# 谢国洋,英国萨里大学,机器学习博士

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# 简短介绍

我是谢国洋,英国萨里大学 NICE 组实验室博士,师从于欧洲科学院院士,IEEE Fellow, IEEE计算智能学位侯任理事长,德国比勒菲尔德大学洪堡人工智能教席教授金耀初。我博士题目Deep Learning-based Image Anomaly Detection in Industrial Manufacturing and Medical Imaging (基于深度学习的工业图像和医疗图像异常检测)。现在我手上总共有14篇顶会及顶刊(4篇 CCF-A, 2篇 CCF-B, 4篇 JCR1区顶刊,其中3篇是中科院1区)。在读博之前,我曾在广汽研究院和百度工作,工作方向是自功驾驶感知相关的技术管理和产品研发的工作。我曾在广汽研究院带领14人团队进行 L3级和L4级自动驾驶技术进行预研和开发工作。其细节会在工作经历中详细介绍

# 学习经历

英国萨里大学 - 博士-机器学习, 2019.10-2023.10

香港科技大学-硕士-机器人感知, 2013.9-2015.9

电子科技大学-本科-电子工程, 2009.9-2013.6

## 学术论文(\* 为共同一作)

- 1. **Guoyang Xie**\*, Jinbao Wang\*, Jiaqi Liu, Yaochu Jin and Feng Zheng, "Pushing the Limits of Few Shot Anomaly Detection in Industry Vision: Graphcore", (ICLR 2023, ML 三大会之一)
- Jiaqi Liu\*, Guoyang Xie\*, Ruitao Chen\*, Xinpeng Li, Jinbao Wang, Yong Liu, and Feng Zheng, "Real3D-AD: A Dataset of Point Cloud Anomaly Detection", (NeurIPS Dataset and Benchmark Track, CCF-A)
- 2. Ruitao Chen\*, **Guoyang Xie**\*, Jiaqi Liu\*, Jinbao Wang, Ziqi Luo, Jinfan Wang and Feng Zheng, "EasyNet: An Easy Network for 3D Industrial Anomaly Detection", (ACM MM, CCF-A)
- 3. **Guoyang Xie\***, Jinbao Wang\*, Jiaqi Liu\*, Jiayi Lyu, Yong Liu, Chengjie Wang, Feng Zheng, and Yaochu Jin, "IM-IAD: Industrial Image Anomaly Detection Benchmark in Manufacturing", (TCYB, IF: 19.217, JCR1区,中科院1区,Minor Revision)

- 4. L.Zhang, S.Zhang, **Guoyang Xie**, Jiaqi Liu, Hua Yan, Jinbao Wang, and Feng Zheng, "What makes a good data augmentation for few-shot unsupervised image anomaly detection", (CVPR Workshop 2023)
- 5. Jinbao Wang\*, **Guoyang Xie**\*, Yawen Huang\*, Yefeng Zheng, Yaochu Jin and Feng Zheng, "FedMed-ATL: Misaligned Unpaired Cross-Modality Neuroimage Synthesis via Transform Loss", (ACM MM 2023, CCF-A)
- 6. **Guoyang Xie**, Tao Xu, Carsten Isert, Michael Aeberhard, Shaohua Li and M.Liu, "Online Active Calibration for a Multi-LRF System", (ITSC 2015, CCF-B)
- 7. **Guoyang Xie\***, Yawen Huang\*, Jinbao Wang, Jiayi Lyu, Feng Zheng, Yefeng Zheng, and Yaochu Jin, "Cross-Modality Neuroimage Synthesis: A Survey", (ACM Computing Surveys 2023, IF: 14.324, JCR-1区,中科院1区)
- 8. **Guoyang Xie\***, Jinbao Wang, Guo Yu, Feng Zheng and Yaochu Jin, "Tiny Adversarial Multi-Objective One-Shot Neural Architecture Search", (CAIS, IF: 6.72, JCR1区)
- 9. Jinbao Wang\*, **Guoyang Xie**\*, Yawen Huang\*, Jiayi Lyu, Feng Zheng, Yefeng Zheng and Yaochu Jin, "FedMed-GAN: Federated Domain Translation on Unsupervised Cross-Modality Brain Image Synthesis", (NeuroComputing, IF: 5.719, JCR1 ⋈)
- 10. Jiaqi Liu\*, Guoyang Xie\*, Jinbao Wang\*, Shangnian Li, Chengjie Wang, Feng Zheng, and Yaochu Jin, "Deep Industrial Image Anomaly Detection: A Survey", (Machine Learning Research, 2023)
- 11. Jinbao Wang\*, **Guoyang Xie**\*, Yawen Huang\*, Jiayi Lyu, Feng Zheng, Yefeng Zheng, and Yaochu Jin, "K-CROSS: K-Space Aware Cross-Modality Score for Synthesized Neuroimage Quality Assessment, (Submitted to JBHI, CCF-B, 中科院1 区)
- 12. **Guoyang Xie\***, Jiaqi Liu\*, Jinbao Wang, Yaochu Jin, and Feng Zheng, "Transfer-AD: Transferable Image Anomaly Detection in Changeover Procedure", (Submitted to AAAI 2023, CCF-A)
- 13. Jiang Xi\*, **Guoyang Xie**\*, Jinbao Wang\*, Yong Liu, Chengjie Wang, Feng Zheng, Yaochu Jin, "A Survey of Visual Sensory Anomaly", arXiv preprint arXiv:2202.07006

#### 工作经历

首席感知智能算法工程师, 广汽研究院 - 2017.12-2019.9

- 1. 建立L3和 L4 级自动驾驶场景测试标准定义, 其中包括:
  - 车道线检测测试标准定义
  - 可行驶区域分割标准定义,包含高速,城区,郊区定义
  - 目标检测标准定义,包含高架桥,高速路定义场景
- 2. 建立量产级泊车辅助算法, 其中包括:
  - Visual SLAM 算法建立

- 智能泊车场景定义
- 3. 建立大规模的高速道路视觉算法数据集,可支持多项任务,其中包括
  - 像素级语义检测
  - 实时级目标检测

## 感知智能算法工程师 - 2015.11-2017.11

基于深度学习的3D障碍物识别及分类,其中包括

- 基于forest tree 的3D目标分类
- End-to-end 3D点云障碍物检测,分类,跟踪统一框架

# 基本技能

- 英文写作和口语流利, 托福:99分, GRE:325分
- 编码语言: Python, Latex, C++

# 著名学术期刊审稿人

- 2020-2023, CAIS 审稿人
- 2022, AAAI审稿人
- 2023, NeurIPS审稿人
- 2023, TEVC审稿人
- 2023, ACM MM 审稿人
- 2023, ICLR 审稿人
- 2023, TETCI 审稿人
- 2023, TNNLS 审稿人

## GITHUB REPOS(代码库)

- Open-IAD: https://github.com/M-3LAB/open-iad
- FedMed-GAN: https://github.com/M-3LAB/FedMed-GAN
- Awesome Industrial Image Anomaly Detection: https://github.com/M-3LAB/awesome-industrial-anomaly-detection
- Brain-GAN Survey: https://github.com/M-3LAB/awesome-multimodal-brain-image-systhesis