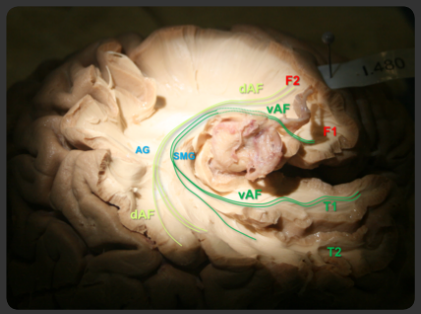
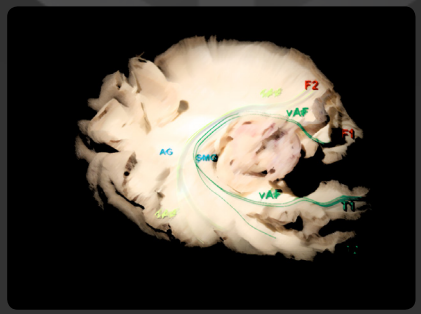
THIRD ANNUAL HANDS-ON COURSE ON WHITE MATTER SURGERY AND BRAIN NETWORKS

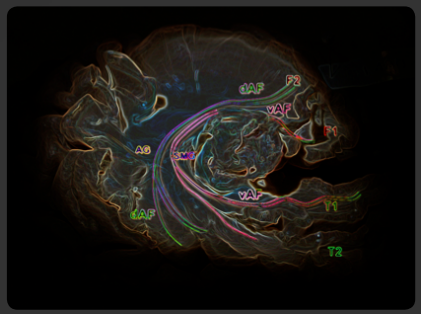
FOR CONSULTANT NEUROSURGEONS

11-12 MARCH 2019
ANATOMY DISSECTION ROOMS
IMPERIAL COLLEGE LONDON, CHARING CROSS CAMPUS
LONDON, UK

FULL COURSE PROGRAM







www.whitemattersurgery.com

Monday 11 March 2019

TIME	SPEAKER/ACTIVITY	TOPIC	VENUE
7:30 – 8:00	Coffee		PM (11F)
8:00– 8:15	George Samandouras, UK	Introduction to the Course	PM (11F)
8:15– 9:15	Guilherme Ribas, BRAZIL	3D LECTURE - The cerebral architecture; anatomy of cerebral gyri and sulci	PM (11F)
9:15 - 10:15	George Samandouras, UK	LECTURE - White matter anatomy and mapping paradigms of the lateral surface of brain - Extreme/external capsules/dAF-vAF/SLF II-III IFOF/MLF/ILF/UF/ Putamen/GP/ Internal capsule Thalamic radiations/Optic radiations	PM (11F)
10:15– 11:15	Guilherme Ribas & Faculty	HANDS-ON WORKSHOP Anatomy of cerebral gyri and sulci	DR (14F)
11:15 -13:30	George Samandouras & Faculty	HANDS-ON WORKSHOP - White matter anatomy of lateral surface of brain: dAF-vAF/SLF II-III IFOF/UF/Putamen/GP/internal capsule/thalamic radiations/optic radiations	DR (14F)
13:30 – 14:00	Lunch		PM (11F)
14:00 – 15:30	George Samandouras & Faculty	HANDS-ON WORKSHOP - Putamen/GP/internal capsule/thalamic radiations/optic radiations	DR (14F)
15:30 – 16:00	Svenja Caspers, GERMANY	LECTURE - Parcellation and atlasing of the cerebral cortex; techniques, technologies and outcomes	PM (11F)
16:00 – 16:30	Matthew Glasser, USA	LECTURE - Neuroanatomical localization of brain function: standard sterotactic spaces, atlases, and the microstructure of eloquent cortex	PM (11F)
16:30 – 17:00	Cathy Price, UK	LECTURE - A clinical tool for selecting tasks for intraoperative mapping of language function	PM (11F)
17:00 – 17:30	Matthew Glasser, USA	LECTURE - The Human Connectome Project (HCP)'s new map of the cerebral cortex	PM (11F)
20:00 - 23:00	Dinner with the Faculty	Bills Bar & Restaurant, Hammersmith	

