TAN WANG

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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*
3rd 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; 2022 PREMIA Best Student Paper**)

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

Google PhD Fellowship 2022	2022
2022 PREMIA Best Student Paper Awards (The Gold Award)	2022
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
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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