

Xiaoyong Guo

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Sex: Male, **Birth Date:** May 7th 1984, **Marriage:** Married



Education & Work

2010.09-2012.12 School of Physics, Nanjing Univ. Physics PhD;

2013.02-now College of Electronic Information and Automation, Tianjin University of Science and Technology, Associate professor.

Research Interest

- Deep learning model optimization for edge computing devices;
- Computational imaging and perception;
- Parallel computation.

Skills&Abilities

- Good command of programming language: Python, C/C++, CUDA C++;
- Deep learning frame work for training models: Pytorch, Tensorflow, Darknet;
- Inference engines or SDK for model deployment: DNN(opencv), TensorRT, Deepstream, NCNN, NNIE;
- Good command of embedded systems: Jetson modules (nano, Xavier NX, TX2), Raspberry pi (3B+, 4), Hisilicon (Hi3516DV300), STM32 (F407ZGTx).

My products

- Thrust Nano 5G Edge computing device;

(url: <https://www.bilibili.com/video/BV1Mg411D72V/>);



- Single-shot multi-spectral face detection & in-vivo discrimination system;

(url: <https://www.bilibili.com/video/BV1V14y1U7Tp/>)



- Portable smart spectrometer;



Patents

- Improved SSD method with domain adaptation for surveillance camera, patent for invention 2023, grant no. 201910659059.4

Representative Papers:

(Since 2009, I have published 29+ first or corresponding author papers. Here, I only list the papers in the field of computer vision and parallel computation, for a full publication list please see web site:

<http://zdh.tust.edu.cn/szdw/jsxl/c0f51390a4be4dcfb40c0f954146df2e.htm>)

- Dawei Zhang, Yanting Huang, Xiaoyang Xie, **Xiaoyong Guo***, A variational Retinex model with structure-awareness regularization for single-image low-light enhancement, IEEE Access Volume: 11, 50918-50928, 2023.(SCI)
- **Xiaoyong Guo** , Kai Zhang, Jiahao Peng, Xiaoyan Chen, Guangjie Guo, Opt2Ada: an universal method for single-image low-light enhancement, Journal of Intelligent & Fuzzy Systems, vol. 44, no. 6, pp. 10689-10702, 2023.(SCI)
- Zhendong Guo, Xiaohong Li, Kai Zhang, **Xiaoyong Guo***, Adaptive pruning threshold based convolutional neural network for object detection, Journal of Intelligent & Fuzzy Systems, vol. Pre-press, no. Pre-press, pp. 1-11, 2022 Published: 19 August 2022 (SCI)
- Hao Feng, Kai Zhang, Xin Wang, Guiqing Zhang and **Xiaoyong Guo***, Thermal transport of bilayer graphene: a homogeneous nonequilibrium molecular dynamics study, 2022 Phys. Scr. 97 045704 (SCI)
- Yizhong Wang, Penghui Niu, **Xiaoyong Guo***, Guowei Yang, and Jun Chen, Single Shot Multibox Detector With Deconvolutional Region Magnification Procedure, IEEE Access Volume: 9, 47767–47776, 2021. (SCI)
- Xiaohong Li, Zhendong Guo, Shan Zhang, and **Xiaoyong Guo***, A new deep model based on part pooling for medical image classification, 2021 IEEE International Conference on Artificial Intelligence and Industrial Design (AIID 2021) (EI)
- Zimeng Chi and **Xiaoyong Guo***, CUDA acceleration for solving three-dimension time-dependent parabolic partial differential equation, 2021 2nd International Conference on Intelligent Computing and Human-Computer Interaction (ICHCI) (EI)
- Zimeng Chi, Guiqing Zhang, and **Xiaoyong Guo*** A new attention mechanism based on inner product for medical image classification, Proc. SPIE 12168, International Conference on Computer Graphics, Artificial Intelligence, and Data Processing (ICCAID 2021), 1216800 (18 March 2022); (EI)
- **Xiaoyong Guo**, Suxia Xu, Yizhong Wang, J. P. Y. Cheung, Yong Hu, Prediction Model of Scoliosis Progression Bases on Deep Learning. Communications in Computer and Information Science, vol 1138. Springer, Singapore (2019) (EI).