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9033 2G  Quantitative analysis of artifacts in 4D DSA: The relative contributions of beam hardening and scatter to vessel dropout behind highly attenuating structures [9033-86]
J. Hermus, T. P. Szczykutowicz, C. M. Strother, C. Mistretta, Univ. of Wisconsin-Madison (United States)

9033 2H  Calibration-free coronary artery measurements for interventional device sizing using inverse geometry x-ray fluoroscopy: in vivo validation [9033-87]
M. T. Tomkowiak, A. N. Raval, M. S. Van Lysel, Univ. of Wisconsin-Madison (United States); T. Funk, Triple Ring Technologies, Inc. (United States); M. A. Speidel, Univ. of Wisconsin-Madison (United States)

9033 2I  Necessary forward model specification accuracy for basis material decomposition in spectral CT [9033-88]
H. Bornefalk, M. Persson, M. Danielsson, KTH Royal Institute of Technology (Sweden)

9033 2J  A study of the x-ray image quality improvement in the examination of the respiratory system based on the new image processing technique [9033-90]
Y. Nagai, M. Kitagawa, J. Torii, T. Iwase, T. Aso, K. Ihara, National Cancer Ctr. Hospital (Japan); M. Fujikawa, Y. Takeuchi, K. Suzuki, T. Ishiguro, A. Hara, Hitachi Medical Corp. (Japan)

9033 2K  Relaxation times estimation in MRI [9033-91]
F. Basile, Univ. degli Studi di Napoli Parthenope (Italy); R. Caivano, A. Cammarota, IRCCS CROB (Italy); G. Ferraioli, V. Pascazio, Univ. degli Studi di Napoli Parthenope (Italy)
9033 2L  Comparison of the effect of simple and complex acquisition trajectories on the 2D SPR and 3D voxelized differences for dedicated breast CT imaging  [9033-92]
J. P. Shah, Duke Univ. (United States) and Duke Univ. Medical Ctr. (United States);
S. D. Mann, Duke Univ. Medical Ctr. (United States); R. L. McKinley, ZumaTek, Inc. (United States); M. P. Tornai, Duke Univ. (United States) and Duke Univ. Medical Ctr. (United States)

9033 2M  C-arm perfusion imaging with a fast penalized maximum-likelihood approach  [9033-93]
R. Frysch, T. Pfeiffer, S. Bannasch, Otto-von-Guericke-Univ. Magdeburg (Germany);
S. Serowy, Univ. Medical Ctr. Magdeburg (Germany); S. Gugel, Otto-von-Guericke-Univ. Magdeburg (Germany); M. Skalej, Univ. Medical Ctr. Magdeburg (Germany); G. Rose, Otto-von-Guericke-Univ. Magdeburg (Germany)

9033 2N  Simultaneous motion estimation and image reconstruction (SMEIR) for 4D cone-beam CT  [9033-94]
J. Wang, X. Gu, The Univ. of Texas Southwestern Medical Ctr. at Dallas (United States)

9033 2O  Three-dimensional image guided extrapolation for cone-beam CT image reconstruction  [9033-95]
B. Nett, GE Healthcare (United States)

9033 2P  Anti-scatter grid evaluation for wide-cone CT  [9033-96]
R. Melnyk, J. Boudry, GE Healthcare (United States); X. Liu, Missouri Univ. of Science and Technology (United States); M. Adamak, GE Healthcare (United States)

9033 2Q  Variance-based iterative image reconstruction from few views in limited-angle C-arm computed tomography  [9033-97]
W. El Hakimi, G. Sakas, Technische Univ. Darmstadt (Germany)

9033 2R  An experimental study on the noise correlation properties of CBCT projection data  [9033-98]
H. Zhang, Southern Medical Univ. (China) and The Univ. of Texas Southwestern Medical Ctr. at Dallas (United States); L. Ouyang, The Univ. of Texas Southwestern Medical Ctr. at Dallas (United States); J. Ma, J. Huang, W. Chen, Southern Medical Univ. (China); J. Wang, The Univ. of Texas Southwestern Medical Ctr. at Dallas (United States)

