Call for Papers – BioCAS 2022 special session on AI-assistive Pathology Image Analysis

You are invited to submit a paper for the special session of "AI-assistive Pathology Image Analysis" at IEEE BioCAS 2022, Oct. 13-15, 2022, Taipei.

Pathology image analysis provides the cell level evaluation and therefore, is critical to clinical diagnosis and treatment. Recent advance of bringing artificial intelligence (AI) methods for pathology image analysis has become an important and emerging research topic. Several issues arise when AI is brought into the analysis of pathology images. The digitized pathology image has an image size of 30 to 50 GB. Thus, delineating the interest regions takes several hours. For pathological cell segmentation, delineating the boundaries of the individual cells is more time-consuming for the pathologists. The target cells for analysis could be tiny and distributed all over the whole slide of image or mixed with various non-target tissues, which also pose challenges to the labeling and processing of the whole slide pathology images. Thus, one of the most severe challenges of employing AI to analyze pathology images is how to reduce the data annotation time by proposing novel semi-supervised or weakly-supervised methods. Another issue is aroused from data imbalance and domain draft from cross-hospital variation.

This special session brings together recent advances in artificial intelligence methods in response to AI-assistive pathology image analysis. This special issue also aims to bring BioCAS community to bridge the gaps between research and practice to develop computing solutions, such as accelerated hardware components for supporting pathology image analysis.

The potential topics include, but are not limited to:

- General deep learning methods for pathology image analysis
- Semi-supervised learning for pathology image analysis
- Weakly-supervised learning for pathology image analysis
- Learning from imbalanced and difficult data for pathology image analysis
- Continual learning and federated learning from cross data providers
- Pathology image quality assessment
- Modal adaptation for different data sources
- Transfer learning between different datasets
- Deep learning studies of modalities on variant pathology datasets
- Accelerated hardware components for pathology image analysis
- Pathological applications

Submission of Regular, Special Session Papers	June 10, 2022
Notification of Paper Acceptance	August 12, 2022
Submission of Final Papers	August 29, 2022
Author & Early-Bird Registration	August 29, 2022

When submission, please select the special session. Submission guide line, refer to:
https://biocas2022.org/site/mypage.aspx?pid=2&lang=en&sid=1419

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