning acoustic microscope (SAM). BMUS, Manchester UK, 2004.
79. Chen C, Poepping TL, Beech-Brandt JJ, Hammer SJ, Baldock R, Hill B, Allan P, Easson WJ, Hoskins PR. Segmentation of arterial geometry from ultrasound images using balloon models. IEEE Biomedical Imaging, Washington DC, 2004.

80. Khoshniat M, Thorne ML, Poepping TL, Holdsworth DW, Steinman DA. Real-time virtual Doppler ultrasound. SPIE Medical Imaging, San Diego CA, 2004.
81. Meagher S, Cosgrove J, Poepping TL, Greated C, Hoskins PR. Accuracy of blood velocity measurements using ultrasound. IEEE Biomedical Imaging, Washington DC, 2004.
82. Steel R, Poepping TL, Thompson RS, MacAskill AC. Edge shadows around rigid, absorbing and non-absorbing cylinders. IEEE Ultrasonics, Ferroelectrics, and Frequency Control, Montreal, QC 2004.
83. Thorne ML, Poepping TL, Rankin RN, Nikolov HN, Holdsworth DW. Doppler ultrasound in vitro modeling of turbulence in carotid vascular disease. SPIE Medical Imaging, San Diego CA, 2004.
84. Poepping TL. Anthropomorphic phantoms: Development of vessel- and tissue-mimicking materials. New England Doppler Conference, Florence, Italy, 2003.
85. Meagher S, Morgan R, Watts D, Poepping TL, Sutcliffe C, Wardlaw J, Connell M, Black R, Hoskins P. Construction of a tissue equivalent anatomical model for testing Doppler systems. New England Doppler Conference, Florence, Italy, 2003.
86. Dineley JA, Meagher S, Poepping TL, Hoskins PR. Development of an arterial wall motion (AWM) phantom: a work in progress. New England Doppler Conference, Florence, Italy 2003.
87. Beech-Brandt JJ, Chen C, Hammer SJ, Poepping TL, Easson WJ, Hoskins PR. Unstructured CFD applied to carotid artery flow. Intl Symp on Modeling of Physiological Flows, Lausanne, Switzerland, 2003.
88. Beech-Brandt J, Chen C, Hammer SJ, Poepping TL, Easson WJ, Hoskins P. Simulation of blood flow in the carotid artery. IPEM Physical, Mathematical, and Numerical Modeling of Blood Flow in Cardiovascular Disease, York UK, 2003.
89. Meagher S, Cosgrove J, Poepping TL, Greated C, Hoskins PR. Assessment of the accuracy of velocity profile measurements using colour flow ultrasound. British Medical Ultrasound Society, UK, 2003.
90. Beech-Brandt J, Chen C, Hammer SJ, Poepping TL, Easson WJ, Hoskins P. Simulation of blood flow in the carotid artery. IPEM Physics and Technology of Medical Ultrasound, York UK, 2003.
91. Chen C, Hoskins PR, Easson W, Poepping TL, Hammer SJ, Beech-Brandt JJ. Extraction of artery shape in ultrasound images by 2D deformable models. IPEM Physics and Technology of Medical Ultrasound, York UK, 2003.
92. Hammer SJ, Poepping TL, Chen C, Beech-Brandt J, Easson W, Hoskins P. Development of a 3D ultrasound scanning system. IPEM Physics and Technology of Medical Ultrasound, York UK, 2003.
93. Hoskins PR, Black R, Greated C, Sutcliffe C, Meagher S, Poepping T, Watts D, Morgan R, Cosgrove J, Connell M, Wardlaw J. Development of anatomical flow models for the calibration of ultrasound blood velocity measurements. IPEM, Bath UK, 2003.
94. Thorne ML, Poepping TL, Nikolov HN, Rankin RN, Holdsworth DW. In vitro investigation of turbulence intensity in the carotid bifurcation. AIUM World Federation for Medicine in Biology, Montreal QC. Ultrasound Med Biol. 29(Suppl 5):S162, 2003.
95. Beech-Brandt JJ, Chen C, Hammer S, Poepping TL, Stroeve P, Easson WJ, Hoskins PR. New diagnostic tool for arterial disease. ICMS Conference on Computational Modelling in Medicine, Edinburgh, Scotland, 17-19 Sept 2003.

