



## Distinguished Lecture Series Learning Geometry



## **Professor Ron Kimmel**

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SIAM Fellow (2019) Cooper Prize (2014) Helmholtz Prize (2013) IEEE Fellow (2009) Counter Terrorism Award, Technion (2003) Hershel Rich Innovation Award, Technion (2001 & 2003) Henry Taub Prize, Technion (2001) Alon Fellowship, Technion (1998-2001)

Date: 28 October 2020 (Wednesday) Time: 4:00-5:00 p.m. GMT+8 (Hong Kong Time) Venue: Online via Zoom (Meeting ID: 914 4896 2795)

## Abstract

Deep learning is a disruptive line of research that changes the way computational problems are being addressed and solved. Many parameters are optimized for, and tuned to train a given computational architecture to classify, segment, identify, and reconstruct objects. This methodology works great as long as there is some assumption about the size of the data, or its spatial or temporal shift invariance property that allow convolutional neural networks to operate on the given data. The question we will address is what can be done for geometric structures for which there is no linear shift invariance mechanism to rely on. We will relate to matching geometric structures, measuring geodesic distances, classifying objects, and ways to import axiomatic constructions into the learning arena, that give birth to novel semi-supervised learning procedures. Finally, I will comment on a new and interesting line of research we have started to explore dealing with computational pathology.

4 4 4 All are welcome 4 4 4

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