



10th Anniver**CERI**

**Centre for Education
Research & Innovation**



QUESTIONS THAT MATTER



A MESSAGE FROM LORELEI LINGARD

I am so proud of what we have built together in the first 10 years of the Centre for Education Research & Innovation (CERI). Supported by a strong culture of interdisciplinary collaboration, CERI faculty and students are producing award-winning research, influencing educational practice and shaping national policy.

CERI's performance in the conventional research metrics of grant funding, peer-reviewed publication and conference presentations has been outstanding.

In the past 10 years, CERI attracted more than \$4.7 million in peer-reviewed research funding, published 422 manuscripts in top journals and presented 494 presentations at key national and international conferences.

Scientists' growing reputations have led to increasing invitations for keynote talks and visiting professorships, with 122 in the past five years.

This superb performance has positioned CERI among the top medical education research units in Canada and it enjoys

a growing international reputation for its foundational research on education in the clinical workplace and its qualitative methodological expertise.

We have achieved something remarkable, and thanks are due to many.

Our thriving community arises from the efforts of a dedicated group of scientists, clinician researchers and educators, and research trainees from medical students to postdocs. None of this would have been possible without sustained support from the Schulich School of Medicine & Dentistry and strong partnerships with clinical departments, particularly Medicine and Surgery, and more recently, Clinical Neurological Sciences, Obstetrics & Gynaecology and Psychiatry.

CERI is also invigorated by collaborations across Western University, particularly with the Faculties of Education and Health Sciences, which enable us to advance knowledge in the interdisciplinary space of health professions education.

Sincere thanks also go to Mark Goldszmidt,

with whom I have shared the leadership of CERI in this first decade, and to our amazing, growing group of scientists, Sayra Cristancho, Chris Watling, Taryn Taylor, and Javeed Sukhera. Each leads a vibrant and innovative research program, asking questions that matter and creating answers that impact.

CERI is a remarkable community of practice. It is alive with innovative ideas, rigorous inquiry, and robust debate, all infused with a spirit of collegial support, mutual respect and mentorship. We have achieved more than I dreamed was possible when I arrived in 2009. I can't wait to see what we do next.

Thank you for the honour of being CERI's Founding Director.

Lorelei Lingard,
Founding Director and Senior Scientist, CERI

WHO WE ARE



CERI is the home of a dynamic community of scientists, researchers, clinical educators, research trainees and research staff from across the Schulich School of Medicine & Dentistry and Western University. The Centre is firmly positioned among the top medical education research units in Canada and enjoys a growing international reputation, for its foundational research on education in the clinical workplace and for its expertise in qualitative methodologies and scientific writing.

CERI aims to produce knowledge relevant to health professions education and clinical practice. This philosophy is captured in our tagline: “Questions that matter; Answers that impact,” which illuminates CERI’s three main focuses.

First, producing cutting-edge research. Each of the six scientists at CERI leads a program of research around key areas of relevance to training in the clinical environment.

Areas of research include: team communication and collaborative practice; practice variability; coaching and feedback; competency and assessment; complexity and collective adaptation; trainee well-being and resilience; and implicit bias recognition and stigma reduction. CERI scientists and researchers have published more than 400 peer-reviewed papers since CERI’s start in 2009.

Second, mentoring clinician-researchers. Many Schulich Medicine & Dentistry faculty and trainees cross CERI’s threshold for the first time because they have an idea for a scholarly project and they come for a consultation and/or they have a general interest in education scholarship and a senior leader sent them for guidance in shaping their career.

Regardless of the reason, our philosophy is that our door is always open. To that end, part of our Research Officer’s role is to be the initial point of contact to any person visiting CERI for the first time.

The Research Officer offers consultation and support and conducts a sort of triage to determine, if necessary, which CERI scientist might be most relevant to the faculty

member’s interests or needs. This approach has proven impactful in terms of spreading knowledge of CERI as a research resource for Schulich Medicine & Dentistry faculty and attracting new members to CERI for community building.

And third, research training. Coherent with the first focus, a strong methodological trend has grown in CERI research, with many of our scientists identified as leading qualitative methodologists in the field.

In particular, we are an internationally recognized team of experts in constructivist grounded theory, socio-material approaches and visual methods. These are powerful methodological tools to explore the social experiences of clinical practice, clinical teaching and clinical learning, and in addition to graduate students, scholars from around the world are coming to visit and train with us.

These three focuses form the basis of what we do at CERI and have been the catalyst of what we have accomplished in the first 10 years. As such, we expect these three focuses to continue to guide our work as we move forward as an internationally-recognized research centre.