9033 2S  A sinogram based technique for image correction and removal of metal clip artifacts in cone beam breast CT  [9033-99]
T. Wang, Y. Shen, Y. Zhong, C.-J. Lai, The Univ. of Texas M.D. Anderson Cancer Ctr. (United States); J. Wang, First Affiliated Hospital of Xinjiang Medical Univ. (China); C. C. Shaw, The Univ. of Texas M.D. Anderson Cancer Ctr. (United States)

9033 2T  Preliminary study of region-of-interest image reconstruction with intensity weighting in cone-beam CT using iterative algorithm  [9033-100]
K. Son, Korea Advanced Institute of Science and Technology (Korea, Republic of) and Sungkyunkwan Univ. School of Medicine (Korea, Republic of); J. Lee, Y. Lee, J. S. Kim, S. Cho, Korea Advanced Institute of Science and Technology (Korea, Republic of)
POSTER SESSION: CONVENTIONAL CT

9033 2V  
Reduction of metal artifacts: beam hardening and photon starvation effects [9033-102]  
G. K. Yadava, D. Pal, J. Hsieh, GE Healthcare (United States)

9033 2W  
Acquiring tomographic images from panoramic x-ray scanners [9033-103]  
V.-G. Nguyen, Le Quy Don Technical Univ. (Viet Nam); S.-J. Lee, Paichai Univ (Korea, Republic of)

9033 2X  
Impact of redundant ray weighting on motion artifact in a statistical iterative reconstruction framework [9033-104]  
Y. Tao, J. Tang, M. Speidel, G.-H. Chen, Univ. of Wisconsin-Madison (United States)

9033 2Y  
Effective noise reduction and equalization in projection domain [9033-105]  
Z. Yang, A. A. Zamyatin, S. Nakanishi, Toshiba Medical Research Institute (United States)

9033 2Z  
X-ray pulsing methods for reduced-dose computed tomography in PET/CT attenuation correction [9033-106]  
U. Wiedmann, V. B. Neculaes, D. Harrison, E. Asma, GE Global Research Ctr. (United States); P. E. Kinahan, Univ. of Washington (United States); B. De Man, GE Global Research Ctr. (United States)

9033 30  
Dose, noise and view weights in CT helical scans [9033-107]  
G. Cao, E. Chino, R. Nilsen, J. Hsieh, GE Healthcare (United States)

9033 31  
Volume estimation of multi-density nodules with thoracic CT [9033-108]  
M. A. Gavrielides, Q. Li, R. Zeng, K. J. Myers, B. Sahiner, N. Petrick, U.S. Food and Drug Administration (United States)

POSTER SESSION: CT RECONSTRUCTION

9033 32  
Accelerating ordered-subsets x-ray CT image reconstruction using the linearized augmented Lagrangian framework [9033-109]  
H. Nien, J. A. Fessler, Univ. of Michigan (United States)

9033 33  
Sinogram rebinning and frequency boosting for high resolution iterative CT reconstruction with focal spot deflection [9033-110]  
J. Wang, Y. Long, L. Fu, X. Rui, GE Global Research Ctr. (United States); E. A. Kazerooni, Univ. of Michigan Hospital (United States); B. De Man, GE Global Research Ctr. (United States)

9033 34  
A multi-resolution approach to retrospectively gated cardiac micro-CT reconstruction [9033-111]  
D. P. Clark, G. A. Johnson, C. T. Badea, Duke Univ. Medical Ctr. (United States)

9033 35  
Generalized least-squares CT reconstruction with detector blur and correlated noise models [9033-112]  
J. W. Stayman, W. Zbijewski, S. Tilley II, J. Siewerdsen, Johns Hopkins Univ. (United States)
LBP-based penalized weighted least-squares approach to low-dose cone-beam computed tomography reconstruction [9033-113]
M. Ma, H. Wang, Y. Liu, H. Zhang, X. Gu, Z. Liang, Stony Brook Univ. (United States)