Maps & Networks Anatomy lectures & dissections

PM (11F) Lecture theatre of Pathology Museum, 11th Floor, Laboratory block, Charing Cross Hospital
DR (14F) Anatomy dissection room, 14th Floor, Laboratory block, Charing Cross Hospital
Bills Bar & Restaurant, Hammersmith Tube station, 10 Hammersmith Grove, London W6 7AP

Tuesday 12 March 2019

TIME	SPEAKER/ACTIVITY	TOPIC	VENUE
8:00 - 8:30	Coffee		PM (11F)
8:30-9:00	Matthew Glasser, USA	LECTURE - Mapping cortical areas and functional networks in individuals: neurosurgical applications	PM (11F)
9:00-9:30	Svenja Caspers, GERMANY	LECTURE - Functional networks architecture and connectivity	PM (11F)
9:30 – 10:00	Heidi Johansen-Berg, UK	LECTURE Imaging white matter plasticity	PM (11F)
10:00 - 10:30	Guilherme Ribas, BRAZIL	3D LECTURE Craniocerebral relations applied to microneurosurgery; cranial key points for deep-seated lesions	PM (11F)
10:30-11:00	George Samandouras, UK	LECTURE - White matter anatomy and mapping paradigms of the inferolateral surface of the brain: CC/Cingulum/SLF III/Internal capsule	PM (11F)
11:00-12:00	Guilherme Ribas & Faculty	HANDS-ON WORKSHOP Craniocerebral relations applied to microneurosurgery; cranial key points for deep-seated lesions	DR (14F)
12:00-13:30	George Samandouras & Faculty	HANDS-ON WORKSHOP - White matter anatomy of inferolateral surface of brain: CC/Cingulum/SLF III/Internal capsule	DR (14F)
13:30 -14:00	Lunch		PM (11F)
14:00 - 15:30	George Samandouras, UK	Live demonstration of a step-by-step, cadaveric approach to the insula with mapping, microscope and neuronavigation	DR (14F)
15:30-16:00	Andrew McEvoy, UK	LECTURE Awake mapping in intraoperative MRI	PM (11F)
16:00-16:30	Lewis Thorne, UK	LECTURE Fluorescent technologies in glioma surgery	PM (11F)
16:30-17:00	Kevin O'Neill, UK	LECTURE Intraoperative spectroscopy in glioma surgery	PM (11F)
17:00 - 18:00	Faculty	Case based discsussion & closing remarks	PM (11F)

Surgical technologies Anatomy lectures & dissections Maps & Networks

PM (11F) Lecture theatre of Pathology Museum, 11th Floor, Laboratory block, Charing Cross Hospital
DR (14F) Anatomy dissection room, 14th Floor, Laboratory block, Charing Cross Hospital

FACULTY

GEORGE SAMANDOURAS CONSULTANT NEUROSURGEON, THE NATIONAL HOSPITAL FOR NEUROLOGY AND NEUROSURGERY, QUEEN SQUARE, LONDON, UK GS trained in Neurosurgery in Oxford receiving numerous teaching awards from the University of Oxford. He runs a neurooncology service with high volume awake craniotomies and resection of gliomas in eloquent parts of the brain. He is invited annually to present his work to the AANS and CNS. He is an invited member of the *Executive Committee of the AANS/CNS section on tumors* (2016-2020).

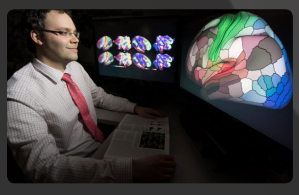
GUILHERMJE RIBAS PROFESSOR OF SURGERY, UNIVERSITY OF SÃO PAULO MEDICAL SCHOOL, SÃO PAULO, BRAZIL Professor Ribas runs a research laboratory at the Hospital Beneficência Portuguesa, focusing on microneurosurgical anatomy and on cranial neurosurgical techniques; he has published more than 50 articles and 40 book chapters. He is a pioneer of stereoscopic publications. His article *The Cerebral Sulci and Gyri* was the most accessed article of the whole Journal of Neurosurgery Publishing Group.

