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*Medical Imaging 2012*

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**Image Processing**

**David R. Haynor**  
**Sébastien Ourselin**

*Editors*

**6–9 February 2012**  
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S. Sergeev, Y. Zhao, San Francisco State Univ. (United States); M. G. Linguraru, Children's National Medical Ctr. (United States); K. Okada, San Francisco State Univ. (United States)
- 8314 25 **Automatic control-point selection for image registration using disparity fitting** [8314-76]  
D. M. Conover, The George Washington Univ. (United States); J. K. Delaney, National Gallery of Art (United States); P. Ricciardi, The Fitzwilliam Museum (United States); M. H. Loew, The George Washington Univ. (United States)

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**POSTER SESSION: SEGMENTATION**

- 8314 26 **Vessel segmentation using an iterative fast marching approach with directional prior** [8314-77]  
W. Liao, S. Wörz, K. Rohr, Ruprecht-Karls-Univ. Heidelberg (Germany) and German Cancer Research Ctr. Heidelberg (Germany)
- 8314 27 **Adaptive epithelial cytoplasm segmentation and epithelial unit separation in immunofluorescent images** [8314-78]  
J. Ramachandran, R. Scott, P. Ajemba, H. Karvir, F. Khan, J. Zeineh, M. Donovan, G. Fernandez, Aureon Biosciences, Inc. (United States)
- 8314 28 **Nuclei extraction from histopathological images using a marked point process approach** [8314-79]  
M. Kulikova, Image and Pervasive Access Lab., CNRS (Singapore); A. Veillard, Image and Pervasive Access Lab., CNRS (Singapore) and National Univ. of Singapore (Singapore); L. Roux, Image and Pervasive Access Lab., CNRS (Singapore) and Univ. Joseph Fourier (France); D. Racoceanu, Image and Pervasive Access Lab., CNRS (Singapore), National Univ. of Singapore (Singapore), and Univ. Pierre et Marie Curie (France)
- 8314 29 **A framework of whole heart extracellular volume fraction estimation for low dose cardiac CT images** [8314-80]  
X. Chen, R. M. Summers, M. S. Nacif, S. Liu, D. A. Bluemke, J. Yao, National Institutes of Health (United States)
- 8314 2A **Heart region segmentation from low-dose CT scans: an anatomy based approach** [8314-81]  
A. P. Reeves, A. M. Biancardi, Cornell Univ. (United States); D. F. Yankelevitz, M. D. Cham, C. I. Henschke, The Mount Sinai Medical Ctr. (United States)
- 8314 2B **Enhanced detection of the vertebrae in 2D CT-images** [8314-82]  
F. Graf, R. Greil, H.-P. Kriegel, M. Schubert, Ludwig-Maximilians-Univ. München (Germany); A. Cavallaro, Imaging Science Institute Erlangen (Germany)
- 8314 2C **Metastatic liver tumor detection from 3D CT images using a level set algorithm with liver-edge term** [8314-83]  
J. Miyakoshi, S. Yui, K. Matsuzaki, T. Irie, Hitachi, Ltd. (Japan)
- 8314 2D **Fully automatic vertebra detection in x-ray images based on multi-class SVM** [8314-84]  
F. Lecron, M. Benjelloun, S. Mahmoudi, Univ. of Mons (Belgium)

- 8314 2E **Local label learning (L3) for multi-atlas based segmentation** [8314-85]  
Y. Hao, Institute of Automation (China); J. Liu, Y. Duan, X. Zhang, Xuanwu Hospital of Capital Medical Univ. (China); C. Yu, Tianjin Medical Univ. General Hospital (China); T. Jiang, Y. Fan, Institute of Automation (China)
- 8314 2F **Automated anatomical labeling method for abdominal arteries extracted from 3D abdominal CT images** [8314-86]  
M. Oda, B. H. Hoang, Nagoya Univ. (Japan); T. Kitasaka, Aichi Institute of Technology (Japan); K. Misawa, Aichi Cancer Ctr. Research Institute (Japan); M. Fujiwara, K. Mori, Nagoya Univ. (Japan)
- 8314 2G **Computerized analysis of pelvic incidence from 3D images** [8314-87]  
T. Vrtovec, Univ. of Ljubljana (Slovenia); M. M. A. Janssen, Univ. Medical Ctr. Utrecht (Netherlands); F. Pernuš, Univ. of Ljubljana (Slovenia); R. M. Castelein, M. A. Viergever, Univ. Medical Ctr. Utrecht (Netherlands)
- 8314 2H **Incorporation of physical constraints in optimal surface search for renal cortex segmentation** [8314-88]  
X. Li, Institute of Automation (China); X. Chen, J. Yao, National Institute of Health (United States); X. Zhang, J. Tian, Institute of Automation (China)
- 8314 2I **A parametric statistic model and fast algorithm for brain MR image segmentation and bias correction** [8314-89]  
T. Zhan, Z. Wei, L. Xiao, L. Qian, Nanjing Univ. of Science & Technology (China)
- 8314 2J **Live-wire-based segmentation of 3D anatomical structures for image-guided lung interventions** [8314-90]  
K. Lu, Philips Research North America (United States); S. Xu, National Institutes of Health (United States); Z. Xue, S. T. Wong, Methodist Hospital Research Institute (United States)

