

PROGRESS IN BIOMEDICAL OPTICS AND IMAGING
Vol. 16 No. 41

Medical Imaging 2015: Image Processing

Sébastien Ourselin

Martin A. Styner

Editors

24–26 February 2015

Orlando, Florida, United States

Sponsored by

SPIE

Cosponsored by

ALIO Industries (United States) • Alpinion Medical Systems (United States) • Modus Medical Devices Inc. (Canada) • Bruker (United States)

Cooperating Organizations

AAPM—American Association of Physicists in Medicine (United States) • APS—American Physiological Society (United States) • CARS—Computer Assisted Radiology and Surgery (Germany) • Medical Image Perception Society (United States) • Radiological Society of North America (United States) • Society for Imaging Informatics in Medicine (United States)
World Molecular Imaging Society • The DICOM Standards Committee

Published by

SPIE

Volume 9413
Part One of Two Parts

Proceedings of SPIE, 1605-7422, V. 9413

SPIE is an international society advancing an interdisciplinary approach to the science and application of light.

Medical Imaging 2015: Image Processing, edited by Sébastien Ourselin, Martin A. Styner, Proc. of SPIE Vol. 9413, 941301 · © 2015 SPIE · CCC code: 1605-7422/15/\$18 · doi: 10.1117/12.2194368

The papers included in this volume were part of the technical conference cited on the cover and title page. Papers were selected and subject to review by the editors and conference program committee. Some conference presentations may not be available for publication. The papers published in these proceedings reflect the work and thoughts of the authors and are published herein as submitted. The publisher is not responsible for the validity of the information or for any outcomes resulting from reliance thereon.

Please use the following format to cite material from this book:

Author(s), "Title of Paper," in *Medical Imaging 2015: Image Processing*, edited by Sébastien Ourselin, Martin A. Styner, Proceedings of SPIE Vol. 9413 (SPIE, Bellingham, WA, 2015) Article CID Number.

ISSN: 1605-7422

ISBN: 9781628415032

Published by

SPIE

P.O. Box 10, Bellingham, Washington 98227-0010 USA

Telephone +1 360 676 3290 (Pacific Time) · Fax +1 360 647 1445

SPIE.org

Copyright © 2015, Society of Photo-Optical Instrumentation Engineers.

Copying of material in this book for internal or personal use, or for the internal or personal use of specific clients, beyond the fair use provisions granted by the U.S. Copyright Law is authorized by SPIE subject to payment of copying fees. The Transactional Reporting Service base fee for this volume is \$18.00 per article (or portion thereof), which should be paid directly to the Copyright Clearance Center (CCC), 222 Rosewood Drive, Danvers, MA 01923. Payment may also be made electronically through CCC Online at copyright.com. Other copying for republication, resale, advertising or promotion, or any form of systematic or multiple reproduction of any material in this book is prohibited except with permission in writing from the publisher. The CCC fee code is 1605-7422/15/\$18.00.

Printed in the United States of America.

Publication of record for individual papers is online in the SPIE Digital Library.



SPIEDigitalLibrary.org

Paper Numbering: Proceedings of SPIE follow an e-First publication model, with papers published first online and then in print. Papers are published as they are submitted and meet publication criteria. A unique citation identifier (CID) number is assigned to each article at the time of the first publication. Utilization of CIDs allows articles to be fully citable as soon as they are published online, and connects the same identifier to all online, print, and electronic versions of the publication. SPIE uses a six-digit CID article numbering system in which:

- The first four digits correspond to the SPIE volume number.
- The last two digits indicate publication order within the volume using a Base 36 numbering system employing both numerals and letters. These two-number sets start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B ... 0Z, followed by 10-1Z, 20-2Z, etc.

The CID Number appears on each page of the manuscript. The complete citation is used on the first page, and an abbreviated version on subsequent pages.

Contents

xiii	Authors
xix	Conference Committee
xxiii	2015 Medical Imaging Award Recipients

Part One

SESSION 1 QUANTITATIVE IMAGE ANALYSIS

- 9413 02 **Highly accurate volumetry of the spinal cord [9413-1]**
- 9413 03 **Constructing a statistical atlas of the radii of the optic nerve and cerebrospinal fluid sheath in young healthy adults [9413-2]**
- 9413 04 **Adaptive sampling of CT data for myocardial blood flow estimation from dose-reduced dynamic CT [9413-3]**
- 9413 05 **Segmentation of vascular structures and hematopoietic cells in 3D microscopy images and quantitative analysis [9413-4]**
- 9413 06 **Fast left ventricle tracking in CMR images using localized anatomical affine optical flow [9413-5]**

SESSION 2 KEYNOTE AND DIFFUSION MRI ANALYSIS

- 9413 07 **OMERO and Bio-Formats 5: flexible access to large bioimaging datasets at scale (Keynote Paper) [9413-6]**
- 9413 09 **7T multi-shell hybrid diffusion imaging (HYDI) for mapping brain connectivity in mice [9413-8]**
- 9413 0A **Measuring the lesion load of multiple sclerosis patients within the corticospinal tract [9413-9]**

SESSION 3 IMAGE REPRESENTATION AND RECONSTRUCTION

- 9413 0B **Joint multi-shot multi-channel image reconstruction in compressive diffusion weighted MR imaging [9413-10]**
- 9413 0C **Multi-contrast magnetic resonance image reconstruction [9413-11]**

- 9413 0D **Image-based compensation for involuntary motion in weight-bearing C-arm cone-beam CT scanning of knees** [9413-12]
- 9413 0E **Super-resolution for medical images corrupted by heavy noise** [9413-13]
- 9413 0F **Spline-based sparse tomographic reconstruction with Besov priors** [9413-14]

SESSION 4 COMPRESSED SENSING/SPARSE METHODS

- 9413 0G **Rank-sparsity constrained atlas construction and phenotyping** [9413-15]
- 9413 0H **Compressed sensing MRI using higher order multi-scale FREBAS for sparsifying transform function** [9413-16]
- 9413 0I **Intraparenchymal hemorrhage segmentation from clinical head CT of patients with traumatic brain injury** [9413-17]
- 9413 0J **Alternating minimization algorithm with iteratively reweighted quadratic penalties for compressive transmission tomography** [9413-18]

SESSION 5 MACHINE LEARNING

- 9413 0K **Revealing latent value of clinically acquired CTs of traumatic brain injury through multi-atlas segmentation in a retrospective study of 1,003 with external cross-validation** [9413-19]
- 9413 0L **Efficient abdominal segmentation on clinically acquired CT with SIMPLE context learning** [9413-20]
- 9413 0M **Longitudinal graph-based segmentation of macular OCT using fundus alignment** [9413-21]
- 9413 0N **Machine learning for the automatic localisation of foetal body parts in cine-MRI scans** [9413-22]
- 9413 0O **MS lesion segmentation using a multi-channel patch-based approach with spatial consistency** [9413-23]

