

Session 5 Digital Imaging Theories and Novel CT Technologies
数字成像理论与 CT 新技术

14:00–18:10, Saturday, **October 28**, 2023

Location: Room 2–5 (Second Floor) of Great Hall / 会议中心 2–5 会议室

Chair: Jian ZHANG, National Institute of Metrology

Vice–Chair: Xingdong LI, National Institute of Metrology; Yunsong ZHAO, Capital Normal University

Organizer: CT Theory and Application Committee of CSS; National Institute of Metrology

	Title	Reporter	Chairs
14:00–14:10	Opening Ceremony		Xingdong LI
14:10–14:40	The Developments of HEPS and Its Hard X-ray Imaging Beamline	Gang LI , <i>Institute of High Energy Physic, CAS</i>	Li ZHANG , <i>Tsinghua University</i>
14:40–15:00	An Iterative Algorithm for Linear Computed Laminography Based on Recursive Difference	Jing ZOU , <i>Tianjin University</i>	
15:00–15:20	Projection View Selection Based on Error Equi-distribution for Sparse-view CT Reconstruction	Yinghui ZHANG , <i>Capital Normal University</i>	
15:20–15:40	Statistical Iterative Spectral CT Imaging Method Based on Blind Separation of Polychromatic Projections	Xiaojie ZHAO , <i>North University of China</i>	
15:40–16:00	An Image Reconstruction Algorithm for Spectral Exterior Problem Based on Edge-preserving Diffusion and Edge-Preserving Smoothing	Yanwei QIN , <i>Capital Normal University</i>	
16:00–16:10	Tea Break		
16:10–16:30	Metal Artifacts Correction Based on a Physics-informed Nonlinear Sinogram Decomposition Model	Shuqiong FAN , <i>Capital Normal University</i>	Zhanli HU , <i>Shenzhen Institute of Advanced Technology, CAS</i>
16:30–16:50	Noise Power Spectrum of Dark-field Imaging Using a Grating Interferometer	Peiyuan GUO , <i>Tsinghua University</i>	
16:50–17:10	Avoiding Back-projection Weighting Factor for Multiple Source-Translation Computed Tomography Reconstruction	Zhisheng WANG , <i>Harin Institute of Technology</i>	
17:10–17:30	A Random Walk Regularized Smoothing and Inpainting Framework for Depth From Focus	Yuhang ZHENG , <i>Beijing Information Science and Technology University</i>	
17:30–17:50	A Test Method of Maximum Detectable Steel Thickness Based on Industrial X- RAY CT	Haijiang DONG , <i>China United Test & Certification Co., Ltd.</i>	
17:50–18:10	One Kind Direct Conversion X-ray Detector (CdTe Detector)	Dong WANG , <i>Varex Imaging Corporation</i>	

14:00–18:00, Sunday, **October 29**, 2023

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14:00–14:30	Medical Artificial Intelligence Imaging Based on Medical–industrial Intersection	Zhanli HU , <i>Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences</i>	Min YANG , <i>Beihang University</i>
14:30–14:50	X–RAY Imaging in Cultural Heritage	Qiong XU , <i>Institute of High Energy Physics, CAS</i>	
14:50–15:10	EMCPNN: A Low–dose CT Reconstruction Network Based on TV–regularized EM Algorithm	Ran AN , <i>Capital Normal University</i>	
15:10–15:30	Research on Defect Detection Algorithm for Railway Casting Digital Radiographic Image Based on Deep Learning	Wang LIAO , <i>Chongqing University</i>	
15:30–15:50	<i>A Semi-supervised Denoising Method for Low-dose CT Based on Conditional Normalizing Flow</i>	Chuwen HUANG , <i>Capital Normal University</i>	
15:50–16:00	Tea Break		
16:00–16:20	Multi–Cost Loss Based Disparity Estimation Network from Light Field	Yuanshen AN , <i>Beijing Information Science and Technology University</i>	Baodong LIU , <i>Institute of High Energy Physic, CAS</i>
16:20–16:40	Research on Dynamic Dual–energy Spectral CT Technology	Huahai SUN , <i>Tsinghua University</i>	
16:40–17:00	TWF–MDTV: Multi–Directional TV algorithm based on the Tight Wavelet Framework for limited–angle CT reconstruction	Jingxue LI , <i>Capital Normal University</i>	
17:00–17:20	A Ring Artifact Removal Model with Dual Domain Regularization for X–ray Computed Tomography	Xin LU , <i>Capital Normal University</i>	
17:20–17:40	Investigation of the Shapes and Distributions of Longhorn Beetles Galleries Using Spiral CT	Rongrong ZHANG , <i>Shandong First Medical University</i>	
17:40–18:00	Static CT, Redefining CT Ultra High Definition Imaging	Jun LIANG , <i>Nanovision Medical Technology (Shanghai) Co., Ltd.</i>	