## Part Two

- 8314 2K **Semi-automatic intracranial tumor segmentation and tumor tissue classification based on multiple MR protocols** [8314-91]  
A. Franz, Philips Research (Germany); H. Tschampa, A. Müller, Univ. Hospital Bonn (Germany); S. Remmele, C. Stehning, J. Keupp, Philips Research (Germany); J. Gieseke, Philips Healthcare (Germany); H. H. Schild, P. Mürtz, Univ. Hospital Bonn (Germany)
- 8314 2L **A multi-dimensional model for localization of highly variable objects** [8314-92]  
H. Ruppertshofen, Univ. of Applied Sciences Kiel (Germany) and Otto-von-Guericke-Univ. Magdeburg (Germany); T. Bülow, J. von Berg, Philips Research Labs. (Germany); S. Schmidt, Univ. of Applied Sciences Wildau (Germany) and Otto-von-Guericke-Univ. Magdeburg (Germany); P. Beyerlein, Univ. of Applied Sciences Wildau (Germany); Z. Salah, G. Rose, Otto-von-Guericke Univ. Magdeburg (Germany); H. Schramm, Univ. of Applied Sciences Kiel (Germany)

- 8314 2M **Improving semi-automated segmentation by integrating learning with active sampling** [8314-93]  
J. Huo, Univ. of California, Los Angeles (United States); K. Okada, San Francisco State Univ. (United States); M. Brown, Univ. of California, Los Angeles (United States)
- 8314 2N **Robust lumen segmentation of coronary arteries in 2D angiographic images** [8314-94]  
M. Polyanskaya, C. Schwemmer, A. Linarth, Friedrich-Alexander-Univ. Erlangen-Nuremberg (Germany); G. Lauritsch, Siemens AG (Germany); J. Hornegger, Friedrich-Alexander-Univ. Erlangen-Nuremberg (Germany)
- 8314 2O **Extraction of liver volumetry based on blood vessel from the portal phase CT dataset** [8314-95]  
A. S. Maklad, M. Matsuhira, H. Suzuki, Y. Kawata, N. Niki, T. Utsunomiya, M. Shimada, Univ. of Tokushima (Japan)
- 8314 2P **Segmentation of the pectoral muscle in breast MR images using structure tensor and deformable model** [8314-96]  
M. Lee, Seoul National Univ. (Korea, Republic of); J. H. Kim, Seoul National Univ. (Korea, Republic of)
- 8314 2Q **A new prostate segmentation approach using multispectral magnetic resonance imaging and a statistical pattern classifier** [8314-97]  
B. Maan, F. van der Heijden, Univ. of Twente (Netherlands); J. J. Fütterer, Radboud Univ. Nijmegen Medical Ctr. (Netherlands)
- 8314 2R **Design of spectral filtering for tissue classification** [8314-98]  
A. Narayanan, P. Shah, B. Das, GE Global Research (India)
- 8314 2S **Robust left ventricular myocardium segmentation for multi-protocol MR** [8314-99]  
A. Groth, J. Weese, H. Lehmann, Philips Research Labs. (Germany)
- 8314 2T **Supervised classification of brain tissues through local multi-scale texture analysis by coupling DIR and FLAIR MR sequences** [8314-100]  
E. Poletti, E. Veronese, M. Calabrese, A. Bertoldo, E. Grisan, Univ. of Padova (Italy)
- 8314 2U **Fast automatic algorithm for bifurcation detection in vascular CTA scans** [8314-101]  
M. Brozio, V. Gorbunova, C. Godenschwager, Siemens Healthcare (Germany); T. Beck, Siemens Healthcare (Germany) and Karlsruhe Institute of Technology (Germany); D. Bernhardt, Siemens Healthcare (Germany)
- 8314 2V **Pulmonary lobe segmentation with level sets** [8314-103]  
A. Schmidt-Richberg, J. Ehrhardt, M. Wilms, R. Werner, H. Handels, Univ. of Lübeck (Germany)
- 8314 2W **Multi-level tree analysis of pulmonary artery/vein trees in non-contrast CT images** [8314-104]  
Z. Gao, R. W. Grout, E. A. Hoffman, P. K. Saha, The Univ. of Iowa (United States)
- 8314 2X **Binary image representation by contour trees** [8314-105]  
D. B. Aydogan, J. Hyttinen, Tampere Univ. of Technology (Finland)

