

XUEHUI WANG

Phone: (+86)178-2070-0935

Email: wangxh228@mail2.sysu.edu.cn

Website: wangxuehui.site

Address: School of Data and Computer Science, Sun Yat-sen University, China

EDUCATION

Shandong University

Sep. 2014 - July. 2018

B.S. in Electronic Information Science and Technology

– GPA: 3.58/4.0 Ranking: 6/94

– Shandong University, SmartCar Lab

Sun Yat-sen University

Sep. 2018 - July. 2021

Master student in Computer Science (General)

Advisor: Long Chen

RESEARCH INTERESTS

Computer Vision(3D perception, Super-resolution, Image Processing), GAN, Autonomous Vehicle Perception System

PUBLICATIONS

Sep. 2018 - Now

1. Yuzhi Zhao[†], **Xuehui Wang**[†], Laiman Po*, Qiong Yan et,al. “BabyPredictor: A Children Face Prediction Framework with Disentangled Learning” Submitted to AAAI 2021.
 - we collect a large-scale Family Face Database (FF-Database) and propose a novel BabyPredictor framework to learn an end-to-end mapping. We disentangle the genetic factor from whole latent space and utilize a diversity factor to learn a multimodal representation.
2. **Xuehui Wang**[†], Qing Wang[†], Yuzhi Zhao, Lei Fan, Long Chen*, Junchi Yan. “Efficient Lightweight Single-image Super-Resolution Network with Attentive Auxiliary Feature Learning” ACCV 2020 (**Acceptance rates: $\approx 25\%$**)
 - we develop a computation efficient yet accurate network based on proposed attentive auxiliary features (A²F) for SISR. Experimental results on large-scale dataset demonstrate the effectiveness of the proposed algorithm against the state-of-the-art SR methods.
3. **Xuehui Wang**[†], Yuzhi Zhao, Qing Wang, Lei Fan, Long Chen*, Junchi Yan. “Adaptively Multi-gradients Auxiliary Feature Learning for Efficient Super-resolution” Prepared for TIP.
 - An enhanced version about Paper.1. We will also add more experiments to demonstrate the high efficiency of our method.
4. **Xuehui Wang**, Qing Wang, Lei Fan, and Long Chen*. “SemaSuperpixel: A Multi-channel Probability-driven Superpixel Segmentation Method” Prepared for ICASSP 2020.
 - We propose a multi-channel probability-driven superpixel segmentation method which introduces multi-channel semantic probabilities into an energy-based method. Extensive experimental evaluations show that our method achieves a leading segmentation quality and convergence speed.
5. **Xuehui Wang**, Lei Fan, Long Chen*. “Semantic-Supervised Road Detection using Planecell” IEEE TITS, (Under Review).
 - We obtain the road area in 3D space using a new representation method: Planecell. We achieve both an increased accuracy and a higher efficiency in presenting the large-scale urban environment.

6.Yuzhi Zhao, Laiman Po, Tingyu Lin, **Xuehui Wang**, Kangcheng Liu, Yujia Zhang et,al. “Legacy Photo Editing with Learned Noise Prior” Submitted to WACV2021.

- We introduce a noise prior learner NEGAN simulating the noise distribution of legacy images using unpaired images. It mainly focuses on matching high-frequency part of noisy images through discrete wavelet transform. Our method performs joint denoising and inpainting and user-guided colorization.

EXPERIENCE

SenseTime Research.

January. 2020 - Now

Intern, Leader: Qiong Yan

I have participated in three topic: 1)Face Restoration with unpaired data. 2)HDR for night portrait 3)An interesting topic - how to predict the appearance of a baby with GAN.

Zhejiang University.

July. 2019 - September. 2019

Visiting Scholar, Advisor: Zicheng Liao

Do researches about the basic architecture of 3D point cloud convolutional network, audio to vision. Build a model which can convert an audio to an expression.

SmartCar Lab, Shandong University.

Mar. 2015 - June. 2018

Core Member.

Study and design the vision algorithm which can help the smart car finish different tasks.

PROJECTS

1.Vision-based Robot Environment Modeling and Location Navigation, National Key Research and Development Program of China

July. 2019 -

- Responsible for the research of the mutual promotion mechanism between the semantic comprehension and the mapping.
- Supervised by Long Chen

2.ECCV2020 Workshop-Efficient Super-resolution

- An efficient super-resolution method. We get a good trade-off between running time and performance. We exploit the frequency relationship between different layers in a network .
- Project leader (Supervised by Qiong Yan)

3.The Design and Development of the Smart Car Based on Beacon Identification.

Oct. 2016 - July. 2017

- Responsible for the design of the algorithm which can help the smart car find and run to the beacon. We treat the eagle camera as the perception device and the K60 made by NXP as the Central Processing Unit.
- Project leader

4.A Contral System for Ball Based on Machine Vision.

July. 2017

- The goal of the system is to make the ball slide between two random points and turn around on the smooth board as required. We calculate the position and the speed of the ball based on machine vision technology.
- Project leader

AWARDS, GRANTS & HONORS

1.National Encouragement Scholarship. (2015, 2016, 2017)

2.Chinese University Students' Star of Self-improvement. (Nomination Award)

- 3.The NXP cup National University Students Intelligent Car Race. (**National Award for the second prize**)
- 4.Mathematical Contest in Modeling and Interdisciplinary Contest in Modeling. (**Honorable Mention**)
- 5.China Undergraduate Mathematical Contest in Modeling. (**First Prize in Shandong Contest District**)
- 6.National Undergraduate Electronics Design Contest. (**First Prize in Shandong Contest District, Recommended National Award**)
- 7.National College Competition on Internet of Things. (**Second Prize in East China region**)
- 8.The First Science Technology Innovation of Shandong College Students. (**Second Prize**)
- 9.Person of the Year in Shandong University. (**2017**)
- 10.Outstanding Graduates in Shandong Province. (**2018**)
- 11.Excellent Student Cadre in Shandong Province. (**2018**)
- 12.Merit Student in Shandong University.
- 13.The First Prize Scholarship in Shandong University.

STRENGTHS

Skills: C++, Python, Pytorch, Tensorflow

Self-appraisal: Positive and Optimistic, Interested in academic research