#### **Other evidence of productivity in Scholarship and Research:**

##### **Patents & Commercializations:**

- Poepping TL, Hoskins PR, Easson WJ. (2004) Tissue-mimicking material. British patent application 0423183.3.
- Vascular flow models – Developed ultrasound and PIV flow models that are marketed and sold internationally by Shelley Medical Imaging Technologies, Div. of Shelley Automation, Toronto.

**Examiner/Reviewer Activities:**

- **Thesis Examiner:**
  - 2022 Dec, Michael O'Neil (PhD), Western Medical Biophysics, Microvascular Responsiveness to Cardiopulmonary Bypass. (*university examiner*)
  - 2022 Oct, Lawrence Yip (PhD), Western Medical Biophysics, Development of a Near-Full-View Angle Coverage Photoacoustic Tomography System and Its Application Towards Optical Fluence Distribution Imaging. (*university examiner*)
  - 2022 Sept, Jeremiah Joseph, (MSc), Western Medical Biophysics, Multi-scale computational modeling of coronary blood flow: application to fractional flow reserve. (*university examiner*)
  - 2022 Aug, Timothy Hunter (MSc), Western Medical Biophysics, Atrial Fibrillation and Cognitive Decline: a Computational Hemodynamics Investigation. (*university examiner*)
  - 2021 Dec, Andrea Wang (MSc), Western Medical Biophysics, Endothelial Dysfunction in Hindlimb Arteries of Old Sprague Dawley rats, and the Type 2 Diabetic Zucker Diabetic Sprague Dawley strain. (*university examiner*)
  - 2020 July, Md. Mansur ul Mulk (PhD), Western Biomedical Engineering, Optimization of Indentation for the Material Characterization of Soft PVA-Cryogels. (*university examiner*)
  - 2020 Apr, Moslem SadeghiGoughari (PhD), University of Waterloo, Dept of Mechanical & Mechatronics Engineering, Enhancing Focused Ultrasound Therapy Using Nanoscale Agents. (*external examiner*)
  - 2020 Mar, Tina Khazaei (MSc), Western Medical Biophysics, Characterization and Enhancement of Local Drug Delivery in Orthopaedic Infection. (*university examiner*)
  - 2019 May, Marja Bertrand (M.A.), Western Education, STEAM Education in Ontario, Canada: A Case Study on the Curriculum and Instructional Models of Four K-8 STEAM Programs. (*university examiner*)
  - 2018, Ali Jalali (PhD), Western Physics, Validating and Highlighting the Advantages of the Optimal Estimation Method for Rayleigh Lidar Middle Atmospheric Temperature Retrievals.
  - 2018 Oct, Adam Hopfgartner (MSc), Western Biomedical Engineering, Development of Granulation Tissue Mimetic Scaffolds for Skin Healing. (*university examiner*)
  - 2018 June, Angela Ezugwu (MSc), Western Physics, Defect-Related Magnetic Properties of Nanostructured Nickel Oxide Thin Films for Solar Cell Applications.
  - 2018 Feb, Golafsooun Ameri (PhD), Western Medical Biophysics, Augmented Reality Ultrasound Guidance in Anesthesiology. (*university examiner*)
  - 2017 May, William T. Hrinivich (PhD), Western Physics, Tools for improving high-dose-rate prostate cancer brachytherapy using three-dimensional ultrasound and magnetic resonance imaging.
  - 2015 Sep, Pubuditha Abeyasinghe (MSc), Western Physics, Structure-Function Relationship of the Brain: Introducing the Generalized Ising Model.
  - 2015 Aug, Nuwansiri N.K. Getangama (MSc), Western Physics, Dielectric Spectroscopy of Polyvinyl Alcohol Hydrogels and Nanocomposites.
  - 2015 Mar, Aveen Alkhatib (PhD), Western Chemical and Biochemical Engineering (Briens), The Study of Mixing and Initial Granule Formation During High Shear Granulation of Pharmaceutical Powders. (*university examiner*)
  - 2014 Sept, Melanie Wright (MSc), Western Physics, Gravity wave spectra morphology in the Arctic and non-Arctic lower atmosphere.

