

CT-Meeting 2016

Schedule

The 4th International Meeting on

Image Formation in

X-Ray Computed Tomography

July 18-22, 2016, Bamberg, Germany

Conference Chair:
Marc Kachelrieß (German Cancer Research Center, DKFZ)



ct-meeting.org

**The 4th International Conference on Image Formation in
X-Ray Computed Tomography is supported by:**

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We would like to thank the members of the scientific committee for their great work by taking the opportunity to mention them in alphabetical order:

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Stefan Sawall	German Cancer Research Center (DKFZ)

Tuesday, July 19**Oral Session : General****Time** : 07:55 – 09:40**Chairs** : Günter Lauritsch and Katsuyuki Taguchi

Time	Author	Title
07:55 – 08:00	Marc Kachelrieß	<i>Opening Remarks</i>
08:00 – 08:20	Tao Sun, Jung-Ha Kim, Roger Fulton, Johan Nuyts	<i>Data-driven Correction for Head Motion In Helical X-ray CT</i>
08:20 – 08:40	Jiabei Zheng, Jeffrey A. Fessler, Heang-Ping Chan	<i>Digital Breast Tomosynthesis Reconstruction with Detector Blur and Correlated Noise</i>
08:40 – 09:00	Matthias Wieczorek, Christoph Jud, Florian Schaff, Franz Pfeiffer, and Tobias Lasser	<i>X-Ray Tensor Tomography – A Linear System Approach to Reconstruction</i>
09:00 – 09:20	Aswin John Mathews, Steven Tilley II, Grace Gang, Satomi Kawamoto, Wojciech Zbijewski, Jeffrey H. Siewerdsen, Reuven Levinson, J. Webster Stayman	<i>Design of Dual Multiple Aperture Devices for Dynamical Fluence Field Modulated CT</i>
09:20 – 09:40	P. Trueb, P. Zambon, and C. Broennimann	<i>Hybrid Photon Counting Detectors for Spectral X-ray Imaging</i>

Coffee Break**Oral Session : Spectral****Time** : 10:00 – 11:40**Chairs** : Bernhard Brendel and Norbert Pelc

10:00 – 10:20	Emil Y. Sidky, Taly Gilat-Schmidt, Rina Foygel Barber, Wooseok Ha, and Xiaochuan Pan	<i>Simultaneous spectral scaling and basis material map reconstruction for spectral CT with photon-counting detectors</i>
10:20 – 10:40	Bernhard Brendel, Frank Bergner, Kevin Brown, and Thomas Koehler	<i>Penalized Likelihood Decomposition for Dual Layer Spectral CT</i>
10:40 – 11:00	Martin Sjölin and Mats Danielsson	<i>Angular Oversampling and Built-In Anti-Aliasing Filtration in CT with ultra-fast ASIC on Photon Counting Detector</i>
11:00 – 11:20	Nicolas Ducros, Simon Rit, Bruno Sixou, and Françoise Peyrin	<i>Non-Linear Regularized Decomposition of Spectral X-ray Projection Images</i>
11:20 – 11:40	George S.K. Fung, Karl Stierstorfer, Matthew Fuld, Satomi Kawamoto, Elliot K. Fishman, Benjamin M.W. Tsui, and Katsuyuki Taguchi	<i>Spectrum Optimization in Split-Filter Dual-Energy CT for Iodine Quantification and Virtual-Non-Contrast Imaging</i>

Lunch Break

Poster Session : **Poster Session 1**
Time : **13:20 – 15:00**
Chairs : **Hengyong Yu and Larry Zeng**

Time	Author	Title
13:20 – 13:40	Poster fast forward (all authors)	
13:40 – 15:00	Jiulong Liu, Xue Zhang, Hongkai Zhao, Yu Gao, David Thomas, Daniel A Low, and Hao Gao	<i>5D Respiratory Motion Model Based Image Reconstruction algorithm for 4D cone-beam computed tomography</i>
13:40 – 15:00	Jingwen Zhuang, Junzheng Zheng, and Mei Bai	<i>Study on geometric efficiency for MDCT</i>
13:40 – 15:00	Meili Yang, Yong Long, and Tianye Niu	<i>Statistical Image-Domain Multi-Material Decomposition for Dual-Energy CT</i>
13:40 – 15:00	Jonas Dittmann, Michael Trapp, and Kilian Dremel	<i>Fast Quantitative Evaluation of the Resolution of Compressed Sensing Tomographic Reconstructions</i>
13:40 – 15:00	Sathish Ramani, and Bruno De Man	<i>Selection of Monochromatic Energy-Pair for Hybrid Decomposition in Dual-Energy CT</i>
13:40 – 15:00	Damien Racine, Pascal Monnin, François O. Bochud, Anaïs Viry, Alexander Schegeher Sue Edyvean, and Francis R. Verdun	<i>Characterization CT unit using a dose efficiency index concept</i>
13:40 – 15:00	Jiulong Liu, Huanjun Ding, Sabee Molloy, Xiaoqun Zhang, and Hao Gao	<i>TICMR: Total Image Constrained Material Reconstruction via Nonlocal Total Variation Regularization for Spectral CT</i>
13:40 – 15:00	Gengsheng L. Zeng and Wenli Wang	<i>On Approximation of Compound Poisson by Poisson</i>
13:40 – 15:00	Mathias Unberath, André Aichert, Stephan Achenbach, and Andreas Maier	<i>Virtual Single-frame Subtraction Imaging</i>
13:40 – 15:00	Francesco Pisana, Thomas Henzler, Stefan Schönberg, Bernhard Schmidt, Ernst Klotz, and Marc Kachelrieß	<i>Adaptive Multi Band Frequency Filter (aMBF) for Noise Reduction in Dynamic CT Perfusion Dataset</i>
13:40 – 15:00	Serge A. Soloviev	<i>A Highly Adaptable X-ray Imaging System Simulator</i>
13:40 – 15:00	Buxin Chen, Yan Liu, Zheng Zhang, Zhou Yu, Richard Thompson, Emil Sidky, and Xiaochuan Pan	<i>Algorithm-Enabled Half-Rotation Data Reconstruction in Spectral CT</i>