Nonlocal means-based regularizations for statistical CT reconstruction [9033-114]
H. Zhang, Stony Brook Univ. (United States); J. Ma, Stony Brook Univ. (United States) and Southern Medical Univ. (China); Y. Liu, H. Han, Stony Brook Univ. (United States); L. Li, CUNY, College of Staten Island (United States); J. Wang, The Univ. of Texas Southwestern Medical Ctr. at Dallas (United States); Z. Liang, Stony Brook Univ. (United States)

Low-dose CT reconstruction with patch based sparsity and similarity constraints [9033-115]
Q. Xu, X. Mou, Xi’an Jiaotong Univ. (China)

Noise study on cone-beam CT FDK image reconstruction by improved area-simulating-volume technique [9033-116]
Y. Liu, Stony Brook Univ. (United States); J. Wang, The Univ. of Texas Southwestern Medical Ctr. at Dallas (United States); H. Zhang, Y. Fan, Z. Liang, Stony Brook Univ. (United States)

Mojette tomographic reconstruction for micro-CT: a bone and vessels quality evaluation [9033-117]
H. Der Sarkissian, LUNAM Univ., Univ. de Nantes, IRCCyN, CNRS (France) and KEOSYS (France); B. Recur, Australian National Univ. (Australia); J. Guédon, LUNAM Univ., Univ. de Nantes, IRCCyN, CNRS (France); P. Bléry, LUNAM Univ., Univ. de Nantes, IRCCyN, CNRS (France) and LIoad INSERM (France); P. Pilet, LUNAM Univ., Univ. de Nantes, LIoad INSERM (France); Y. Amouriq, LUNAM Univ., Univ. de Nantes, IRCCyN, CNRS (France) and LIoad INSERM (France)

Two-step iterative reconstruction of region-of-interest with truncated projection in computed tomography [9033-118]
K. Yamakawa, S. Kojima, Hitachi, Ltd. (Japan)

Multigrid iterative method with adaptive spatial support for computed tomography reconstruction from few-view data [9033-119]
P.-C. Lee, Industrial Technology Research Institute (Taiwan)

Iterative raw measurements restoration method with penalized weighted least squares approach for low-dose CT [9033-120]
H. Takahashi, T. Goto, K. Hirokawa, O. Miyazaki, Hitachi Medical Corp. (Japan)

Use of depth information from in-depth photon counting detectors for x-ray spectral imaging: a preliminary simulation study [9033-121]
Y. Yao, Stanford Univ. (United States); H. Bornefalk, KTH Royal Institute of Technology (Sweden); S. S. Hsieh, Stanford Univ. (United States); M. Danielsson, KTH Royal Institute of Technology (Sweden); N. J. Pelc, Stanford Univ. (United States)

Fast model-based restoration of noisy and undersampled spectral CT data [9033-122]
D. Rigie, P. J. La Riviere, Univ. of Chicago (United States)
Experimental study of two material decomposition methods using multi-bin photon counting detectors [9033-123]
K. C. Zimmerman, Marquette Univ. (United States); E. Y. Sidky, Univ. of Chicago (United States); T. Gilat Schmidt, Marquette Univ. (United States)

Prostate tissue decomposition via DECT using the model based iterative image reconstruction algorithm DIRA [9033-124]
A. Malusek, M. Magnusson, M. Sandborg, R. Westin, G. Alm Carlsson, Linköping Univ. (Sweden)

Investigation of the polynomial approach for material decomposition in spectral x-ray tomography using an energy-resolved detector [9033-125]
A. Potop, CEA-LETI (France) and CREATIS, CNRS, Univ. de Lyon (France); V. Rebuffel, J. Rinkel, A. Brambilla, CEA-LETI (France); F. Peyrin, CREATIS, CNRS, Univ. de Lyon (France); L. Verger, CEA-LETI (France)

Enabling photon counting detectors with dynamic attenuators [9033-126]
S. S. Hsieh, N. J. Pelc, Stanford Univ. (United States)

Noise balance in pre-reconstruction decomposition in spectral CT [9033-127]
X. Wang, Y. Zou, Toshiba Medical Research Institute (United States)