SESSION 6 SHAPE AND MODELS

- 9413 0P **Automatic sulcal curve extraction on the human cortical surface** [9413-24]
- 9413 0Q **Adaptation of an articulated fetal skeleton model to three-dimensional fetal image data** [9413-25]
- 9413 0R **Interpretable exemplar-based shape classification using constrained sparse linear models** [9413-26]
- 9413 0S **Reference geometry-based detection of (4D-)CT motion artifacts: a feasibility study** [9413-27]

- 9413 0T **Hierarchical pictorial structures for simultaneously localizing multiple organs in volumetric pre-scan CT** [9413-28]
- 9413 0U **Skeletal shape correspondence via entropy minimization** [9413-29]

SESSION 7 COMPUTATIONAL ANATOMY

- 9413 0V **Probabilistic atlas based labeling of the cerebral vessel tree** [9413-30]
- 9413 0W **Simultaneous skull-stripping and lateral ventricle segmentation via fast multi-atlas likelihood fusion** [9413-31]
- 9413 0X **A transformation similarity constraint for groupwise nonlinear registration in longitudinal neuroimaging studies** [9413-32]
- 9413 0Y **Automatic brain extraction in fetal MRI using multi-atlas-based segmentation** [9413-33]
- 9413 0Z **Automatic parcellation of longitudinal cortical surfaces** [9413-34]

SESSION 8 SEGMENTATION: BRAIN

- 9413 10 **3D MR ventricle segmentation in pre-term infants with post-hemorrhagic ventricle dilation** [9413-35]
- 9413 11 **Automatic tissue segmentation of neonate brain MR Images with subject-specific atlases** [9413-36]
- 9413 12 **Shape-based multi-region segmentation framework: application to 3D infants MRI data** [9413-37]
- 9413 13 **LOGISMOS-B for primates: primate cortical surface reconstruction and thickness measurement** [9413-38]
- 9413 14 **Robust detection of multiple sclerosis lesions from intensity-normalized multi-channel MRI** [9413-39]
- 9413 15 **Evaluation of an automatic brain segmentation method developed for neonates on adult MR brain images** [9413-40]

SESSION 9 SEGMENTATION

- 9413 16 **Active contour based segmentation of resected livers in CT images** [9413-41]
- 9413 17 **FIST: a fast interactive segmentation technique** [9413-42]
- 9413 18 **A supervoxel-based segmentation method for prostate MR images** [9413-43]

- 9413 19 **A 3D neurovascular bundles segmentation method based on MR-TRUS deformable registration** [9413-44]
- 9413 1A **Pancreas segmentation from 3D abdominal CT images using patient-specific weighted subspatial probabilistic atlases** [9413-45]

SESSION 10 CLASSIFICATION

- 9413 1B **Random local binary pattern based label learning for multi-atlas segmentation** [9413-46]
- 9413 1C **Multi-output decision trees for lesion segmentation in multiple sclerosis** [9413-47]
- 9413 1D **Trabecular bone class mapping across resolutions: translating methods from HR-pQCT to clinical CT** [9413-48]
- 9413 1E **Cerebral microbleed segmentation from susceptibility weighted images** [9413-49]
- 9413 1F **Rotation invariant eigenvessels and auto-context for retinal vessel detection** [9413-50]
- 9413 1G **Deep convolutional networks for pancreas segmentation in CT imaging** [9413-51]

SESSION 11 MOTION/TIME SERIES

- 9413 1H **Robust bladder image registration by redefining data-term in total variational approach** [9413-52]
- 9413 1I **Joint registration of location and orientation of intravascular ultrasound pullbacks using a 3D graph based method** [9413-53]
- 9413 1J **Optimal-mass-transfer-based estimation of glymphatic transport in living brain** [9413-54]
- 9413 1K **Robust temporal alignment of multimodal cardiac sequences** [9413-55]
- 9413 1L **Relating speech production to tongue muscle compressions using tagged and high-resolution magnetic resonance imaging** [9413-56]

SESSION 12 REGISTRATION

- 9413 1M **Automatic assessment of volume asymmetries applied to hip abductor muscles in patients with hip arthroplasty** [9413-57]
- 9413 1N **Evaluation of five image registration tools for abdominal CT: pitfalls and opportunities with soft anatomy** [9413-58]
- 9413 1O **Remapping of digital subtraction angiography on a standard fluoroscopy system using 2D-3D registration** [9413-59]

- 9413 1P **Discontinuous nonrigid registration using extended free-form deformations** [9413-60]
- 9413 1Q **Using image synthesis for multi-channel registration of different image modalities** [9413-61]
- 9413 1R **Getting the most out of additional guidance information in deformable image registration by leveraging multi-objective optimization** [9413-62]

POSTER SESSION

- 9413 1T **Evaluating intensity normalization for multispectral classification of carotid atherosclerotic plaque** [9413-64]
- 9413 1U **Segmentation of skin strata in reflectance confocal microscopy depth stacks** [9413-65]
- 9413 1V **Towards high-throughput mouse embryonic phenotyping: a novel approach to classifying ventricular septal defects** [9413-66]
- 9413 1W **A primal dual fixed point algorithm for constrained optimization problems with applications to image reconstruction** [9413-67]
- 9413 1X **Cerenkov luminescence tomography based on preconditioning orthogonal matching pursuit** [9413-68]
- 9413 1Y **Beam hardening correction for sparse-view CT reconstruction** [9413-69]
- 9413 1Z **Heritability analysis of surface-based cortical thickness estimation on a large twin cohort** [9413-70]
- 9413 20 **Estimating diffusion properties in complex fiber configurations based on structure-adaptive multi-valued tensor-field filtering** [9413-71]
- 9413 21 **Joint brain connectivity estimation from diffusion and functional MRI data** [9413-72]

Part Two

- 9413 22 **Communication of brain network core connections altered in behavioral variant frontotemporal dementia but possibly preserved in early-onset Alzheimer's disease** [9413-73]
- 9413 23 **Comparisons of topological properties in autism for the brain network construction methods** [9413-74]
- 9413 24 **A novel method for 4D cone-beam computer-tomography reconstruction** [9413-76]
- 9413 25 **Partial volume correction for arterial spin labeling data using spatial-temporal information** [9413-77]
- 9413 26 **Intensity transform and Wiener filter in measurement of blood flow in arteriography** [9413-78]

