



KONICA MINOLTA

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FOR IMMEDIATE RELEASE

Konica Minolta Healthcare Sponsors SPIE Best Student Paper Award

Wayne, NJ, March 8, 2022 – Konica Minolta Healthcare Americas congratulates the winner and runners-up of the Best Student Paper Award given by the International Society for Optics and Photonics (SPIE) at its 2022 Medical Imaging Symposium. SPIE is a not-for-profit society that helps advance emerging light-based research and technologies across numerous industries. As a multinational company invested in research to deliver innovations in imaging technologies, Konica Minolta sponsored the award as part of its continued commitment to education and support of young scientists in medical imaging.

The winner was Joshua Ray Chen, a student research intern at the University of Wisconsin-Madison for his paper, “Overcoming the challenges of inaccurate CT numbers in low dose CT.” In computerized tomography (CT), as the dose is lowered, image noise increases and the CT number becomes more inaccurate. Joshua, Mang Feng, research assistant, and Ke Li, PhD, Associate Professor of Medical Physics and Radiology, investigated the physics of CT number inaccuracy in low-dose CT. They developed a method to address this issue and validated it for a photon counting detector for CT (PCD-CT), demonstrating an improvement in the material quantification accuracy of spectral PCD-CT images. This has the potential to improve the accuracy of clinical diagnosis while minimizing dose to the patient.

The runners-up were Benjamin D. Killeen, a third-year PhD student in the Department of Computer Science at Johns Hopkins University, for his paper, “Toward perception-based anticipation of cortical breach during K-wire fixation of the pelvis,” and Matthew Tivnan, a biomedical engineering PhD student at Johns Hopkins School of Medicine, for his paper, “Control of variance and bias in CT image processing with variational training of deep neural networks.” Benjamin and his co-authors provided the first steps toward a perception-based algorithm to interpret interventional radiographs acquired during interventional surgical procedures to improve efficacy and reduce errors in challenging trauma surgical procedures. Matthew presented his method for controlling the performance of deep-learning algorithms in the reconstruction of CT images, enabling optimization of image quality for specific diagnostic tasks.

“As a sponsor of the SPIE Medical Imaging Symposium, Konica Minolta is thrilled to support research in physics and computer sciences applied to medical imaging,” says John Sabol, Clinical Research Manager, Konica Minolta Healthcare. “We congratulate the winner, Joshua Ray Chen, and runners-up, Benjamin D. Killeen and Matthew Tivnan, for their excellent papers and presentations. As a company with nearly 150 years innovating imaging across an array of industries,

we understand that science and technology are integral to advancing medical imaging innovations from the bench to the bedside, and we are pleased to support and recognize today's student researchers as they work toward becoming tomorrow's academia leaders."

About Konica Minolta Healthcare Americas, Inc.

Konica Minolta Healthcare is a world-class provider and market leader in medical diagnostic imaging and healthcare information technology. With over 75 years of endless innovation, Konica Minolta is globally recognized as a leader providing cutting-edge technologies and comprehensive support aimed at providing real solutions to meet customer's needs and helping make better decisions sooner. Konica Minolta Healthcare Americas, Inc., headquartered in Wayne, NJ, is a unit of Konica Minolta, Inc. (TSE:4902). For more information on Konica Minolta Healthcare Americas, Inc., please visit <https://healthcare.konicaminolta.us>