Energy-resolved CT imaging with a photon-counting silicon-strip detector [9033-128]
M. Persson, B. Huber, S. Karlsson, H. Chen, C. Xu, M. Yveborg, H. Bornefalk, M. Danielsson, KTH Royal Institute of Technology (Sweden)

Characterization of a hybrid energy-resolving photon-counting detector [9033-129]
A. Zang, G. Pelzer, G. Anton, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); R. Ballabriga Sune, CERN (Switzerland); F. Bisello, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany) and IBA Dosimetry GmbH (Germany); M. Campbell, CERN (Switzerland); A. Fautler, M. Fiederle, FMF-Freiburger Materialforschungszentrum (Germany); X. Llopart Cudie, CERN (Switzerland); T. Michel, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany)

X-ray light valve (XLV): a novel detectors` technology for digital mammography [9033-130]
S. Marcovici, V. Sukhovatkin, P. Oakham, XLV Diagnostics, Inc. (Canada)

Characterization of a silicon strip detector for photon-counting spectral CT using monoenergetic photons from 40 keV to 120 keV [9033-131]
X. Liu, H. Bornefalk, H. Chen, M. Danielsson, S. Karlsson, M. Persson, C. Xu, B. Huber, KTH Royal Institute of Technology (Sweden)

Experimental and theoretical performance analysis for a CMOS-based high resolution image detector [9033-132]
A. Jain, D. R. Bednarek, S. Rudin, Toshiba Stroke and Vascular Research Ctr., Univ. at Buffalo (United States)
Measurement of imaging properties of scintillating fiber optic plate [9033-133]

Part Three

Optimizing two radioluminescence based quality assurance devices for diagnostic radiology utilizing a simple model [9033-134]
J. Lindström, Karolinska Univ. Hospital (Sweden) and Linköping Univ. (Sweden); M. Hulthén, Karolinska Univ. Hospital (Sweden); G. Alm Carlsson, M. Sandborg, Linköping Univ. (Sweden)

Investigation of spatial resolution and temporal performance of SAPHIRE (scintillator avalanche photoconductor with high resolution emitter readout) with integrated electrostatic focusing [9033-135]
D. A. Scaduto, A. R. Lubinsky, J. A. Rowlands, Stony Brook Univ. (United States); H. Kenmotsu, N. Nishimoto, T. Nishino, NanoX Japan (Japan); K. Tanioka, Tokyo Denki Univ. (Japan); W. Zhao, Stony Brook Univ. (United States)

Imaging performance of a thin Lu₂O₃:Eu nanophosphor scintillating screen coupled to a high resolution CMOS sensor under x-ray radiographic conditions: comparison with Gd₂O₂S:Eu conventional phosphor screen [9033-136]
I. Seferis, Wroclaw Univ. (Poland) and Univ. of Patras (Greece); C. Michail, I. Valais, Technological Educational Institute of Athens (Greece); J. Zeler, Wroclaw Univ. (Poland); P. Liaparinos, N. Kalyvas, G. Fountos, Technological Educational Institute of Athens (Greece); E. Zych, Wroclaw Univ. (Poland); I. Kandarakis, Technological Educational Institute of Athens (Greece); G. Panayiotakis, Univ. of Patras (Greece)

Physical properties of a new flat panel detector with irradiated side sampling (ISS) technology [9033-137]
M. Fiebich, J. M. Burg, C. Piel, Technische Hochschule Mittelhessen (Germany); L. Rodenheber, Justus Liebig Univ. Giessen (Germany); P. Penchev, Technische Hochschule Mittelhessen (Germany); G. A. Krombach, Justus Liebig Univ. Giessen (Germany)

MTF characterization in 2D and 3D for a high resolution large field of view flat panel imager for cone beam CT [9033-138]
J. P. Shah, Duke Univ. (United States) and Duke Univ. Medical Ctr. (United States); S. D. Mann, Duke Univ. Medical Ctr. (United States); M. P. Tornai, Duke Univ. (United States) and Duke Univ. Medical Ctr. (United States); M. Richmond, G. Zentai, Varian Medical Systems, Inc. (United States)