13:40 – 15:00	Moiz Ahmad, Rebecca Fahrig, Martin Spahn, Jang-Hwan Choi, Niko Köster, Silke Reitz, Waldo Hinshaw, Leland Pung, Teri Moore, Andreas Maier, and Kerstin Müller	<i>First in-vivo Experiments with a Large field-of-view Flat Panel Photon-Counting Detector</i>
13:40 – 15:00	Yuanke Zhang, Hongbing Lu, Jing Meng, Junliang Shang, Junying Zhang, and Pinghong Ren	<i>Noise Reduction in Low-dose CT by Non-local Means on Local Principle Components</i>
13:40 – 15:00	Hao Zhang, Jianhua Ma, William Moore, and Zhengrong Liang	<i>Characterization of the previous normal-dose CT scan induced nonlocal means regularization method for low-dose CT image reconstruction</i>
13:40 – 15:00	Shanghai Jiang, Biao Wei, Peng Feng, and Peng He	<i>Monte Carlo Simulation for Polychromatic X-ray Fluorescence Computed Tomography with Sheet-Beam Geometry</i>
13:40 – 15:00	Miaoshi Wang, Yanbo Zhang, Rui Liu, Shuxu Guo, and Hengyong Yu	<i>An Adaptive Reconstruction Algorithm for Spectral CT Regularized by a Reference Image</i>
13:40 – 15:00	Haewon Nam and Jongduk Baek	<i>Metal artifact reduction algorithm based on the data-adapted moving least squares using minimum estimated sinogram</i>
13:40 – 15:00	Andreas Fehringer, Korbinian Mechlem, Michael Epple, Sebastian Allner, Lorenz Hehn, Franz Pfeiffer, and Peter B. Noël	<i>Ultra-fast cone-beam SIR on 2k-cubed data</i>
13:40 – 15:00	Seung Ho Kim, Dae Cheon Kim, Hanbean Youn, Seungryong Cho, and Ho Kyung Kim	<i>Bone-Enhanced Small-Animal Microtomography with Single-Shot Dual-Energy Sandwich Detectors</i>
13:40 – 15:00	Kilian Dremel, Daniel Althoff, and Simon Zabler	<i>CT Alignment Correction in Iterative Reconstruction Methods</i>
13:40 – 15:00	Sunhee Wi, Hoyeon Lee, and Seungryong Cho	<i>Feasibility study on many-view under-sampling(MVUS) using spiral beam filter</i>
13:40 – 15:00	Maik Stille and Thorsten M. Buzug	<i>Augmented Likelihood Image Reconstruction with Non-local Prior Image Regularization</i>
13:40 – 15:00	Yixing Huang, Oliver Taubmann, Xiaolin Huang, Viktor Haase, Günter Lauritsch, and Andreas Maier	<i>A New Scale Space Total Variation Algorithm for Limited Angle Tomography</i>
13:40 – 15:00	Sanghoon Cho and Seungryong Cho	<i>CNR Improvement in a Sparse-View Cone-Beam Computed Tomography using an Anti-Scatter Grid</i>
13:40 – 15:00	Mingye Wu, Bruno De Man, and Zhye Yin	<i>Model-Based Dose Reconstruction for CT Dose Estimation</i>
13:40 – 15:00	Jeroen Cant, Gert Behiels, and Jan Sijbers	<i>Automatic Geometric Calibration of Chest Tomosynthesis using Data Consistency Conditions</i>
13:40 – 15:00	Ti Bai, Xuanqin Mou, Hao Yan, Hengyong Yu, and Ge Wang	<i>A Unified X-ray Computed Tomographic Reconstruction Framework</i>

