RSNA 2017 Presentation List

Suzuki Lab
Medical Imaging Research Center
Illinois Institute of Technology

Scientific Paper
Title: Investigating the Depth of Convolutional Neural Networks (CNNs) in Computer-aided Detection and Classification of Focal Lesions: Lung Nodules in Thoracic CT and Colorectal Polyps in CT Colonography
Authors: N Tajbakhsh; A Zarshenas, MSc; J Liu, MS; K Suzuki, PhD, Chicago, IL (ksuzuki@iit.edu)
Time and Place: Tue Nov 28 2017 11:00AM - 11:10AM ROOM S404AB
Session Name:

Scientific Paper
Title: Two Deep-Learning Models for Lung Nodule Detection and Classification in CT: Convolutional Neural Network (CNN) vs Neural Network Convolution (NNC)
Authors: N Tajbakhsh; A Zarshenas, MSc; J Liu, MS; K Suzuki, PhD, Chicago, IL (ksuzuki@iit.edu)
Time and Place: Tue Nov 28 2017 11:10AM - 11:20AM ROOM S404AB
Session Name:

Education Exhibit
Title: What Was Changed in Machine Learning (ML) in Medical Image Analysis After the Introduction of Deep Learning?
Authors: K Suzuki, PhD, Chicago, IL; A Zarshenas, MSc; J Liu, MS; Y Zhao, BSC; Y Luo (ksuzuki@iit.edu)
Time and Place: 
Session Name:

Education Exhibit
Title: How Deep Should We Go with Deep Learning in Medical Image Analysis?
Authors: N Tajbakhsh; A Zarshenas, MSc; J Liu, MS; K Suzuki, PhD, Chicago, IL (ksuzuki@iit.edu)
Time and Place: 
Session Name:

Education Exhibit
Title: Virtual High-Dose (VHD) Technology: Radiation Dose Reduction in Digital Breast Tomosynthesis (DBT) by Means of Supervised Deep-Learning Image Processing (DLIP)
Authors: Junchi Liu, M.S., Amin Zarshenas, M.S., Zheng Wei, B.S., Limin Yang, M.D., Ph.D., Laurie Fajardo, M.D., M.B.A., Kenji Suzuki, PhD
Time and Place: 11/27/17, 12:15 PM - 12:45 PM; Location: PH106-ED-MOA9
Session Name: Education Exhibit – Physics –Diagnostic

Scientific Paper
Title: First-Reader Computerized System for Distinction between Malignant and Benign Nodules on Thoracic CT Images By Means of End-To-End Deep Learning: Convolutional Neural Network (CNN) and Neural Network Convolution (NNC) Approaches
**Scientific Paper**

**Title:** Radiation Dose Reduction in Thin-Slice Chest CT at a Micro-Dose (mD) Level by Means of 3D Deep Neural Network Convolution (NNC)

**Authors:** A Zarshenas, MSc, Chicago, IL; Y Zhao, BSC; J Liu, MS; T Higaki, PhD; K Awai, MD; K Suzuki, PhD (mzarshen@hawk.iit.edu)

**Time and Place:** Tue Nov 28 2017 3:10PM - 3:20PM ROOM S403B

**Session Name:** Scientific Paper – Physics – Radiation Dose - CT

**Scientific Paper**

**Title:** Highly Efficient Biomarker Selection (BS) Based on Novel Binary Coordinate Accent (BCA) for Machine Learning with a Large Dataset in Radiomics

**Authors:** A Zarshenas, MSc, Chicago, IL; J Liu, MS; K Suzuki, PhD (mzarshen@hawk.iit.edu)

**Time and Place:** Tue Nov 28 2017 12:15PM - 12:45PM Station #4

**Session Name:** Scientific Paper – Physics – CAD

**Scientific Paper**

**Title:** Virtual Dual-Energy (VDE) Imaging: Separation of Bones from Soft Tissue in Chest Radiographs (CXRs) by Means of Anatomy-Specific (AS) Orientation-Frequency-Specific (OFS) Deep Neural Network Convolution (NNC)

**Authors:** A Zarshenas, MSc, Chicago, IL; J V Patel, BS; J Liu, MS; P Forti; K Suzuki, PhD (mzarshen@hawk.iit.edu)

**Time and Place:** Mon Nov 27 2017 12:15PM - 12:45PM Station #6

**Session Name:** Scientific Paper – Physics – Diagnostic X-ray

**Scientific Posters**

**Title:** Detection of Solid Pulmonary Nodules in Micro-Dose CT (mDCT) with "Virtual" Higher-Dose (vHD) CT Technology: An Observer Performance Study

**Authors:** W Fukumoto, Hiroshima, Japan; K Suzuki, PhD; T Higaki, PhD; Y Zhao, BSC; A Zarshenas, MSc; K Awai

**Time and Place:** Nov 28 2017 12:15PM - 12:45PM ROOM CH Community, Learning Center

**Session Name:** Primary Category: Chest, Secondary Category: Radiation Dose Reduction