Comparing analytical and Monte Carlo optical diffusion models in phosphor-based x-ray detectors [9033-139]
N. Kalyvas, P. Liaparinos, Technological Educational Institute of Athens (Greece)
POSTER SESSION: DOSE

9033 3Y  Radio-fluorogenic dosimetry with violet diode laser-induced fluorescence [9033-142]
P. Sandwall, H. Spitz, H. Elson, M. Lamba, W. Connick, H. Fenichel, Univ. of Cincinnati (United States)

9033 3Z  Comparison of different approaches of estimating effective dose from reported exposure data in 3D imaging with interventional fluoroscopy systems [9033-143]
A. Svalkvist, J. Hansson, M. Båth, Univ. of Gothenburg (Sweden) and Sahlgrenska Univ. Hospital (Sweden)

9033 40  Improved-resolution real-time skin-dose mapping for interventional fluoroscopic procedures [9033-144]
V. K. Rana, S. Rudin, D. R. Bednarek, Toshiba Stroke and Vascular Research Ctr., Univ. at Buffalo (United States)

9033 41  Beam hardening and partial beam hardening of the bowtie filter: effects on dosimetric applications in CT [9033-145]
X. Lopez-Rendon, Katholieke Univ. Leuven (Belgium); G. Zhang, Mayo Clinic (United States); H. Bosmans, R. Oyen, F. Zanca, Katholieke Univ. Leuven (Belgium)

9033 42  CT-guided brachytherapy of prostate cancer: reduction of effective dose from x-ray examination [9033-146]
D. B. Sanin, Medical Radiological Research Ctr. (Russian Federation) and Ctr. of Brachytherapy of Prostate Cancer (Russian Federation); V. A. Biryukov, S. S. Rusetskiy, Medical Radiological Research Ctr. (Russian Federation); P. V. Sriridov, T. V. Valodina, Ctr. of Brachytherapy of Prostate Cancer (Russian Federation)

POSTER SESSION: MAMMOGRAPHY

9033 43  X-ray scatter characterization in dedicated breast CT with bowtie filters [9033-147]
K. Kontson, R. J. Jennings, U.S. Food and Drug Administration (United States) and Univ. of Maryland (United States)

9033 44  A simple scatter correction method for dual energy contrast-enhanced digital breast tomosynthesis [9033-148]
Y. Lu, B. Lau, Y.-H. Hu, W. Zhao, G. Gindi, Stony Brook Univ. (United States)

9033 45  Development of mammography system using CdTe photon counting detector for the exposure dose reduction [9033-149]
S. Maruyama, N. Niwa, M. Yamazaki, Nagoya Univ. (Japan); T. Yamakawa, T. Nagano, Telesystems Co. (Japan); Y. Kodera, Nagoya Univ. (Japan)

9033 46  On imaging with or without grid in digital mammography [9033-150]
H. Chen, M. Danielsson, B. Cederström, KTH Royal Institute of Technology (Sweden)

9033 47  Estimation of effective x-ray tissue attenuation differences for volumetric breast density measurement [9033-151]
B. Chen, C. Ruth, Z. Jing, B. Ren, A. Smith, A. Kshirsagar, Hologic, Inc. (United States)
### POSTER SESSION: NEW IMAGING CONCEPTS

**9033 4A** Feasibility study of spectral computed tomography (CT) with gold as a new contrast agent (Best Student Paper) [9033-155]
M. Müllner, H. Schlattl, U. Oeh, C. Hoeschen, Helmholtz Zentrum München GmbH (Germany); O. Dietrich, Ludwig-Maximilians- Univ. Hospital München (Germany)

**9033 4B** Projection-based energy weighting on photon-counting x-ray images in digital subtraction mammography: a feasibility study [9033-156]
S.-H. Choi, S.-W. Lee, Y.-N. Choi, Y.-J. Lee, H.-J. Kim, Yonsei Univ. (Korea, Republic of)

