## 2021-2022 Medical Vision Seminar

| Week      | Paper Title   | Reporter      |
|-----------|---|---------------|
| 2021/6/30 | <ol> <li>(CVPR20) Structure Boundary Preserving Segmentation for<br/>Medical Image with Ambiguous Boundary</li> <li>(CVPR21) DoDNet: Learning to segment multi-organ and<br/>tumors from multiple partially labeled datasets</li> </ol>   | Luyue Shi     |
|           | <ol> <li>(CVPR20) Augmenting Colonoscopy using Extended and<br/>Directional CycleGAN for Lossy Image Translation</li> <li>(CVPR21) Multi-institutional Collaborations for Improving<br/>Deep Learning-based Magnetic Resonance Image<br/>Reconstruction Using Federated Learning</li> </ol> | Haoyu Chen    |
| 2021/7/7  | <ol> <li>(CVPR2021) XProtoNet: Diagnosis in Chest Radiography with Global and Local Explanations</li> <li>(ISBI2021) Geometric Loss for Deep Multiple Sclerosis Lesion Segmentation</li> </ol>  | Lufei Gao     |
|           | <ol> <li>(CVPR2021) DARCNN: Deomain Adaptive Region-based<br/>Convolutional Neural Network for Unsupervised Instance<br/>Segmentation in Biomedical Images</li> <li>(ISBI2021) Towards Unbiased Covid-19 Lesion Localisation<br/>and Segmentation Via Weakly Supervised Learning</li> </ol> | Jinyue Cai    |
| 2021/7/14 | <ol> <li>(CVPR2021) Learning Calibrated Medical Image<br/>Segmentation via Multi-Rater Agreement Modeling</li> <li>(MICCAI2021) QUBIQ Challenge</li> </ol>  | Yicheng Jiang |
|           | (CVPR2021) Group-Free 3D Object Detection via     Transformers     (MICCAI2021) Medical Transformer: Gated Axial- Attention for Medical Image Segmentation  | Congjie Ye    |
| 2021/7/21 |   | Wentao Lei    |
|           | (CVPR2021) DiNTS: Differentiable Neural Network     Topology Search for 3D Medical Image Segmentation   | Wei Lou       |
| 2021/7/20 | <ol> <li>Disabling Backdoor and Identifying Poison Data by using<br/>Knowledge Distillation in Backdoor Attacks on Deep Neural<br/>Networks</li> <li>Neural Attention Distillation: Erasing Backdoor Triggers<br/>from Deep Neural Networks</li> </ol>                                      | Rongjun Tang  |

|           | <ol> <li>(CVPR2021) FedDG: Federated Domain Generalization on<br/>Medical Image Segmentation via Episodic Learning in<br/>Continuous Frequency Space</li> <li>(ISBI2020)ASCNet: Adaptive-Scale Convolutional Neural<br/>Networks for Multi-Scale Feature Learning</li> </ol> | Yujin Tang  |
|-----------|--|-------------|
|           | <ol> <li>(NeurIPS2020) Is normalization indispensable for training deep neural network?</li> <li>(ISBI2020) Class-Center Involved Triplet Loss for Skin Disease Classification on Imbalanced Data</li> </ol>   | Lei Liu     |
| 2021/8/4  | <ol> <li>(ISBI) WEAKLY SUPERVISED PROSTATE TMA<br/>CLASSIFICATION VIA GRAPH CONVOLUTIONAL<br/>NETWORKS</li> <li>(ISBI2020) WEAKLY-SUPERVISED BRAIN TUMOR<br/>CLASSIFICATION WITH GLOBAL DIAGNOSIS LABEL</li> </ol>   | Wentao Lei  |
| 2021/8/11 | <ol> <li>(Arxiv 2021.06) Medical Transformer: Universal Brain<br/>Encoder for 3D MRI Analysis</li> <li>(Arxiv 2021.04) Emerging Properties in Self-Supervised<br/>Vision Transformers</li> </ol>   | Congjie Ye  |
| 2021/8/11 | <ol> <li>(MICCAI2020) Meta Corrupted Pixels Mining for Medical<br/>Image Segmentation</li> <li>(MICCAI2021) Distilling effective supervision for robust<br/>medical image segmentation with noisy labels</li> </ol>  | Luyue Shi   |
| 2021/8/18 | <ol> <li>(NIPS 2020) Contrastive learning of global and local features for medical image segmentation with limited annotations</li> <li>(NIPS 2020) Bootstrap Your Own Latent - A New Approach to Self-Supervised Learning</li> </ol>  | Luoyao Kang |
