

TOTAL-BODY PET 2021 ONLINE – 22ND SEPTEMBER 2021

FINAL AGENDA - UK time zone

12:00	Opening of Total-Body PET 2021
12:50 – 13:00	Welcome to Total-Body PET 2021 Adriana Tavares, University of Edinburgh, UK
13:00 – 15:00	Educational session – part 1 (LIVE)
<i>40-50 min.</i>	“Total-body PET system design” Suleman Surti, University of Pennsylvania, USA
<i>40-50 min</i>	“Image reconstruction methods and challenges” Adam Alessio, Michigan State University, USA
15:00 – 15:30	Comfort break
15:30 – 17:30	Educational session – part 2 (LIVE)
<i>40-50 min.</i>	“Kinetic modelling and applications of Total-Body PET technology” Guobao Wang, UC Davis, USA
<i>40-50 min.</i>	“Potential of Total-Body PET to Assess Drug Disposition” Oliver Langer, Medical University Vienna, Austria
<i>40-50 min.</i>	“Potential of Total-Body PET in radiotracer development” Antony Gee, King’s College London, UK

Exhibition and poster booths open

TOTAL-BODY PET2021 ONLINE – 23RD SEPTEMBER 2021

FINAL AGENDA - UK time zone

13:00 – 14:20	Parallel proffered talks – LIVE	
	Instrumentation Chairs: Prof Stefaan Vandenberghe & Dr Suleman Surti	Applications Chairs: Dr Adriana Tavares & Prof David Mankoff
10 min	“Exploring Timing Resolution Limits of Cost-Effective DOI-capable Semi-Monolithic Detectors for Total-body PET” Stephan Naunheim, RWTH Aachen University, Germany	“Photon quantum entanglement in the MeV regime and its application in PET imaging” Julien Bordes, University of York, UK
10 min	“Spatial resolution of long axial field of view PET designs with monolithic detectors – Simulation study” Maya Abi Akl, Ghent University, Belgium	“Patlak analysis of whole body dynamic FDG PET scans: normative values of healthy tissue” Tim J.M. Jaspers, Eindhoven University of Technology, Netherlands
10 min	“Calibration Techniques for Monolithic Crystals Detectors Based on Neural Networks” Marta Freire, Universitat Politècnica de València, Spain	“Use of whole-body PET in mice to assess the redundancy between ABCB1 and ABCG2 in controlling the brain distribution and biliary excretion of shared substrates” Irene Hernández-Lozano, Medical University of Vienna, Austria
10 min	“A calibration methodology using external reference and supervised machine learning for highly segmented scintillation detectors in PET” Janko Lambertus, RWTH Aachen University, Germany	“Total Body PET scanning of CD8+ T-Lymphocytes to study the body’s immune defence system in COVID-19 related conditions” Terry Jones, UC Davis, USA
10 min	“Reducing Calibration Times in Total Body PET Designs Based on Monolithic Crystals” Marta Freire, Universitat Politècnica de València, Spain	“Dynamic total-body ¹⁸F-FDG parametric imaging on a long-axial FOV PET/CT scanner” Hasan Sari, Siemens, Switzerland
	<i>Round table discussions</i>	<i>Round table discussions</i>
14:20 – 15:00	e-Poster booth session & exhibition network	
15:00 – 15:30	Comfort break	
15:30 – 16:20	Proffered talks, Part 1 - LIVE <i>Emerging applications</i> Chairs: Dr Geoff Warnock & Prof Ken Herrman	
10 min	“Predictive Value of Dynamic Total Body PET-CT Imaging for treatment response in locally advanced non-small cell lung cancer (LA-NSCLC) patients with induction chemo-immunotherapy: Quantitative Analysis of ¹⁸F-FDG Uptake in Primary Tumor and Metastatic Lymph Nodes” Hui Liu, Collaborative Innovation Center of Cancer Medicine, China	
10 min	“ImmunoPET/CT Imaging of SIV infection in real time reveals ongoing residual viral replication as one initial source of active HIV reservoir” Francois Villinger, University of Louisiana at Lafayette, USA	
10 min	“Research Studies on the PennPET Explorer” Austin R. Pantel, University of Pennsylvania, USA	
	<i>Round table discussions</i>	
16:20 – 16:40	Industry sponsored session 1	
16:40 – 17:30	Keynote speaker talk – LIVE Chairs: Prof Paul Marsden & Prof Simon Cherry	
	“Experience with Total-Body PET in a clinical Nuclear Medicine department” Axel Rominger, University of Bern, Switzerland	

