

Lightning talks of selected paper posters

Wednesday 12th July 11.05-12.00

Poster 2: Modelling, Speckle Simulation and Quality Evaluation of Synthetic Ultrasound Images. Prerna Singh, Ramakrishnan Mukundan, Rex De Ryke. University of Canterbury and Radiology Services, Christchurch District Health Board (New Zealand) – Theme: Ultrasound imaging

Poster 4: Multidimensional assessments of abdominal aortic aneurysms by magnetic resonance against ultrasound diameter measurements. Georgios Papanastasiou, Victor Gonzalez-Castro, Calum Gray, Rachael Forsythe, Yolanda Sorgia-Koutraki, Neil Mitchard, David Newby, Scott Semple. Clinical Research Imaging Centre, University of Edinburgh, Centre for Cardiovascular Science, University of Edinburgh and Department of Radiology, Royal Infirmary of Edinburgh (UK) and University of León (Spain) – Theme: Cardiovascular imaging

Poster 5: Comparison of Automatic Vessel Segmentation Techniques for Whole Body Magnetic Resonance Angiography with Limited Ground Truth Data. Andrew McNeil, Giulio Degano, Ian Poole, Graeme Houston, Emanuele Trucco. University of Dundee, Toshiba Medical Visualization Systems Europe and Ninewells Hospital and Medical School Dundee (UK) (Submission 106) – Theme: Cardiovascular imaging

Poster 6: Cardiac Mesh Reconstruction from Sparse, Heterogeneous Contours. Benjamin Villard, Valentina Carapella, Rina Ariga, Vicente Grau, Ernesto Zacur. University of Oxford (UK), Simula Research Laboratory (Norway) and University of Oxford Centre for Clinical Magnetic Resonance Research (UK) – Theme: Cardiovascular imaging

Poster 8: Automatic LGE myocardial scar segmentation using mask SLIC supervoxels - Replicating the clinical method. Julia Popescu, Alessandra Borlotti, Erica Dall' Armelina, Vicente Grau. University of Oxford and University of Leeds (UK) – Theme: Cardiovascular imaging

Poster 10: New level Set Model in Follow-up Radiotherapy Image Analysis. Roushank Rahmat, David Harris-Birtill, Stephen McLaughlin, Bill Nailon, Allan Price. University of St. Andrews, Edinburgh Cancer Research Centre, Western General Hospital and Heriott Watt University (UK) – Theme: Oncology imaging

Poster 11: Topological Analysis of the Vasculature of Angiopoietin-Expressing Tumours through Scale-Space Tracing. Constantino Carlos reyes Aldasoro, Meit Bjondahl, Chryso Kanthou, Gillian Tozer. City University of London and The University of Sheffield (UK) – Theme: Oncology imaging

Poster 12: 3D Texton Based Prostate Cancer Detection Using Multiparametric Magnetic Resonance Imaging. Liping Wang, Reyer Zwigelaar. Aberystwyth University (UK) – Theme: Oncology imaging

Poster 13: Tumour Segmentation in Whole Slide Images using Persistent Homology and Deep Convolutional Features. Talha Qaiser, Yee-Wah Tsang, David Epstein, Nasir Rajpoot. University of Warwick and University Hospital of Coventry and Warwickshire (UK) – Theme: Oncology imaging

Poster 16: Learning longitudinal MRI patterns by SICE and deep learning: Assessing the Alzheimer's Disease progression. Juan M. Górriz, Francisco Jesús Martínez Murcia, Jorge Munilla, Andrés Ortíz, Javier Ramírez. University of Málaga and University of Granada (Spain) – Theme: Brain imaging

Poster 17: Improved reference tracts for unsupervised brain white matter tractography. Susana Muñoz Maniega, Mark E. Bastin, Ian J. Deary, Joanna M. Wardlaw, Jonathan Clayden. University of Edinburgh and

University College London (UK) – Theme: Brain imaging

Poster 18: Tree-based ensemble learning techniques in the analysis of Parkinsonian Syndromes. Javier Ramírez, Manuel Gómez, Andrés Ortíz. University of Málaga (Spain), The Florida State University (USA) and University of Granada (Spain) – Theme: Brain imaging

Poster 20: Evaluation of Four Supervised Learning Schemes in White Matter Hyperintensities Segmentation in Absence or Mild Presence of Vascular Pathology. Muhammad Febrian Rachmadi, Maria leonor Agan, Taku Komura, Maria C. Valdes Hernández. University of Edinburgh (UK) – Theme: Brain imaging

Poster 23: Evaluation of an Automatic ASPECT Scoring System for Acute Stroke in Non-Contrast CT. Matthew Daykin, Aneta Lisowska, Erin Beveridge, Vismantas Dilys, Keith Muir, Mathini Sellathurai, Ian Poole. Toshiba Medical Visualization Systems Europe, University of Edinburgh and University of Glasgow (UK) – Theme: Brain imaging

Poster 24: Pre-processing Techniques for Colour Digital Pathology Image Analysis. Wael Saafin, Gerald Schaefer. Loughborough University (UK) – Theme: Image enhancement and alignment

Poster 25: Finite Element Based Interactive Elastic Image Registration. Yechiel Lamash, Anath Fischer, Jonathan Lessick. Technion—Israel Institute of Technology and Ramban – Health Care Campus (Israel) – Theme: Image enhancement and alignment

Poster 26: Can planning images reduce scatter in follow-up cone-beam CT? Jonathan Mason, Alessandro Perelli, William Nailon, Mike Davies. University of Edinburgh and Edinburgh Cancer Centre, Western General Hospital (UK) – Theme: Image enhancement and alignment