|           | 调整到8月25号   | Lufei Gao   |
| 2021/8/25 | <ol> <li>(CVPR2020) MMTM: Multimodal Transfer Module for<br/>CNN Fusion</li> <li>(AAAI2021) SMIL: Multimodal Learning with Severely<br/>Missing Modality</li> </ol>  | Lufei Gao   |
|           | <ol> <li>(ICLR2019) Uncertainty-guided Continual Learning with<br/>Bayesian Neural Networks</li> <li>(PNAS2017) Overcoming catastrophic forgetting in neural<br/>networks.</li> </ol>  | Lei Liu     |

| 1. (CVPR2020) FocalMix: Semi-Supervised Learning for 3D Medical Image Detection   2. (ICCV2017) Focal Loss for Dense Object Detection   2. (ICCV2017) Focal Loss for Dense Object Detection   3. (IVPS2020) Rethinking Pre-training and Self-training   2. (CVPR2020) Deep Distance Transform for Tubular Structure Segmentation in CT Seans   3. (IVPS2018) Loss Surfaces, Mode Connectivity, and Fast Ensembling of DNNs   2. (ICLR2017) SNAPSHOT ENSEMBLES: TRAIN 1, GET M FOR FREE   1. (CVPR 2020) Multi-scale domain-adversarial multiple-instance CNN for cancer subtype classification with unannotated histopathological images   3. (CVPR2019) Math Makes Training Multi-modal Classification Networks Hard?   2. (CVPR2019) Data augmentation using learned transformations for one-shot medical image segmentation   4. (CVPR2019) Noise2Void - Learning Denoising From Single Noisy Images   2. (ECCV2020) Unpaired Learning of Deep Image Denoising   4. (TNNLS 2020) A survey on explainable artificial intelligence (xai): Toward medical xai   2. (CVPR 2017) Mdnet: A semantically and visually interpretable medical image diagnosis network   4. (Arxiv 21.03) Swin transformer: Hierarchical vision transformer using shifted windows   2. (Arxiv 21.09) nnFormer: Interleaved Transformer for Volumetric Segmentation   2. (Miccai2020) Voxel2Mesh: 3D Mesh Model Generation from Volumetric Data   3. (Arxiv 21.06) Per-Pixel Classification is Not All You Need for Semantic Segmentation   4. (Arxiv 21.06) Per-Pixel Classification is Not All You Need for Semantic Segmentation   4. (Arxiv 21.06) Per-Pixel Classification is Not All You Need for Semantic Segmentation   4. (Arxiv 21.06) Per-Pixel Classification is Not All You Need for Semantic Segmentation   4. (Arxiv 21.06) Per-Pixel Classification is Not All You Need for Semantic Segmentation   4. (Arxiv 21.06) Per-Pixel Classification is Not All You Need for Semantic Segmentation   4. (Arxiv 21.06) Per-Pixel Classification   4. (Arxiv 21.06) Per-Pixel Classification   4. (Arxiv 21.06) Per-Pixel Classification   4 |            |  |               |
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| 1. (NIPS2020) Rethinking Pre-training and Self-training 2. (CVPR2020) Deep Distance Transform for Tubular Structure Segmentation in CT Scans  1. (NIPS2018) Loss Surfaces, Mode Connectivity, and Fast Ensembling of DNNs 2. (ICLR2017) SNAPSHOT ENSEMBLES: TRAIN 1, GET M FOR FREE  1. (CVPR 2020) Multi-scale domain-adversarial multiple-instance CNN for cancer subtype classification with unannotated histopathological images  1. (CVPR2020)What Makes Training Multi-modal Classification Networks Hard? 2. (CVPR2019)Data augmentation using learned transformations for one-shot medical image segmentation  1. (CVPR2019) Noise2Void - Learning Denoising From Single Noisy Images 2. (ECCV2020) Unpaired Learning of Deep Image Denoising  1. (TNNLS 2020) A survey on explainable artificial intelligence (xai): Toward medical xai 2. (CVPR 2017) Mdnet: A semantically and visually