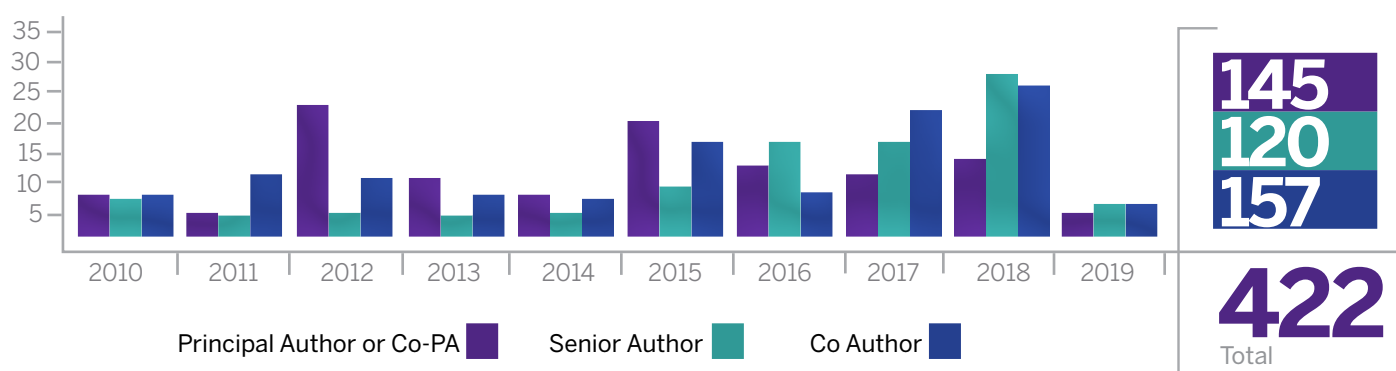


IMPACT BY THE NUMBERS

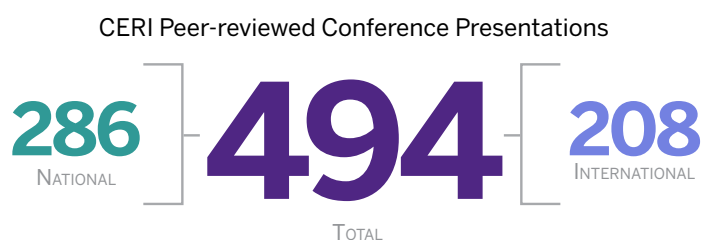
Impact during the past 10 years



CERI PUBLICATIONS



TALKS AND PRESENTATIONS 2010-2019



CULTURE

Culture is a difficult thing to evidence; it is somewhat ineffable, but people know it when they experience it

The success of a research centre is traditionally measured quantitatively, using metrics such as grants capture, peer-reviewed dissemination and graduate training. We have been serious and driven in our pursuit of these metrics at CERI. But we have also recognized, from the beginning, that a successful research centre has qualities that cannot be captured by such metrics.

At CERI, we have worked to foster a culture of excellence through collegial support, interdisciplinary respect and collaborative effort. These cultural values resonate with CERI members who have reported that CERI's culture is one of the main reasons they continue to engage in education research in spite of multiple demands on their time. The following aims have guided our efforts in this regard:

- to provide time and space for the discussion of scholarly ideas at various stages of development and to refine each to its best possible version;
- to foster respect for all contributions to these discussions, regardless of training level, disciplinary background or organizational role;
- to cultivate a shared language by which we can communicate across research paradigms, educational philosophies and clinical domains;
- to lead by example, collaborating with integrity and generosity, sharing our talents with one another, and celebrating one another's successes;
- to interact with, support and mentor one another holistically, using a people-oriented mindset to build strength by acknowledging and developing both individuals' scientific skills and their personal traits.

CERI's evolution has included a constant search for rich and diverse perspectives from across many different disciplines. As an MD/PhD student, working at CERI offered me the opportunity to do research that fits with a busy clinical schedule by creating a framework of mentorship to help keep projects on track.

Tavis Apramian

Completed CERI MD/PhD, and current Resident in Family Medicine,
McMaster University





For two summers at CERI, I worked with incredible mentors who taught me the skills I needed to succeed and gave me the freedom to expand my ideas and interests. Alongside other research students, I received ample opportunity to practise my presentation skills, dissect and improve my writing, and to simply ask questions. When presenting at local and national conferences, there was always a CERI member in the audience. I count my time at this Centre among my most valuable experiences in medical school.