- 2013 Sept, Erden Ertorer (PhD), Western Biomedical Engineering, Fabricating cost-effective nanostructures for biomedical applications. (*university examiner*)
- 2013 Sept, Nour Ghonaim (PhD), Western Biomedical Engineering, Investigating conducted microvascular response to localized oxygen delivery in vivo using a novel micro-delivery approach (*university examiner*)
- 2012 Feb, Matthew Fox (PhD), Western Physics, Hyperpolarized noble gas magnetic resonance imaging and dynamic spectroscopy for investigation of rat models of lung inflammation
- 2011 Aug, Shadi Shavakh (MEd), Western Biomedical Engineering, System Development of a Novel Ultrasound Elastography System for Imaging Breast Cancer. (*university examiner*)
- 2011 Aug, Armin Dehgha (PhD), Western Physics, Validation and Application of Wind Profiler Measurements of Atmospheric Turbulence
- 2011 June, Steve Hudson (PhD), Western Physics, Structure and strength: anisotropic polyvinyl alcohol hydrogels and spider mite silk fibres
- 2011 Apr, Andrew Brenders (PhD), Western Geophysics, Strategies for waveform tomography of long-offset, 2-d exploration seismic data (*university examiner*)
- 2011 Apr, Michael Lizardo (PhD), Western Medical Biophysics (Chambers/MacDonald), From Isolated Tumour Cells to Overt Lymph Node Metastases: Biological and Imaging Studies on the Development of Experimental Lymph Node Metastases
- 2010 Dec, Maryam Shirmohammad (MEd) Western Biomedical Engineering, Evaluating delays in prospectively gated cardiac micro-computed tomography.
- 2010 Jan, Xiaojun Xu (MEd) Western Physics, Magnetic resonance imaging of 3-He apparent diffusion coefficient anisotropy in emphysema.
- 2009 Oct, Jennifer Lo (MEd), Western Biomedical Engineering, Interface design for a virtual reality-enhanced, image-guided surgery platform using surgeon-controlled viewing techniques.
- 2009 Aug, Stephen Pinter (PhD), Western Biomedical Engineering, Investigating Vascular Quantification with High-Frequency Power Doppler Ultrasound from a Signal Detection Perspective.
- 2008 Nov, Bernard Chiu (PhD), Western Biomedical Engineering, Quantification of Carotid Atherosclerosis Using 3D Ultrasound Images.
- 2008 Sept, Christianne Mallet (MEd), Western Medical Biophysics, Carotid 3D Ultrasound: Longitudinal Measurement and Cardiac-gated.
- 2008 Aug, Adam Krasinski (MEd), Western Medical Biophysics, Mapping and Quantifying Carotid Atherosclerosis using Three-Dimensional Ultrasound and Magnetic Resonance Imaging.
- 2008 Jan, Kyle Gilbert (PhD), Western Physics, Development of a Field-Cycled Magnetic Resonance Imaging Scanner.
- 2007 Apr, Renee Korol (PhD), Western Medical Biophysics, Optical Analysis of Extracellular Matrix Proteins in Unstable Carotid Plaque.
- 2005 Aug, Wei Tang (MEd), Western Medical Biophysics, Linear Cascaded Modeling and Experimental Approach to the Signal and Noise Characterization of Cesium Iodide Based X-ray Detectors.
- **Comprehensive Examiner:**
  - Western Medical Biophysics, Qin (Daisy) Sun (PhD), Feb 2021
  - Western Medical Biophysics, Amgad Louka (PhD), Nov 2020

- Western Medical Biophysics, Stephanie Giza (PhD), Mar 2018
- Western Biomedical Engineering Comprehensive Exam Committee – chaired approximately 3-4 comprehensive exams per year as member of BME Comprehensive Exam Committee 2014-2016
- Western Medical Biophysics, Kevin Sinclair (PhD), Nov 2015
- Western Biomedical Engineering, Rony Sharon (PhD), Jul 2015
- Western Biomedical Engineering, Maysam Shahedi Bagh Khandan (PhD), June 2014
- Western Biomedical Engineering, Mai Elfarnawany (PhD), Sept 2013
- Western Medical Biophysics, Emily Wong (PhD), Mar 2010
- Western Medical Biophysics, Rebecca Feldman (PhD), May 2008
- Western Biomedical Engineering, Lauren Wirtzfeld (PhD), Oct 2006
- **Journal Reviewer Activities:**

