

Sunday, May 20	Monday, May 21	Tuesday, May 22	Wednesday, May 23
	8:00 – 8:15 Opening remarks	8:00 – 8:50 Refresher course: Spectral CT	8:00 – 8:50 Refresher course: Deep Learning for CT
	8:15 – 9:55 Session M1 Model based iterative reconstruction I	8:55 – 9:55 Session T1 Multi-energy CT I	8:55 – 9:55 Session W1 Model based iterative reconstruction II
	9:55 – 10:20 Coffee break	9:55 – 10:20 Coffee break	9:55 – 10:20 Coffee break
	10:20 – 12:00 Session M2 The four best-scored abstracts	10:20 – 11:20 Session T2 Multi-energy CT II	10:20 – 12:00 Session W2 Photon counting CT
		11:20 – 12:00 Session T3 Novel analytical results	
	12:00 – 13:20 Lunch break	12:00 – 13:20 Lunch break	12:00 – 13:20 Lunch break
	13:20 – 15:00 Session M3 Novel data acquisition concepts	13:20 – 14:00 Session T4 Poster highlights	13:20 – 14:00 Session W3 Poster highlights
	15:00 – 15:30 Coffee break	14:00 – 16:20 Poster session <i>CBCT, Dynamic CT, Data truncation & consistency, Industrial CT, Phase contrast & fluorescence CT</i>	14:00 – 16:20 Poster session <i>Analytical methods, MBIR, Deep learning, Spectral CT</i>
	15:30 – 17:30 Session M4 Artifacts and noise removal methods	Coffee served at 15:00	Coffee served at 15:00
16:00 – 18:30 Registration at the lobby of the University of Utah Guesthouse		16:30 – 17:30 Session T5 Limited data CT	16:30 – 17:50 Session W4 Deep Learning
18:30 Welcoming reception at Fort Douglas Military Museum	18:10 Dinner at “This is The Place State Park”	18:30 Dinner at Rodizio Grill	18:30 Dinner at The Jewish Community Center

Session M1: Model-based iterative reconstruction I
 Moderated by Fessler J (University of Michigan) & La Riviere P (University of Chicago)

<p>pDART: Discrete algebraic reconstruction using a polychromatic forward model</p> <p>Six N, De Beenhouwer J, Sijbers J <i>University of Antwerp, Belgium</i></p>	1
<p>Joint image reconstruction for multiphase CT</p> <p>Xu J, Noo F <i>Johns Hopkins University, MD, USA; University of Utah, UT, USA</i></p>	5
<p>Statistical image reconstruction with sample-based beam-hardening compensation for X-ray CT</p> <p>Martinez C, Fessler J A, Desco M, Abella M <i>Carlos III University of Madrid, Spain; University of Michigan, MI, USA</i></p>	11
<p>Model based iterative reconstruction with spatially adaptive sinogram weights for wide-cone cardiac CT</p> <p>Ziabari A, Ye D H, Fu L, Srivastava S, Sauer K D, Thibault J-B, Bouman C A <i>Purdue University, IN, USA; GE Healthcare Technologies, WI, USA; GE Global Research, NY, USA; University of Notre Dame, IN, USA</i></p>	15
<p>A memory-efficient algorithm for large-scale sparsity regularized image reconstruction</p> <p>Ongie G, Murthy N, Balzano L, Fessler J A <i>University of Michigan, MI, USA</i></p>	20

Session M2: The four best scored abstracts
 Moderated by Kachelrieß M (German Cancer Research Center) & Taguchi K (Johns Hopkins University)

<p>First experimental validation of a novel concept for dynamic beam attenuation in CT</p> <p>Huck S M, Parodi K, Stierstorfer K <i>Ludwig Maximilians University of Munich, Germany; Siemens Healthcare, GmbH, Germany</i></p>	24
<p>Detectability indices in anisotropic X-ray dark-field tomography</p> <p>Boghiu T C, Sharma Y, Pfeiffer F, Lasser T <i>Technical University of Munich, Germany</i></p>	28
<p>Simultaneous reconstruction and separation in a spectral CT framework with a proximal variable metric algorithm</p> <p>Tairi S, Anthoine S, Morel C, Boursier Y <i>Aix Marseille University, France</i></p>	32
<p>Consistency of fanbeam projections of a translating object along an arc of a circle</p> <p>Boulier T, Clackdoyle R, Lesaint J, Desbat L <i>Grenoble Alpes University, France</i></p>	36

Session M3: Novel data acquisition concepts
 Moderated by Chen G-H (University of Wisconsin-Madison) & McCollough C (Mayo Clinic)