Taylor Roebottom

Completed CERI Summer Research Training Program, current
Resident in Obstetrics & Gynaecology, Schulich Medicine



Although faces have changed and research programs have evolved since 2009, CERI's foundation remains unaltered – a culture of collegiality, interdisciplinary collaboration and innovative thinking.

My own development as a scientist rests on these three pillars, which made possible my recent granting of tenure and promotion to Associate Professor. By asking the not-so-easy questions, the CERI community constantly pushes you to the limits of your scientific comfort zone only to realize that those limits are bigger than what they look like in your mind.

Saya Cristancho

CERI Scientist & Associate Professor, Department of Surgery



Before visiting CERI, I didn't know how to integrate my experiences as a surgeon in a research question that mattered. I was fortunate to be part of this community for six months. I've never had such an encouraging experience in almost 10 years of my professional career with a supervisor, mentor and team, which helped me to develop my skills as a researcher. All are open-minded to discussing innovative ideas with 'junior researchers' like me.

Jennifer Klasen

CERI PhD trainee and Surgeon from Switzerland



CERI, to me, exemplifies the spirit of inquiry. It is a place where ideas fill the air, dialogue abounds, serious debate arises as humour and lively expressiveness infiltrates the atmosphere. I have so appreciated the interdisciplinary conversations related to research, writing and professional practice; the poking and prodding and support that stimulates one to clarify ideas and articulate one's thoughts.

Sandra DeLuca

CERI Researcher and Professor and Associate Dean,
Fanshawe College School of Nursing

CERI is the place at Western where physicians and researchers come together and co-produce high-quality, impactful research. As a junior faculty member now providing medical education support for physicians at Stanford, I can honestly say that I feel prepared and equipped to do so because of the postdoctoral training and support I received during my tenure at CERI.

**Stefanie
Sebok-Syer**

Completed CERI Postdoctoral Fellowship,
Faculty member at Stanford University,
Department of Emergency Medicine

TRAINING



MASTER OF HEALTH PROFESSIONS EDUCATION

The Master of Health Professions Education (MHPE) Canada program is a two-year, part-time research degree program from the School of Health Professions Education at Maastricht University in the Netherlands.

While the degree is conferred from the University of Maastricht, the curriculum and research thesis supervision are delivered in part from CERI and the Centre for Health Education Scholarship (CHES) in Vancouver, British Columbia. The objectives of the MHPE program are to provide teachers of health professionals, including physicians, nurses, physiotherapists, and others, with the capacity to implement and improve their educational programs and to conduct education research related to regional and national health priorities.

Thesis supervision and mentorship are offered by CERI faculty. Since 2014, almost all of the graduate students CERI supports are enrolled in the MHPE program. Our MHPE graduates have demonstrated tremendous success establishing cross-faculty collaborations, leading curriculum and innovation initiatives at the undergraduate and postgraduate training levels, securing research funding, and disseminating their research at national and international conferences and in top-tiered scholarly journals.



SUMMER RESEARCH AND UNDERGRADUATE TRAINING AT CERI



Through Schulich Medicine & Dentistry's competitive Summer Research Training Program and Summer Research Opportunities Program, CERI scientists and researchers have supported a total of 34 medical students in their research development.

These research training programs encourage medical students to pursue their interests in medical research and develop the knowledge, skills and attitudes necessary to engage in rigorous education scholarship. CERI also regularly hosts summer research volunteers from high school programs

in London, co-op programs at other Ontario universities, Western undergraduate and Schulich Medicine programs.

