

# YE ZHU

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## Education

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**South China Agricultural University**

**Sep. 2017 – June 2021**

*Bachelor of Engineering in Software Engineering*

*Guangzhou, China*

## Research Experiments

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**Inherent Consistent Learning for Accurate Semi-supervised Medical Image Segmentation**

Ye Zhu, Jie Yang, Siqi Liu and Ruimao Zhang\*

March 2023, MIDL 2023 (accept, **Oral**)

- Propose a novel Inherent Consistent Learning (ICL) method, which aims to learn robust semantic category representations through the semantic consistency guidance of labeled and unlabeled data to help segmentation.
- Conducted extensive evaluations on three medical image segmentation datasets (2D and 3D), outperforming the state-of-the-art methods with a large margin.

**Toward Unpaired Multi-modal Medical Image Segmentation via Learning Structured Semantic Consistency**

Jie Yang, Ye Zhu, Chaoqun Wang, Zhen Li and Ruimao Zhang\*

March 2023, MIDL 2023 (accept)

- Proposed a novel method for performing unpaired multi-modal medical image segmentation based on a single Transformer by learning the structured semantic consistency between modalities.
- Collaborated in conducting extensive evaluations on two medical image segmentation scenarios, outperforming the state-of-the-art methods with a large margin.

**AMOS: A Large-Scale Abdominal Multi-Organ Benchmark for Versatile Medical Image Segmentation**

Yuanfeng Ji, Haotian Bai, Jie Yang, Chongjian Ge, Ye Zhu, Xiang Wan\*, Ping Luo\* and Ruimao Zhang\*

April 2022, NeurIPS 2022 (accept, **Oral**)

- Built a new large-scale, diverse, and clinical abdominal organ segmentation dataset of 600 CT/MRI scans, namely AMOS, which is comprehensive with 15 organs, and is the largest dataset of its kind.
- Collaborated in benchmarking current baseline methods on this newly built dataset with various evaluation metrics, and designed extended experiments to validate that AMOS could serve as a versatile dataset for multiple learning tasks.

**Toward Clinically Assisted Colorectal Polyp Recognition via Structure Cross-modal Representation Consistency**

Weijie Ma, Ye Zhu, Jie Yang, Yiwen Hu, Zhen Li, Li Xiang and Ruimao Zhang\*

February 2022, MICCAI 2022 (early accept, top 13%) .

- Proposed a novel Transformer-based framework is introduced to tackle WL-only CPC, which proposed the Cross-modal Global Alignment (CGA) and a newly designed Spatial Attention Module (SAM) to pursue the structured semantic consistency.
- Collaborated in conducting extensive evaluations on CPC-Paired Dataset with two paired image modalities (WL-NBI).

**Hybrid-Order Anomaly Detection on Attributed Networks**

Ling Huang, Ye Zhu, Yuefang Gao, Tuo Liu, Chao Chang, Caixing Liu, Yong Tang and Chang-Dong Wang\*

July 2021, TKDE 2021 (early accept)

- Defined a new problem of hybrid-order anomaly detection on attributed networks, which aims to detect not only structure/attribute-abnormal nodes but also structure/attribute-abnormal motif instances.
- Developed a new deep learning model called Hybrid-Order Graph Attention Network (HO-GAT) and conducted extensive experiments on real-world datasets, confirming the effectiveness of the HO-GAT method.

## Programming Skills

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**Programming Languages:** Python, Java, C

**Developer Tools:** VS Code, Eclipse, Pycharm

**Technologies/Frameworks:** Linux, GitHub

## Additional Information

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**Languages:** Cantonese (Native), Mandarin (Proficient), English (Proficient - IELTS: 7.0)