TAN WANG

Nanyang Technological University ⋄ 50 Nanyang Ave ⋄ Singapore
(+65) 8941-8544 ⋄ wangt97@hotmail.com ⋄ Google Scholar ⋄ Website

RESEARCH INTERESTS

Debiased Learning, Causality, Vision & Language

EDUCATION

University of Electronic Science and Technology of China (UESTC) *Sep. 2016 - Jun. 2020*
Honours Degrees, Electronic Information Engineering
GPA(Overall): **92.98**/100 or **3.99**/4.0
Rank: **2**/284 (Overall) or **1**/415 (First 2 years)
Highlighted Courses: Calculus I (96/100), Calculus II (97/100), Pattern Recognition (99/100), Probability and Mathematical Statistics (96/100), Signals and Systems (95/100), Digital Signal Processing (96/100), Analog electronic Circuits (96/100), Electromagnetic Field Theory (97/100)

Chiba University, Japan *Aug. 2017*
Exchange Program
Sakura Science Club scholarship awardee. Funded by Japan Science and Technology Agency (JST).

Nanyang Technological University (NTU), Singapore *Aug. 2020 - Present*
2nd Year Ph.D. Student
Supervisor: Prof. Zhang Hanwang

RESEARCH EXPERIENCE

Microsoft Research *Jun. 2022 - Sep. 2022*
Research Intern, Redmond WA (Remote)
Supervised by Kevin Lin, Lijuan Wang, Zicheng Liu

Nanyang Technological University (NTU) *Jul. 2019 - Jun. 2020*
Research Assistant, MReal Lab
Supervised by Prof. Zhang Hanwang.

University of Electronic Science and Technology of China (UESTC) *Mar. 2018 - Jun. 2020*
Research Assistant, Center for Future Media
Supervised by Prof. Xing Xu and Prof. Yang Yang. Collaborated with Prof. Alan Hanjalic.

PUBLICATIONS

Please check Google Scholar for the full publication list (* indicates equal contribution)

Equivariance and Invariance Inductive Bias for Learning from Insufficient Data
- **Tan Wang**, Qianru Sun, Sugiri Pranata, Karlekar Jayashree, Hanwang Zhang
- European Conference on Computer Vision (ECCV), 2022 (**Final Rating: 122**)

Class Re-Activation Maps for Weakly-Supervised Semantic Segmentation
- Zhaozheng Chen, **Tan Wang**, Xiongwei Wu, Xian-sheng Hua, Hanwang Zhang, Qianru Sun
- IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2022

Self-Supervised Learning Disentangled Group Representation as Feature

- **Tan Wang**, Zhongqi Yue, Jianqiang Huang, Qianru Sun, Hanwang Zhang
- Conference and Workshop on Neural Information Processing Systems (NeurIPS), 2021 (**Spotlight Presentation**)

Causal Attention for Unbiased Visual Recognition

- **Tan Wang**, Chang Zhou, Qianru Sun, Hanwang Zhang
- IEEE International Conference on Computer Vision (ICCV), 2021

Counterfactual Zero-Shot and Open-Set Visual Recognition

- Zhongqi Yue*, **Tan Wang***, Hanwang Zhang, Qianru Sun, Xian-sheng Hua
- IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2021

Visual Commonsense R-CNN

- **Tan Wang**, Jianqiang Huang, Hanwang Zhang, Qianru Sun
- IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2020

Visual Commonsense Representation Learning via Causal Inference

- **Tan Wang**, Jianqiang Huang, Hanwang Zhang, Qianru Sun
- IEEE Conference on Computer Vision and Pattern Recognition MVM Workshop (CVPRW), 2020 (**Oral Presentation**)

Matching Images and Text with Multi-modal Tensor Fusion and Re-ranking

- **Tan Wang**, Xing Xu, Yang Yang, Alan Hanjalic, Heng Tao Shen and Jingkuan Song
- ACM Multimedia (ACM MM), 2019 (**Oral Presentation**)

Cross-Modal Attention with Semantic Consistence for Image-Text Matching

- Xing Xu*, **Tan Wang***, Yang Yang, Lin Zuo, Fumin Shen and Heng Tao Shen
- IEEE Transactions on Neural Networks and Learning Systems (TNNLS), 2020

Radial Graph Convolutional Network for Visual Question Generation

- Xing Xu*, **Tan Wang***, Yang Yang, Alan Hanjalic and Heng Tao Shen
- IEEE Transactions on Neural Networks and Learning Systems (TNNLS), 2020

SCHOLARSHIPS

Jury Prize in ICCV 2021 VIPriors Challenge	2021
NTU Research Scholarship	2020
Outstanding Graduates of Sichuan Province (Top 1% student)	2020
Outstanding Undergraduate Thesis Award (Top 2% student)	2020
National Scholarship (Top 2% student)	2016-2017
National Scholarship (Top 2% student)	2017-2018
Tang Lixin Sponsored Elite Scholarship (Only 60 awardees per year in UESTC)	2017-2018
Best Freshman Award (Only 1 awardee per year in Department)	2016-2017
Honor Student Scholarship (10 awardees per year in Department)	2017-2018
Outstanding Student Scholarship (Top 10% student)	2016-2019

LEADERSHIP

Lecture Group of EE Department

Founder & President   *Oct. 2017 - Sep. 2018*

- Organized academic forum, sharing sessions, Q&A meetings more than 30 times, serving over 1000 students on studying and future planing.
- The team grows to 30 people and won the Outstanding Student Organisation prize in 2018.

Innovative Entrepreneurship Project of UESTC

Team Leader   *Sep. 2017 - Mar. 2018*

- This project focus on the pedestrian detection in low-light condition with excellent conclusion. We combine the recent pedestrian detection models with the low-light image enhancement algorithm based on Laplace operator.
- Responsible for the code implementation and project promotion.

ACADEMIC SERVICE

Co-organizer: NICO Challenge 2022 (ECCV'22 CiV Workshop)
PC Member: ICME'19, CVPR'22, ECCV'22
Journal: IEEE TNNLS, ACM ToMM

SKILLS

Programming Languages	Python, Matlab, LaTeX, Shell
Deep Learning	Pytorch, Tensorflow
Others	Multisim, VerilogHDL