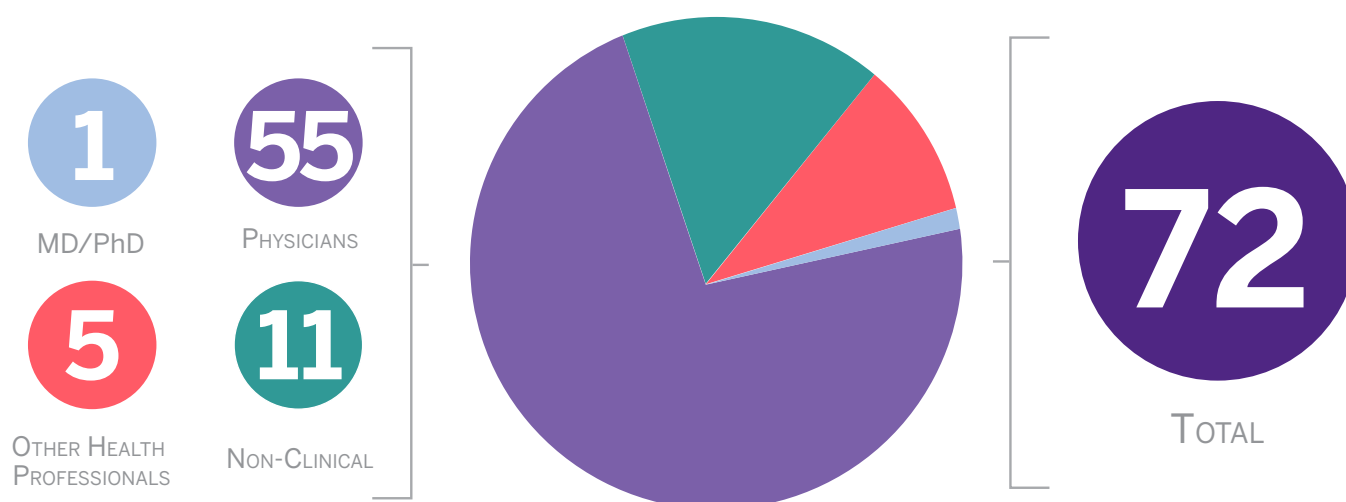
Our summer research curriculum has grown in scope and depth and CERI is increasingly sought after by students as a summer research training destination. These students have done high-quality work, with some of them disseminating their research at local research days, national medical education conferences, and in top-tiered scholarly journals. Our students continue to produce high-quality work, with some winning awards recognizing their excellence.

CERI GRADUATE TRAINEES

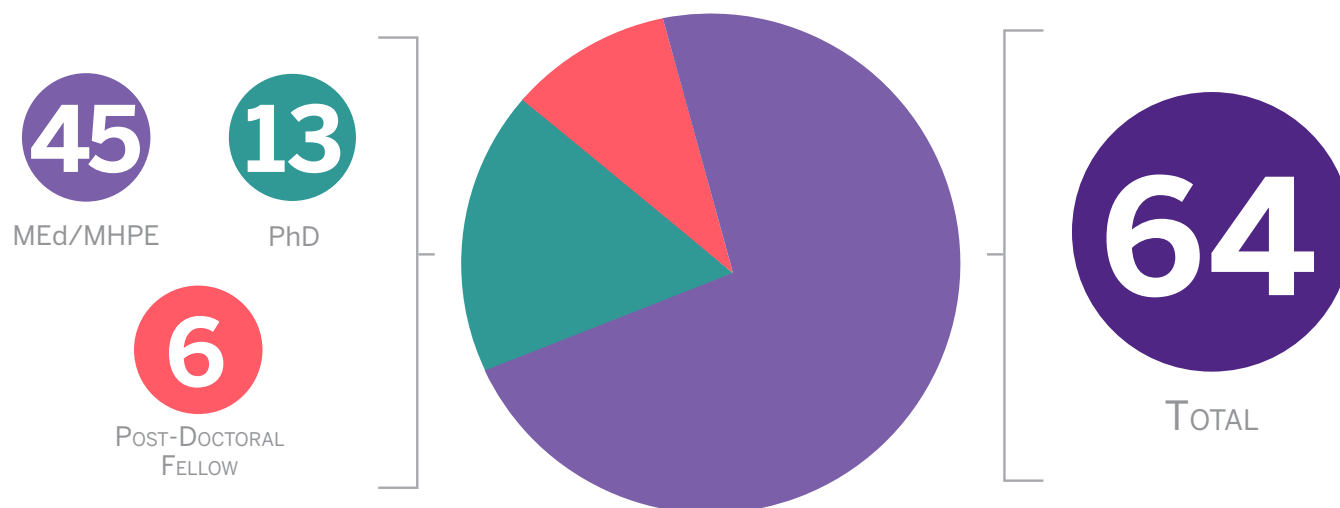


TOTAL GRADUATE BREAKDOWN 2010 - 2019

BY DISCIPLINE



BY GRADUATE DEGREE



WORKING TOWARD A UNIFIED VISION



OUR TEAM

Scientists and Researchers currently helping expand CERI's vision



SCIENTISTS



Lorelei Lingard
PhD

The Founding Director of CERI, Lorelei is an internationally recognized researcher in the study of communication and collaboration on health care teams. She is also a Professor in Medicine and holds cross appointments in the Faculty of Health Sciences and the Faculty of Education.

With a PhD in Rhetoric, Lorelei brings a unique approach to the field of health professions education research. For more than 20 years, she has studied the communication practices of clinical teams, in order to support evidence-based educational initiatives to improve teamwork. In recent years, Lorelei has been using her research on teamwork to shift the discourse of 'competence' in medical education, so that we are paying attention to not only individual competence but also collective competence.