- 8314 2Y **An automated multi-modal object analysis approach to coronary calcium scoring of adaptive heart isolated MSCT images** [8314-106]  
J. Wu, Univ. of Surrey (United Kingdom); G. Ferns, Keele Univ. (United Kingdom); J. Giles, Conquest Hospital (United Kingdom); E. Lewis, Univ. of Surrey (United Kingdom)
- 8314 2Z **Three dimensional multi-scale visual words for texture-based cerebellum segmentation** [8314-107]  
A. Foncubierta-Rodríguez, Univ. of Applied Sciences Western Switzerland (Switzerland); A. Depeursinge, Univ. of Applied Sciences Western Switzerland (Switzerland) and Univ. Hospital of Geneva (Switzerland); L. Gui, Univ. Hospital of Geneva (Switzerland); H. Müller, Univ. of Applied Sciences Western Switzerland (Switzerland) and Univ. Hospital of Geneva (Switzerland)
- 8314 30 **Finding seeds for segmentation using statistical fusion** [8314-108]  
F. Xing, The Johns Hopkins Univ. (United States); A. J. Asman, Vanderbilt Univ. (United States); J. L. Prince, The Johns Hopkins Univ. (United States); B. A. Landman, Vanderbilt Univ. (United States) and The Johns Hopkins Univ. (United States)
- 8314 32 **Watershed-based segmentation of the corpus callosum in diffusion MRI** [8314-110]  
P. Freitas, L. Rittner, S. Appenzeller, A. Lapa, R. Lotufo, Univ. of Campinas (Brazil)
- 8314 33 **Computational intelligence techniques for identifying the pectoral muscle region in mammograms** [8314-111]  
H. E. Rickard, R. G. Villao, Coastal Carolina Univ. (United States); A. S. Elmaghraby, Univ. of Louisville (United States)
- 8314 34 **GrowCut-based fast tumor segmentation for 3D magnetic resonance images** [8314-112]  
T. Yamasaki, Cornell Univ. (United States), The Univ. of Tokyo (Japan), and Japan Society for the Promotion of Science (Japan); T. Chen, Cornell Univ. (United States); M. Yagi, Osaka Univ. (Japan); T. Hirai, R. Murakami, Kumamoto Univ. (Japan)
- 8314 35 **Automatic detection of significant and subtle arterial lesions from coronary CT angiography** [8314-113]  
D. Kang, Univ. of Southern California (United States); P. Slomka, R. Nakazato, V. Y. Cheng, J. K. Min, D. Li, D. S. Berman, Cedars-Sinai Medical Ctr. (United States); C.-C. J. Kuo, Univ. of Southern California (United States); D. Dey, Cedars-Sinai Medical Ctr. (United States)
- 8314 36 **Automatic segmentation of the liver using multi-planar anatomy and deformable surface model in abdominal contrast-enhanced CT images** [8314-114]  
Y. Jang, H. Hong, Seoul Women's Univ. (Korea, Republic of); J. W. Chung, Y. H. Yoon, Seoul National Univ. Hospital (Korea, Republic of)
- 8314 37 **A novel approach for three dimensional dendrite spine segmentation and classification** [8314-115]  
T. He, Z. Xue, S. T. C. Wong, Methodist Hospital Research Institute (United States)
- 8314 38 **Segmentation algorithm of colon based on multi-slice CT colonography** [8314-116]  
Y. Hu, M. S. Ahamed, E. Takahashi, H. Suzuki, Y. Kawata, N. Niki, Univ. of Tokushima (Japan); M. Suzuki, G. Iinuma, N. Moriyama, National Cancer Ctr. (Japan)

