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# Computational Pathology and Ophthalmic Medical Image Analysis


First International Workshop, COMPAY 2018  
and 5th International Workshop, OMIA 2018  
Held in Conjunction with MICCAI 2018  
Granada, Spain, September 16–20, 2018  
Proceedings

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## COMPAY 2018 Preface

We were very excited to host the first MICCAI COMPAY workshop in the rapidly emerging area of computational pathology, the study of disease using computational analysis of digitized images of tissue slides. We believe this first event on computational pathology and its synergy with advanced image analysis and deep learning provided a space for researchers in the MICCAI community to meet, discuss, and share their advances in these fields. The MICCAI conference was the perfect venue and *it was* the best time for this to happen. The aim of COMPAY was to bring together scientific researchers, medical experts, and industry partners working in the field of computational pathology, in order to push further innovative and clinically relevant solutions for digital pathology. We strived to provide a platform for scientific discussion on computational pathology with a focus on artificial intelligence and deep learning, which can help foster cooperative projects at an international level. We hope that you will find the contributions on the state of the art computational pathology stimulating and enjoyable. We are grateful to the MICCAI organizers for giving us this opportunity. We also extend our sincere gratitude to all the reviewers who helped ensure the high quality of papers presented at COMPAY 2018, the first of hopefully a series of workshops at MICCAI.

August 2018

Francesco Ciompi  
Jeroen van der Laak  
Nasir Rajpoot  
Stephen McKenna  
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David Snead

## OMIA 2018 Preface

Age-related macular degeneration, diabetic retinopathy, and glaucoma are main causes of blindness. Oftentimes blindness can be avoided by early intervention, making computer-assisted early diagnosis of retinal diseases a research priority. Related research is exploring retinal biomarkers for systemic conditions such as dementia, cardiovascular disease, and complications of diabetes. Significant challenges remain, including reliability and validation, effective multimodal analysis (e.g., fundus photography, optical coherence tomography, and scanning laser ophthalmoscopy), more powerful imaging technologies, and the effective deployment of cutting-edge computer vision and machine learning techniques. The 4th International Workshop on Ophthalmic Medical Image Analysis (OMIA5) addressed all these aspects and more, this year in collaboration with the ReTOUCH retinal image challenge.

August 2018

Yanwu Xu  
Emanuele Trucco  
Mona K. Garvin  
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