In 2014, Dr. Lingard was awarded the prestigious appointment of Fellow of the Canadian Academy of Health Sciences, in recognition of the impact of her work on Canadian health care. In 2018, she was awarded the highest international honour in her field, the Karolinska Prize for Research in Medical Education.



Mark Goldszmidt
MD, PhD

Mark Goldszmidt is a clinician-scientist, Professor in Medicine and the Founding Associate Director for CERI. He also holds cross appointments in the Faculty of Health Sciences, Faculty of Information & Media Studies and the Faculty of Education.

Without question, Mark considers the founding and subsequent collaborative development of CERI to be one of his career highlights. He is a highly sought-after research mentor and supervisor and derives some of his greatest satisfaction from the accomplishments of his students and mentees.

As a researcher, Mark has been heavily influenced by sociomateriality and rhetorical genre theory. Using these theories, his research focuses on practice variability and the complex relationship between clinical care, supervision and student learning. Through his research, he has explored questions such as: How do a teaching teams' communication practices shape patient care? In what ways do different attending practices shape patient care and influence learning? What is the impact of organizational values on the clinical practice of teaching teams? Dr. Goldszmidt has received numerous awards in recognition of his leadership in medical education including the prestigious 3M National Teaching Fellowship from the Society for Teaching and Learning in Higher Education.



Chris Watling
MD, PhD

Chris Watling joined CERI as a fellow and PhD trainee, with an ambitious goal of completing a PhD in Health Professions Education while working full time in the role of Associate Dean, Postgraduate Medical Education. With expert mentorship from Lorelei Lingard, collaboration with mentors at Maastricht University and support from the CERI community of scholars, he defended his PhD in January 2014 – a career highlight.

During and beyond his PhD, Chris has developed an internationally recognized program of research on learning in clinical settings. Initially focused on feedback, the program has grown to encompass related teaching and learning strategies, such as direct observation and coaching. Additionally, he has built a reputation for exploring research questions from a sociocultural perspective, and for considering the influence of professional culture on how learning unfolds.

In addition to establishing a solid publication record, Chris is increasingly sought after as a speaker and as a research collaborator and mentor. He has been an invited speaker at six other Canadian medical schools during the past five years, as well as a number of international sites, and he recently spent a month as a visiting professor at the Centre for Research on Assessment and Digital Learning at Deakin University in Melbourne, Australia. These invitations reflect his ability to bridge the worlds of education research, practice and policy, as well as his growing expertise in methodology and academic writing.

OUR TEAM

Scientists and Researchers currently helping expand CERI's vision

SCIENTISTS



Sayra Cristancho
PhD

Sayra Cristancho is an Associate Professor in Surgery and Scientist at CERI. She is also cross-appointed to the Faculty of Education.

By importing engineering methods to the study of teamwork in health care, Sayra's research program investigates the nature of collective adaptation in high-stakes environments. She is particularly interested in exploring the factors that determine the level of complexity of a situation (e.g., technical, organizational, inter-personal) and their influence on how teams adapt. Sayra's research uses qualitative methods and is informed by systems-engineering thinking.

Borrowing from systems engineering's emphasis on the use of visual methods, Sayra has pioneered the use of 'rich pictures' in medical education research. This method has provided a window through which research participants more readily tell their stories about dealing with high-stakes situations. Given the area of her research and her methodological expertise, Sayra has been invited to speak nationally and internationally at academic institutions in Europe, Australia and North America. The Canadian Institutes of Health Research, the Physicians Services Incorporated and the Royal College of Physicians and Surgeons of Canada, among others, fund Sayra's research program.



Taryn S. Taylor
MD, PhD

Taryn S. Taylor completed medical school and residency in Obstetrics & Gynaecology at the Schulich School of Medicine & Dentistry, Western University in 2016. During her residency training, she completed a PhD in Health Professions Education through Maastricht University as a Clinical Investigator Program trainee. Her doctoral thesis was recognized in 2017 by the largest international conference in medical education, the Association of Medical Education of Europe, with the PhD prize for best doctoral research.

Taryn subsequently completed a Senior Fellowship in Simulation Education through the Department of Innovation in Medical Education at the University of Ottawa Skills and Simulation Centre.

Presently, she is an Assistant Professor in the Department of Obstetrics & Gynaecology and a Scientist at CERI. In her Scientist role, Taryn has continued to develop her research program exploring the nature and implications of fatigue in the clinical performance and well-being of physicians and trainees. An evolving research interest includes using simulation to explore challenges in inter-professional collaboration among nurses, midwives, obstetricians and anesthetists when providing perinatal care.