<p>Design and evaluation of a prototype high-throughput micro-CT system for in-vivo small animal imaging</p> <p>Kuntz J, Funck C, Maier J, Kachelrieß M, Sawall S <i>German Cancer Research Center (DKFZ), Germany</i></p>	40
<p>Performance evaluation of a piecewise-linear dynamic attenuator</p> <p>Shunhavanich P, Pelc N J <i>Stanford University, CA, USA</i></p>	44
<p>Implementation and assessment of dynamic fluence field modulation with multiple aperture devices</p> <p>Gang G J, Mao A, Siewerdsen J H, Stayman J W <i>Johns Hopkins University, MD, USA</i></p>	47

<p>First multislit collimator prototype for SparseCT: design, manufacturing and initial validation</p> <p>Chen B, Muckley M J, Sodickson A D, O'Donnell T, Berner M, Allmendinger T, Stierstorfer K, Flohr T, Schmidt B, Sodickson D, Otazo R</p> <p><i>New York University, NY, USA; Harvard Medical School, MA, USA; Siemens Healthcare GmbH, Germany</i></p>	52
<p>Reconstruction of reduced-dose SparseCT data acquired with an interrupted-beam prototype on a clinical scanner</p> <p>Muckley M J, Chen B, O'Donnell T, Berner M, Allmendinger T, Stierstorfer K, Flohr T, Schmidt B, Sodickson A D, Sodickson D K, Otazo R</p> <p><i>New York University, NY, USA; Harvard Medical School, MA, USA; Siemens Healthcare GmbH, USA</i></p>	56

<p>Session M4: Artifact and noise removal techniques Moderated by Pan X (University of Chicago) & S Vedantham (University of Arizona)</p>

<p>Stack transition artifact removal for cardiac CT using a symmetric Demons algorithm</p> <p>Lebedev S, Fournie E, Stierstorfer K, Kachelrieß M</p> <p><i>German Cancer Research Center (DKFZ), Germany; Siemens Healthcare GmbH, Germany</i></p>	60
<p>Noise reduction via filtering temporal differences</p> <p>Nett B E, Miao C, Pack J D</p> <p><i>GE Healthcare, WI, USA; GE Global Research, NY, USA</i></p>	65
<p>Projective invariants for geometric calibration in flat panel computed tomography</p> <p>Aichert A, Bier B, Rist L, Maier A</p> <p><i>University of Erlangen-Nuremberg, Germany</i></p>	69
<p>Multi-motion compensation for high-quality cone-beam CT of the head</p> <p>Sisniega A, Zbijewski W, Wu P, Stayman J W, Aygun N, Stevens R, Wang X, Foos D H, Siewerdsen J H</p> <p><i>Johns Hopkins University, MD, USA; Carestream Health, NY, USA</i></p>	73
<p>Estimation of the source-detector alignment of cone-beam X-ray systems using collimator edge tracking</p> <p>Luckner C, Mertelmeier T, Maier A, Ritschl L</p> <p><i>University of Erlangen-Nuremberg, Germany; Siemens Healthcare GmbH, Germany</i></p>	78
<p>Evaluation of optimization-based reduction of truncation artifacts in C-arm CBCT</p> <p>Xia D, Chang Y-B, Manak J, Zhang Z, Chen B, Sidky E Y, Pan X</p> <p><i>University of Chicago, IL, USA; Canon Medical Research Institute, IL, USA</i></p>	82

<p>Session T1: Multi-energy CT I Moderated by Stayman J W (Johns Hopkins University) & Hsieh S (UCLA)</p>

<p>"X-map 2.0" and "iBHC2" for consistent edema signal enhancement for acute ischemic stroke using non-contrast-enhanced dual-energy CT</p> <p>Taguchi K, Itoh T, Fuld M K, Fournie E, Lee O, Noguchi K</p> <p><i>Johns Hopkins University, MD, USA; Siemens Healthcare GmbH, USA & Japan; University of Toyama, Japan</i></p>	86
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Prior-based multi material decomposition (PBMMD) for dual energy CT Dorn S, Chen S, Sawall S, Maier J, Knaup M, Maier A, Lell M, Kachelrieß M <i>German Cancer Research Center (DKFZ), Germany; University of Erlangen-Nuremberg, Germany</i>	106

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 Moderated by Tang X (Emory University)

Divergent-beam backprojection-filtration formula with applications to region-of-interest imaging Reshef A, Riddell C, Troussset Y, Ladjal S, Bloch I <i>GE Healthcare, Buc, France; Paris Saclay University, France</i>	110
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 Moderated by Yu Z (Accuray) & Zhou J (Canon Medical Research USA)

Phase contrast and fluorescence CT

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 Moderated by Riddell C (GE Healthcare) & Rit S (Lyon INSA, France)

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