Further networking optional via online platform

TOTAL-BODY PET2021 ONLINE – 24TH SEPTEMBER 2021

FINAL AGENDA - UK time zone

13:00 – 13:30	Invited speaker talk – LIVE Chairs: Prof Thomas Bayer & Dr Michelle Williams
	“Multi-organ kinetic modelling and connectome analysis for Total-Body PET” Adriana Tavares, University of Edinburgh, UK
13:30 – 15:00	Proffered talks, Part 2 – LIVE <i>Emerging applications (cont.)</i> Chairs: Prof Adriaan Lammertsma & Prof Roger Gunn
10 min	“Comparison of bolus and infusion methods for multi-organ analysis: application to [¹⁸F]NaF in mice” Jason Laval, University of Edinburgh, UK
10 min	“Exploring Human Functional Connectome Using Total-Body PET (ENHANCE-PET)” Lalith Kumar Shiyam Sundar, Medical University of Vienna, Austria
10 min	“Imaging pharmacokinetics of [¹¹C]glyburide with whole-body PET” Solène Marie, Université Paris-Saclay, France
10 min	“Delay estimation using a convolutional neural network for total-body kinetic modelling” Elizabeth Li, UC Davis, USA
10 min	“Parametric Image Reconstruction for Total-body PET based on Convolutional Neural Network” Yingying Li, Zhejiang University, China
10 min	“Total-Body PET Images Reconstruction Optimization Using Deep Learning” Ruiyao Ma, Tsinghua University, China
Round table discussions	
15:00 – 15:30	Comfort break
15:30 – 16:50	Proffered talks, Part 3 – LIVE <i>Instrumentation news</i> Chairs: Prof Sibylle Ziegler and Prof Joel Karp
10 min	“C-DenseNet: A direct neural network based approach for Total Body PET Image Reconstruction” Venkata S.S. Kandarpa, LATIM, Université de Bretagne Occidentale, France
10 min	“Development and evaluation of a CT-less reconstruction framework for long-axial FOV PET scanners using LSO background radiation” Hasan Sari, Siemens, Switzerland
10 min	“Development of a deep learning method for CT-free correction for an ultra-long axial field of view PET scanner” Song Xue, University of Bern, Switzerland
10 min	“Filtration and reconstruction of trigger-less data for the whole-body J-PET scanner” Aleksander Gajos, Jagiellonian University, Poland
10 min	“A TB-PET design with DOI and TOF capabilities” Antonio J. González, Universitat Politècnica de València, Spain
Round table discussions	
16:50 – 17:10	Industry sponsored session 2
17:10 – 17:30	Closing session “What to expect from Total-Body PET in 2022?” Stefaan Vandenberghe, Ghent University, Belgium

Further networking optional via online platform

E-POSTERS- 23rd SEPTEMBER, 14:20 – 15:00

Please note, poster booths will be open for the whole meeting. Please use the chat function in the booth or the message function in the delegate list to arrange a time to meet out with this session.

Poster Number	Presenter	Poster Title
1	Nicola Belcari	Towards the ideal TOF-PET detector: a scalable architecture with uncompromised performance for clinical and total-body applications
2	Maurizio Conti	Biograph Vision Quadra, a Total Body PET scanner: why, what, and what for?
4	Ana Ros García	PROScRiPT: a probe for the improvement of the spatial resolution in total-body PET
5	Łukasz Kapłon	Technical attenuation length measurement of plastic scintillators with SiPMs for the total-body J-PET scanner
6	Yannick Kuhl	Fast Calibration of (Semi-)Monolithic Detectors based on a Multi-Fan-Beam Collimator
7	Szymon Niedźwiecki	Commissioning of 50 cm AFOV modular plastic J-PET scanner
8	David Sarrut	Advanced Monte Carlo simulations of emission tomography imaging systems with GATE
9	Shivani	Performance characteristic of Total Body J-PET prototype with plastic scintillators and Wavelength Shifters
10	Roman Y. Shopa	Monte Carlo based analytical model of the system response matrix for the TOF MLEM reconstruction in total-body J-PET
11	Catriona Wimberley	Factor analysis of whole-body mouse PET data: image derived input function for [18F]MNI-1126 and [18F]MNI-1038