Javeed Sukhera
MD, PhD, CChP

Javeed Sukhera is an Associate Professor of Psychiatry and Paediatrics and a Senior Designate Physician Lead for Child and Adolescent Psychiatry at London Health Sciences Centre. His clinical activities include working in the Paediatric Chronic Pain Program, Child and Adolescent Mental Health Care Program and Transcultural Mental Health Program at London Health Sciences Centre. In addition to CERI, he is an Associate Scientist at the Children's Health Research Institute.

Javeed's doctoral work offered a coherent program of research aimed at understanding how health care practitioners perceive their implicit biases and how interventions aimed at addressing those biases unfold and influence change. His current research as a CERI Scientist aims to extend the lines of inquiry he started in his doctoral work related to equity, diversity and inclusion (EDI). This is an under-explored area within health professions and is growing in importance. EDI has strong clinical relevance, as it relates to disparities or inequities that manifest in poor outcomes for patients, hinder productivity in the health care workplace, and stifle opportunities for innovation and excellence.



RESEARCHERS



Lisa Shepherd

MD, MHPE, FRCSC

Lisa Shepherd is an Associate Professor in Medicine, Division of Emergency Medicine, with a strong interest in medical education, having taught in Schulich Medicine & Dentistry's undergraduate, postgraduate and continuing medical education programs for many years.

Currently, she is the Clerkship Director and focuses most of her education attention within the Doctor of Medicine Program, leading clerkship as it transitions to a competency-based medical education curriculum.

She has been affiliated with the CERI community for seven years, learning about qualitative research, grant application and scholarly writing from CERI scientists.

In 2018, she completed a Master of Health Professions Education degree from Maastricht University, specialized research track.

Her research interests include learning from failure – how physicians and medical students understand and perceive their journey from being an academically failure-deprived student to a resident and eventually to a faculty member, working in a clinical world where failure is both plentiful and unavoidable.



Anita Cheng

MD, FRCPC, MHPE

Anita Cheng is an Assistant Professor in Paediatrics, Division of Neonatal and Perinatal Medicine. She is Associate Program Director and Competency-Based Medical Education Lead for the Neonatal-Perinatal Medicine Subspecialty Education program, as well as the NICU Rotation Education Lead for residents and medical students at Schulich Medicine & Dentistry. She completed a Master in Health Professions Education degree through Maastricht University and Western University.

Her research program focuses on developing culture and community around delivering compassionate care to families through cultivating reflective practice in trainees. Her work involves building curriculum and a feedback culture that encourages families and interdisciplinary staff to help trainees navigate difficult conversations, develop effective communication skills and grow as reflective practitioners.



Kathy Hibbert

PhD

Kathy Hibbert is Professor and Associate Dean of Western's Teacher Education program and Director of the Interdisciplinary Centre for Research in Curriculum as a Social Practice.

She is cross-appointed with the Department of Medical Imaging at Schulich Medicine & Dentistry and has led research on teaching and learning with the International Atomic Energy Agency for more than a decade. Most recently, she has been working with the first medical responders to the Fukushima Nuclear Accident at Fukushima Medical University, Japan. Together, they have developed a Science, Technology & Society curriculum located in human experience, and framed within trauma-informed care approaches.

She is an Associate Editor of the *Curriculum Journal*, a publication of the British Educational Research Association and publishes broadly on curriculum topics across the professions. She has been a Researcher with CERI since its inception.

OUR TEAM

Scientists and Researchers currently helping expand CERI's vision



RESEARCHERS



Tavis Apramian

MD, PhD

Tavis Apramian graduated as CERI's first MD/PhD student in 2019. He is currently a Family Medicine resident at McMaster University. He came to the Centre after graduate work in English Literature (Carleton University) and Narrative Medicine (Columbia University). At the Centre, his research focuses on medical humanities, grounded theory methodology, situated learning, procedural variations in surgery and workplace-based assessment. Tavis' research tells stories designed to help researchers and policy-makers better understand the experiences of workplace learning.

The core purpose of his work is to help make medical education more accessible, engaging, transparent and meaningful. His writing and research have appeared in *Annals of Surgery*, *CMAJ*, *Qualitative Research*, *Medical Education*, *Academic Medicine* and others.



Elizabeth Anne Kinsella

PhD

Professor Elizabeth Anne Kinsella has been a CERI researcher since its inception. Her interdisciplinary scholarship uses empirical and philosophical inquiry to advance conceptions of professional knowledge, and education and practice methodologies currently used in Health and Social Care.

