香港浸會大學理學院
HKBU Faculty of Science

DEPARTMENT OF COMPUTER SCIENCE

<u>PhD Degree Oral Presentation</u>

PhD Candidate:	Mr Mang YE
Date	28 August 2019 (Wednesday)
Time:	10:30 am - 12:30 pm (35 mins presentation and 15 mins Q & A)
Venue:	RRS 732, Sir Run Run Shaw Bldg., HSH Campus

"Open-world Person Re-Identification"

<u>Abstract</u>

With the increasing demand of intelligent video surveillance systems, person re-identification (re-ID) plays an important role in intelligent video analysis, which aims at matching person images across non-overlapping camera views. With the advanced deep neural networks, existing methods have achieved human-level performance on the widely-used re-ID benchmarks. However, most of the research efforts are conducted on the closed-world settings. As a prerequisite in practical video surveillance application, there is still a large gap between the closed-world research-oriented setting and the practical open-world settings. In this thesis, we try to narrow the gap by studying three important issues in open-world person re-ID, including (1) unsupervised learning with large-scale unlabeled training data; 2) learning robust re-ID model with label corrupted training data and 3) cross-modality person re-ID with multi-modality data.

For unlabeled training data, a dynamic graph matching framework and a robust anchor embedding method are proposed for unsupervised video-based person re-ID under different settings. And a data augmentation invariant and instance spread-out feature is proposed for general unsupervised embedding learning problems.

For label corrupted training data, a two-stage PurifyNet is introduced to handle the label noise problem in person re-identification, which jointly refines the falsely annotated labels and mines hard samples with correct labels.

For multi-modality data, a dual-constrained top-ranking loss with a two-stream network is proposed for cross-modality visible-thermal person re-ID, which simultaneously addresses the cross-modality and intra-modality variations.

*** ALL INTERESTED ARE WELCOME ***