# Shitong Sun

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## RESEARCH INTERESTS

Text-guided Image Retrieval, Federated Learning, Zero-shot Learning

## EDUCATION

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|---|---|
| **Queen Mary University of London | Computer Vision | PhD | Supervisor: Shaogang Gong** | **Sept.2020-Now** |
| **University of Trento | Alan Turing Institute | Supervisor: Prof. Nicu Sebe** | **2023** |
| **Katholic University of Leuven | Artificial Intelligence | Master | Cum Laude** | **Sept.2017-Sept.2018** |
| **Katholic University of Leuven | Electronic Engineering | Bachelor | Cum Laude** | **Sept.2015-Jul.2017** |
| **Beijing Jiaotong University | Electrical Engineering and Automation | Bachelor | 90.1%** | **Sept.2013-Jul.2015** |

## RESEARCH

**Benchmarking Robustness of Text-Image Composed Retrieval | NeurIPS 2023 workshop**

- Research: Robustness analysis on text-guided image retrieval.

**Training-free Zero-shot Composed Image Retrieval with Local Concept Reranking | Under review ECCV 2024**

- Research: Text-guided image retrieval with explicit text query with both global and local level.

**Decentralised Person Re-Identification with Selective Knowledge Aggregation | BMVC 2021**

- Research: Federated ReID algorithm with both domain specific knowledge and domain invariant knowledge under privacy protection.

**Federated Zero-Shot Learning with Mid-Level Semantic Knowledge Transfer | Under Pattern Recognition**

- Research: Federated ZSL with scalable and data protected mid-level knowledge transfer.

## WORKING EXPERIENCE

**Institute of Automation, Chinese Academy of Science | Deep CNN based computer vision**          **China, 2018-2020**

- Research: Develop ReID algorithm and enhance its performance on market1501, Duke datasets
- Skiing company project: Apply pedestrian-attribute-recognition algorithm to real-world problems
- National key project: Reconstruction of human 3D model based on Densepose, fix it to Intelligent Scene Exploration and Evaluation (ISEE) platform

**Teaching Assistant in QMUL, Machine Learning, Computer Vision**          **London, 2021-2023**

## PROJECTS

**Master Thesis | Deep Neural Network | Continual learning**          **Belgium, 2017-2018**
**Supervisor: Prof. Tinne Tuytelaars**

- Using data prototypes to avoid forgetting in continual learning
- Design algorithm for data representation extraction and combination from different tasks

**Incisor Segmentation | Computer Vision**          **Belgium, 2018**

- Build an incisor detector based on PCA and Active Shape Model for initial position estimation
- Interpret the shape models with images for delicate segmentation

## AWARDS

- Alan Turing Institute provided a gift of research funding for 4,000 pounds in 2023
- Graduated with Cum Laude Bachelor and Master Honors in KU Leuven in 2017 and 2018
- Merit Student in Beijing Jiaotong University in 2015
- Study Scholarship in Beijing Jiaotong University in 2014 and 2015

## SKILLS

- Language: English LELTS 6.5, fluent in both spoken and written English; Chinese with Native Proficiency
- Codding: 7 years of coding experience, familiar with Python, C, Java, TCP/IP, MATLAB, Keras, Pytorch.