interpretable medical image diagnosis network  1. (Arxiv 21.03) Swin transformer: Hierarchical vision transformer using shifted windows 2. (Arxiv 21.09) mnFormer: Interleaved Transformer for Volumetric Segmentation  1. (CVPR2021) 3D Graph Anatomy Geometry-Integrated Network for Pancreatic Mass Segmentation, Diagnosis, and Quantitative Patient Management 2. (Miccai2020) Voxel2Mesh: 3D Mesh Model Generation from Volumetric Data  1. (Arxiv 21.06) Per-Pixel Classification is Not All You Need for Semantic Segmentation  Yaoluo Kang  | 2021/9/1   | Medical Image Detection  | Yicheng Jiang |
| 2021/9/8  Ensembling of DNNs 2. (ICLR2017) SNAPSHOT ENSEMBLES: TRAIN 1, GET M FOR FREE  1. (CVPR 2020) Multi-scale domain-adversarial multiple-instance CNN for cancer subtype classification with unannotated histopathological images  1. (CVPR2020)What Makes Training Multi-modal Classification Networks Hard? 2. (CVPR2019)Data augmentation using learned transformations for one-shot medical image segmentation  1. (CVPR2019) Noise2Void - Learning Denoising From Single Noisy Images 2. (ECCV2020) Unpaired Learning of Deep Image Denoising  1. (TNNLS 2020) A survey on explainable artificial intelligence (xai): Toward medical xai 2. (CVPR 2017) Mdnet: A semantically and visually interpretable medical image diagnosis network  1. (Arxiv 21.03) Swin transformer: Hierarchical vision transformer using shifted windows 2. (Arxiv 21.09) nnFormer: Interleaved Transformer for Volumetric Segmentation  1. (CVPR2021) 3D Graph Anatomy Geometry-Integrated Network for Pancreatic Mass Segmentation, Diagnosis, and Quantitative Patient Management 2. (Miccai2020) Voxel2Mesh: 3D Mesh Model Generation from Volumetric Data  1. (Arxiv 21.06) Per-Pixel Classification is Not All You Need for Semantic Segmentation  |            | 2. (CVPR2020) Deep Distance Transform for Tubular Structure  | Wei Lou       |
| instance CNN for cancer subtype classification with unannotated histopathological images  1. (CVPR2020)What Makes Training Multi-modal Classification Networks Hard? 2. (CVPR2019)Data augmentation using learned transformations for one-shot medical image segmentation  1. (CVPR2019) Noise2Void - Learning Denoising From Single Noisy Images 2. (ECCV2020) Unpaired Learning of Deep Image Denoising  1. (TNNLS 2020) A survey on explainable artificial intelligence (xai): Toward medical xai 2. (CVPR 2017) Mdnet: A semantically and visually interpretable medical image diagnosis network  1. (Arxiv 21.03) Swin transformer: Hierarchical vision transformer using shifted windows 2. (Arxiv 21.09) nnFormer: Interleaved Transformer for Volumetric Segmentation  1. (CVPR2021) 3D Graph Anatomy Geometry-Integrated Network for Pancreatic Mass Segmentation, Diagnosis, and Quantitative Patient Management 2. (Miccai2020) Voxel2Mesh: 3D Mesh Model Generation from Volumetric Data  1. (Arxiv 21.06) Per-Pixel Classification is Not All You Need for Semantic Segmentation   |            | Ensembling of DNNs 2. (ICLR2017) SNAPSHOT ENSEMBLES: TRAIN 1, GET M  | Wentao Lei    |