ANDREW MCEVOY CONSULTANT NEUROSURGEON, THE NATIONAL HOSPITAL FOR NEUROLOGY AND NEUROSURGERY, QUEEN SQUARE, LONDON, UK In addition Mr McEvoy, is Honorary Consultant Neurosurgeon to Great Ormond Street Hospital for Children. Mr McEvoy has a specialist Neuro-oncology service with a particular interest in the prediction and preservation of function during large re-sective neurosurgical procedures and the reorganisation of brain function around brain tumours.

LEWIS THORNE CONSULTANT NEUROSURGEON, THE NATIONAL HOSPITAL FOR NEUROLOGY AND NEUROSURGERY, QUEEN SQUARE, LONDON, UK Mr Thorne is the surgical lead for Neuro-Oncology at Queen Square. He was an early adopter of multidisciplinary working, running a joint neuro-oncology clinic with a chemo-radiation oncologist from the start of his consultant career. He has produced the first, validated, grading scale for predicting surgical success in glioblastoma, and has pioneered qualitative studies of the entire decision-making process for patients.

KEVIN O'NEILL CONSULTANT NEUROSURGEON, CHARING CROSS HOSPITAL, IMPERIAL COLLEGE NHS TRUST LONDON, UK Mr O'Neill's focus is on brain tumour research. He heads up the brain tumour clinical service at Imperial College and a centre of excellence translation research programme aimed at developing and testing new treatment strategies. He particularly enjoys the application of science and technology to medicine, utilising new technologies. He is dedicated to research and has been widely published in peer-reviewed journals.

CATHY PRICE PROFESSOR OF COGNITIVE NEUROSCIENCE, INSTITUTE OF NEUROLOGY, UCL DIRECTOR, WELLCOME TRUST CENTRE FOR NEUROIMAGING, LONDON, UK Cathy Price's research program aims to establish a functional anatomical model of language that predicts how speech and reading are lost and recovered following neurological damage. If there are multiple ways that the brain can perform each language task (degeneracy), then the effect of damage will depend on whether there is a surviving system available to sustain the task.



MATTHEW GLASSER CO-INVESTIGATOR, THE HUMAN CONNECTOME PROJECT; RESIDENT PHYSICIAN, NEURORADIOLOGY, WASHINGTON UNIVERSITY, ST. LOUIS, USA Dr. Glasser's research is focused on non-invasive neuroanatomy; he has authored 57 peer-reviewed articles. In 2016, Dr. Glasser and his colleagues in the HCP published a new map of human cortical areas that was featured on the cover of Nature and the front page of the New York Times. His current work focuses on validation of non-invasive measures of brain connectivity.

SVENJA CASPERS HEAD, INSTITUTE FOR ANATOMY, HEINRICH HEINE UNIVERSITY DÜSSELDORF, GERMANY Professor Caspers is also Head of the working group "Connectivity" at the Institute of Neuroscience of the Research Centre Jülich. Her major research focus is the fibre tracts in relation to cortical anatomy and functional network architecture, as well as in relation to environmental and genetic factors, particularly during aging. This is based on general work on systems neuroanatomy, including parcellations and atlasing.

HEIDI JOHANSEN-BERG DIRECTOR OF THE WELLCOME CENTRE FOR INTEGRATIVE NEUROIMAGING, NUFFIELD DEPARTMENT OF CLINICAL NEUROSCIENCES, UNIVERSITY OF OXFORD, UK Professor Johansen-Berg is a Wellcome Principal Research Fellow and Professor of Cognitive Neuroscience. She heads the Plasticity Group at FMRIB, and the Wellcome Centre for Integrative Neuroimaging, a M/D facility focusing on the use of MRI for research, along with related technologies such as TMS, transcranial direct current stimulation, MEG and EEG.

CERI DAVIES PROFESSOR OF ANATOMY, DEPARTMENT OF SURGERY AND CANCER, IMPERIAL COLLEGE LONDON, UK Professor Davies is actively involved in undergraduate and postgraduate education and is a Member of the Court of Examiners of the Royal College of Surgeons of England. He has published numerous articles in peer-reviewed journals. He is a Past President of the Anatomical Society. He is President of the International Federation of Anatomy Associations World Congress of Anatomy to be held in London in 2019.