**9033 4C** High resolution x-ray fluorescence imaging for a microbeam radiation therapy treatment planning system [9033-157]
P. Chtcheprov, C. Inscoe, L. Burk, R. Ger, H. Yuan, J. Lu, The Univ. of North Carolina at Chapel Hill (United States); S. Chang, O. Zhou, The Univ. of North Carolina at Chapel Hill (United States) and UNC Lineberger Comprehensive Cancer Ctr. (United States)

**9033 4D** Development of an MRI fiducial marker prototype for automated MR-US fusion of abdominal images [9033-158]
C. P. Favazza, K. R. Gorny, Mayo Clinic (United States); M. J. Washburn, GE Healthcare (United States); N. J. Hangiandreou, Mayo Clinic (United States)

**9033 4E** Comparison between optimized GRE and RARE sequences for 19F MRI studies [9033-159]
C. D. Soffientini, Politecnico di Milano (Italy); A. Mastrogiacomo, Fondazione IRCCS Istituto Neurologico C. Besta (Italy); M. Caffini, S. Cocco, Politecnico di Milano (Italy); I. Zucca, A. Scotti, Fondazione IRCCS Istituto Neurologico C. Besta (Italy); G. Baselli, Politecnico di Milano (Italy); M. G. Bruzzone, Fondazione IRCCS Istituto Neurologico C. Besta (Italy)

**9033 4G** A new resonance-frequency based electrical impedance spectroscopy and its application in biomedical engineering [9033-161]
S. Dhurjaty, Dhurjaty Electronics Consulting LLC (United States); Y. Qiu, M. Tan, B. Zheng, The Univ. of Oklahoma (United States)

### POSTER SESSION: NUCLEAR MEDICAL IMAGING

**9033 4H** A simple model for deep tissue attenuation correction and large organ analysis of Cerenkov luminescence imaging [9033-164]
F. Habte, A. Natarajan, D. S. Paik, S. S. Gambhir, Stanford Univ. School of Medicine (United States)
Improved attenuation correction for freely moving animal brain PET studies using a virtual scanner geometry [9033-165]
G. I. Angelis, W. J. Ryder, A. Z. Kyme, R. R. Fulton, S. R. Meikle, The Univ. of Sydney (Australia)

Optimization using detective quantum efficiency (DQE) of the high-resolution parallel-hole collimators with CdTe pixelated semiconductor SPECT system [9033-166]
Y.-J. Lee, D.-H. Kim, Y. Kim, H.-J. Kim, Yonsei Univ. (Korea, Republic of)

A novel intra-operative positron imager for rapid localization of tumor margins [9033-167]
H. Sabet, Radiation Monitoring Devices, Inc. (United States); B. C. Stack, Univ. of Arkansas for Medical Sciences (United States); V. V. Nagarkin, Radiation Monitoring Devices, Inc. (United States)

Image reconstruction for the new simultaneous whole-body openPET/CT geometry [9033-169]
Y. Yin, Tokyo Institute of Technology (Japan); H. Tashima, National Institute of Radiological Sciences (Japan); T. Obi, Tokyo Institute of Technology (Japan); T. Yamaya, National Institute of Radiological Sciences (Japan)

Including the effect of molecular interference in the coherent x-ray scattering modeling in MC-GPU and PENELope for the study of novel breast imaging modalities [9033-170]
B. Ghammraoui, R. Peng, I. Suarez, C. Bettolo, A. Badal, U.S. Food and Drug Administration (United States)

Evaluation of the resolving potency of a novel reconstruction filter on periodontal ligament space with dental cone-beam CT: a quantitative phantom study [9033-171]
Y. Houno, Nagoya Univ. (Japan); T. Hishikawa, K. Gotoh, M. Naitoh, E. Ajiiri, Aichi-Gakuin Univ. (Japan); Y. Kodera, Nagoya Univ. (Japan)

Unfiltered Monte Carlo-based tungsten anode spectral model from 20 to 640 kV [9033-172]
A. M. Hernandez, J. M. Boone, Univ. of California, Davis (United States)

