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# T-CAIREM Buzz

January 2021

## News & Activities

### U of T launches the Temerty Centre for Artificial Intelligence Research and Education in Medicine



Top row: Prof. Anna Goldenberg, Prof. Muhammad Mamdani, Vinyas Harish • Centre row: Prof. Mjaye Mazwi, Prof. Laura Rosella, Dr. Alistair Johnson • Bottom row: Prof. Sean Hill, Felipe Morgado, Zoryana Salo.

It's official! The University of Toronto's Faculty of Medicine recently launched the [Temerty Centre for Artificial Intelligence Research and Education in Medicine \(T-CAIREM\)](#).

Based in the Department of Laboratory Medicine and Pathobiology, T-CAIREM brings together leading researchers from the fields of artificial intelligence (AI), data science and the health sciences. T-CAIREM's work will focus on three pillars: Education, Research, and Data Infrastructure.

Professor [Muhammad Mamdani](#) has been appointed the Director of T-CAIREM for five years and will manage a leadership team of renowned experts:

- **Education lead:** Professor [Laura Rosella](#) (DLSPH) and **learner co-leads** [Vinyas Harish](#) (MD/PhD student) and [Felipe Morgado](#) (MD/PhD student)
- **Research co-leads:** Professors [Anna Goldenberg](#) (Computer Science/SickKids) and [Mjaye Mazwi](#) (Pediatrics/SickKids)
- **Infrastructure co-leads:** Professor [Sean Hill](#) (Psychiatry/CAMH) and Dr. [Alistair Johnson](#) (SickKids).

Originally called the Centre for Machine Learning in Medicine, T-CAIREM underwent a name change to honour a generous donation from **James and Louise Temerty** and the **Temerty Foundation**. Their gift has helped establish T-CAIREM as a focal point for collaborations between healthcare providers, trainees, researchers, computer scientists, engineers and industry to advance healthcare through AI.

For more information, visit [T-CAIREM website](#) and follow us on [Twitter \(@UofT\\_TCAIREM\)](#).

### AI pioneer Dr. Eric Topol to deliver guest lecture on January 19



T-CAIREM is thrilled to present cardiologist, scientist and AI pioneer [Dr. Eric Topol](#) for the inaugural lecture of the Temerty Centre Speaker Series on **January 19**. Dr. Topol will speak about “The AI Path to Deeper and More Accurate Medicine.”

Dr. Topol is the Founder and Director of the [Scripps Research Translational Institute](#), a Professor of Molecular Medicine and Executive Vice-President of Scripps Research. As a researcher, he has published over 1,200 peer-reviewed articles with more than 280,000 citations, and was elected to the National Academy of Medicine. He is one of the top 10 most cited researchers in medicine. His principal scientific focus has been on the genomic and digital tools to individualize medicine.

To celebrate our very first guest lecture, we have organized two separate events with Dr. Topol.

**DATE:** January 19, 2021 (Tuesday)

**TIME:** 12pm to 1pm

**COST:** Free

**AUDIENCE:** Open to the public

**METHOD:** Hosted virtually via Zoom

[Click to register for Dr. Topol public event](#)

**EXCLUSIVE: Meet and greet for U of T Students with Dr. Topol**

**DATE:** January 19, 2021 (Tuesday)

**TIME:** 1pm to 1:30pm

**COST:** Free

**AUDIENCE:** This is intended for University of Toronto students only

**METHOD:** Hosted virtually via Zoom

Due to overwhelming demand, spaces are limited for this exclusive meet and greet with Dr. Topol. To keep the meet and greet intimate and interactive, students must apply to reserve a space. We'll notify you if you're selected a few days before the event.

[Click to apply for U of T student meet and greet](#)

**T-CAIREM Director discusses the future of AI in healthcare**



embrace the technology, said T-CAIREM Director **Muhammad Mamdani** at the Temerty Medicine Talk hosted in October by the University of Toronto. The talk was the first of a three-part series that features experts from the Temerty Faculty of Medicine discussing current issues in medicine and health. The talks are moderated by Globe and Mail health columnist **André Picard** and celebrate the university's [\\$250-million gift](#) from **James and Louise Temerty** and the **Temerty Foundation**.

### U of T professors discuss how AI will affect healthcare



"How will Artificial Intelligence affect the delivery of healthcare?" was the title of this online discussion with Professors [Bo Wang](#), T-CAIREM Education Lead [Laura Rosella](#), and T-CAIREM Director [Muhammad Mamdani](#). Moderated by Prof. [Rahul Gopal Krishnan](#), the panel discussed ethics, safety, training, and AI's influence on decision-making in healthcare.

## Opportunities

### Join us! Become a T-CAIREM member (Ongoing)



(PHOTO: iStockphoto)

[T-CAIREM seeks members](#) who want to explore the terrain where data science meets medical research and practice. Our goal is to unite people across disciplines to build understanding and awareness about AI in medicine. Membership is free and available to University of Toronto researchers and those with U of T-affiliated organizations. For more information contact [Zoryana Salo](#), T-CAIREM Centre Administrator.

### Call for summer Faculty supervisors

**University of Toronto faculty** who potentially have one or more positions available for post-secondary summer students are invited to take part in T-CAIREM's [AI in Medicine Summer Studentship](#) program.



