

MICHAEL GAVIN HART / CLINICAL CV

GMC: 6134656

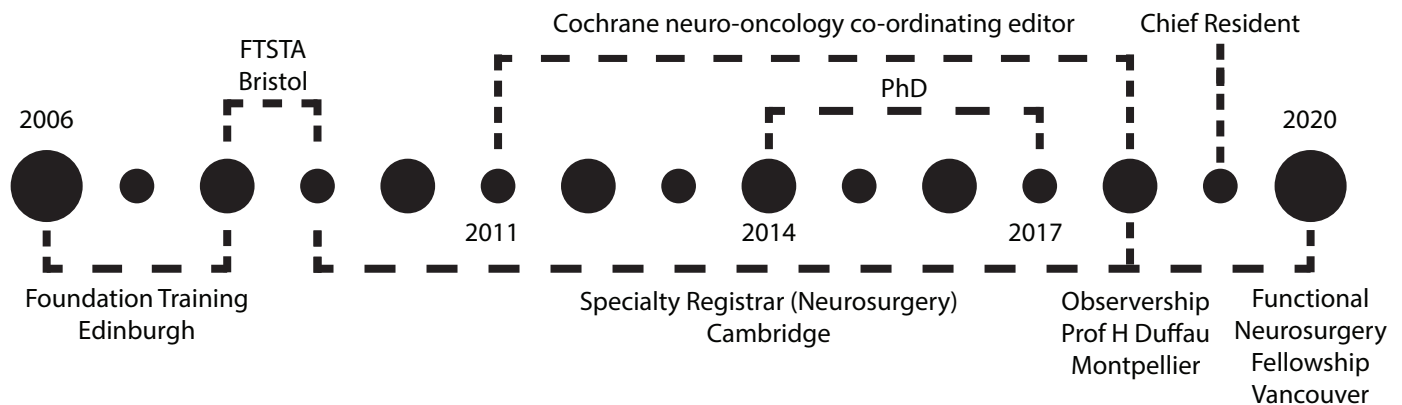
Revalidation: 13 September 2022

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QUALIFICATIONS & DEGREES

FEBNS	2020
FRCSEd (Surg.Neurol)	2019
PhD	2018
AHEA	2013
MRCS	2009
MBChB	2006
BSc (Hons)	2004

EMPLOYMENT

Fellowship in Functional Neurosurgery
Professor C Honey, Vancouver, 2020-2021

Observership in Brain Mapping
Professor H Duffau, Montpellier, 2018

PhD Candidate
University of Cambridge, 2014-2017

Cochrane Co-ordinating Editor
2011-2018

Neurosurgery Training
Cambridge, 2009-2020

FTSTA1 Neurosurgery & Neurology
Bristol, 2008-2009

Foundation Programme
East of Scotland, 2006-2008

LOGBOOK

Total cases:	2036
Index cases:	341 (178)
Paediatric cases:	153 (104)
Spine:	427 (268)
Skull base (inc. meningioma):	111 (92)
Pituitary:	33 (14)
DBS:	46
total (P+T+S-TS+S-TU)	