Her research increases awareness of the impact that an understanding of reflective practice, and its epistemological foundation, can have on health/social care workers' outcomes.

Elizabeth directs the Epistemologies of Practice Lab, and is leader of the Health Professional Education Field of the Health & Rehabilitation Sciences Graduate Program at the Faculty of Sciences at Western University. Her scholarship is internationally recognized for its impact to improve and expand conceptions of professional knowledge, and for transforming professional education and practice in Health and Social Care sectors. Elizabeth has published more than 85 impactful and highly-cited publications and leads an award-winning online Preceptor Education Program used by more than 35,000 preceptors and students around the globe.

Michael Ott

MD, MSc, FRCSC, FACS, MHPE

Marie-Eve Lebel

MD, FRCSC, MHPE

Kathryn Myers

MD, FRCPC, EdM

Wael Haddara

MD, FRCPC

Ravi Taneja

MD, FRCPC

CENTRE FOR EDUCATION RESEARCH & INNOVATION STAFF

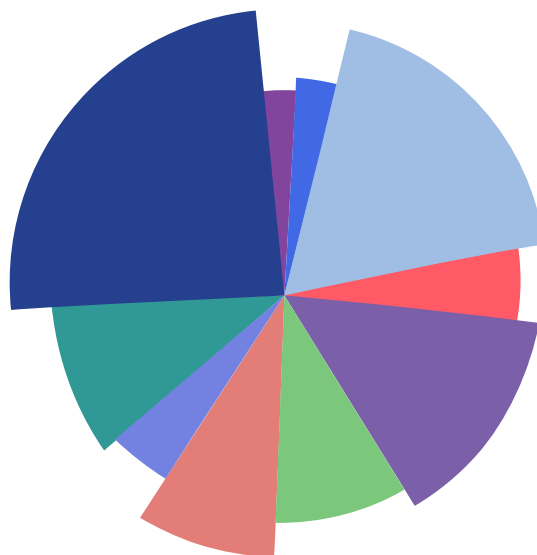


RESEARCH FUNDING AND AWARDS



GRANT FUNDING

2010 149,874	2015 457,737
2011 1,003,602	2016 553,052
2012 568,844	2017 299,166
2013 250,225	2018 837,794
2014 475,097	2019 108,066



