



香港浸會大學
HONG KONG BAPTIST UNIVERSITY
計算機科學系
Department of Computer Science

Department of Computer Science Distinguished Lecture Series 2016/17

Visual Domain Adaptation



4:30 - 5:30pm | 4 January, 2017 | Wednesday

LT1 (SCT501), Cha Chi-ming Science Tower, Ho Sin Hang Campus

Abstract

Domain adaptation (also called transfer learning) is an emerging research topic in computer vision. In some vision applications, the domain of interest (i.e., the target domain) contains very few or even no labelled samples, while an existing domain (i.e., the auxiliary domain) is often available with a large number of labelled examples. For example, millions of loosely labelled Flickr photos or YouTube videos can be readily obtained by using keywords based search. On the other hand, users may be interested in retrieving and organizing their own multimedia collections of images and videos at the semantic level, but may be reluctant to put forth the effort to annotate their photos and videos by themselves. This problem becomes furthermore challenging because the feature distributions of training samples from the web domain and consumer domain may differ tremendously in statistical properties. To explicitly cope with the feature distribution mismatch for the samples from different domains, in this talk I will describe our SVM based approaches for domain adaptation under different settings as well as their interesting applications in computer vision.

Biography

Dong Xu is Chair in Computer Engineering at the School of Electrical and Information Engineering, The University of Sydney, Australia. He received the B.Eng. and PhD degrees from University of Science and Technology of China, in 2001 and 2005, respectively. While pursuing the PhD degree, he worked at Microsoft Research Asia and The Chinese University of Hong Kong for more than two years. He also worked as a postdoctoral research scientist at Columbia University from 2006 to 2007 and a faculty member at Nanyang Technological University from 2007 to 2015.

His current research interests include computer vision, multimedia and machine learning. His group has developed new machine learning methods for various vision and multimedia related applications including Internet vision and social media (e.g., large scale image/video retrieval), biometrics (face recognition and human gait recognition), video analysis and medical image analysis. He has published more than 100 papers in IEEE Transactions and top tier conferences including CVPR, ICCV, ECCV, ICML, ACM MM and MICCAI. His co-authored work (with his former PhD student Lixin Duan) received the Best Student Paper Award in IEEE International Conference on Computer Vision and Pattern Recognition (CVPR) in 2010. His co-authored work (with his former PhD student Lin Chen) won the IEEE Transactions on Multimedia Prize Paper Award in 2014.

He is on the editorial boards of T-PAMI, T-MM and T-CSVT. He also served as a guest editor of seven special issues in T-NNLS, T-CYB, T-CSVT, IJCV, ACM TOMM, CVIU and IEEE Multimedia. He is currently serving as the steering committee member of ICME (2016-2017). Moreover, he served as an area chair of CVPR 2012, a program co-chair of ICME 2014, an area chair of ECCV 2016 and a track chair of ICPR 2016.

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