- 9413 27 **Tchebichef moments based nonlocal-means method for despeckling optical coherence tomography images** [9413-79]
- 9413 28 **Multi-session complex averaging for high resolution high SNR 3T MR visualization of ex vivo hippocampus and insula** [9413-80]
- 9413 29 **Total variation based image deconvolution for extended depth-of-field microscopy images** [9413-81]
- 9413 2A **Beyond Frangi: an improved multiscale vesselness filter** [9413-82]
- 9413 2B **High performance 3D adaptive filtering for DSP based portable medical imaging systems** [9413-83]
- 9413 2C **Directional denoising and line enhancement for device segmentation in real time fluoroscopic imaging** [9413-84]
- 9413 2D **Trade-off between speed and performance for colorectal endoscopic NBI image classification** [9413-85]
- 9413 2E **Automatic localization of vertebrae based on convolutional neural networks** [9413-86]
- 9413 2F **Detection of anomaly in human retina using Laplacian eigenmaps and vectorized matched filtering** [9413-87]
- 9413 2G **Direct volume estimation without segmentation** [9413-88]
- 9413 2H **Spot counting on fluorescence *in situ* hybridization in suspension images using Gaussian mixture model** [9413-89]
- 9413 2I **Automatic detection of endothelial cells in 3D angiogenic sprouts from experimental phase contrast images** [9413-90]
- 9413 2J **Method for accurate sizing of pulmonary vessels from 3D medical images** [9413-91]
- 9413 2K **Optimal reinforcement of training datasets in semi-supervised landmark-based segmentation** [9413-92]
- 9413 2M **Piecewise recognition of bone skeleton profiles via an iterative Hough transform approach without re-voting** [9413-94]
- 9413 2N **A novel Hessian based algorithm for rat kidney glomerulus detection in 3D MRI** [9413-95]
- 9413 2O **Detection method of visible and invisible nipples on digital breast tomosynthesis** [9413-96]
- 9413 2P **Semi-automatic delineation of the spino-laminar junction curve on lateral x-ray radiographs of the cervical spine** [9413-97]
- 9413 2Q **Evaluating MRI based vascular wall motion as a biomarker of Fontan hemodynamic performance** [9413-98]
- 9413 2R **Evaluation of COPD's diaphragm motion extracted from 4D-MRI** [9413-99]

- 9413 2S **Calculation of brain atrophy using computed tomography and a new atrophy measurement tool** [9413-100]
- 9413 2T **Automated detection of periventricular veins on 7 T brain MRI** [9413-101]
- 9413 2U **Automated coronary artery calcium scoring from non-contrast CT using a patient-specific algorithm** [9413-102]
- 9413 2V **Computational analysis of PET by AIBL (CapAIBL): a cloud-based processing pipeline for the quantification of PET images** [9413-103]
- 9413 2W **Image-based reconstruction of 3D myocardial infarct geometry for patient specific applications** [9413-104]
- 9413 2X **Initial evaluation of a modified dual-energy window scatter correction method for CZT-based gamma cameras for breast SPECT** [9413-105]
- 9413 2Y **Schizophrenia patients differentiation based on MR vascular perfusion and volumetric imaging** [9413-106]
- 9413 30 **Image registration based on the structure tensor of the local phase** [9413-108]
- 9413 31 **A liver registration method for segmented multi-phase CT images** [9413-109]
- 9413 32 **Non-rigid MRI-TRUS registration in targeted prostate biopsy** [9413-110]
- 9413 33 **Deformable registration of CT and cone-beam CT by local CBCT intensity correction** [9413-111]
- 9413 34 **A fast alignment method for breast MRI follow-up studies using automated breast segmentation and current-prior registration** [9413-112]
- 9413 35 **Image registration using stationary velocity fields parameterized by norm-minimizing Wendland kernel** [9413-113]
- 9413 36 **Tracking of deformable target in 2D ultrasound images** [9413-114]
- 9413 37 **Accurate CT-MR image registration for deep brain stimulation: a multi-observer evaluation study** [9413-115]
- 9413 38 **Annotation-free probabilistic atlas learning for robust anatomy detection in CT images** [9413-116]
- 9413 39 **On the usefulness of gradient information in multi-objective deformable image registration using a B-spline-based dual-dynamic transformation model: comparison of three optimization algorithms** [9413-117]
- 9413 3A **Piecewise nonlinear image registration using DCT basis functions** [9413-118]
- 9413 3B **Personalized x-ray reconstruction of the proximal femur via a non-rigid 2D-3D registration** [9413-119]

- 9413 3C **A fast and memory efficient stationary wavelet transform for 3D cell segmentation** [9413-120]
- 9413 3D **Automated retinal fovea type distinction in spectral-domain optical coherence tomography of retinal vein occlusion** [9413-121]
- 9413 3E **Bootstrapping white matter segmentation, Eve++** [9413-122]
- 9413 3F **Bright-field cell image segmentation by principal component pursuit with an Ncut penalization** [9413-123]
- 9413 3G **Locally adaptive MR intensity models and MRF-based segmentation of multiple sclerosis lesions** [9413-124]
- 9413 3H **Improving the robustness of interventional 4D ultrasound segmentation through the use of personalized prior shape models** [9413-125]
- 9413 3I **Novel multiresolution mammographic density segmentation using pseudo 3D features and adaptive cluster merging** [9413-126]
- 9413 3J **Segmentation of organs at risk in CT volumes of head, thorax, abdomen, and pelvis** [9413-127]
- 9413 3K **Graph cut based co-segmentation of lung tumor in PET-CT images** [9413-128]
- 9413 3L **Segmentation of the liver from abdominal MR images: a level-set approach** [9413-129]
- 9413 3M **Semi-automatic 3D segmentation of costal cartilage in CT data from Pectus Excavatum patients (Cum Laude Poster Award)** [9413-130]
- 9413 3N **Automatic anatomy recognition of sparse objects** [9413-131]
- 9413 3O **Phase congruency map driven brain tumour segmentation** [9413-132]
- 9413 3P **Tumor segmentation on FDG-PET: usefulness of locally connected conditional random fields** [9413-133]
- 9413 3Q **Automated segmentation of serous pigment epithelium detachment in SD-OCT images** [9413-134]
- 9413 3R **Multi-atlas based segmentation of multiple organs in breast MRI** [9413-135]
- 9413 3S **Locating seed points for automatic multi-organ segmentation using nonrigid registration and organ annotations** [9413-136]
- 9413 3T **Optimization-based interactive segmentation interface for multi-region problems** [9413-137]
- 9413 3U **Live minimal path for interactive segmentation of medical images** [9413-138]
- 9413 3V **Combined use of high-definition and volumetric optical coherence tomography for the segmentation of neural canal opening in cases of optic nerve edema** [9413-139]