Hybrid-model for computed tomography simulations and post-patient collimator design [9033-174]
H. Xu, K. Tao, GE Global Research Ctr. (China); P. GK, GE Healthcare Bio-Sciences Ltd. (India); M. Wu, GE Global Research Ctr. (China); X. Cao, GE Healthcare (China); Y. Long, GE Global Research Ctr. (United States); M. Yan, Y. Yao, GE Global Research Ctr. (China); B. De Man, GE Global Research Ctr. (United States)

Physics-based modeling of x-ray CT measurements with energy-integrating detectors [9033-175]
Y. Long, GE Global Research Ctr. (United States); H. Gao, GE Healthcare Technologies (United States); M. Wu, GE China Technology Ctr. (China); J. D. Pack, GE Global Research Ctr. (United States); H. Xu, K. Tao, GE China Technology Ctr. (China); P. F. Fitzgerald, B. De Man, GE Global Research Ctr. (United States)
Quantification of biological tissue and construction of patient equivalent phantom (skull and chest) for infants (1-5 years old) [9033-176]
A. F. Alves, D. R. Pina, F. A. Bacchim Neto, M. Ribeiro, J. R. A. Miranda, Univ. Estadual Paulista (Brazil)

Guidewire path simulation using equilibrium of forces [9033-177]
F. M. Cardoso, S. S. Furuie, Univ. de São Paulo (Brazil)

Optical crosstalk in CT detectors and its effects on CT images [9033-178]
H. Youn, S. Kam, J. C. Han, H. K. Kim, Pusan National Univ. (Korea, Republic of)

A comparison of simulation tools for photon-counting spectral CT [9033-179]
R. A. Nasirudin, Technische Univ. München (Germany); P. Penchev, Technische Hochschule Mittelhessen (Germany); K. Mei, E. J. Rummeny, Technische Univ. München (Germany); M. Fiebich, Technische Hochschule Mittelhessen (Germany); P. B. Noël, Technische Univ. München (Germany)

**POSTER SESSION: PHASE CONTRAST IMAGING**

Optimization of grating-based phase-contrast imaging setup [9033-180]
P. Baturin, M. Shafer, Carestream Health, Inc. (United States)

Design of a compact high-energy setup for x-ray phase-contrast imaging [9033-181]
M. Schüttler, Technische Univ. München (Germany) and Karlsruher Institut für Technologie (Germany); A. Yaroshenko, Technische Univ. München (Germany); M. Bech, Technische Univ. München (Germany) and Lund Univ. (Sweden); G. Potdevin, A. Malecki, M. Chabior, J. Wolf, A. Tapfer, Technische Univ. München (Germany); J. Meiser, D. Kunka, M. Amberger, J. Mohr, Karlsruher Institut für Technologie (Germany); F. Pfeiffer, Technische Univ. München (Germany)

Multilayer coated gratings for phase-contrast computed tomography (CT) [9033-182]
Z. Marton, H. B. Bhandari, Radiation Monitoring Devices, Inc. (United States); H. H. Wen, National Heart, Lung, and Blood Institute (United States); V. V. Nagarkar, Radiation Monitoring Devices, Inc. (United States)

Analysis of a deconvolution-based information retrieval algorithm in x-ray grating-based phase-contrast imaging [9033-184]

Energy weighting in grating-based x-ray phase-contrast imaging [9033-185]
G. Pelzer, T. Weber, G. Anton, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); R. Ballabriga Sune, CERN (Switzerland); F. Bayer, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); M. Campbell, CERN (Switzerland); W. Haas, F. Horn, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); X. Llopart Cudie, CERN (Switzerland); N. Michel, CMS-Schnaittach (Germany); U. Mollenbauer, IBA Dosimetry GmbH (Germany); J. Rieger, A. Ritter, I. Ritter, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); S. Wölfel, IBA Dosimetry GmbH (Germany); W. S. Wong, CERN (Switzerland); A. Zang, T. Michel, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany)
Comparison of propagation- and grating-based x-ray phase-contrast imaging techniques with a liquid-metal-jet source [9033-186]
T. Zhou, U. Lundström, KTH Royal Institute of Technology (Sweden); T. Thüring, S. Rutishauser, Paul Scherrer Institut (Switzerland) and Swiss Federal Institute of Technology (Switzerland); D. H. Larsson, KTH Royal Institute of Technology (Sweden); M. Stampanoni, Paul Scherrer Institut (Switzerland) and Swiss Federal Institute of Technology (Switzerland); C. David, Paul Scherrer Institut (Switzerland); H. M. Hertz, A. Burvall, KTH Royal Institute of Technology (Sweden)