(PHOTO: iStockphoto)

### **T-CAIREM 2021 Student Trainee Rounds (Deadline: Feb. 1)**

T-CAIREM's [2021 Student Trainee Rounds](#) is a competitive seminar series to highlight innovative and outstanding research at the intersection of artificial intelligence (AI) and healthcare. **Applications from University of Toronto graduate students and MD students are now being accepted.** Selected students will be able to present their research at bi-monthly public seminars beginning in April 2021.

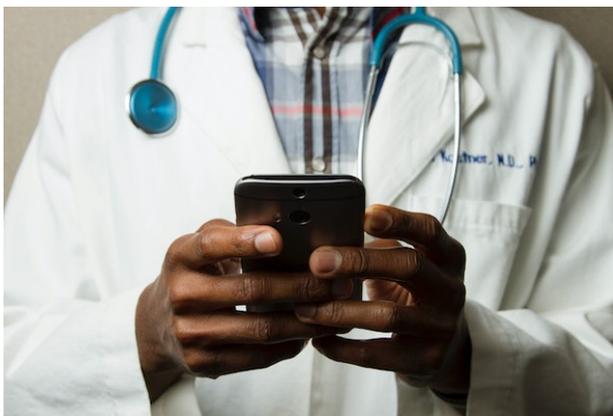
### **Summer Research Studentships (Deadline: Feb.19)**

T-CAIREM launched its inaugural [AI in Medicine Summer Student Program](#) to introduce **undergraduate and medical students** to AI research in health. The program is **also open to students at any Canadian university** as well as international students.

### **\$200,000 Temerty Innovation Grants for AI in Medicine available (Deadline: Mar. 1)**

Administered by T-CAIREM, the [Temerty Innovation Grants for AI in Medicine](#) support **multidisciplinary teams of University of Toronto or U of T-affiliated researchers** who are working on projects with the potential to transform healthcare over the next 20 years.

## **Upcoming Events**



(PHOTO: [Unsplash](#), National Cancer Institute, Daniel Sone)

### **COVID-19: Investigating a Viral Phenomenon (Jan. 9)**

The University of Toronto's Laboratory Medicine and Pathobiology Students Union will take a deep dive into the research conducted by [renowned scientists on the SARS-CoV-2 virus](#).

### **The Trouble with Models (Cells, Animals & Stimulation) (Jan. 12)**

Animal models have long been used in medical research but technological advances have brought us alternative translational approaches that may better serve as links between bench science and clinical application. [Join TR Talks to discuss](#) the troubles with models.

### **The Alignment Problem: Machine Learning and Human Values (Jan. 14)**

This [one-hour livestream](#) features best-selling author **Brian**

## Statistical Learning with Electronic Health Records Data (Jan. 18)

The widespread adoption of electronic health records (EHR) has generated massive amounts of medical data. [Jesse Gronsbell](#), an Assistant Professor in the Department of Statistical Sciences at the University of Toronto, will [discuss the statistical challenges and benefits of EHR](#).

## T-CAIREM Member Spotlight

### Dr. Amol Verma

Physician and Scientist at St. Michael's Hospital

Assistant Professor at University of Toronto



To launch our first newsletter, we caught up with T-CAIREM member and former Rhodes scholar Dr. **Amol Verma**. We wanted to learn more about his work incorporating AI in medicine and his recent projects. (It turns out he's also something of a singer as well.)

#### What inspired you to pursue medicine as a career?

I've wanted to be a physician for as long as I can remember. My mother is a family doctor. We would often see her patients in the grocery store or shopping mall, and I was struck by how appreciative they were of her care. I enjoyed science and problem solving, and I saw medicine a wonderful way to apply those skills to help people.

#### What's your proudest accomplishment?

I am most proud of co-founding and co-leading [GEMINI](#), along with Dr. **Fahad Razak**, and a number of colleagues across the University of Toronto. GEMINI is a hospital data and analytics platform that we initially started to help measure the quality of care being provided in hospitals and identify opportunities for improvement. Over the last five years, we've gone from an idea to a team of more than 20 full-time staff that supports a provincial quality improvement program. We now work with almost 30 hospitals across Ontario.

#### What do you like to do when you aren't working?

Spend time with my wife and toddler. We've been enjoying the winter by making snow-people and singing about Rudolph and Frosty.

#### What are you working on now that you're really excited about?

There are two projects. At St. Michael's Hospital, we recently implemented CHARTwatch, an AI-based early warning system that identifies patients at risk for clinical deterioration in hospital. Second, the GEMINI data platform has collected detailed clinical data about more than 400,000 hospital admissions, and this will be remotely accessible to researchers. There are many opportunities for involvement in both projects, so [please contact me](#) if you'd like to learn more.

#### What excites you the most about the possibilities of AI in healthcare?

I believe AI can help make healthcare more effective, efficient and compassionate. The key will be figuring out how computers and humans can work together to take advantage of our relative strengths. AI can help automate and simplify mundane and time-consuming tasks. There is also danger. It could exacerbate biases, worsen inequities and displace human interactions. I'm

<a href="#">Subscribe</a>	<a href="#">Past Issues</a>	most excited about being among the group of clinicians who is working to implement AI carefully and compassionately	<a href="#">Translate</a> ▾	<a href="#">RSS</a> 📡
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Please let us know what you'd like to see in future issues of the T-CAIREM Buzz. We're always looking for stories and events to include that would be of interest to our members. Contact: [tcairem.comms@utoronto.ca](mailto:tcairem.comms@utoronto.ca)

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