| 2021/9/15  Classification Networks Hard? 2. (CVPR2019)Data augmentation using learned transformations for one-shot medical image segmentation  1. (CVPR2019) Noise2Void - Learning Denoising From Single Noisy Images 2. (ECCV2020) Unpaired Learning of Deep Image Denoising  1. (TNNLS 2020) A survey on explainable artificial intelligence (xai): Toward medical xai 2. (CVPR 2017) Mdnet: A semantically and visually interpretable medical image diagnosis network  1. (Arxiv 21.03) Swin transformer: Hierarchical vision transformer using shifted windows 2. (Arxiv 21.09) nnFormer: Interleaved Transformer for Volumetric Segmentation  1. (CVPR2021) 3D Graph Anatomy Geometry-Integrated Network for Pancreatic Mass Segmentation, Diagnosis, and Quantitative Patient Management 2. (Miccai2020) Voxel2Mesh: 3D Mesh Model Generation from Volumetric Data  1. (Arxiv 21.06) Per-Pixel Classification is Not All You Need for Semantic Segmentation   |            | instance CNN for cancer subtype classification with  | Rongjun Tang  |
| Noisy Images 2. (ECCV2020) Unpaired Learning of Deep Image Denoising  1. (TNNLS 2020) A survey on explainable artificial intelligence (xai): Toward medical xai 2. (CVPR 2017) Mdnet: A semantically and visually interpretable medical image diagnosis network  1. (Arxiv 21.03) Swin transformer: Hierarchical vision transformer using shifted windows 2. (Arxiv 21.09) nnFormer: Interleaved Transformer for Volumetric Segmentation  1. (CVPR2021) 3D Graph Anatomy Geometry-Integrated Network for Pancreatic Mass Segmentation, Diagnosis, and Quantitative Patient Management 2. (Miccai2020) Voxel2Mesh: 3D Mesh Model Generation from Volumetric Data  1. (Arxiv 21.06) Per-Pixel Classification is Not All You Need for Semantic Segmentation  |            | Classification Networks Hard? 2. (CVPR2019)Data augmentation using learned   | Lufei Gao     |
| 2021/9/22  (xai): Toward medical xai  (CVPR 2017) Mdnet: A semantically and visually interpretable medical image diagnosis network  1. (Arxiv 21.03) Swin transformer: Hierarchical vision transformer using shifted windows  2. (Arxiv 21.09) nnFormer: Interleaved Transformer for Volumetric Segmentation  1. (CVPR2021) 3D Graph Anatomy Geometry-Integrated Network for Pancreatic Mass Segmentation, Diagnosis, and Quantitative Patient Management  2. (Miccai2020) Voxel2Mesh: 3D Mesh Model Generation from Volumetric Data  1. (Arxiv 21.06) Per-Pixel Classification is Not All You Need for Semantic Segmentation  Yujin Tang  Yujin Tang  Yicheng Jiang  |            | Noisy Images   | Luyue Shi     |
| 1. (Arxiv 21.03) Swin transformer: Hierarchical vision transformer using shifted windows 2. (Arxiv 21.09) nnFormer: Interleaved Transformer for Volumetric Segmentation  1. (CVPR2021) 3D Graph Anatomy Geometry-Integrated Network for Pancreatic Mass Segmentation, Diagnosis, and Quantitative Patient Management 2. (Miccai2020) Voxel2Mesh: 3D Mesh Model Generation from Volumetric Data  1. (Arxiv 21.06) Per-Pixel Classification is Not All You Need for Semantic Segmentation  Yujin Tang  Yujin Tang  Yicheng Jiang  |            | <ul><li>(xai): Toward medical xai</li><li>(CVPR 2017) Mdnet: A semantically and visually</li></ul>   | Lei Liu       |
| Network for Pancreatic Mass Segmentation, Diagnosis, and Quantitative Patient Management  2. (Miccai2020) Voxel2Mesh: 3D Mesh Model Generation from Volumetric Data  1. (Arxiv 21.06) Per-Pixel Classification is Not All You Need for Semantic Segmentation  Yicheng Jiang  Yaoluo Kang  |            | transformer using shifted windows 2. (Arxiv 21.09) nnFormer: Interleaved Transformer for   | Yujin Tang    |
| for Semantic Segmentation   |            | Network for Pancreatic Mass Segmentation, Diagnosis, and Quantitative Patient Management  2. (Miccai2020) Voxel2Mesh: 3D Mesh Model Generation | Yicheng Jiang |
| 2021/10/06 国庆节  |            |  | Yaoluo Kang   |
| <u> </u>  | 2021/10/06 | 国庆节  |               |

|            | <ol> <li>(CVPR2020) FocalMix: Semi-Supervised Learning for 3D<br/>Medical Image Detection</li> <li>(CVPR2021) Instant-Teaching: An End-to-End Semi-Supervised Object Detection Framework</li> </ol>  | Congjie Ye      |