Increasing the field of view of x-ray phase contrast imaging using stitched gratings on low absorbent carriers [9033-188]
J. Meiser, M. Amberger, Karlsruher Institut für Technologie (Germany); M. Willner, Technische Univ. München (Germany); D. Kunka, P. Meyer, F. Koch, Karlsruher Institut für Technologie (Germany); A. Hipp, Helmholtz-Zentrum Geesthacht (Germany); M. Walter, microworks GmbH (Germany); F. Pfeiffer, Technische Univ. München (Germany); J. Mohr, Karlsruher Institut für Technologie (Germany)

Effect of coherence loss in differential phase contrast imaging [9033-191]
W. Cai, Univ. of Rochester Medical Ctr. (United States); R. Ning, Univ. of Rochester Medical Ctr. (United States), Univ. of Rochester (United States), and Koning Corp. (United States); J. Liu, Univ. of Rochester (United States)

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A. Jain, A. Panse, D. R. Bednarek, S. Rudin, Toshiba Stroke and Vascular Research Ctr., Univ. at Buffalo (United States)

9033 5G Dose reduction in CT with correlated-polarity noise reduction: context-dependent spatial resolution and noise properties demonstrating two-fold dose reduction with minimal artifacts [9033-201]
J. T. Dobbins III, J. R. Wells, W. Segars, Duke Univ. (United States) and Duke Univ. Medical Ctr. (United States)

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Y. Lin, K. R. Choudhury, H. P. McAdams, Duke Univ. (United States); D. H. Foos, Carestream Health, Inc. (United States); E. Samei, Duke Univ. (United States)

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V. Singh, A. Jain, D. R. Bednarek, S. Rudin, Toshiba Stroke and Vascular Research Ctr., Univ. at Buffalo (United States)

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K. Li, J. Tang, G.-H. Chen, Univ. of Wisconsin-Madison (United States)

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C. Lee, J. Park, Y. Ko, J. Baek, Yonsei Univ. (Korea, Republic of)

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Y. Rakongthai, 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)
A flat-field correction method for photon-counting-detector-based micro-CT [9033-208]
S. E. Park, J. G. Kim, M. A. A. Hegazy, M. H. Cho, S. Y. Lee, Kyung Hee Univ. (Korea, Republic of)

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J. P. Shah, Duke Univ. (United States) and Duke Univ. Medical Ctr. (United States);
S. D. Mann, Duke Univ. Medical Ctr. (United States); R. L. McKinley, ZumaTek, Inc. (United States);
M. P. Tornai, Duke Univ. (United States) and Duke Univ. Medical Ctr. (United States)

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A. Srivastava, B. J. Heisinger, V. Sinha, H.-K. Lee, X. Liu, Missouri Univ. of Science and Technology (United States); M. Qu, X. Duan, S. Leng, C. H. McCollough, Mayo Clinic (United States)

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Feasibility of active sandwich detectors for single-shot dual-energy imaging (Best Poster Award) [9033-214]
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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.

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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. Huismann, Radboud Univ. Nijmegen Medical Ctr. (Netherlands); R. Elliot, Case Western Reserve Univ. (United States); N. Shih, M. Feldman, Univ. of Pennsylvania (United States); S. Viswanath, Case Western Reserve Univ. (United States); J. Futterer, 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

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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 Helmholtz-Institute Jena (Germany)

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M. Müllner, H. Schlattl, U. Oeh, C. Hoeschen, Helmholtz Zentrum München GmbH (Germany); O. Dietrich, Ludwig-Maximilians-Univ. Hospital München (Germany)

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