AWARDS

Braakman Prize
FEBNS exam, 2020

Codman Fellowship
Functional Neurosurgery Fellowship, Vancouver 2019-2020

Ward Improvement Prize,
'SAFER' Ward Rounds, 2019

Making a Difference: Nomination, 2019

Codman Travel Grant,
Congress of Neurological Surgeons, New Orleans, 2015

COURSES

Training the Trainers
Cambridge, 2020

National Neurosurgery Finishing School
Bristol, 2019

Advanced Trauma Life Support (ATLS)
(Instructor Potential)
Silverstone, 2019

Chief Resident Programme
Cambridge, 2018-2019

MIAD Healthcare: Leadership Course
Cambridge, 2018

Deep Brain Stimulation Fundamentals
Dusseldorf, 2018

Neurosurgical Approaches to the Cranial Compartments
RCSEd, 2018

White Matter Dissection Course
Lisbon, 2017

EANS European Training Course in Neurosurgery
2014-2017

Midas Rex Drilling Course
Lisbon, 2015

Approaches in Neurovascular Surgery
Cambridge, 2014

Cambridge Lectures in Neurosurgical Anatomy
2010, 2012, 2014

Cambridge Anterior Skull Base Course, 2010

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SELECTED CONFERENCES

Society of British Neurological Surgeons

Cambridge, London, Brighton,
Leeds, Newcastle, Dublin

4th Annual B.C. Neurosciences

Academic Day
Vancouver, 2019

British Society for Stereotactic and Functional Neurosurgery (BSSFN)§

Cambridge, 2019

European Society for Stereotactic and Functional Neurosurgery (ESSFN)*

Edinburgh, 2018

Dutch / Belgian Neurosurgical Societies§

Den Bosch, 2017

European LGG Network

Bilbao 2017, Lisbon 2018, London 2019

Czech-Slovak Neurosurgery Meetings§

Brno, 2016

Fifth Biennial Conference on Resting State & Brain Connectivity*

Vienna, 2016

British Neurosurgery Research Group*

Cambridge, 2016* & Cardiff, 2018*

European Association of Neurosurgical Societies (EANS)*

Madrid 2015, Dublin 2019

Congress of Neurological Surgeons*

New Orleans, 2015

European Association of Neuro-Ophthalmology (EUNOS)*

Oxford, 2013

Cochrane Colloquium & Symposia

Madrid, Oxford, Quebec, Vienna,
Birmingham, Geneva 2011-2017

§keynote | *presented | ^submitted

Italic = planned / pending / in-progress

TEACHING

Excellence in Teaching Award

University of Cambridge
December 2016

COURSES

BNTA Course (Functional Neurosurgery)

Cambridge, 2020

Curriculum Development: Neuroanatomy

University of Cambridge,
2016-ongoing)

Neuroanatomy Demonstrator

(University of Cambridge,
2014-ongoing)

Cambridge Neurosurgery College Teaching

Programme: DBS & Epilepsy

FORMAL

Medical Grand Round "A Terran Odyssey"

Addenbrooke's hospital,
June 2016

Clinical Supervisor

(University of Cambridge,
2010-2015)

Neurosciences Foundation Years Teaching Programme

(Addenbrooke's, 2013-2014)

INFORMAL

Regular contributor to both the registrar and FY teaching programmes in Addenbrooke's

Enthusiastic contributor to bedside clinical teaching and intra-operative teaching for both medical & nursing students

AUDIT

Quatitative analysis of tremor dynamics following DBS for Parkinson's disease using kinetic monitoring, 2018-2020 [Submitted to SBNS in Dundee, 2020]

'SAFER' Grand Rounds, 2018-2019*

- package of initiatives resulting in a series of objective improvements to patient flow achieving trust level recognition

Cognitive Outcomes in Meningiomas and the Effects of Therapy (COMET), 2016*

- recognition of the importance of neuropsychological outcomes after meningioma surgery

- proposal for routine follow-up and assessment under neuropsychology

C1-2 fracture management, 2014*

- validation of clinical outcomes with a variety of predominantly conservative measures

Cambridge Adult Spinal Assessment Proforma for Assessment and Rehabilitation, 2013*

- design, implementation and validation of a specific pro-forma for assessing spinal precautions after trauma

Coiling for cerebral aneurysms: NICE standards, 2010

- patients met accepted standards

Infusion studies for normal pressure hydrocephalus: NICE standards, 2009

- implementation of standard procedure specific consent and patient information pack

Success and satisfaction with fluoroscopic radiofrequency rhizolysis for trigeminal neuralgia, 2008*

- validation of technique without intra-operative waking

- early report of patient satisfaction and quality of life outcomes

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LEADERSHIP & MANAGEMENT

**Lead for The Brain Tumour
Charity CAESAR Project**
Cambridge, 2019

**National Neurosurgery
Finishing School**
Bristol, 2019

Chief Resident In Neurosurgery
2018-2019

MIAD Healthcare: Leadership
Cambridge, 2018

Neurosurgery ST Rota Manager
2018-2020

Neurosurgery FY Rota Manger
2012-2014

Skeynote | ***p**resented | **^s**ubmitted
Italic = **p**lanned / **p**ending / **i**n-progress