- 8314 39 **Automatic segmentation and analysis of fibrin networks in 3D confocal microscopy images** [8314-117]  
X. Liu, J. Mu, Univ. of Notre Dame (United States); K. R. Machlus, A. S. Wolberg, Univ. of North Carolina at Chapel Hill (United States); E. D. Rosen, Indiana Univ. School of Medicine (United States); Z. Xu, M. S. Alber, D. Z. Chen, Univ. of Notre Dame (United States)
- 8314 3A **Placental fetal stem segmentation in a sequence of histology images** [8314-118]  
P. Athavale, Univ. of Toronto (Canada); L. A. Vese, Univ. of California, Los Angeles (United States)
- 8314 3B **Fully automated 3D prostate central gland segmentation in MR images: a LOGISMOS based approach** [8314-119]  
Y. Yin, S. V. Fotin, S. Periaswamy, J. Kunz, H. Haldankar, N. Muradyan, iCAD, Inc. (United States); B. Turkbey, P. Choyke, National Cancer Institute (United States)
- 8314 3C **A unifying graph-cut image segmentation framework: algorithms it encompasses and equivalences among them** [8314-120]  
K. C. Ciesielski, West Virginia Univ. (United States) and The Univ. of Pennsylvania (United States); J. K. Udupa, The Univ. of Pennsylvania Health System (United States); A. X. Falcão, Univ. of Campinas (Brazil); P. A. V. Miranda, Univ. of São Paulo (Brazil)
- 8314 3D **Automatic 3D segmentation of the kidney in MR images using wavelet feature extraction and probability shape model** [8314-121]  
H. Akbari, B. Fei, Emory Univ. (United States) and Georgia Institute of Technology (United States)
- 8314 3E **Automatic organ segmentation on torso CT images by using content-based image retrieval** [8314-122]  
X. Zhou, A. Watanabe, Gifu Univ. School of Medicine (Japan); X. Zhou, Nagoya Bunri Univ. (Japan); T. Hara, Gifu Univ. School of Medicine (Japan); R. Yokoyama, M. Kanematsu, Gifu Univ. Hospital (Japan); H. Fujita, Gifu Univ. School of Medicine (Japan)
- 8314 3F **An improved fuzzy c-means algorithm for unbalanced sized clusters** [8314-123]  
S. Gu, J. Liu, Q. Xie, L. Wang, Wuhan National Lab. for Optoelectronics (China) and Huazhong Univ. of Science and Technology (China)
- 8314 3G **Graph representation of hepatic vessel based on centerline extraction and junction detection** [8314-124]  
X. Zhang, J. Tian, Institute of Automation (China); K. Deng, Xidian Univ. (China); X. Li, F. Yang, Institute of Automation (China)
- 8314 3H **Vessel centerline extraction in phase-contrast MR images using vector flow information** [8314-125]  
Y.-J. Jeong, Karlsruhe Institute of Technology (Germany); S. Ley, Univ. Hospital Heidelberg (Germany) and Univ. of Toronto (Canada); R. Dillmann, R. Unterhinninghofen, Karlsruhe Institute of Technology (Germany)
- 8314 3I **A fuzzy clustering vessel segmentation method incorporating line-direction information** [8314-186]  
Z. Wang, W. Xiong, W. Huang, J. Zhou, A\*STAR Institute for Infocomm Research (Singapore); S. K. Venkatesh, National Univ. of Singapore School of Medicine (Singapore)