|------------|--|-----------------|
| 2021/10/13 | <ol> <li>(MICCAI2021) CoTr: Efficiently Bridging CNN and<br/>Transformer for 3D Medical Image Segmentation</li> <li>(MICCAI2021) MIL-VT: Multiple Instance Learning<br/>Enhanced Vision Transformer for Fundus Image<br/>Classification</li> </ol>               | Wei Lou         |
|            |  | Wentao Lei      |
| 2021/10/20 | Batch Normalization Increases Adversarial Vulnerability and Decreases Adversarial Transferability: A Non-Robust Feature Perspective  | Rongjun Tang    |
|            |  |                 |
| 2021/10/27 |  |                 |
|            | <ol> <li>(MICCAI2019) Uncertainty-Aware Self-ensembling Model<br/>for Semi-supervised 3D Left Atrium Segmentation</li> <li>(MICCAI2020) Shape-Aware Semi-supervised 3D Semantic<br/>Segmentation for Medical Images</li> </ol>                                   | Huansen<br>Chen |
| 2021/11/3  | <ol> <li>(CVPR2021) FSDR: Frequency Space Domain<br/>Randomization for Domain Generalization</li> <li>(CVPR2021) A Fourier-based Framework for Domain<br/>Generalization</li> </ol>  | Luyue Shi       |
|            | <ol> <li>(MICCAI 2021) Self-Supervised Longitudinal<br/>Neighbourhood Embedding</li> <li>(MICCAI 2021) Contrastive Learning with Continuous<br/>Proxy Meta-Data for 3D MRI Classification</li> </ol>   | Luoyao Kang     |
| 2021/11/10 | <ol> <li>(MICCAI2021) Early Detection of Liver Fibrosis Using<br/>Graph Convolutional Networks.</li> <li>(MICCAI2021) Focusing on Clinically Interpretable<br/>Features: Selective Attention Regularization for Liver Biopsy<br/>Image Classification</li> </ol> | Lufei Gao       |
| 2021/11/17 | CVPR_deadline  |                 |

| 1. (TMI 2021.oct)A Unified Framework for Generalized Low-Shot Medical Image Segmentation with Scarce Data 2. (CVPR2019) RepMet: Representative-based metric learning for classification and one-shot object detection 1. (CVPR2021)SetMargin Loss applied to Deep Keystroke Biometrics with Circle Packing Interpretation 2. (CVPR2021)Triplet Contrastive Learning for Brain Tumor Classification 1. (MICCA12021) TransFuse: Fusing Transformers and CNNs forMedical Image Segmentation 2. (ICCV2021) Fast Convergence of DETR with Spatially Modulated Co-Attention 1. (NIPS2021): FlexMatch: Boosting Semi-Supervised Learning with Curriculum Pseudo Labeling 2. (CVPR2020): FocalMix: Semi-Supervised Learning for 3D Medical Image Detection  Rongjun Tang 1. (MICCA12021) Multi-compound Transformer for Accurate Biomedical Image Segmentation 2. (MICCA12021) Spine-Transformers: Vertebra Detection and Localization in Arbitrary Field-of-View Spine CT with Transformers  2021/12/15  Luyue Shi Luoyao Kang Lufei Gao Yicheng Jiang Ungang |            |  |                  |
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| 1. (CVPR2021)SetMargin Loss applied to Deep Keystroke Biometrics with Circle Packing Interpretation 2. (CVPR2021)Triplet Contrastive Learning for Brain Tumor Classification  1. (MICCAI2021) TransFuse: Fusing Transformers and CNNs forMedical Image Segmentation 2. (ICCV2021) Fast Convergence of DETR with Spatially Modulated Co-Attention  1. (NIPS2021): FlexMatch: Boosting Semi-Supervised Learning with Curriculum Pseudo Labeling 2. (CVPR2020): FocalMix: Semi-Supervised Learning for 3D Medical Image Detection  Rongjun Tang  1. (MICCAI2021) Multi-compound Transformer for Accurate Biomedical Image Segmentation 2. (MICCAI2021) Spine-Transformers: Vertebra Detection and Localization in Arbitrary Field-of-View Spine CT with Transformers  Huansen Chen  Luyue Shi  Luoyao Kang  Lufei Gao  Yicheng Jiang  Lei Liu  Yiming   |            | Shot Medical Image Segmentation with Scarce Data 2. (CVPR2019) RepMet: Representative-based metric learning                                    | Yicheng Jiang    |