	Julia Mascolo-Fortin, Dmitri Matenine, and Philippe Després	<i>Adaptation of the OSC-TV Reconstruction Algorithm for 4D Cone Beam Computed Tomography</i>
13:40 – 15:00	Pei Han, Xin Jin and Yuxiang Xing	<i>Helical CT Reconstruction with Real-time Focal-Spot-Shift Correction</i>
13:40 – 15:00	Michael Reiter and Johann Kastner	<i>Investigation Towards Simulation-Based Determination of Measurement Uncertainties for X-Ray Computed Tomography</i>
13:40 – 15:00	Shouping Zhu, Zhipeng Guo, Cuiping Bao, Jianxun Wang, Gaoqi Lv, Xu Cao, Jimin Liang, and Jie Tian	<i>Micro-CT Resolution Promotion Based on Coupled Dictionary Training in Sinogram</i>

Coffee Break

Oral Session : Cardiac

Time : 15:20 – 17:00

Chairs : Zhye Yin and Zhou Yu

Time	Author	Title
15:20 – 15:40	Stephan Achenbach	Plenary lecture: <i>Coronary CT Angiography</i>
15:40 – 16:00	Stephan Achenbach	Plenary lecture: <i>Coronary CT Angiography</i>
16:00 – 16:20	Juliane Hahn, Herbert Bruder, Thomas Allmendinger, Karl Stierstorfer, Thomas Flohr, and Marc Kachelrieß	<i>Cardiac Motion Compensation from Short Scan CT Data: A Comparison of Three Algorithms</i>
16:20 – 16:40	George S. K. Fung, Luisa Ciuffo, Hiroshi Ashikaga, and Katsuyuki Taguchi	<i>Motion Estimation for Cardiac Functional Analysis using Low Dose X-ray Computed Tomography</i>
16:40 – 17:00	Alexander Katsevich, Michael Frenkel, Marcus Chen, Michael Bungo, and Alan Cohen	<i>Hybrid Local Tomography Image Reconstruction Algorithm and Its Diagnostic Accuracy for Evaluating Coronary Arteries with Calcified Plaque and Stents</i>

Wednesday, July 20

Oral Session: Image Reconstruction

Time : 08:00 – 09:40

Chairs : Jeffrey Fessler and Emil Sidky

Time	Author	Title
08:00 – 08:2	Emil Sidky	<i>Basic short course: Image Reconstruction</i>
08:20 – 08:40	Emil Sidky	<i>Basic short course: Image Reconstruction</i>
08:40 – 09:00	Jens Gregor, Philip Bingham, and Lloyd F. Arrowood	<i>Total Variation Constrained Weighted Least Squares Using SIRT and Proximal Mappings</i>
09:00 – 09:20	Dimple Modgil, David S. Rigie, Michael D. Bindschadler, Adam M. Alessio, and Patrick J. La Rivière	<i>Image-Domain Denoising for Myocardial Blood Flow Estimation in Dynamic CT</i>
09:20 – 09:40	Thibault Notargiacomo, Dominique Houzet, Guillaume Bernard, and Vincent Fristot	<i>Sparse Regularization of CBCT Reconstruction Using 3D Dual-Tree Complex Wavelet Transform and Dictionary Learning Techniques</i>

Coffee Break

Oral Session: Security and NDT

Time : 10:00 – 11:40

Chairs : Michael Knaup and Harry Martz

10:00 – 10:20	Andre Mouton and Toby P. Breckon	<i>Object Classification in Baggage-CT Imagery using Randomised Clustering Forests</i>
10:20 – 10:40	Kyle Champley, Jerel Smith, Jeff Kallman, and Philip Top	<i>Automatic Threat Detection for a Dual-Energy Four-View X-ray Carryon Luggage Scanner</i>
10:40 – 11:00	Joscha Maier, Carsten Leinweber, Stefan Sawall, Henning Stoschus, Frederic Ballach, Tobias Müller, Michael Hammer, Ralf Christoph, and Marc Kachelrieß	<i>Simulation-Based Artifact Correction for Computed Tomography in Metrology</i>
11:00 – 11:20	Navnina Bhatia, David Tisseur, and Jean Michel Létang	<i>Scattering Correction for Industrial CBCT using Continuously Thickness-Adapted Kernels at MeV Energy Range</i>
11:20 – 11:40	Corinne B. Brunelle, Mathieu Des Roches, Louis-Frederic Daigle, Pierre Francus, Bernard Long, and Philippe Després	<i>Combining CT Scan and Particle Imaging Techniques: Applications in Geosciences</i>

Lunch Break

Poster Session : Poster Session 2
Time : 13:20 – 15:00
Chairs : Klaus Müller and Zhou Yu

