

# NATIONAL UNIVERSITY OF SINGAPORE

School of Computing

## C S S E M I N A R

**Title: Challenges on Scalable Indexing Techniques for Big Multimedia Data**

Speaker: Mr Shoji Nishimura  
NEC Corporation  
Japan

Date/Time: 2 March 2015, Monday, 02:00 PM to 04:00 PM

Venue: Executive Classroom, COM2-04-02

Chaired by: Dr Ooi Beng Chin, Distinguished Professor, School of Computing  
(ooibc@comp.nus.edu.sg)

### Abstract:

Mr. Nishimura will briefly introduce the related research topics that are currently conducted at the Central Research Laboratories of NEC Corporation, such as big data processing. He will then focus on the introduction to a commercial level demo system for surveillance video search, named Wally, which has been exhibited at the ACM Multimedia 2014. Wally is a scalable distributed automated video surveillance system with rich search functionalities, and integrated with image processing products developed by NEC, such as NeoFace(R), FieldAnalyst, and StreamPro. Here, NeoFace(R) is one of the best face recognition technologies in the world, having highest recognition accuracy. Meanwhile, he will report their current progress on indexing techniques for similarity search on high dimensional multimedia data.

Subsequently, Mr. Nishimura will briefly introduce small pieces of the past work on multi-dimensional index for location based services, named MD-HBase, which has been presented at the MDM 2011. MD-HBase is designed to achieve both scalability and efficiency for querying location data. Meanwhile, he will report their current progress on the extension of MD-HBase. Finally, he will pick up some challenging issues and share some initial motivations that make us should consider integrating both low and high dimensional indexes. Such an integration would be helpful to enhance the functionalities on multimedia information retrieval in the near future.

### Biodata:

Mr. Shoji Nishimura is a researcher and an assistant manager of the Central Research Laboratories of NEC Corporation. He received the B.E. and M.E. degrees from Kyoto University, Japan in 1999 and 2001, respectively. He was a visiting researcher at University

of California, Santa Barbara, USA from Jan. to Dec. in 2010. His research interests include parallel and distributed computing, multi-dimensional indexing, and multimedia information retrieval. He worked on the topics of high performance computing, parallelizing compiler, grid computing, web services, and location based services. Currently he is working on the topics of large-scale data processing and database management systems. He has filed over 20 patents (12 granted) and published related papers at major conferences. He received Best Paper Runner-up Award at MDM 2011. He is an editorial member of Information Processing Society Japan Journal (IPSJ Journal). He is a member of ACM, the Information Processing Society of Japan (IPSJ), and the Database Society of Japan (DBSJ).