- 9413 3W **Intelligent editing for post-processing of ROI segmentation** [9413-140]
- 9413 3X **Fast and memory-efficient LOGISMOS graph search for intraretinal layer segmentation of 3D macular OCT scans** [9413-141]
- 9413 3Y **Segmentation of bone structures in 3D CT images based on continuous max-flow optimization** [9413-142]
- 9413 3Z **Segmentation of branching vascular structures using adaptive subdivision surface fitting** [9413-143]
- 9413 40 **A fully automatic multi-atlas based segmentation method for prostate MR images** [9413-144]
- 9413 41 **Relaxation time based classification of magnetic resonance brain images** [9413-145]
- 9413 42 **Identifying the optimal segmentors for mass classification in mammograms** [9413-146]
- 9413 43 **Interactive image segmentation framework based on control theory** [9413-147]
- 9413 44 **Shape index distribution based local surface complexity applied to the human cortex** [9413-148]
- 9413 45 **Cochlear shape description and analyzing via medial models** [9413-149]

Authors

Numbers in the index correspond to the last two digits of the six-digit citation identifier (CID) article numbering system used in Proceedings of SPIE. The first four digits reflect the volume number. Base 36 numbering is employed for the last two digits and indicates the order of articles within the volume. Numbers start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B...0Z, followed by 10-1Z, 20-2Z, etc.

- Abdalbari, Anwar, 3L
Abràmoff, Michael D., 3X
Abramson, Richard G., 0L, 1N
Acha, B., 3Y
Afacan, Onur, 28
Agam, Gady, 3A
Alassaf, Manal H., 0Z
Alderliesten, Tanja, 1R, 39
Alessio, Adam M., 04
Alhrishi, Mazen G., 1O
Ali, Murtaza, 2B
Ali, Sharib, 1H
Allan, Chris, 07
Al-Louzi, Omar, 0M
Amouroux, Marine, 1H
Appelboam, Andy, 2P
Ardigò, Marco, 1U
Arkesteijn, Georgius A. M., 20
Asada, H. Harry, 2I
Asman, Andrew J., 0K
Bach Cuadra, Meritxell, 0Y
Badea, C. T., 0G
Baptista, Maria J., 1K, 3H
Barbosa, Daniel, 06, 1K, 3H, 3M
Barillot, Christian, 14
Barkhof, Frederik, 02
Barnes, Samuel, 09
Bartzokis, George, 22
Baselice, Fabio, 41
Baucom, Rebeccah B., 0L, 1N
Bauer, Jan, 1D
Baxter, John S. H., 3T
Beckers, I., 29
Bel, Arjan, 1R
Beltrametti, Mauro C., 2M
Benders, Manon J. N. L., 15
Bennett, Kevin M., 2N
Benveniste, Helene, 1J
Berényi, Ervin, 3O
Berger, Martin, 0D
Berman, Daniel S., 2U
Bhaduri, M., 2G
Bhargava, Pavan, 0M
Bhotika, Rahul, 17
Biessels, Geert Jan, 2T
Bin Zahid, Abdullah, 2S
Bindschadler, Michael D., 04
Blackburn, Colin, 07
Bloch, Isabelle, 12
Blondel, Walter, 1H
Bockenbach, Olivier, 2B
Bosman, Peter A. N., 1R, 39
Bourgeat, Pierrick, 2V
Bouvy, Willem H., 2T
Bowles, Christopher, 0N
Bradley, Andrew P., 1U
Brady, David J., 0J
Brady, Michael, 3O
Brouwer, Patrick A., 0V
Budin, Francois, 1I
Burel, Jean-Marie, 07
Burke, Ryan P., 0L, 1N
Buss, Claudia, 11
Butman, John A., 0I, 1E
Bystrov, Daniel, 38
Caan, Matthan W. A., 20
Cagneaux, Maud, 0Y
Calabresi, Peter A., 0M
Carass, Aaron, 0M, 1C, 1Q
Cardoso, M. Jorge, 1M
Carin, Lawrence, 0J
Carlesso, Nadia, 05
Carrell, Tom, 1O
Carroll, Mark, 07
Ceritoglu, Can, 0W
Chae, Eun Young, 2O
Chae, Seung-Hoon, 2O
Chan, I., 2G
Chantrel, Steeve, 3U
Chartrand, Gabriel, 3U
Chaudhary, Vipin, 2H
Chav, Ramnada, 3U
Chen, Danny Z., 05
Chen, Elvis C. S., 3T
Chen, Haoyu, 3Q
Chen, Min, 1Q
Chen, Xinjian, 3K, 3Q
Chen, Yimin, 10
Chen, Yuehuan, 3F
Chen, Yunmei, 0B, 0C, 24
Chen, Zhi, 1I
Cheng, Hewei, 1B
Cherel, Marie, 11
Chiu, Bernard, 10
Choi, Jang-Hwan, 0D
Choi, Young-Wook, 2O
Chu, Shu-Hsien, 2I
Chung, Moo K., 23

