



HAL
open science

Transfer Learning and Applications

Qiang Yang

► **To cite this version:**

Qiang Yang. Transfer Learning and Applications. 7th International Conference on Intelligent Information Processing (IIP), Oct 2012, Guilin, China. pp.2-2, 10.1007/978-3-642-32891-6_2 . hal-01524983

HAL Id: hal-01524983

<https://inria.hal.science/hal-01524983v1>

Submitted on 19 May 2017

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons Attribution 4.0 International License

Transfer learning and Applications

Qiang Yang

Department of Computer Science and Engineering,
Hong Kong University of Science and Technology, Hong Kong
qyang@cse.ust.hk

Abstract. In machine learning and data mining, we often encounter situations where we have an insufficient amount of high-quality data in a target domain, but we may have plenty of auxiliary data in related domains. Transfer learning aims to exploit these additional data to improve the learning performance in the target domain. In this talk, I will give an overview on some recent advances in transfer learning for challenging data mining problems. I will present some theoretical challenges to transfer learning, survey the solutions to them, and discuss several innovative applications of transfer learning, including learning in heterogeneous cross-media domains and in online recommendation, social media and social network mining.