Time	Author	Title
13:20 – 13:40	Poster fast forward (all authors)	
13:40 – 15:00	Rui Liu, Lin Fu, Bruno De Man, and Hengyong Yu	<i>GPU Acceleration of Branchless Distance Driven Projection and Backprojection</i>
13:40 – 15:00	Manuel Viermetz, Lorenz Birnbacher, Marian Willner, Peter B. Noël, Franz Pfeiffer, and Julia Herzen	<i>High Resolution Laboratory Grating-Based X-Ray Phase-Contrast CT</i>
13:40 – 15:00	Wenyang Wang, Liuyuan Zhou, Xucheng Zhu, and Yuxiang Xing	<i>Image Reconstruction for Few-View and Limited-Angle MECT Based on Group-Wise Low Rank Constraint</i>
13:40 – 15:00	Andreas Fieselmann and Ludwig Ritschl	<i>Isocenter Determination for Arbitrary Planar Cone-Beam CT Scan Trajectories</i>
13:40 – 15:00	Jiulong Liu and Hao Gao	<i>Material Reconstruction for Spectral Computed Tomography with Detector Response Function</i>
13:40 – 15:00	Shouping Zhu, Yu Fan, Lei Xiong, Zhipeng Guo, Gaoqi Lv, Xu Cao, and Jimin Liang	<i>Fast Scanning Imaging of Micro-CT for Small Animals</i>
13:40 – 15:00	Sarah E. Divil, W. Paul Segars, Soren Christensen, Max Wintermark, Maarten G. Lansberg, and Norbert J. Pelc	<i>Use of Synthetic CT to Reduce Simulation Time of Complex Phantoms and Systems</i>
13:40 – 15:00	Natalia Dadivanyan, Detlev J. Götz, and Detlef Beckers	<i>Applying Soft Radiation in Computed Tomography Experiments on a Multipurpose Diffractometer</i>
13:40 – 15:00	André Aichert, Katharina Breininger, Thomas Köhler, and Andreas Maier	<i>Efficient Epipolar Consistency</i>
13:40 – 15:00	Qiulin Tang, Satoru Nakanishi, Zhou Yu, and Wenli Wang	<i>Fully Iterative Reconstruction for Cardiac CT</i>
13:40 – 15:00	Gengsheng L. Zeng and Wenli Wang	<i>Noise Weighting with an Exponent for Transmission CT</i>
13:40 – 15:00	Hussein Banjak, Marius Costin, Caroline Vienne, Ronan Guillaumet, and Valérie Kaftandjian	<i>Reconstruction Algorithms for Reverse Helical Super-Short-Scan Mode</i>
13:40 – 15:00	Richard Sampson, Madison G. McGaffin, Thomas F. Wenisch, and Jeffrey A. Fessler	<i>Investigating Multi-threaded SIMD for Helical CT Reconstruction on a CPU</i>
13:40 – 15:00	Jakob S. Jørgensen, Sophia B. Coban, William R. B. Lionheart, and Philip J. Withers	<i>Effect of Sparsity and Exposure on Total Variation Regularized X-ray Tomography from few Projections</i>

13:40 – 15:00	Mats Persson and Fredrik Grönberg	<i>Spatial-Frequency-Domain Study of Anticorrelated Noise Reduction in Spectral CT</i>
13:40 – 15:00	Sean D. Rose, Emil Y. Sidky, Adrian A. Sanchez, and Xiaochuan Pan	<i>Investigating Pixel Size and Resolution in Optimization-Based CT Image Reconstruction</i>
13:40 – 15:00	Srinivasan Vedantham, Souleymane Konate, Linxi Shi, Suman Shrestha, Gopal R. Vijayaraghavan, and Andrew Karellas	<i>Dedicated Cone-Beam Breast CT with Laterally shifted CMOS Detector</i>
13:40 – 15:00	You Zhang, Jianhua Ma, and Jing Wang	<i>A New CT Reconstruction Technique Using Adaptive Deformation Recovery and Intensity Correction (ADRIC)</i>
13:40 – 15:00	Minghao Guo and Hao Gao	<i>Shift-Invariant Projection and Backprojection for Helical CT based on A Self-Consistent Coordinate</i>
13:40 – 15:00	Yaoshen Yuan, Brian Tracey, and Eric Miller	<i>Performance Bounds for Sinogram Decomposition and Potential Benefits of Multi-energy Data</i>
13:40 – 15:00	Hongyan Liu	<i>Noise Model-Based CT Image Denoising by 3D Transform-Domain Collaborative Filtering</i>
13:40 – 15:00	Hewei Gao, Adam Cohen, and Priti Madhav	<i>Material Decomposition for Wide-Cone Dual-Energy CT Using Fast kV Switching</i>
13:40 – 15:00	Adrian A. Sanchez, Emil Y. Sidky, Sean D. Rose, and Xiaochuan Pan	<i>Optimizing Iterative Image Reconstruction in Digital Breast Tomosynthesis via the Hotelling Observer</i>
13:40 – 15:00	William M. Thompson	<i>Lattice Sampling Data Acquisition Scheme as an Alternative to Helical Scanning for X-ray Micro-CT</i>
13:40 – 15:00	Álvaro Martínez, Alba García-Santos, Inés García, Estefanía Serrano, Javier García, Claudia de Molina, Manuel Desco, and Mónica Abella	<i>A Software Tool for the Design and Simulation of X-ray Acquisition Protocols</i>
13:40 – 15:00	Paurakh L. Rajbhandary and Norbert J. Pelc	<i>Comparison Weighted Energy Bin vs. Weighted Basis Material CT Images</i>
13:40 – 15:00	Yash Sharma, Matthias Wieczorek, Christoph Jud, Florian Schaff, Franz Pfeiffer, and Tobias Lasser	<i>X-ray tensor tomography: How much to measure?</i>
13:40 – 15:00	Carsten Leinweber, Joscha Maier, Stefan Sawall, Henning Stoschus, Frederic Ballach, Tobias Müller, Michael Hammer, Ralf Christoph, and Marc Kachelrieß	<i>Attenuation-Based Reconstruction of Low and High Frequency Components of Detected X-Ray Spectra</i>
13:40 – 15:00	Okkyun Lee, Steffen Kappler, and Katsuyuki Taguchi	<i>Spectral Response Effect-Compensated Estimator in Photon Counting CT using Low-Order Gram Polynomials</i>
13:40 – 15:00	Huiqiao Xie, Tianye Niu, Huipeng Deng and Xi-angyang Tang	<i>Texture Enhanced Optimization-Based Image Reconstruction (TxE-OBIR) Algorithm</i>

