



Rotary Club of Christchurch South Inc.

P O Box 12-243, Christchurch 8023, NZ.

SERVICE ABOVE SELF



# Bulletin

#30 for 18 February 2026



At our recent meeting, members were treated to a fascinating and sometimes personal presentation by Prof Terry Peters of the Robarts Research Institute in London Ontario, entitled: "An Unexpected Journey in Medical Imaging."

Bringing greetings from the Rotary Club of London, Ontario Prof Peters began by reflecting on his long friendship with fellow Kiwi Alan McKinnon, forged nearly 60 years ago as physics students at the University of Otago. Their academic paths continued together at the University of Canterbury, where an inspiring (and occasionally chalk-throwing!) Yorkshire professor sparked Peters' lifelong interest in applying engineering mathematics to medicine.

His doctoral work focused on measuring bone density. Initially attempting to use ultrasound, he soon realised its limitations. Instead, he proposed reconstructing cross-sectional images from multiple X-ray projections—an idea inspired by techniques from radio astronomy and built on the mathematics of the Fourier transform. Working with just 64 kilobytes of memory on an IBM360 computer, he reconstructed one of the world's first CT images from 20 X-rays of a sheep's leg bone, taken using an industrial scanner at Christchurch Airport. Though early clinical reaction was lukewarm, history would vindicate the approach.

Around the same time, Sir Godfrey Hounsfield unveiled the first commercial CT scanner through EMI—the same company famous for producing records by The Beatles. Rather than abandon his work, Prof Peters pressed on, completing what became the first doctoral thesis based on CT reconstruction.

After helping build a prototype CT scanner in Christchurch and also being part of an investigation on behalf of the NZ Government into which CT scanners NZ should acquire, he was recruited to the Montreal Neurological Institute. There, he worked with some of the earliest CT and MRI scanners in North America, helping plan installations and pioneer image-guided neurosurgery. By attaching

reference frames to patients' heads and mapping imaging data into precise 3D coordinates, surgeons could place electrodes with submillimetre accuracy—transformative for treating epilepsy and Parkinson's disease.

Prof Peters described the dramatic effects of deep brain stimulation for Parkinson's patients: individuals previously unable to hold a cup steady regaining normal movement once electrodes were correctly positioned. Advances in 3D visualization, stereoscopic imaging, and later robotics dramatically improved both the speed and safety of these procedures.

After nearly two decades in Montreal, political uncertainty in Quebec prompted a move to London, Ontario, where he established an image-guided surgery programme at Robarts. There, his team expanded into robotic electrode placement, augmented and virtual reality surgical navigation, and innovative cardiac imaging techniques. One breakthrough improved mitral valve repair procedures, making them four times faster and forty times safer—though regulatory and commercial realities ultimately halted its adoption, illustrating the challenging path from laboratory to clinic.

More recently, his team has been exploring the use of low-voltage alternating electric fields to treat aggressive brain tumours such as gliomas. Early laboratory and animal studies show promising results, and preparations are underway for initial human trials.

Throughout his talk, Prof Peters emphasised key lessons: do not be discouraged if others appear to get there first; take calculated risks; recognise that experts are not always right; and once you choose a path, commit fully without looking back. Most importantly, he spoke passionately about mentoring. His greatest dream, he said, is to see his “academic children and grandchildren” build their own successful laboratories and bring affordable imaging technologies—enhanced by artificial intelligence—to underserved communities worldwide.

Prof Peters regularly returns to New Zealand to visit family, of course, but also, he is an advisor to the Matai Institute in Gisbourne which does research based on MRI imaging.

*Reporters note: I had already invited our good friends Terry and Jackie Peters to attend Rotary this week expecting the speaker to be Master Mariner Captain Phillip Sweetman. When he became unavailable it occurred to me that it would be great to hear Terry speak, given that he is an international expert on medical imaging. Terry gracefully accepted the invitation, and we were treated to an impressive presentation. To generate the above report of Terry's talk I used the AI tool ChatGPT. If anyone is interested in the detailed steps I used, please get in touch. –Alan Mc*

*Thanks Alan McJ, for the report and Viv, for the photo.*

## Upcoming meetings:

25/02/2026	Holly Evans	25 Year old Holly - New Zealand's Up & Coming Soprano Opera Singer <b>(Friends and Family Night)</b>
4/03/2026	Club Night – Committees Updates	Club Night – Committees Updates
11/03/2026		

- **UPCOMING ROTARY COMMUNITY SERVICE PROJECTS**

## **1. Cashmere Stream Esplanade**

**Saturday 2nd May '26.**

**10-12 for maintenance followed by a shared lunch.**

## **2. John Taylor Walkway**

**Saturday 13th June '26**

**10-12 for maintenance**

**Followed by a BBQ.**

## **Notices:**

- new email address:  
[atholmccully01@gmail.com](mailto:atholmccully01@gmail.com)

## **Duties:**

<b>Duty</b>	<b>25-Feb-26</b>	<b>4-Mar-26</b>	<b>11-Mar-26</b>
<b>Cash Desk</b>	V Ellis	A McCully	H Garlick
<b>Cash Desk</b>	M Soares	D Peterson	M Soares
<b>Reception</b>	G Bailey	A McKinnon	G Dockrill
<b>Speaker's Host</b>	M Opie	#N/A	L Bougen
<b>Grace</b>	M Opie	H Garlick	L Bougen
<b>International Toast</b>	G Bailey	A McKinnon	G Dockrill
<b>Thanks to Speaker</b>	V Ellis	#N/A	M Soares
<b>Quote for the Week</b>	M Soares	D Peterson	H Garlick
<b>Speaker Reporter</b>	D Peterson	V Ellis	M Opie
<b>Sergeant</b>	V Ellis	M Opie	G Bailey

## **Leave:**

	from	to
S Haye	11/08/2020	TBA
E Bermingham	01/01/2023	TBA
SMcLean	20/03/2024	TBA
A Kim	30/06/2025	TBA
A Airay	1 2 Feb	26 Mar

**The link for the club web pages is**  
**[www.christchurchsouthrotary.org.nz](http://www.christchurchsouthrotary.org.nz)**

**The link to club Facebook pages is**  
**<https://www.facebook.com/ChristchurchSouthRotary>**

## **Reminders:**

**Record your apology at the Reception Desk at a prior meeting,  
OR email: [chchsouthrotary@gmail.com](mailto:chchsouthrotary@gmail.com) before  
11.00am Wednesday.**

**You will get a reminder a couple of days before the meeting re  
apologising and to advise if bringing a guest.**

**Emergency apologies to Alan McKinnon (021 142 7668)**

**OR, Club Secretary Viv Ellis (027 490 3161)**

**DUTIES** If you are unable to carry out your allocated duty, it is **YOUR** responsibility to arrange a substitute.

## **LEAVE OF ABSENCE**

**Please advise all leave of absence of 3 or more weeks to the Secretary, by email or in writing.**