*Review 5-10 articles per year from the journals below:*

  - Biomedical Signal Processing and Control, 2011 – present
  - Biorheology, 2014 – present
  - Cardiovascular Engineering & Technology, 2016 – present
  - IEEE Transactions on Instrumentation and Measurement, 2008 – present
  - IEEE Transactions on Ultrasonics, Ferroelectrics, & Frequency Control, 2016 –present
  - Journal of Biomechanical Engineering, 2015 – present
  - Medical & Biological Engineering & Computing, 2004 – present
  - Medical Engineering & Physics, 2014 – present
  - Medical Physics, 2005 – present
  - Physiological Measurement, 2009 – present
  - Physical & Engineering Sciences in Medicine, 2021 – present
  - Physics in Medicine & Biology, 2009 – present
  - PLOS ONE, 2015 – present
  - Scientific Reports (by Nature.com), 2015 – present
  - Ultrasound, 2010 – present
  - Ultrasound in Medicine & Biology, 2004 – present
- **Grant Reviewer Activities:**
  - Member, Canadian Institutes of Health Research (CIHR) College of Reviewers, 2017–present
  - Panel Member, CIHR Peer-Review Committee – Medical Physics and Imaging Committee, 2019-2021
  - Panel Member, CIHR-NSERC Peer-Review Committee – Collaborative Health Research Projects (CHRP), 2015 – 2018
  - External referee for Natural Science & Engineering Research Council (NSERC), 1-2 proposals per year, 2006 – *present*
  - External referee for the following overseas funding agencies:
    - Netherlands Organization for Scientific Research (NWO), 2019
    - Marsden Fund, New Zealand, 2017
    - Research Foundation Flanders (Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO), Flanders (Belgium), 2015, 2016

- Technology Foundation STW (Technologiestichting STW), Netherlands, 2009
- Reviewer for Western's Fellowship for Teaching Innovation, 2008 & 2010
- **Panel and Judging Activities:**
  - Judge (oral), Imaging Network of Ontario conference, March 23-24, 2021 (virtual)
  - Judge, Canadian Undergraduate Physics Conference, London, Ontario, Nov 6-8, 2020 (virtual)
  - Judge (oral/poster), Imaging Network of Ontario conference, March 26-27, 2020. (virtual)
  - Judge (oral/poster), Imaging Network of Ontario conference, London, Ontario March 28-29, 2019
  - Judge, Western Engineering Three-minute Thesis (3MT), London, Jan 2019
  - Judge, London Imaging Discovery Day, London, 2018
  - Panelist, University Science Education class (Course instructors: T. Haffie and L. Wahl), faculty panelist participating in inquiry exercise on strengths of education at Western, Dec 2018
  - Judge (oral/poster), Imaging Network of Ontario conference, March 28-29, 2018, Toronto, Ontario
  - Session chair, Artimino Ultrasound Conference, Helsingborg, Sweden, June 7-10, 2015

#### **Event Organization:**

- Member, Scientific Committee, Imaging Network of Ontario (ImNO) conference, March 23-24, 2021. (virtual conference due to the COVID-19 pandemic). <https://www.imno.ca/2020-symposium>
- Member, Scientific Committee, Imaging Network of Ontario (ImNO) conference, March 26-27, 2020. (virtual conference due to the COVID-19 pandemic). <https://www.imno.ca/2020-symposium>
- Co-chair, Scientific and Organizing Committee, Imaging Network of Ontario (ImNO) conference, March 28-29, 2019, London, Ontario. <https://www.imno.ca/2019-symposium>
- Chair, Organizing Committee, Annual Conference of Ontario Association of Physics Teachers (OAPT), May 10-12, 2018, London, Ontario.
- Co-organizer, biennial international conference on biomedical ultrasound – Artimino Ultrasound Conference <http://artimino13.sri.utoronto.ca/>, June 16-19, 2013, Lake Rousseau, Ontario, with co-organizer Peter Burns, Chair of Medical Biophysics, University of Toronto

#### **Outreach:**

- Canadian Conference for Undergraduate Women in Physics (CCUWIP) 2020, Western Physics & Astronomy representative, Jan 2020
- Patrick Whippley Award for Science Outreach, 2019 – founding member and selection committee
- Canadian Undergraduate Physics Conference (CUPC) 2018, Western Physics & Astronomy representative, Aug 2018
- Ontario Association of Physics Teachers' Conference, Western Physics & Astronomy representative, May 2016, 2017, 2019
- Department Coordinator, annual Western's Fall Preview Day, 2013 – 2017.
- Department Coordinator, annual Western's March Break Open House, 2013 – 2017. Coordinator for Alumni Meet & Greet reception, volunteers, and display and presentation material.
- Annual *Team Canada* Selection Committee on behalf of Youth Science Foundation for Intel International Science & Engineering Fair, 2007-2018.