INVITED LECTURES [non-conference]

**'How I Do It: Connectomics in
Functional Neurosurgery'**
St George's Hospital, 2019

**'Connectomics for the
Neurosurgeon'**
Vancouver General Hospital, 2019

**'Network Approaches in
Neurosurgery'**
Great Ormond Street, 2018

**'The Neurosurgeon, The
Connectome, and The
Resting Brain'**
Neuroscience Day,
Cambridge, 2016

COMMUNITY OUTREACH

**Patient & Carer Day Open Day,
for the CAESAR Project**
Research update for involved patients
and carers
Funded by The Brain Tumour Charity
Cambridge, 2019

**Awake Brain Surgery, for
'Inside Out' on BBC**
Cambridge, 2018

**'Float like a butterfly, sting like a
bee?**
**Presentation & debate for the
Cambridge Science Festival**
Cambridge, 2018

**'So you want to be a brain
surgeon?'**
Wisbech Grammar School
& Loretto School, 2018

'Network Guided Neurosurgery'
Cambridge Society for the
Application of Research, 2018

**'The brainmapper's guide to
neurosurgery'**
Whitby talk, Downing College, 2016
Downing talk

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COURSES

Good Clinical Practice

Cambridge, 2017

Data science bootcamp in Python

Cambridge Coding Academy, 2016

Making a web app

Cambridge Coding Academy, 2015

Exploring the Connectome

Dutch Connectome Lab, 2015

Biological Problems with Python

University of Cambridge, 2015

Elementary Maths for Biologists

University of Cambridge, 2014

FSL Course

Oxford, 2014

RESEARCH SKILLS

Programming	●	●	●	●	○
Mathematical & statistical analysis	●	●	●	●	○
Image & signal processing	●	●	●	●	○
Clinical trial data/meta-analysis	●	●	●	●	●
Machine learning	●	●	●	○	○

ONGOING RESEARCH

Connectomics and Electrical Stimulation for Augmenting Resection (CAESAR)

Funded by The Brain Tumour Charity (GN-000335)

Further Information: www.mrmikehart.com/caesar

thebraintumourcharity.org/media-centre/news/research-news/partners-crime-when-patients-become-partners-resea/

Connectomics in Deep Brain Stimulation

Collaborators: Morris RC, Buttery P, Poologaindran A, Seidlitz J.

Lead localisation in a prospective cohort of patients with Parkinson's Disease

Morphometric Similitiry Networks in Parkinson's Disease

Prior to Deep Brain Stimulation

White Matter Dissections

Klingler style dissections in the Department of Anatomy, University of Cambridge, in collaboration with Dr Sue Jones

PRIZES & AWARDS

Syme Medal

RCSEd, 2018

Cambridge Society for the Application of Research (CSAR)

2017

Sir Hugh Cairns Essay Prize

Society of British Neurological Surgeons (SBNS), 2016

Cambridge Neuroscience

Poster Prize

2015

AD HOC REVIEWING (Web of Science Researcher ID K-4919-2019)

Acta Neurochirurgica; Brain and Behaviour; Cochrane Database of Systematic Reviews, Operative Neurosurgery; Journal of Neurology, Neurosurgery, and Psychiatry; Neurosurgery; Neurosurgery Focus; Scientific Reports.

GRANTS & FUNDING

Medtronic Research Programme

'IMAGN(R) - Image Guidance Networks'
\$50,000 June 2018

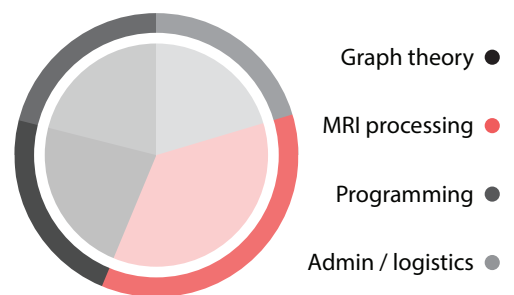
The Brain Tumour Charity

'Connectomics And Electrical Stimulation For Augmenting Resection (CAESAR)'
£50,000 May 2014 - November 2018