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**POSTER SESSION: SHAPE**

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- 8314 3K **A framework for longitudinal data analysis via shape regression** [8314-127]  
J. Fishbaugh, S. Durrleman, The Univ. of Utah (United States); J. Piven, The Univ. of North Carolina at Chapel Hill (United States); G. Gerig, The Univ. of Utah (United States)
- 8314 3L **3D reconstruction of the scapula from biplanar radiographs** [8314-128]  
P. Y. Lagacé, T. Cresson, N. Hagemester, Ecole de Technologie Supérieure (Canada); F. Billuart, X. Ohl, Ecole Nationale Supérieure d'Arts et Métiers (France); J. de Guise, Ecole de Technologie Supérieure (Canada); W. Skalli, Ecole Nationale Supérieure d'Arts et Métiers (France)
- 8314 3M **A shape-based statistical method to retrieve 2D TRUS-MR slice correspondence for prostate biopsy** [8314-129]  
J. Mitra, Le2i, CNRS, Univ. de Bourgogne (France) and Univ. de Girona (Spain); A. Srikantha, D. Sidibé, Le2i, CNRS, Univ. de Bourgogne (France); R. Martí, A. Oliver, X. Lladó, Univ. de Girona (Spain); S. Ghose, Le2i, CNRS, Univ. de Bourgogne (France) and Univ. de Girona (Spain); J. C. Vilanova, Girona Magnetic Resonance Ctr. (Spain); J. Comet, Hospital Dr. Josep Trueta (Spain); F. Meriaudeau, Le2i, CNRS, Univ. de Bourgogne (France)
- 8314 3N **Shape-constrained multi-atlas based segmentation with multichannel registration** [8314-130]  
Y. Hao, T. Jiang, Y. Fan, Institute of Automation (China)
- 8314 3O **Automated detection of pain from facial expressions: a rule-based approach using AAM** [8314-131]  
Z. Chen, R. Ansari, D. J. Wilkie, Univ. of Illinois at Chicago (United States)

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**POSTER SESSION: IMAGE ENHANCEMENT**

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- 8314 3P **Tomographic reconstruction of Cerenkov photons in tissues through approximate message-passing** [8314-132]  
J. Zhong, J. Tian, H. Liu, C. Qin, X. Yang, X. Ma, Institute of Automation (China)
- 8314 3Q **Quantization of reconstruction error with an interval-based algorithm: an experimental comparison** [8314-133]  
A. Hassoun, O. Strauss, Lab. d'Informatique de Robotique et de Microelectronique de Montpellier, CNRS, Univ. Montpellier (France)
- 8314 3R **Blind local noise estimation for medical images reconstructed from rapid acquisition** [8314-134]  
X. Pan, X. Zhang, S. Lyu, Univ. at Albany (United States)
- 8314 3S **Optimisation of reconstruction for the registration of CT liver perfusion sequences** [8314-135]  
B. Romain, Philips Healthcare (France), Ecole Central Paris (France), and Lab. IBISC, Univ. d'Evry-Val (France); V. Letort, Ecole Centrale Paris (France); O. Lucidarme, Hospital La Pitié-Salpêtrière (France); F. d'Alché-Buc, Lab. IBISC, Univ. d'Evry-Val (France) and The National Institute for Research in Computer Science and Control, CNRS (France); L. Rouet, Philips Healthcare (France)

- 8314 3U **Image fusion in x-ray differential phase-contrast imaging** [8314-137]  
W. Haas, M. Polyanskaya, F. Bayer, K. Gödel, H. Hofmann, J. Rieger, A. Ritter, T. Weber, L. Wucherer, J. Durst, T. Michel, G. Anton, J. Hornegger, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany)
- 8314 3V **Super-resolution reconstruction in MRI: better images faster?** [8314-138]  
E. Plenge, D. H. J. Poot, M. Bernsen, G. Kotek, G. Houston, P. Wielopolski, Erasmuc MC (Netherlands); L. van der Weerd, Leiden Univ. Medical Ctr. (Netherlands); W. J. Niessen, Erasmuc MC (Netherlands) and Delft Univ. of Technology (Netherlands); E. Meijering, Erasmuc MC (Netherlands)
- 8314 3W **An iterative hard thresholding algorithm for CS MRI** [8314-139]  
S. R. Rajani, M. R. Reddy, Indian Institute of Technology Madras (India)
- 8314 3X **Image quality improvement through fusion of hybrid bone- and soft-tissue-texture filtering for 3D cone beam CT extremity imaging system** [8314-140]  
D. Yang, R. A. Senn, N. Packard, J. Yorkston, D. H. Foos, Carestream Health, Inc. (United States)
- 8314 3Y **Quality evaluation for metal influenced CT data** [8314-141]  
B. Kratz, S. Ens, C. Kaethner, J. Müller, T. M. Buzug, Univ. of Lübeck (Germany)
- 8314 3Z **Denosing of 4D cardiac micro-CT data using median-centric bilateral filtration** [8314-142]  
D. Clark, G. A. Johnson, C. T. Badea, Duke Univ. Medical Ctr. (United States)
- 8314 40 **Confidence map-based super-resolution reconstruction** [8314-143]  
W. El Hakimi, Technische Univ. Darmstadt (Germany); S. Wesarg, Cognitive Computing & Medical Imaging (IGD) (Germany)
- 8314 41 **Enhancing super-resolution reconstructed image quality in 3D MR images using simulated annealing** [8314-144]  
S. ur Rahman, T. Vateva, Technische Univ. Darmstadt (Germany); S. Wesarg, Fraunhofer-Institut für Graphische Datenverarbeitung (Germany)
- 8314 42 **A novel iterative non-local means algorithm for speckle reduction** [8314-145]  
Y. Zhan, X. Zhang, M. Ding, Huazhong Univ. of Science and Technology (China)
- 8314 43 **Additive Dirichlet models for projectional images** [8314-147]  
S. Williams, M. J. Bottema, Flinders Univ. (Australia)
- 8314 44 **Prediction coefficient estimation in Markov random fields for iterative x-ray CT reconstruction** [8314-148]  
J. Wang, K. Sauer, Univ. of Notre Dame (United States); J.-B. Thibault, Z. Yu, GE Healthcare (United States); C. Bouman, Purdue Univ. (United States)