- Annual workshop for *Canadian Medical Hall of Fame Discovery Days in Health Sciences*, 2006–2010.
- Judge for poster competition for London Imaging Discovery Days, June 2008, 2009.
- Judge for poster competition for CIHR Strategic Training Program for Vascular Research, April 2008.
- Guest lecturer on Medical Physics career options (Physics 024, Physics 029), 2007, 2008.
- Volunteer at Western’s Fall Preview Days, Nov 2005 and Nov 2007.
- Canadian Undergraduate Physics Conference (CUPC) 2005 – Medical Physics representative, Nov 2005.

**Professional Development:**

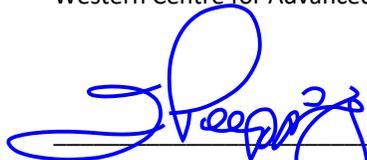
- Partnership for Integration of Computation into Undergraduate Physics (PICUP) virtual conference, Aug 2021
- Data Science course – “Data Science Without Tears”, six-week online bootcamp for faculty covering data science topics including machine learning, ethics, python. Western (March-April 2021)
- Partnership for Integration of Computation into Undergraduate Physics (PICUP) virtual conference, June 2020
- Remote Teaching (collaborative webinar), Eric Mazur (Harvard University), July 2020
- CIHR Sex and Gender Bias Analysis for Biomedical Research (completed Sept 2019)
- CIHR/NSERC Unconscious Bias online training module (completed Sept 2019)
- Ontario Association of Physics Teachers’ Conference 2017, Western Physics & Astronomy representative, May 2016, 2017, 2019
- Annual Western Fall Perspectives on Teaching Conference, Western CTL, 2008-2010, 2013, 2019
- Annual Western Spring Perspectives on Teaching Conference, Western CTL, 2007-2010, 2011, 2013, 2015, 2017, 2019
- Gender Summit 2013 – North America, Washington D.C., Nov 2013
- Western Conference on Science Education (WCSE), Western University, July 2013
- Western Technology in Education Symposium (TIES), Western TSC, March 2013
- Mentoring Faculty Women in Science and Engineering, Western TSC, Mar 2013
- Foundational Leadership course, Western Human Resources, Feb 2013
- Science Talks Workshop, Faculty of Science, April 2011
- Dec 2009, Science Talks Workshop, Faculty of Science
- Oct 2008, Flipping Problem Solving on Its Head, Western TSC
- 2008, Orientation for Video Conference Teaching, Western’s Schulich School of Medicine & Dentistry Teaching & Technology Services
- 2008, Rules and Rhythms of the Academic Year, Western New Faculty Network
- May 2007, Course Design and Renovation Workshop, Western TSC
- May 2007, Teaching with Technology Workshop Series: Extending WebCT with TurnItIn, Publisher Content, and MERLOT, Western TSC
- Aug 2005, Faculty Orientation Course on Teaching at the University Level, Western TSC
- Aug 2005, Summer Institute on Teaching with Technology, Western TSC

- 2005, Workshop on Challenges and Rewards of Mentoring Graduate Students, Western's Schulich School of Medicine & Dentistry

**Membership in Professional Societies/Associations:**

- American Association of Physicists in Medicine (AAPM) member, 1996–2004
- American Institute of Ultrasound in Medicine (AIUM) member, 2000–2004
- Biomedical Imaging Research Centre (BIRC) member, 2009 – present
- Canadian Association of Physicists (CAP) member, 2007 – present
- Canadian Organization of Medical Physicists (COMP) member, 1996 – 2021
- Institute of Electrical & Electronics Engineers (IEEE) member, 2006 – present
- Ontario Association of Physics Teachers (OAPT) member, 2017 – present
- Western Bone & Joint Institute member, 2019 – present
- Western Centre for Advanced Materials & Biomaterials (CAMBR), 2015 – present

Signature: \_\_\_\_\_

  
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Date: \_\_\_\_\_

Nov 15/22  
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