MICCAI 2015 Ophthalmic Medical Image Analysis
Second International Workshop (OMIA 2015)
Munich, Germany, October 9, 2015

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OMIA 2015 PROGRAM SCHEDULE

08:00–08:30   Registration and poster set-up

08:30–08:40   Opening remarks

08:40–09:20   **Keynote**
Ocular Imaging Research and the Singapore Perspective
Jiang (Jimmy) Liu, Institute for Infocomm Research, A*STAR, Singapore
See abstract and biosketch on last page

09:20–09:35   **OMIA-O-1**
Stability Analysis of Fractal Dimension in Retinal Vasculature
Fan Huang, Jiong Zhang, Erik Bekkers, Behdad Dashtbozorg, Bart ter Haar Romeny

09:35–09:50   **OMIA-O-2**
Classification of SD-OCT Volumes with LBP: Application to DME Detection
Guillaume Lemaître, Mojdeh Rastgoo, Joan Massich, Shrinivasan Sankar, Fabrice Meriaudeau, Désiré Sidibé

09:50–11:20   Poster session (with coffee break from 10:30–11:00)
See list of posters on next page

11:20–11:35   **OMIA-O-3**
Glaucoma Detection by Learning from Multiple Informatics Domains
Yanwu Xu, Lixin Duan, Damon Wong, Tien Yin Wong, Jiang (Jimmy) Liu

11:35–11:50   **OMIA-O-4**
Segmentation of Corneal Endothelial Cells Contour by Means of a Genetic Algorithm
Fabio Scarpa, Alfredo Ruggeri

11:50–12:05   **OMIA-O-5**
Automated Bruch's Membrane Opening Segmentation in Cases of Optic Disc Swelling in Combined 2D and 3D SD-OCT Images Using Shape-Prior and Texture Information
Jui-Kai Wang, Randy Kardon, Mona Garvin

12:05–12:20   **OMIA-O-5**
Obtaining Consensus Annotations for Retinal Image Segmentation Using Random Forest and Graph Cuts
Dwarikanath Mahapatra

12:20–12:30   Closing remarks

OMIA 2015 LIST OF POSTERS

OMIA-P-1 *Geodesic Graph Cut Based Retinal Fluid Segmentation in Optical Coherence Tomography*
Hrvoje Bogunovic, Michael Abràmoff, Milan Sonka

OMIA-P-2 *Multimodal Graph-Theoretic Approach for Segmentation of the Internal Limiting Membrane at the Optic Nerve Head*
Mohammad Saleh Miri, Victor Robles, Michael Abràmoff, Young Kwon, Mona Garvin

OMIA-P-3 *Segmentation of the Retinal Vasculature within Spectral-Domain Optical Coherence Tomography Volumes of Mice*
Wenxiang Deng, Bhavna Antony, Elliot Sohn, Michael Abràmoff, Mona Garvin

OMIA-P-4 *Effective Drusen Localization for Early AMD Screening Using Sparse Multiple Instance Learning*
Huiying Liu, Yanwu Xu, Damon Wong, Jiang (Jimmy) Liu

OMIA-P-5 *Adaptive Super-Candidate Based Approach for Detection and Classification of Drusen on Retinal Fundus Images*
Vaanathi Sundaresan, Keerthi Ram, Kulasekaran Selvaraj, Niranjan Joshi, Mohanasankar Sivaprakasam

OMIA-P-6 *Refining Coarse Manual Segmentations with Stable Probability Regions*
Lauri Laaksonen, Joni Herttuainen, Hannu Uusitalo, Lasse Lensu

OMIA-P-7 *Automatic Grading of Diabetic Retinopathy on a Public Database*
Lama Seoud, Jihed Chelbi, Farida Cheriet

OMIA-P-8 *EyeArt + EyePACS: Automated Retinal Image Analysis for Diabetic Retinopathy Screening in a Telemedicine System*
Malavika Bhaskaranand, Jorge Cuadros, Chaithanya Ramachandra, Sandeep Bhat, Muneeswar Nittala, SriniVas Sadda, Kaushal Solanki

OMIA-P-9 *Curvature Based Biomarkers for Diabetic Retinopathy via Exponential Curve Fits in SE(2)*
Erik Bekkers, Jiong Zhang, Remco Duits, Bart ter Haar Romeny

OMIA-P-10 *Retinal Artery/Vein Classification via Graph Cut Optimization*
Koen Eppenhof, Erik Bekkers, Tos Berendschot, Josien Pluim, Bart ter Haar Romeny

OMIA-P-11 *A New Method of Blind Deconvolution for Colour Fundus Retinal Images*
Bryan Williams, Ke Chen, Simon Harding, Yalin Zheng

OMIA-P-12 *Evaluation of Publicly Available Blood Vessel Segmentation Methods for Retinal Images*
Pavel Vostatek, Pauli Fält, Markku Hauta-Kasari, Ela Claridge, Hannu Uusitalo, Lasse Lensu

OMIA-P-13 *A Polar Map Based Approach Using Retinal Fundus Images for Glaucoma Detection*
Akshaya Ramaswamy, Keerthi Ram, Niranjan Joshi, Mohanasankar Sivaprakasam

OMIA-P-14 *Boosting Convolutional Filters with Entropy Sampling for Optic Cup and Disc Image Segmentation from Fundus Images*
Dwarikanath Mahapatra

OMIA 2015 KEYNOTE
Ocular Imaging Research and the Singapore Perspective
Jiang (Jimmy) Liu, Institute for Infocomm Research, A*STAR, Singapore

Abstract. In this keynote, Jimmy will introduce his team's ocular imaging work in the past ten years. He will describe his work on the following areas: ocular disease screening algorithms, image guided ocular surgery, ocular biometrics, and ocular medical image informatics. He will also share his collaborations with Topcon corporation.

Biosketch. Jiang (Jimmy) Liu received his bachelor degree in computer engineering from University of Science and Technology China in 1988; he received his master and doctor degree in computer science in 1992 and 2004 from National University of Singapore. Jimmy is the founding head of the Ocular Imaging iMED Department in the Institute for Infocomm Research. The iMED team has a staff strength of 25 (18 full-time research scientists with Ph.D degree and 7 research engineers with master or bachelor degrees). In 2013, Jimmy established AVATA (I2R and National Health Group Advanced Vision and Technology Alliance) clinical research joint lab with Singapore National Health Group and ATLANTIA (Advanced Technological Laboratory for A*STAR and Topcon Innovative Alliance) industrial joint research lab with Topcon Corporation, Tokyo, Japan. He is also adjunct principal scientist in Singapore Eye Research Institute and was the Singapore Chapter Chair for IEEE EMBS (Engineering in Medicine & Biology Society) in 2014. Jimmy has more than 40 international patents on ocular image processing and has published more than 200 academic papers, including papers in JAMIA, CVPR and TMI. He has published continuously in MICCAI main proceedings since 2009 (3 MICCAI papers in 2014, 3 papers in 2013, 1 paper in 2012, 2 papers in 2011, 1 paper in 2010, and 1 paper in 2009). In this year's MICCAI 2015, he had 4 papers in the main proceedings on ocular image processing.