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#### POSTER SESSION: NEURO APPLICATIONS

- 8314 45 **Glial brain tumor detection by using symmetry analysis** [8314-149]  
V. Padoia, E. Binaghi, S. Balbi, A. De Benedictis, E. Monti, Univ. degli Studi dell'Insubria (Italy); R. Minotto, Ospedale di Circolo Fondazione Macchi Varese (Italy)

- 8314 46 **Automatic segmentation of white matter hyperintensities robust to multicentre acquisition and pathological variability** [8314-150]  
T. Samaille, O. Colliot, R. Cuingnet, Univ. Pierre et Marie Curie (France), INSERM (France), Ctr. National de la Recherche Scientifique (France), and ICM - Institut du Cerveau et de la Moëlle épinière (France); E. Jouvent, H. Chabriat, Hopital Lariboisière (France); D. Dormont, M. Chupin, Univ. Pierre et Marie Curie (France), INSERM (France), Ctr. National de la Recherche Scientifique (France), and CHU Lariboisière (France)
- 8314 47 **Labeling of the cerebellar peduncles using a supervised Gaussian classifier with volumetric tract segmentation** [8314-151]  
C. Ye, The Johns Hopkins Univ. (United States); P.-L. Bazin, Max-Planck-Institute for Human Cognitive and Brain Sciences (Germany); J. A. Bogovic, The Johns Hopkins Univ. (United States); S. H. Ying, The Johns Hopkins Univ. School of Medicine (United States); J. L. Prince, The Johns Hopkins Univ. (United States)
- 8314 48 **Intracranial aneurysm growth quantification in CTA** [8314-152]  
A. Firouzian, Erasmus MC (Netherlands); R. Manniesing, Radboud Univ. Nijmegen Medical Ctr. (Netherlands); C. T. Metz, S. Klein, Erasmus MC (Netherlands); B. K. Velthuis, G. J. E. Rinkel, Univ. Medical Ctr. Utrecht (Netherlands); A. van der Lugt, Erasmus MC (Netherlands); W. J. Niessen, Erasmus MC (Netherlands) and Delft Univ. of Technology (Netherlands)
- 8314 49 **A field map estimation strategy without the noise-bandwidth tradeoff** [8314-153]  
J. Dagher, Massachusetts General Hospital (United States) and Harvard Medical School (United States); A. Bilgin, The Univ. of Arizona (United States)
- 8314 4A **Fiber estimation errors incurred from truncated sampling in q-space diffusion magnetic resonance imaging** [8314-154]  
B. Wilkins, N. Lee, M. Singh, The Univ. of Southern California (United States)
- 8314 4B **Brain tissue segmentation in 4D CT using voxel classification** [8314-155]  
R. van den Boom, M. T. H. Oei, S. Lafebre, L. J. Oostveen, F. J. A. Meijer, S. C. A. Steens, M. Prokop, B. van Ginneken, R. Manniesing, Radboud Univ. Nijmegen Medical Ctr. (Netherlands)
- 8314 4C **Discriminating between brain rest and attention states using fMRI connectivity graphs and subtree SVM** [8314-156]  
F. Mokhtari, S. K. Bakhtiari, G. A. Hossein-Zadeh, Univ. of Tehran (Iran, Islamic Republic of); H. Soltanian-Zadeh, Univ. of Tehran (Iran, Islamic Republic of) and Henry Ford Health System (United States)
- 8314 4D **MITK global tractography** [8314-157]  
P. F. Neher, B. Stieltjes, German Cancer Research Ctr. (Germany); M. Reisert, Univ. Hospital Freiburg (Germany); I. Reicht, H.-P. Meinzer, K. H. Fritzsche, German Cancer Research Ctr. (Germany)
- 8314 4E **ISMI: a classification index for high angular resolution diffusion imaging** [8314-158]  
D. Röttger, D. Dudai, Univ. of Koblenz-Landau (Germany); D. Merhof, Univ. of Konstanz (Germany); S. Müller, Univ. of Koblenz-Landau (Germany)