Tzu-Cheng Lee, Ruoqiao Zhang, Adam M. Alessio, Lin Fu, Bruno De Man, and Paul E. Kinahan	<i>Statistical Distributions of Ultra-Low Dose CT Sinograms in the Data Processing Stream</i>
Andrew M. Davis, Xiaochuan Pan, and Charles A. Pelizzari	<i>Image Quality Comparison of a CBCT Virtual-Isocenter Imaging Trajectory to a Clinical Circular Scan</i>
Saeed Seyyedi, Matthias Wiczorek, Christoph Jud, Franz Pfeiffer, and Tobias Lasser	<i>A Regularized X-ray Tensor Tomography Reconstruction Technique</i>

Coffee Break

Oral Session : Phase-Contrast

Time : 15:20 – 17:00

Chairs : Bruno De Man and Web Stayman

Time	Author	Title
15:20 – 15:40	F. Pfeiffer, A. Velroyen, A. Yaroshenko, A. Tapfer, S.D. Auweter, K. Hellbach, F.G. Meinel, T.Koehler, M. Bech, P.B. Noël, A.Ö. Yildirim, O. Eickelberg	<i>Pre-clinical Dark-Field CT Imaging of Small-Animal Lung Disease Models</i>
15:40 – 16:00	Charlotte Klara Hagen, Anna Zamir, Paul Claude Diemoz, Marco Endrizzi, Fabio Alessio Vittoria, Panagiotis Magshoudlou, Paolo Coan, Alberto Bravin, Paolo De Coppi, and Alessandro Olivo	<i>Opportunities for Phase-Based Computed Tomography in the Laboratory</i>
16:00 – 16:20	Maximilian von Teuffenbach, Bernhard Brendel, Andreas Fehring, Peter B. Noël, Franz Pfeiffer, and Thomas Köhler	<i>Iterative Reconstruction of Grating-based PCCT Without Phase-Stepping</i>
16:20 – 16:40	Christian Gusenbauer, Stefan Hunger, Sascha Senck and Johann Kastner	<i>Characterization of Tooth Samples with a Talbot-Lau Grating Interferometer μXCT Desktop Device</i>
16:40 – 17:00	Thomas Koenig, Marcus Zuber, Barbara Trimborn, Tomas Farago, Pascal Meyer, Danays Kunka, Frederic Albrecht, Sascha Kreuer, Thomas Volk, Michael Fiederle, and Tilo Baumbach	<i>The Grating-Based Dark-Field Image: Degradation of Quantitative Contrast by System-Specific Sampling Artifacts</i>

Thursday, July 21

Oral Session : Image Quality

Time : 08:00 – 09:40

Chairs : Michel Defrise and Yuxiang Xing

Time	Author	Title
08:00 – 08:20	Frédéric Noo	<i>Basic short course: Image Quality Assessment</i>
08:20 – 08:40	Frédéric Noo	<i>Basic short course: Image Quality Assessment</i>
08:40 – 09:00	Harald Schönhuber and Frédéric Noo	<i>Statistically-Efficient Estimation of Hotelling Observer Performance with Unknown Means</i>
09:00 – 09:20	Bastian Bier, Kerstin Müller, Martin Berger, Jang-Hwan Choi, Ludwig Ritschl, Marc Kachelrieß, Rebecca Fahrig, and Andreas Maier	<i>Scatter Correction for C-Arm CT Using Primary Modulation</i>
09:20 – 09:40	Scott S. Hsieh and Norbert J. Pelc	<i>Pixel Size Tradeoffs for CdTe Spectral Photon Counting Detectors</i>