- Clark, D. P., 0G
 Collins, D. Louis, 44
 Commowick, Olivier, 14
 Correia-Pinto, Jorge, 3M
 Cresson, Thierry, 3U
 Cunningham, Denise, 2F
 Curran, Walter J., 19
 Czaja, Wojciech, 2F
 Daams, Marita, 02
 Dahdouh, Sonia, 12
 Daianu, Madelaine, 09, 22
 Dardenne, Guillaume, 36
 Darkner, Sune, 35
 Das, Bipul, 0T
 Daul, Christian, 1H
 Dauwels, Justin, 2I
 Degirmenci, Soysal, 0J
 De Guise, Jacques A., 3U
 Denton, Erica R. E., 3I
 de Ribaupierre, Sandrine, 10
 Derksen, Alexander, 37
 Dey, Damini, 2U
 de Zubicaray, Greig I., 1Z
 D'hooge, Jan, 06, 1K, 3H
 Diaz-Arrastia, Ramon, 0I
 Diaz-Zamudio, Mariana, 2U
 Dibos, Françoise, 0E
 Diekmann, Susanne, 34
 Diez, Yago, 34
 DiFranco, Matthew, 1D
 Dijkstra, Jouke, 0V
 Ding, Mingyue, 27
 Ding, Xiaowei, 2U
 Doré, Vincent, 1Z, 2V
 Downe, Richard, 1I
 Drechsler, Klaus, 16
 Emami Abarghouei, Shadi, 32
 Entezari, Alireza, 0F
 Fahrig, Rebecca, 0D
 Fan, Yong, 1B
 Farag, Amal, 1G
 Fei, Baowei, 18, 40
 Fenster, Aaron, 10, 32
 Ferguson, Richard K., 07
 Ferraioli, Giampaolo, 41
 Filho, João B. D., 26
 Fischer, Lukas, 1D
 Fleishman, Greg M., 0X
 Fletcher, P. Thomas, 0X
 Flynn, Helen, 07
 Fonov, Vladimir, 44
 Fonseca, Jaime C., 06
 Franco, Marcelo L. N., 26
 Frangi, Alejandro F., 1P
 Franz, Astrid, 38
 Fripp, Jurgen, 1Z, 2V
 Fujiwara, Michitaka, 1A
 Furst, Jacob, 42
 Gaa, Johannes, 45
 Galbrun, Ernest, 1H
 Galimzianova, Alfia, 3G
 Galloway, Robert L., 03
 Gan, Lin, 3A
 Gao, Peng, 1Y
 Gao, Shan, 1T
 Garvin, Mona K., 3V
 Gauer, Tobias, 0S
 Gerendas, Bianca S., 3D
 Gerig, Guido, 11, 44
 Germano, Guido, 2U
 Ghoul, Suha, 32
 Gierlak, M., 29
 Gillen, Kenneth, 07
 Goldberger, Jacob, 0O
 Gonzalez, Christopher, 3E
 Gorthi, Subrahmanyam, 0Y
 Greenspan, Hayit, 0O
 Gubern-Merida, Albert, 34
 Guibaud, Laurent, 0Y
 Guillemain, François, 1H
 Gutman, Boris A., 0X
 Guyot, Alexis, 1O
 Hagmann, Patric, 0Y
 Hahn, Horst K., 02, 0A, 34
 Hahn, James K., 0Z
 Hajnal, Joseph V., 0N
 Hallmann, Marc, 37
 Hames, Samuel C., 1U
 Han, Miaofei, 3J
 Han, Shaobo, 0J
 Haneishi, Hideaki, 2R
 Hanken, Katrin, 0A
 Harrigan, Robert L., 03
 Hart, Alister, 1M
 Hashmi, Naveed, 3R
 Hashoul, Sharbell, 3R
 Haussler, F., 29
 Hayashi, Yuichiro, 1A
 Hayat, Tayyib T. A., 0N
 He, Wenda, 3I
 Heldmann, Stefan, 37
 Henckel, Joahnn, 1M
 Herzka, Daniel A., 2W
 Hildebrandt, Helmut, 0A
 Hinton, Kendra E., 3E
 Hirakawa, Tsubasa, 2D
 Hong, Haifa, 2Q
 Hu, Zhenhua, 1X
 Hua, Rui, 1P
 Huang, Feng, 0B, 0C
 Huang, Xishi, 3L
 Ibragimov, Bulat, 2K
 Iesato, Ken, 2R
 Išgum, Ivana, 15
 Islam, A., 2G
 Israeli, D., 2Y
 Ito, K., 0H
 Ito, S., 0H
 Jacobs, Russell E., 09
 Jahanshad, Neda, 09, 22

- Jani, Ashesh B., 19
 Janssen, Jasper P., 0V
 Jeong, Ji-Wook, 2O
 Jerman, Tim, 2A
 Jiang, Wanying, 27
 Jimenez, Elvira E., 22
 Jog, Amod, 1C, 1E, 1Q
 Joskowicz, L., 2Y
 Joyseeree, Ranveer R., 3S
 Ju, Wei, 3K
 Juette, Arne, 3I
 Kaganovsky, Yan, 0J
 Kahraman, O., 29
 Kahrs, Lüder A., 45
 Kainberger, Franz, 1D
 Kainz, Bernhard, 0N
 Kamocka, Małgorzata M., 05
 Kaneda, Kazufumi, 2D
 Kang, Hakmook, 0K
 Karasawa, Kenichi, 1A
 Karasev, Peter, 43
 Kardon, Randy H., 3V
 Karpate, Yogesh, 14
 Kausch, Lisa, 38
 Kawata, Naoko, 2R
 Kelly, Patrick D., 0K
 Kim, Dong Youn, 23
 Kim, Hak Hee, 2O
 Kim, Jin Uk, 23
 Kim, Sun Hyung, 0P, 44
 King, Andrew, 1O
 Kishimoto, Jessica, 10
 Kitamoto, Asanobu, 1V
 Kitasaka, Takayuki, 1A
 Kitslaar, Pieter H., 3Z
 Klein, Jan, 0A
 Klemt, Christian, 1M
 Klinder, Tobias, 0Q
 Knapp, Karen, 2P
 Koceva, Jasna, 0A
 Koide, Tetsushi, 2D
 Kolesov, Ivan, 1J, 43
 Kominami, Yoko, 2D
 Kono, Atsushi K., 3P
 Kovarnik, Tomas, 1I
 Koyama, Hisanobu, 3P
 Krupa, Alexandre, 36
 Kuijf, Hugo J., 2T
 Kutten, Kwame, 0W
 Lan, Guanghui, 24
 Landman, Bennett A., 03, 0K, 0L, 1N, 3E
 Lang, Andrew, 0M
 Langs, Georg, 1D, 1F, 3D
 Lardo, Albert C., 2W
 La Rivière, Patrick J., 04
 Laue, Hendrik, 34
 Le Bras, Anthony, 36
 Lee, Christopher P., 0L, 1N
 Lee, Junghoon, 33
 Lee, Kevin, 11
 Lee, Kyungmoo, 3X
 Lee, Min-Hee, 23
 Lee, Sang Hyeon, 23
 Lee, Sooyeul, 2O
 Leigh, Roger, 07
 Lelieveldt, Boudewijn P. F., 0V, 1T, 3Z
 Lenglet, Christophe, 21
 Lesjak, Žiga, 3G
 Le-Tien, Thuong, 0E
 Li, Baojuan, 25
 Li, Meiling, 3J
 Li, Qiang, 3J
 Li, S., 2G
 Li, Simon, 07
 Li, Yan, 3J
 Li, Zhang, 30
 Liang, Sisi, 3R
 Liang, Xi, 1V, 3R
 Liang, Zhengrong, 25
 Liao, Qimei, 1Y
 Likar, Boštjan, 2A, 2K, 3G
 Lindner, Dominik, 07
 Linkert, Melissa, 07
 Li-Thao-Té, Sébastien, 0E
 Liu, Haixiao, 1X
 Liu, LiZhi, 18, 40
 Liu, Meng, 0C
 Liu, Sijia, 2H
 Liu, Tian, 19
 Liu, Wenlei, 1Y
 Liu, Yang, 25
 Lorenz, Cristian, 0Q
 Lu, Bo, 24
 Lu, HongBing, 1Y, 25
 Lu, Kongkuo, 3W
 Lu, Le, 1G
 Lukas, Carsten, 02
 Luong, Marie, 0E
 Lyall, Amanda, 11
 Lyu, Ilwoo, 0P
 Ma, Jinfeng, 3J
 Magrath, Elizabeth, 1E
 Maguire, Orla, 2H
 Maier, Andreas, 0D
 Majdani, Omid, 45
 Malamateniou, Christina, 0N
 Mann, Steve D., 2X
 Mao, Hui, 19
 Marami, Bahram, 32
 Marchal, Maud, 36
 Martin, Nicholas G., 1Z
 Massone, Anna Maria, 2M
 Masuda, Yoshitada, 2R
 Matsumoto, Koji, 2R
 Mawn, Louise A., 03
 McMahon, Katie L., 1Z
 McNeillie, Patrick, 3R
 McVeigh, Elliot, 2W
 Mechrez, Roey, 0O
 Meine, Hans, 37