- 8314 4F **Intrinsic functional connectivity pattern-based brain parcellation using normalized cut** [8314-159]  
H. Cheng, D. Song, Institute of Automation (China); H. Wu, Univ. of Electronic Science and Technology of China (China); Y. Fan, Institute of Automation (China)
- 8314 4G **Accelerated diffusion spectrum imaging via compressed sensing for the human connectome project** [8314-160]  
N. Lee, B. Wilkins, M. Singh, The Univ. of Southern California (United States)
- 8314 4H **Mesial temporal lobe epilepsy lateralization using SPHARM-based features of hippocampus and SVM** [8314-161]  
M. Esmaeilzadeh, The Australian National Univ. (Australia) and Univ. of Tehran (Iran, Islamic Republic of); H. Soltanian-Zadeh, Univ. of Tehran (Iran, Islamic Republic of) and Henry Ford Hospital (United States); K. Jafari-Khouzani, Henry Ford Hospital (United States)
- 8314 4I **Segmentation of the optic tracts using graph-based techniques** [8314-162]  
J. H. Noble, P.-F. D'Haese, B. M. Dawant, Vanderbilt Univ. (United States)
- 8314 4J **Detection of abrupt motion in DCE-MRI** [8314-163]  
K. Rajamani, D. Shanbhag, R. Mullick, S. Ranjan, U. Patil, GE Global Research (India); S. N. Gupta, GE Global Research (United States)
- 8314 4K **Retinal vessel width measurement at branching points using an improved electric field theory-based graph approach** [8314-165]  
X. Xu, The Univ. of Iowa (United States); M. D. Abramoff, The Univ. of Iowa (United States) and Veteran's Administration Medical Ctr. (United States); G. Bertelsen, Univ. of Tromsø (Norway); J. M. Reinhardt, The Univ. of Iowa (United States)

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**POSTER SESSION: COMPRESSIVE SENSING**

- 8314 4M **Multi-slice and multi-frame image reconstruction by predictive compressed sensing** [8314-167]  
J. Zhang, J. Wang, G. Xu, Univ. of Wisconsin-Milwaukee (United States); J.-B. Thibault, GE Healthcare (United States)
- 8314 4N **Compressed sensing for phase-contrast computed tomography (Cum Laude Poster Award)** [8314-168]  
T. Gaass, G. Potdevin, M. Bech, J. Herzen, M. Willner, P. B. Noël, A. Tapfer, F. Pfeiffer, A. Haase, Technische Univ. München (Germany)
- 8314 4O **A feasibility study for compressed sensing combined phase contrast MR angiography reconstruction** [8314-169]  
D.-H. Lee, C.-P. Hong, Yonsei Univ. (Korea, Republic of); M.-W. Lee, Genpia Co. (Korea, Republic of); B.-S. Han, Yonsei Univ. (Korea, Republic of)
- 8314 4P **Quality assessment of fast wavelet-encoded MRI utilizing compressed sensing** [8314-170]  
Z. Liu, B. Nutter, S. Mitra, Texas Tech Univ. (United States)

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**POSTER SESSION: FUNCTIONAL IMAGING**

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- 8314 4Q **Rician compressed sensing for fast and stable signal reconstruction in diffusion MRI** [8314-171]  
S. Dolui, A. Kuurstra, O. V. Michailovich, Univ. of Waterloo (Canada)
- 8314 4R **Model-based blood flow quantification from DSA: quantitative evaluation on patient data and comparison with TCCD** [8314-172]  
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