Coffee Break

Oral Session : Iterative Reconstruction

Time : 10:00 – 11:40

Chairs : Alexander Katsevich and Johan Nuyts

10:00 – 10:20	Pengwei Wu, Tingyu Mao, Shutao Gong, Jing Wang, Ke Sheng, Yaoqin Xie, and Tianye Niu	<i>Shading Correction Assisted Iterative Conebeam CT Reconstruction</i>
10:20 – 10:40	Sathish Ramani, Xin Wang, Lin Fu, and Michael Lexa	<i>Denoising-Based Accelerated Statistical Iterative Reconstruction for X-ray CT</i>
10:40 – 11:00	Qiaoqiao Ding, Yong Long, Xiaoqun Zhang, and Jeffrey A. Fessler	<i>Modeling Mixed Poisson-Gaussian Noise in Statistical Image Reconstruction for X-Ray CT</i>
11:00 – 11:20	Meng Wu, Andreas Maier, Yan Xia, and Rebecca Fahrig	<i>Auto-tuned Path-based Iterative Reconstruction (aPBIR) for X-ray Computed Tomography</i>
11:20 – 11:40	Grace J. Gang, Jeffrey H. Siewerdsen, and J. Webster Stayman	<i>Task-Based Design of Fluence Field Modulation in CT for Model-Based Iterative Reconstruction</i>

Lunch Break

Poster Session : Poster Session 3
Time : 13:20 – 15:00
Chairs : Timo Berkus and Jing Wang

Time	Author	Title
13:20 – 13:40	Poster fast forward (all authors)	
13:40 – 15:00	Miran Park, Ho Kyung Kim, and Seungryong Cho	<i>Computed Laminography System with Various Scanning Configurations for Nondestructive Testing</i>
13:40 – 15:00	Dan Xia, Pascal Paysan, Zheng Zhang, Dieter Seghers, Marcus Brehm, Peter Munro, Andrew M. Davis, Mathias Lehmann, Emil Y. Sidky, Charles Pelizzari, and Xiaochuan Pan	<i>Optimization-based Reconstruction from Megavoltage Cone-beam CT Data in Image Guided Radiation Therapy</i>
13:40 – 15:00	Malte Vassholz, Benno Koberstein-Schwarz, Aike Ruhlandt, Martin Krenkel, and Tim Salditt	<i>X-Ray Tomography Based on 3D Radon Transform Compatible with Anisotropic Sources</i>
13:40 – 15:00	Estefania Serrano, Javier Garcia Blas, Claudia Molina, Ines Garcia, Jesus Carretero, Manuel Desco, and Monica Abella	<i>Design and Evaluation of a Parallel and Multi-Platform Cone-Beam X-Ray Simulation Framework</i>
13:40 – 15:00	Aymeric Reshef, Cyril Riddell, Yves Troussset, Saïd Ladjal, and Isabelle Bloch	<i>Dual-Rotation C-arm Cone-Beam Computed Tomography to Increase Low Contrast Resolution</i>
13:40 – 15:00	Jérôme Lesaint, Rolf Clackdoyle, Simon Rit, and Laurent Desbat	<i>Two Cone-Beam Consistency Conditions for a Circular Trajectory</i>
13:40 – 15:00	Charlotte Delmas, Cyril Riddell, Yves Troussset, Erwan Kerrien, Marie-Odile Berger, René Anxionnat, and Serge Bracard	<i>Intra-Operative 3D Micro-Coil Imaging Using Subsampled Tomographic Acquisition Patterns on a Biplane C-arm System</i>
13:40 – 15:00	Seungeon Kim, Yongjin Chang, and Jong Beom Ra	<i>Reduction of Cone Angle Effect in Cardiac Motion Correction Based on Partial Angle Reconstructed Images in CT</i>
13:40 – 15:00	T. Funk, D. Badali, S. Hsieh, and T.G. Schmidt	<i>PRISM: A New Software Tool for Simulating Realistic CT Data with CAD Model Based Objects</i>
13:40 – 15:00	Lucretiu M. Popescu	<i>A Reformulation of the X-Ray Transmission Image Reconstruction Problem for more Accurate Modeling of the Polychromatic and Spatial Resolution Effects</i>
13:40 – 15:00	Meng Wu, Jared Dunnmon, Yan Xia, Waldo Hinshaw, Norbert Pelc, Andreas Maier, Rebecca Fahrig, and Matthias Ihme	<i>X-ray Computed Tomography of Flame Structure in Porous Media Burners</i>
13:40 – 15:00	Ilmar Hein, Zhou Yu, and Satoru Nakanishi	<i>Three-Dimensional Two Material Based Beam Hardening Correction for Iterative Reconstruction</i>