- Mendez, Mario F., 22
 Menon, Prahlad G., 2Q
 Meuli, Reto, 0Y
 Mikheev, Artem, 2S
 Miller, Michael I., 0W
 Minderman, Hans, 2H
 Misawa, Kazunari, 1A
 Mistretta, Charles, 2C
 Modat, Marc, 1M
 Modersitzki, Jan, 38
 Modgil, Dimple, 04
 Moeskops, Pim, 15
 Monaghan, Mark, 1K, 3H
 Montagne, Axel, 09
 Montillo, Albert, 0T
 Montuoro, Alessio, 1F
 Moore, Josh, 07
 Moore, William J., 07
 Morais, Pedro, 06, 1K, 3H
 Mori, Kensaku, 1A
 Mori, Susumu, 0W
 Moshel, S., 2Y
 Mu, Jian, 05
 Mu, Wei, 2E
 Müller, Henning, 3S
 Müller, Samuel, 45
 Nadeski, Mark, 2B
 Narang, Benjamin, 2P
 Natanzon, Alexander, 17
 Nedergaard, Maiken, 1J
 Nederveen, Aart J., 1T
 Nielsen, Mads, 35
 Nimura, Yukitaka, 1A
 Nishii, Tatsuya, 3P
 Nishio, Mizuho, 3P
 Nowlan, Niamh C., 0N
 Nunes, Polyana F., 26
 Oberstar, Erick, 2C
 Oda, Masahiro, 1A
 O'Dell, Walter G., 2J
 Odhner, Dewey, 3N
 Odinaka, Ikenna, 0J
 Oelmann, Simon, 16
 Ogunleye, Tomi, 19
 Oguz, Ipek, 13
 Ohnishi, Takashi, 2R
 Ong, Lee-Ling Sharon, 2I
 Ortmaier, Tobias, 45
 O'Sullivan, Joseph A., 0J
 Ourselin, Sébastien, 1M
 Oyarzun Laura, Cristina, 16
 Padfield, Dirk R., 17, 3C
 Pai, Akshay, 35
 Paniagua, Beatriz, 0U
 Parhi, Keshab K., 21
 Park, Justin C., 24
 Park, Seyoun, 33
 Pascazio, Vito, 41
 Pashakhanloo, Farhad, 2W
 Pasiliao, Eduardo, Jr., 0B
 Patel, Mayur B., 0K
 Patrocínio, Ana C., 26
 Patsch, Janina M., 1D
 Patterson, Andrew J., 07
 Penney, Graeme, 1O
 Pérez-Carrasco, J. A., 3Y
 Perissinotto, Andrea, 1K
 Pernuš, Franjo, 2A, 2K, 3G
 Peters, Terry M., 3T
 Pham, Dzung L., 0I, 1C, 1E
 Phillips, Michael, 2P
 Pichat, Jonas, 1M
 Pindelski, Blazej, 07
 Pirpinia, Kleopatra, 39
 Pizer, Stephen M., 0U
 Plassard, Andrew J., 03, 0K, 3E
 Plisker, William, 33
 Politte, David G., 0J
 Poot, Dirk H. J., 20
 Poulose, Benjamin K., 0L, 1N
 Pozo, Jose M., 1P
 Prasad, Gautam, 09
 Prastawa, Marcel, 11
 Prieto, Juan Carlos, 0U
 Prince, Jerry L., 0M, 0R, 1C, 1L, 1Q
 Prow, Tarl W., 1U
 Qiu, Wu, 10
 Queirós, Sandro, 06, 1K, 3H, 3M
 Quon, Harry, 33
 Raicu, Daniela Stan, 42
 Rajchl, Martin, 2W, 3T
 Ramalingam, Balaji, 07
 Ratner, Vadim, 1J, 43
 Raytchev, Bisser, 2D
 Reiber, Johan H. C., 0V
 Ren, Jing, 3L
 Resnick, Susan M., 3E
 Reuben, Adam, 2P
 Ricca, Giorgio, 2M
 Rocchisani, Jean-Marie, 0E
 Rodrigues, Nuno F., 1K, 3H, 3M
 Rong, Junyan, 1Y
 Rose, Stephen, 1Z
 Rossi, Peter, 19
 Roth, Holger R., 1G
 Roundhill, David, 0Q
 Rowe, Chris C., 2V
 Roy, Snehashis, 0I, 1E
 Royalty, Kevin, 2C
 Royer, Lucas, 36
 Rozwicki, Emil, 07
 Rueckert, Daniel, 0N, 1A
 Rühaak, Jan, 34, 37
 Rusinek, Henry, 2S
 Rutherford, Mary, 0N
 Sa, Ruhan, 2H
 Sakhaee, Elham, 0F
 Salvado, Olivier, 1Z, 2V
 Samadani, Uzma, 2S
 Sanchez, Mar, 13