| forMedical Image Segmentation 2. (ICCV2021) Fast Convergence of DETR with Spatially Modulated Co-Attention 1. (NIPS2021): FlexMatch: Boosting Semi-Supervised Learning with Curriculum Pseudo Labeling 2. (CVPR2020): FocalMix: Semi-Supervised Learning for 3D Medical Image Detection  Rongjun Tang  1. (MICCAI2021) Multi-compound Transformer for Accurate Biomedical Image Segmentation 2. (MICCAI2021) Spine-Transformers: Vertebra Detection and Localization in Arbitrary Field-of-View Spine CT with Transformers  Pulpin Tang  Luyue Shi  Luoyao Kang  Lufei Gao  Yicheng Jiang  Lei Liu  2022/12/29   | 2021/11/24 | Biometrics with Circle Packing Interpretation 2. (CVPR2021)Triplet Contrastive Learning for Brain Tumor  | _                |
| Learning with Curriculum Pseudo Labeling 2. (CVPR2020): FocalMix: Semi-Supervised Learning for 3D Medical Image Detection  Rongjun Tang  1. (MICCAI2021) Multi-compound Transformer for Accurate Biomedical Image Segmentation 2. (MICCAI2021) Spine-Transformers: Vertebra Detection and Localization in Arbitrary Field-of-View Spine CT with Transformers  Luyue Shi  Luoyao Kang  2021/12/22  2021/12/29  Lufei Gao  Lifei Gao  Lei Liu  Yiming  |            | forMedical Image Segmentation 2. (ICCV2021) Fast Convergence of DETR with Spatially  | Wei Lou          |
| 2021/12/8  1. (MICCAI2021) Multi-compound Transformer for Accurate Biomedical Image Segmentation 2. (MICCAI2021) Spine-Transformers: Vertebra Detection and Localization in Arbitrary Field-of-View Spine CT with Transformers   | 2021/12/1  | Learning with Curriculum Pseudo Labeling 2. (CVPR2020): FocalMix: Semi-Supervised Learning for 3D  | Wentao Lei       |
| Biomedical Image Segmentation 2. (MICCAI2021) Spine-Transformers: Vertebra Detection and Localization in Arbitrary Field-of-View Spine CT with Transformers    Description   |            |  | Rongjun Tang     |
| Chen   | 2021/12/8  | Biomedical Image Segmentation 2. (MICCAI2021) Spine-Transformers: Vertebra Detection and Localization in Arbitrary Field-of-View Spine CT with | Yujin Tang       |
| Luoyao Kang  Lufei Gao  Yicheng Jiang  Lei Liu  2022/12/29  Yiming   |            |  |                  |
| 2021/12/22  Lufei Gao  Yicheng Jiang  Lei Liu  2022/12/29  Yiming  | 2021/12/15 |  | Luyue Shi        |
| 2021/12/22 Yicheng Jiang  Lei Liu  2022/12/29 Yiming   |            |  | Luoyao Kang      |
| Yicheng Jiang  Lei Liu  2022/12/29  Yiming   | 2021/12/22 |  | Lufei Gao        |
| 2022/12/29 Yiming  |            |  | Yicheng Jiang    |
| 11111116   |            |  | Lei Liu          |
| Ouyang   | 2022/12/29 |  | Yiming<br>Ouyang |

| 2022/1/5  |  | Congjie Ye      |
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|           |  | Youlong Ding    |
| 2022/1/12 |  | Wei Lou         |
|           |  | Zhuo Chen       |
| 2022/1/19 |  | Wentao Lei      |
|           |  | Chenyu Liu      |
| 2022/1/26 |  | Rongjun Tang    |
|           |  | Yujin Tang      |
| 2022/2/16 |  | Huansen<br>Chen |
|           |  | Luyue Shi       |
| 2022/2/23 |  | Luoyao Kang     |
|           |  | Lufei Gao       |
| 公开资料      | https://github.com/cmwang-sribd-2020/cuhksz-medical-vision-<br>seminar-2021-Journal-Club |                 |