- 13:40 – 15:00 Wei Xu and Dake Feng *Studying Performance of A Penalized Maximum Likelihood Method for PET Reconstruction on Nvidia GPU and Intel Xeon Phi Coprocessor*
- 13:40 – 15:00 Steven Tilley II, Wojciech Zbijewski, Jeffrey H. Siewerdsen, and J. Webster Stayman *Modeling Shift-Variant X-Ray Focal Spot Blur for High-Resolution Flat-Panel Cone-Beam CT*
- 13:40 – 15:00 Picha Shunhavanich and Norbert J. Pelc *Lossy Compression of Projection Data from Photon Counting Detectors*
- 13:40 – 15:00 Zhiqian Chang, Ken Sauer, Debashish Pal, Somesh Srivastava, Jean-Baptiste Thibault, and Charles Bouman *Simultaneous Gain Parameter Estimation in Model-Based Cone-Beam CT Image Reconstruction*
- 13:40 – 15:00 Cristóbal Martínez, Claudia de Molina, Manuel Desco, and Mónica Abella *Simple Method for Beam-Hardening Correction Based on a 2D Linearization Function*
- 13:40 – 15:00 Kerstin Müller, Moiz Ahmad, Martin Spahn, Jang-Hwan Choi, Silke Reitz, Niko Köster, Yanye Lu, Rebecca Fahrig, and Andreas Maier *Towards Material Decomposition on Large Field-of-View Flat Panel Photon-Counting Detectors — First in-vivo Results*
- 13:40 – 15:00 Haewon Nam, Minghao Guo, and Hao Gao *Tensor Framelet Based Iterative Image Reconstruction Algorithm for Low-Dose Multislice Helical CT*
- 13:40 – 15:00 Zheng Zhang, Dan Xia, Xiao Han, Emil Y. Sidky, Charles Pelizzari, and Xiaochuan Pan *Impact of Image Constraints and Object Structures on Optimization-Based Reconstruction*
- 13:40 – 15:00 Claudia de Molina, Juan F. P. J. Abascal, Manuel Desco, and Mónica Abella *Study of the Possibilities of Surface-Constrained Compressed Sensing (SCCS) Method for Limited-View Tomography in CBCT systems*
- 13:40 – 15:00 Andrew Kingston, Thomas Heyang Li, Glenn Myers, Shane Latham, Adrian Sheppard, and Trond Varslot *Acquisition and Reconstruction of Optimal Trajectories for Cone-Beam X-ray CT*
- 13:40 – 15:00 William C. Barber, Huanjun Ding, Jan C. Wesel, Nail Malakhov, Gregor Wawrzyniak, Jan S. Iwanczyk, Eirik Næss-Ulseth, and Sabee Molloy *Spectral Breast CT by Single Photon Counting*
- 13:40 – 15:00 Yo Seob Han, Minji Lee, John Paul Ward, Michael Unser, Seungyoung Cho, and Jong Chul Ye *Multi-scale Circular Conebeam Interior Tomography using Bedrosian Identity: Verification with Real Data*
- 13:40 – 15:00 Sungsoo Ha, Heyi Li, and Klaus Mueller *Efficient Area-Based Ray Integration Using Summed Area Tables and Regression Models*
- 13:40 – 15:00 Robert Cierniak *Analytical Statistical Reconstruction Algorithm with the Direct Use of Projections Performed in Fan-beam Scanners*
- 13:40 – 15:00 Sebastian Allner, Andreas Fehringer, Jonathan Schock, Franz Pfeiffer, and Peter B. Noël *Dual-Band Projection Alignment Applied in X-ray Microscopy*

13:40 – 15:00	Seokhwan Jang, Seungeon Kim, Mina Kim, and Jong Beom Ra	<i>Motion Compensated Reconstruction for 3D Head Motion</i>
13:40 – 15:00	Veronique Rebuffel, Emil Popa, Clarisse Fournier, and Loick Verger	<i>A new Linearization Method for X-ray Spectral Data</i>
13:40 – 15:00	Xue Rui, Yannan Jin, and Peter M. Edic	<i>Material-Based Scatter Correction for Computed Tomography</i>
13:40 – 15:00	Harry E. Martz, Jr., and John Beaty	<i>Explosive Detection in Aviation Security Using CT: Advanced Reconstruction Algorithms and Publically Available Datasets</i>
13:40 – 15:00	Yan Liu, Zhou Yu	<i>Whitening Transform Based Noise Reduction for Spectral CT</i>
13:40 – 15:00	Madison G. McGaffin and Jeffrey A. Fessler	<i>Accelerated Parallel and Distributed Iterative Coordinate Descent (ICD) for X-ray CT</i>
13:40 – 15:00	Jens Maisenbacher, Friedrich Prade, Jens Gibeimer, Franz Pfeiffer, and Jürgen Mohr	<i>X-Ray Dark Field Investigation of Friction Contact Materials in Lamella Drive Couplings</i>

