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Medical Imaging 2014

Physics of Medical Imaging

Bruce R. Whiting
Christoph Hoeschen
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Editors

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3 Phase Contrast Imaging
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Thomas G. Flohr, Siemens Healthcare (Germany) and Eberhard Karls Universität Tübingen (Germany)

4 Algorithms
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Kirsten Boedeker, Toshiba Medical Research Institute USA (United States)

5 CT Reconstructions
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Marc Kachelriess, Deutsches Krebsforschungszentrum (Germany)

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Michael Grass, Philips Research (Germany)

8 Tomosynthesis
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9 Multi-energy CT
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Joseph Y. Lo, Duke University Medical Center (United States)

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Awards

Robert F. Wagner 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:

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2014 Recipients:

First Place: **MRI signal and texture features for the prediction of MCI to Alzheimer's disease progression** (9035-78)
A. Martínez-Torteya, J. A. Rodriguez-Rojas, J. M. Celaya-Padilla, J. I. Galván-Tejada, V. M. Treviño-Alvarado, Sr., J. G. Tamez-Peña, Tecnológico de Monterrey (Mexico)

Second Place: **Distinguishing benign confounding treatment changes from residual prostate cancer on MRI following laser ablation** (9036-49)
G. Litjens, H. Huisman, Radbound Univ. Nijmegen Medical Ctr. (Netherlands); R. Elliot, Case Western Reserve Univ. (United States); N. Shih, M. Feldman, Univ. of Pennsylvania (United States); S. Viswnath, Case Western Reserve Univ. (United States); J. Futterrer, J. Bomers, Radboud Univ. Nijmegen Medical Ctr. (Netherlands); A. Madabhushi, Case Western Reserve Univ. (United States)

Conference Awards

2014 Recipients:

Best Student Paper Awards sponsored by Carestream

First Place
Apparatus and fast method for cancer cell classification based on high harmonic coherent diffraction imaging in reflection geometry [9033-58]
M. Zürch, Friedrich-Schiller-Univ. Jena (Germany); S. Foertsch, Siemens AG (Germany) and Friedrich-Alexander-Univ. Erlangen (Germany); M. Matzas, Siemens AG (Germany); K. Pachmann, Univ. Hospital Jena (Germany) and Ctr. for Transfusion Medicine (Germany); R. Kuth, Siemens AG (Germany); C. Spielmann, Friedrich-Schiller-Univ. Jena (Germany) and Helmholtzinstitute Jena (Germany)

Second Place
Cascaded systems modeling of signal, noise, and DQE for x-ray photon counting detectors [9033-70]
J. Xu, W. Zbijewski, G. Gang, J. W. Stayman, K. Taguchi, Johns Hopkins Univ. (United States); M. Lundqvist, E. Fredenberg, Philips Women's Healthcare (Sweden); J. A. Carrino, J. H. Siewerdsen, Johns Hopkins Univ. (United States)

Third Place
Feasibility study of spectral computed tomography (CT) with gold as a new contrast agent [9033-155]
M. Müllner, H. Schlattl, U. Oeh, C. Hoeschen, Helmholtz Zentrum München GmbH (Germany); O. Dietrich, Ludwig-Maximilians-Univ. Hospital München (Germany)

Poster Awards sponsored by GE Healthcare

First Place
Feasibility of active sandwich detectors for single-shot dual-energy imaging [9033-214]
S. Yun, J. C. Han, D. W. Kim, H. Youn, H. K. Kim, Pusan National Univ. (Korea, Republic of); J. Tanguay, Univ. of British Columbia (Canada); I. A. Cunningham, Robarts Research Institute (Canada) and Univ. of Western Ontario (Canada)

Runner Up
A spectral CT technique using balanced K-edge filter set [9033-207]
Y. Rakvongthai, Massachusetts General Hospital (United States); W. Worstell, Photo Diagnostic Systems Inc. (United States) and Massachusetts General Hospital (United States); G. El Fakhri, J. Ouyang, Massachusetts General Hospital (United States)