- Schadewaldt, Nicole, 38
 Schaer, Marie, 0Y
 Scherrer, Benoit, 28
 Schmidt-Erfurth, Ursula, 1F, 3D
 Schulz, Heinrich, 38
 Sedai, Suman, 3R
 Serrano, C., 3Y
 Shekhar, Raj, 33
 Shen, Kaikai, 1Z
 Shen, Wei, 2E
 Shi, Fei, 3Q
 Shi, Shuyue, 31
 Shi, Yundi, 13
 Shibuya, M., 0H
 Shiroishi, Toshihiko, 1V
 Sigurdsson, Gunnar A., 0R
 Simader, Christian, 1F, 3D
 Simonelli, Lucia D., 2F
 Singh, Jolene M., 28
 Sirouspour, Shahin, 32
 Slabaugh, Greg, 2P
 Slomka, Piotr J., 2U
 Smith, Seth A., 03
 Sommer, Stefan, 35
 Song, Qi, 0T
 Song, Yanli, 3J
 Sonka, Milan, 13, 1I, 3X
 Sonke, Jan-Jakob, 39
 Sonoyama, Shoji, 2D
 Sørensen, Lauge, 35
 Soyer, H. Peter, 1U
 Spanier, A. B., 2Y
 Špiclin, Žiga, 2A, 3G
 Sporring, Jon, 35
 Stamm, Aymeric, 28
 Staring, Marius, 3Z
 Stoker, Jaap, 30
 Stone, Maureen, 1L
 Strehlow, Jan, 34
 Strother, Charles, 2C
 Styner, Martin A., 0P, 0U, 11, 13, 44
 Sugimura, Kazuro, 3P
 Sugiura, Toshihiko, 2R
 Summers, Ronald M., 1G
 Sun, Yue, 32
 Sun, Zhi, 31
 Sun, Zhuli, 3Q
 Suzuki, Toshio, 2R
 Swastika, Windra, 2R
 Swedlow, Jason, 07
 Szilágyi, Tünde, 3O
 Tada, Yuji, 2R
 Tamaki, Toru, 2D
 Tamura, Masaru, 1V
 Tanabe, Nobuhiro, 2R
 Tanaka, Shinji, 2D
 Tang, An, 3U
 Tang, Xiaoying, 0W
 Tang, Yuchao, 1W
 Tannenbaum, Allen, 1J, 43
 Tarkowska, Aleksandra, 07
 Tatsumi, Koichiro, 2R
 Taylor, Zeike A., 1P
 Terzopoulos, Demetri, 2U
 Thiran, Jean-Philippe, 0Y
 Thompson, Paul M., 09, 0X, 1Z, 22
 Tian, Jie, 1X, 2E
 Tian, Zhiqiang, 18, 40
 Tomuro, Noriko, 42
 Tong, Yubing, 3N
 Torigian, Drew A., 3N
 Tornai, Martin P., 2X
 Tourbier, Sébastien, 0Y
 Tran, Dai-Viet, 0E
 Tran, Trac D., 0R
 Trayanova, Natalia, 2W
 Tu, Liyun, 0U
 Turkbey, Evrim B., 1G
 Udupa, Jayaram K., 3N
 Ukwatta, Eranga, 2W
 Unberath, Mathias, 0D
 Vadakkumpadan, Fijoy, 2W
 Valentinitsch, Alexander, 1D
 Van de Giessen, Martijn, 0V
 van der Geest, Rob J., 1T, 3Z
 van Herk, Marcel, 39
 van Vliet, Lucas J., 20, 30
 van Wijk, Diederik F., 1T
 van't Klooster, Ronald, 1T, 3Z
 Varnavas, Andreas, 1O
 Venkatraman, Vijay, 3E
 Vicory, Jared, 0U
 Viergever, Max A., 15, 2T
 Vik, Torbjørn, 38
 Vilaça, João L., 06, 1K, 3H, 3M
 Villalon-Reina, Julio E., 09
 Villemagne, Victor L., 2V
 Vincken, Koen L., 2T
 Vos, Frans M., 20, 30
 Vrtovec, Tomaž, 2K
 Wächter-Stehle, Irina, 0Q
 Wagner, Martin, 2C
 Wahle, Andreas, 1I
 Wainwright, Ian, 2B
 Walczysko, Petr, 07
 Waldstein, Sebastian M., 3D
 Wan, Justin W. L., 3F
 Wang, Hongzhi, 3R
 Wang, Huiqian, 3N
 Wang, Jui-Kai, 3V
 Wang, Kun, 1X
 Wang, Lei, 34
 Wang, MengMeng, 2I
 Wang, Z., 2G
 Warfield, Simon K., 28
 Weiler, Florian, 02, 34
 Wendland, Hannes, 0Q
 Werner, René, 0S
 Wesarg, Stefan, 16
 White, James, 2W

Wiemker, Rafael, 38
Wilkes, Sean, 0I
Wong, John, 33
Woo, Jonghye, 1L
Wright, Margaret J., 1Z
Wu, Jing, 3D
Wu, Teresa, 2N
Xiang, Dehui, 3K, 3Q
Xiang, Wenqi, 27
Xie, Qingguo, 31
Xie, Zhongliu, 1V
Xing, Fangxu, 1L
Xu, Zhoubing, 0L, 1N
Yacoubou Djima, Karamatou A., 2F
Yamada, Y., 0H
Yang, Andrew II, 2S
Yang, Caiyun, 2E
Yang, Dan, 0U
Yang, Feng, 2E
Yang, Jianfei, 20
Yang, Lin, 05
Yang, Xiaofeng, 19
Yang, Xin, 1X, 2E
Yang, Zhen, 0R
Ye, Chuyang, 1L
Yin, Zhye, 0T
Ying, Howard S., 0M
Yoshida, Shigeto, 2D
Yu, Weimin, 3B
Yuan, Jing, 10
Yuan, Rong, 31
Zaldarriaga Consing, Kirsten, 11
Zhang, Bin, 3K
Zhang, Hao, 0B, 0C, 24
Zhang, Li, 1I, 3X
Zhang, Linchuan, 25
Zhang, Ling, 1I
Zhang, Min, 2N
Zhang, Xi, 25
Zhang, Xuming, 27
Zhang, Yu, 42
Zhao, Liming, 3N
Zhen, X., 2G
Zheng, Guoyan, 3B
Zhu, Hancan, 1B
Zhu, Liangjia, 1J, 43
Zlokovic, Berislav V., 09
Zollman, Amy L., 05
Zwanenburg, Jaco J. M., 2T
Zwiggelaar, Reyer, 3I
Zysset, Philippe, 3B

Conference Committee

Symposium Chairs

David Manning, Lancaster University (United Kingdom)
Steven C. Horii, The University of Pennsylvania Health System
(United States)

Conference Chairs

Sébastien Ourselin, University College London (United Kingdom)
Martin A. Styner, The University of North Carolina at Chapel Hill
(United States)