Poster 27: Deep quantitative liver segmentation and vessel exclusion to assist in liver assessment. Benjamin Irving, Chloe Hutton, Sid Vikal, Marija Mavar, Andrea Dennis, Matt Kelly, J Michael Brady. Perspectum Diagnostics and University of Oxford (UK) – Theme: Modelling and segmentation

Poster 28: Segmentation of Overlapping Macrophages Using Anglegram Analysis. José Alonso Solís Lemus, Brian Stramer, Greg Slabaugh, Constantino Carlos Reyes Aldasoro. City University of London and King's College London (UK) – Theme: Modelling and segmentation

Poster 30: A comparison of texture features versus deep learning for image classification in interstitial lung disease. Alison O'Neil, Keith Goatman, Matthew Shepherd, Erin Beveridge. Toshiba Medical Visualization Systems (UK) – Theme: Modelling and segmentation

Poster 31: A Novel High-Throughput Multispectral Cell Segmentation Algorithm. Jenia Golbstein, Michael Vidne, Gabi Tarcic, Revital Sharivkin, Yaniv Tocker. Hadassah Medical Center Campus (Israel) – Theme: Modelling and segmentation

Poster 32: A New Method for Surgical Tracking System Based on Fiducial Marker. Zijian Zhao and Shuaiyifan Ma. Shandong University (China) – Theme: Feature detection and classification

Poster 33: Glomerulus classification with Convolutional Neural Networks. Anibal Pedraza, Jaime Gallego, Samuel López, Lucía González, Arvidas, Laurinavicius, Maria Gloria Bueno. University of Castilla la Mancha, Hospital General Universitario (Spain) and Vilnius University Hospital Santariskes Clinics and Vilnius University (Lithuania) – Theme: Feature detection and classification

Poster 34: Random Forest-based Feature Importance for HEP-2 Cell Image Classification. Vipha Gupta, Amav Bhavsar. Indian Institute of Technology (India) – Theme: Feature detection and classification

Poster 29: Simultaneous Cell Detection and Classification with an Asymmetric Deep Autoencoder in Bone Marrow Histology Images. Tzu-Hsi Song, Victor Sánchez, Hesham Eldaly, Nasir Rajpoot. University of Warwick and Addenbrookes Hospital (UK) – Theme: Feature detection and classification

Poster only presentations

Tuesday 11th July and Wednesday 12th July

Poster 1: Diagnosis of metastatic cervical lymph nodes from thyroid carcinoma using a deep learning architecture with the point-wise gated Boltzmann machine, Qi Zhang, Shanghai University (China)

Poster 3: Tissues Classification of the Cardiovascular System using Texture Descriptors. Claudia Mazo, Enrique Alegre, Maria Trujillo, Victor Gonzalez Castro, Universidad del Valle, Universidad de Leon (Spain)

~~Poster 7: Segmentation of Abdominal Aortic Aneurysm (AAA) Based on Topology Prior Model. Safa Salahat, Khalifa University (United Arab Emirates) and presented by Bilal Taha, Khalifa University (United Arab Emirates)~~ **WITHDRAWN**

~~Poster 9: Classification of Cervical Cancer using Pap smear Images: A Convolutional Neural Network Approach. Bilal Taha, Jorge Dias, Naoufel Werghi, Khalifa University (United Arab Emirates)~~ **WITHDRAWN**

Poster 14: Multispectral biopsy image based colorectal tumor grader. Suchithra Kunhoth, Somaya Maadeed, Qatar University (Qatar)

Poster 15: A texton-based approach for the classification of benign and malignant masses in mammograms, Zobia Suhail, Azam Hamidinekoo, Erika R. E. Denton, Reyer Zwiggelaar, Aberystwyth University (UK)

Poster 19: A Deep Learning Pipeline to Delineate Proliferative Areas of Intracranial Tumors in Digital Slides. Zaneta Swiderska-Chadaj, Tomasz Markiewicz, Bartłomiej Grala, Arkadiusz Gertych, Warsaw University of Technology (Poland)

Poster 22: Feature Extraction and Classification to Diagnose Hypoxic-Ischemic Encephalopathy Patients by Using Susceptibility-Weighted MRI Images. Sisi Wu, Sasan Mahmoodi, Angela Darekar, Brigitte Vollmer, Emma Lewis, Maria Liljeroth, University of Southampton (UK)

Poster 35: Paediatric Frontal Chest Radiograph Screening with fine-tuned Convolutional Neural Networks. Jonathan Gerrand, Quentin Williams, Dalton Lunga, Adam Pantanowitz, Shabir Madhi, Nasreen Mahomed, Council for Scientific and Industrial Research (CSIR), University of Witwatersrand, National Institute for Communicable Diseases (South Africa)

Poster 36: Cervical Nuclei Classification: Feature Engineering versus Deep Belief Network. Christoph Rasche, Ciprian Tiganesteanu, Mihai Neghina, University Politehnica of Bucharest, (Romania)

Poster 38: Fetoscopic Panorama Reconstruction: Moving from Ex-Vivo to In-Vivo. Floris Gaisser, Suzanne Peeters, Boris Lenseigne, Pieter Jonker, Dick Oepkes, Delft University of Technology (The Netherlands)

Poster 39: Significance of Magnetic Resonance Image Details in Sparse Representation Based Super

Resolution. Prabhjot Kaur, Srimanta Mandal, Anil Sao, IIT Mandi (India), **Presented by Arnav Bhavsar, IIT Mandi (India)**