3.64M

SCIENTISTS

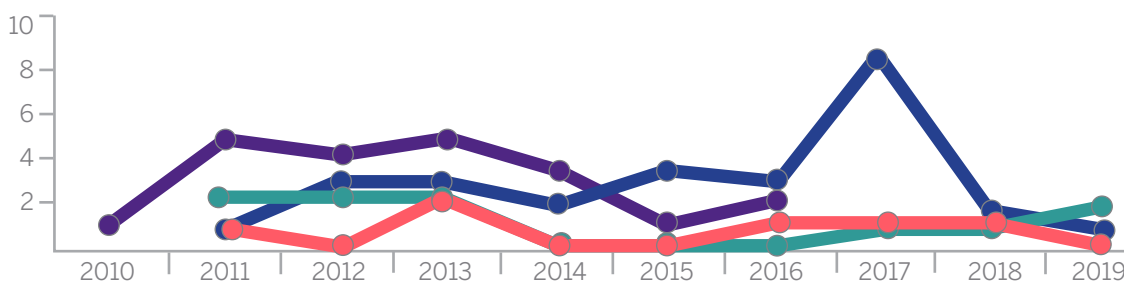
1.06M

RESEARCHERS

4.7M

TOTAL

CERI AWARDS 2009 - 2019



22
CONFERENCE/
JOURNAL

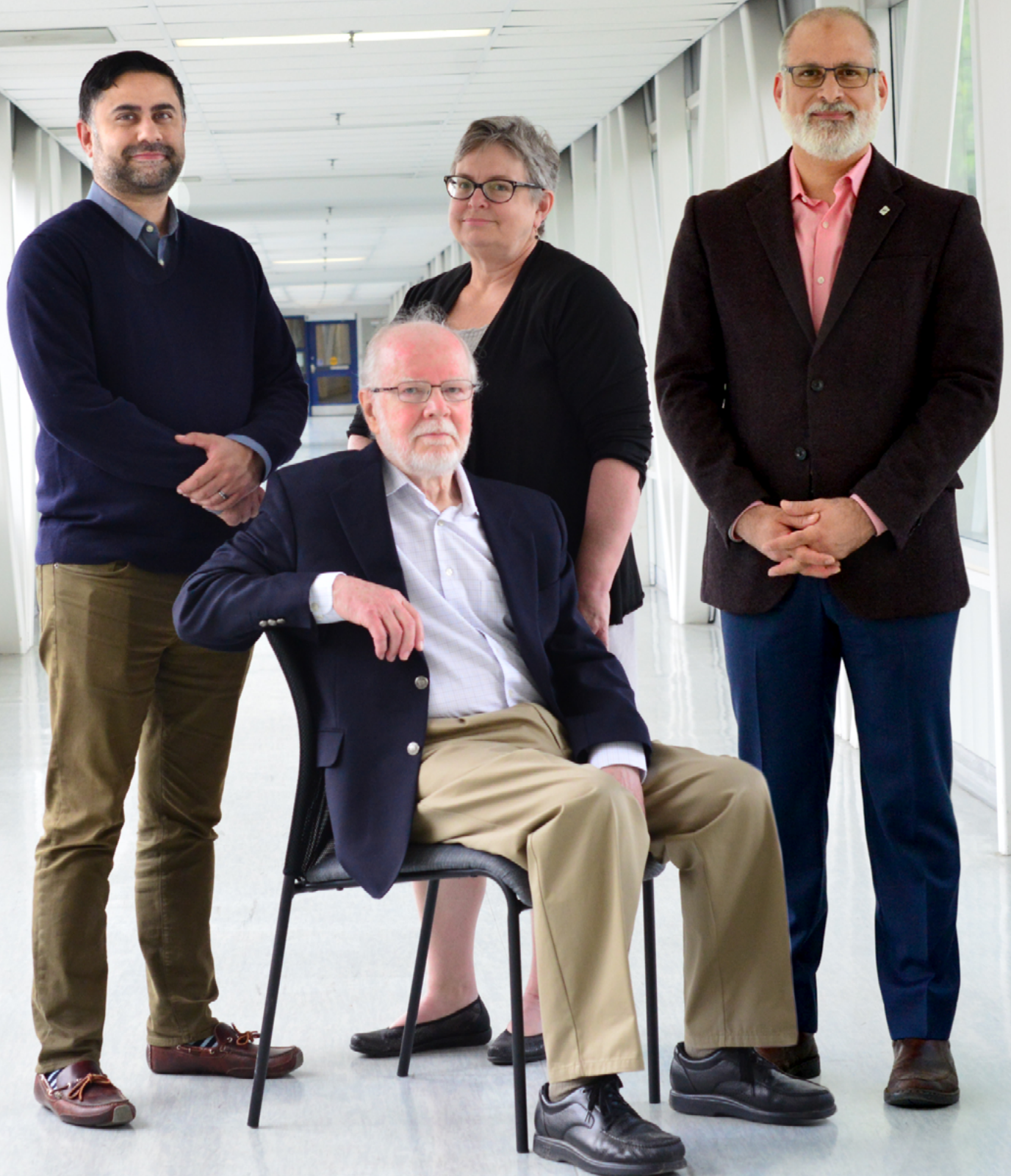
27
LOCAL

10
NATIONAL

6
INTERNATIONAL

65
TOTAL

RESEARCHERS, AFFILIATES AND FELLOWS



SELECTED AWARDS



2012

LORELEI LINGARD

Schulich Distinguished Leader Award

2013

MARK GOLDSZMIDT

3M National Teaching Fellow, Society for Teaching and Learning in Higher Education, Canada

2015

NICOLE PERRIER

(SRTP STUDENT)

Dr. Glenn Wither Research Award for best research project in the Summer Research Training Program

TARYN TAYLOR

Canadian Society for Clinical Investigation/Canadian Institutes of Health Research Resident Research Prize

2016

RADHA JOSEPH

(SRTP STUDENT)

Schulich Scholar of Merit Award in the category of Curricular Development/Involvement

CHRIS WATLING

Schulich Excellence in Education Leader Award – Graduate/Postgraduate

2017

CERI TEAM

Schulich Excellence in Education Team Award

LORELEI LINGARD

Meridith Marks Mentorship Award

**JORGE GEORGAKOPOULOS,
JULIANNE KOKE ZANDBERG**

(SUMMER VOLUNTEER STUDENTS)

Schulich Scholar of Merit Award for students from the UME Quality Committee

2018

LORELEI LINGARD

Karolinska Prize for Research in Medical Education

JAVEED SUKHERA

Best Paper Award from the Association of American Medical Colleges, Research in Medical Education Meeting

2019

SAYRA CRISTANCHO

Champion Award for Mentoring Early Career Medical Educators, Canada

LORELEI LINGARD

Early Career Medical Educator Mentor Award



ANSWERS THAT IMPACT

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Western
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& Innovation