Conference Program Committee

Rafeef Abugharbieh, The University of British Columbia (Canada)
Paul Aljabar, King's College London (United Kingdom)
Mostafa Analoui, The Livingston Group LLC (United States)
Elsa D. Angelini, Télécom ParisTech (France)
Brian B. Avants, University of Pennsylvania (United States)
Meritxell Bach-Cuadra, Université de Lausanne (Switzerland)
Kyongtae Ty Bae, University of Pittsburgh Medical Center
(United States)
Christian Barillot, IRISA / INRIA Rennes (France)
Benoit M. Dawant, Vanderbilt University (United States)
Marleen de Bruijne, Erasmus MC (Netherlands)
Baowei Fei, Emory University (United States)
Aaron Fenster, Robarts Research Institute (Canada)
Alejandro F. Frangi, The University of Sheffield (United Kingdom)
Mona K. Garvin, The University of Iowa (United States)
James C. Gee, University of Pennsylvania (United States)
Benjamin Glocker, Imperial College London (United Kingdom)
Guido Gerig, The University of Utah (United States)
Ghassan Hamarneh, Simon Fraser University (Canada)
David R. Haynor, University of Washington (United States)
Tobias Heimann, Siemens AG (Germany)
Ivana Išgum, Universitair Medisch Centrum Utrecht (Netherlands)
Stefan Klein, Erasmus MC (Netherlands)
Bennett A. Landman, Vanderbilt University (United States)
Tianhu Lei, University of Pittsburgh Medical Center (United States)
Boudewijn P. F. Lelieveldt, Leids Universitair Medisch Centrum
(Netherlands)
Murray H. Loew, The George Washington University (United States)
Cristian Lorenz, Philips Research (Germany)

Frederik Maes, Katholieke Universiteit Leuven (Belgium)
Vincent A. Magnotta, The University of Iowa Hospitals and Clinics (United States)
Sunanda D. Mitra, Texas Tech University (United States)
Kensaku Mori, Nagoya University (Japan)
Nassir Navab, Technische Universität München (Germany)
Mads Nielsen, Niels Bohr Institute (Denmark)
Wiro J. Niessen, Erasmus MC (Netherlands)
Brian Nutter, Texas Tech University (United States)
Dzung L. Pham, Henry Jackson Foundation/USU (United States), National Institutes of Health (United States), and Johns Hopkins University (United States)
Josien P. W. Pluim, Technische Universiteit Eindhoven (Netherlands)
Jerry L. Prince, Johns Hopkins University (United States)
Sonia Pujol, Brigham and Women's Hospital (United States)
Punam K. Saha, The University of Iowa (United States)
Olivier Salvado, Commonwealth Scientific and Industrial Research Organisation (Australia)
Philippe Thevenaz, Ecole Polytechnique Fédérale de Lausanne (Switzerland)
Jayaram K. Udupa, University of Pennsylvania (United States)
Koen Van Leemput, Harvard Medical School (United States) and Massachusetts General Hospital (United States)
Tom K. Vercauteren, University College London (United Kingdom)
Tomaž Vrtovec, University of Ljubljana (Slovenia)
Andreas Wahle, The University of Iowa (United States)
Wolfgang Wein, ImFusion GmbH (Germany)

Session Chairs

- 1 Quantitative Image Analysis
David R. Haynor, University of Washington (United States)
Josien P. W. Pluim, Technische Universiteit Eindhoven (Netherlands)
- 2 Keynote and Diffusion MRI Analysis
Olivier Salvado, Commonwealth Scientific and Industrial Research Organisation (Australia)
Sébastien Ourselin, University College London (United Kingdom)
- 3 Image Representation and Reconstruction
Dzung L. Pham, Henry Jackson Foundation/USU (United States), National Institutes of Health (United States), and Johns Hopkins University (United States)
Kensaku Mori, Nagoya University (Japan)

- 4 Compressed Sensing/Sparse Methods
Baowei Fei, Emory University (United States)
Murray H. Loew, The George Washington University (United States)
- 5 Machine Learning
Mona K. Garvin, The University of Iowa (United States)
Ivana Išgum, Universitair Medisch Centrum Utrecht (Netherlands)
- 6 Shape and Models
Mads Nielsen, Niels Bohr Institute (Denmark)
Benoit M. Dawant, Vanderbilt University (United States)
- 7 Computational Anatomy
James C. Gee, University of Pennsylvania (United States)
Bennett A. Landman, Vanderbilt University (United States)
- 8 Segmentation: Brain
Koen Van Leemput, Massachusetts General Hospital (United States)
Marleen de Bruijne, Erasmus MC (Netherlands)
- 9 Segmentation
Aaron Fenster, Robarts Research Institute (Canada)
Jayaram K. Udupa, University of Pennsylvania (United States)
- 10 Classification
Punam K. Saha, The University of Iowa (United States)
Ghassan Hamarneh, Simon Fraser University (Canada)
- 11 Motion/Time Series
Jerry L. Prince, Johns Hopkins University (United States)
Wolfgang Wein, ImFusion GmbH (Germany)
- 12 Registration
Alejandro F. Frangi, The University of Sheffield (United Kingdom)
Rafeef Abugharbieh, The University of British Columbia (Canada)

2015 Medical Imaging Award Recipients

Robert F. Wagner Best Student Paper Award

Robert F. Wagner was an active scientist in the SPIE Medical Imaging meeting, starting with the first meeting in 1972 and continuing throughout his career. He ensured that the BRH, and subsequently the CDRH, was a sponsor for the early and subsequent Medical Imaging meetings, helping to launch and ensure the historical success of the meeting. The Robert F. Wagner All-Conference Best Student Paper Award (established 2014) is acknowledgment of his many important contributions to the Medical Imaging meeting and his many important advances to the field of medical imaging.



This award is cosponsored by:



The Medical Image Perception Society



2015 Recipients:

First Place: **Automatic discrimination of color retinal images using the bag of words approach** [9414-54]

Ibrahim Sadik, I. Hussein Tahoun, Désiré Sidibé, Fabrice Meriaudeau, Univ. de Bourgogne (France)

Second Place: **Automated pulmonary lobar ventilation measurements using volume-matched thoracic CT and MRI** [9417-42]

Fumin Guo, Sarah Svenningsen, Emma Bluemke, Martin Rajchl, Jing Yuna, Aaron Fenster, Grace Parraga, Robarts Research Institute (Canada)

Conference Awards

2015 Recipients:

Cum Laude Poster Award: **Semi-automatic 3D segmentation of coastal cartilage in CT data from Pectus Excavatum patients** [9413-130]

D. Barbosa, N. Rodrigues, M. Vilaça, ICVS/3B's - PT Government Associate Lab. (Portugal) and Instituto Politécnico do Cávado e Ave (Portugal); S. Queirós, J. Correia-Pinto, ICVS/3B's - PT Government Associate Lab. (Portugal)

