



HKBU MATH 45th Anniversary Distinguished Lecture

Innovative Spectral and Imaging Methods with applications to **Telemedicine, Telehealth and Non-invasive Diagnosis**



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- 22 October 2015 (Thursday) Date:
- 4:30 pm 5:30 pm (Preceded by Reception at 4:00 pm) Time:
- RRS905, Sir Run Run Shaw Building, Venue: Ho Sin Hang Campus, Hong Kong Baptist University

Abstract

This is a lecture for the general audience without advanced mathematics background and only very minimal knowledge of signal and image processing. The topics of discussion include:

- 1. The state-of-the-art (nonlinear and non-stationary) signal and image decomposition and reconstruction methods that extend to higher dimensional data manifolds.
- 2. What is telemedicine? Why is it necessary? What are the benefits?
- 3. Telehealth prolongs healthy lives and is a multi-trillion-\$ industry and beyond.
- 4. Everyone wants non-invasive medical diagnosis, but what are the options?
- 5. A brief discussion of traditional Chinese medical (TCM) practice.
- 6. How does the knowledge of TCM benefit the advancement of bio-medical research?
- 7. Perhaps modern spectral, imaging, and data manifold methods could provide the solutions, at least partially.

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