Coffee Break

Oral Session : CBCT

Time : 15:20 – 17:00

Chairs : Brian Nett and Frédéric Noo

Time	Author	Title
15:20 – 15:40	Oliver Taubmann, Günter Lauritsch, Gregor Krings, and Andreas Maier	<i>Convex Temporal Regularizers in Cardiac C-arm CT</i>
15:40 – 16:00	A. Sisniega, J. W. Stayman, Q. Cao, J. Yorkston, J. H. Siewerdsen, and W. Zbijewski	<i>Motion Estimation Using a Penalized Image Sharpness Criterion for Resolution Recovery in Extremities Cone-Beam CT</i>
16:00 – 16:20	Xi Chen, Luo Ouyang, Hao Yan, Xun Jia, Bin Li, Qingwen Lyu, You Zhang, and Jing Wang	<i>Optimization of the Geometry and Speed of a Moving Blocker System for Cone-beam Computed Tomography Scatter Correction</i>
16:20 – 16:40	H. Dang, J. Webster Stayman, J. Xu, Alejandro Sisniega, Wojciech Zbijewski, Xin Wang, D. H. Foos, Nafi Aygün, Vassilis E. Koliatsos, and Jeffrey H. Siewerdsen	<i>Task-Based Regularization Design for Detection of Intracranial Hemorrhage in Cone-Beam CT</i>
16:40 – 17:00	You Zhang, Joubin Nasehi Tehrani, and Jing Wang	<i>A Biomechanical Modeling Guided CBCT Reconstruction Technique (Bio-recon)</i>

Friday, July 22

Oral Session: Artifact Reduction

Time : 08:00 – 09:40

Chairs : Jakob Jørgensen and Nicole Maaß

Time	Author	Title
08:00 – 08:20	Marc Kachelrieß	<i>Basic short course: Artifact Reduction</i>
08:20 – 08:40	Marc Kachelrieß	<i>Basic short course: Artifact Reduction</i>
08:40 – 09:00	Brian E. Nett, Jang Hwan Cho, and Jed D. Pack	<i>Motion Evoked Artifact Deconvolution</i>
09:00 – 09:20	Dan Xia, David A. Langan, Stephen B. Solomon, Hao Lai, Zheng Zhang, Buxin Chen, Emil Y. Sidky, and Xiaochuan Pan	<i>Truncation Artifact Reduction by Exploiting Data Derivative and Image-TV Constraints in C-arm CBCT</i>
09:20 – 09:40	Richard Bismark, Robert Frysck, and Georg Rose	<i>Reduction of Beam Hardening Artifacts on Real C-Arm CT Data using Statistical Polyenergetic Image Reconstruction</i>

Coffee Break

Oral Session: General

Time : 10:00 – 11:40

Chairs : Karl Stierstorfer and Srinivasan Vedantham

10:00 – 10:20	Ivan G. Kazantsev, Ulrik L. Olsen, Henning F. Poulsen, and Per C. Hansen	<i>A Spectral Geometrical Model for Compton Scatter Tomography Based on the SSS Approximation</i>
10:20 – 10:40	Vicki T. Taasti, Jørgen B. B. Petersen, Jesper Thygesen, Ludvig P. Muren, Cai Grau, and David C. Hansen	<i>A Robust Method for Calculation of Proton Stopping Power Ratio using Dual Energy CT</i>
10:40 – 11:00	Gloria Vilches-Freixas, Jean Michel Létang, Nicolas Ducros, and Simon Rit	<i>Dual-Energy CT Spectra Optimization for Proton Treatment Planning</i>
11:00 – 11:20	Jan Hoskovec, Fabien Momey, Rolf Clackdoyle, Laurent Desbat, and Simon Rit	<i>Fan-Beam Reconstruction under Motion and Data Truncation: Comparing Analytic and Iterative Approaches</i>
11:20 – 11:40	X + Y	<i>Preview: Fully 3D 2017, CT-Meeting 2018</i>

	Monday	Tuesday	Wednesday	Thursday	Friday
08:00–09:40		Oral Session (General)	Oral Session (Image Recon.)	Oral Session (Image Quality)	Oral Session (Artifact Reduction)
		Coffee	Coffee	Coffee	Coffee
10:00–11:40		Oral Session (Spectral)	Oral Session (Security, NDT)	Oral Session (Iterative Recon.)	Oral Session (General)
		Lunch	Lunch	Lunch	Lunch
13:20–15:00		Poster Session	Poster Session	Poster Session	
		Coffee	Coffee	Coffee	EZRT (optional)
15:20–17:00	Registration	Oral Session (Cardiac)	Oral Session (Phase-Contrast)	Oral Session (CBCT)	
19:00–22:00	Reception	Dinner (Klosterbräu)		Dinner (Eckerts)	