NIHR Cochrane Infrastructure Grant

Cochrane Gynaecological, Neuro-oncology, and Orphan Cancer Group (GNOC) 2014-2018
£150,000 per annum

RESEARCH TIME



LAB COLLABORATIONS & MENTORSHIP

Dr Rafael Romero-Garcia

"Supporting Surgical Management of Low-grade Glioma with Structural and Functional Connectomics"
Guarantors of Brain Post-Doctoral Fellow 2017-2020

Ayan Mandal

"Genetic, Cellular, and Topological Characterization of Adult Human Brain Regions Commonly Plagued by Glioma"
Gates Cambridge Scholar (PhD Candidate)

Anujan Poologaindran

"Homotopic structure and functional modularity"
The Alan Turing Institute Doctoral Student (PhD Candidate)

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PUBLICATIONS

total: 29, H = 12, RG = 31.12, full list @researchgate.net/profile/michael_hart8)

Mandal AS, Romero-Garcia R, **Hart MG**, Suckling J. Genetic, cellular, and connectomic characterization of the brain regions commonly plagued by glioma. *Brain* 2020;143(11):3294-3307 doi: 10.1093/brain/awaa277

Erez Y, Assem M, Coelho P, Romero-Garcia R, Owen M, McDonald A, Woodberry E, Morris RC, Price SJ, Suckling J, Duncan J, **Hart MG**, Santarius T. Intraoperative mapping of executive function using electrocorticography for patients with low grade glioma. *Acta Neurochirurgica* 2020 doi: 10.1007/s00701-020-04646-6

Hart MG, Romero-Garcia R, Price SJ, Santarius T, Suckling J. Connections, Tracts, Fractals, and the Rest: a Working Guide to Network and Connectivity Analyses in Neurosurgery. *World Neurosurgery*. 2020

Romero-Garcia, Suckling J, Owen M, Assem M, Coelho P, McDonald A, Woodberry E, Price SJ, Burke AGA, Santarius T, Erez Y, **Hart MG**. Brain Network Disruption Predicts Memory and Attention Deficits After Surgical Resection of Glioma. *MedRxiv*. 2019; doi: 10.1101/19008581

Hart MG, Grant GR, Solyom EF, Grant R. Biopsy Versus Resection for High Grade Glioma. *Cochrane Database Syst Rev*. 2019. CD002034. doi: 10.1002/14651858.CD002034.pub2.

Zheng X, **Hart MG**, Erzinclioğlu S, Santarius T. MNGI-32. Long-term Cognitive Outcome of Meningioma and the Effects of Treatment (COMET) Study Results. *Neuro-oncology*. 2018; 20(suppl_6):vi156-vi156. doi: 10.1093/neuonc/noy148.648

Hart MG, Romero-Garcia R, Price SJ, Suckling J. Global effects of focal brain tumors on functional complexity and network robustness: a prospective cohort study. *Neurosurgery*. 2018; 84(6): 1201-1213. doi:10.1093/neuros/nyy378

Jenkinson MD, Barone DG, Bryant A, Vale L, Bulbeck H, Lawrie TA, **Hart MG**, Watts C. Intraoperative Imaging Technology to Maximise Extent of Resection for Glioma. *Cochrane Database Syst Rev*. 2018; CD012788.pub2. doi: 10.1002/14651858.CD012788.pub2

Abrigo JM, Fountain D, Provenzale JM, Law EK, Kwong JSW, **Hart MG**, Tam WWS. Magnetic Resonance Perfusion for Differentiating Low-grade from High-grade Gliomas at First Presentation. *Cochrane Database Syst. Rev*. 2018; CD011551. doi: 10.1002/14651858.CD011551.pub2

Kostusiak M, **Hart MG**, Barone DG, Hofmann R, Kirolos R, Santarius T, Trivedi RA. Methodological Shortcomings in the Literature Evaluating the Role and Applications of 3D Training for Surgical Trainees. *Med. Teach*. 2017; 39(11):1-6. doi: 10.1080/0142159X.2017.1362102

Hart MG, Housden CR, Suckling J, Tait R, Young AMH, Muller U, Newcombe VFJ, Jalloh I, Pearson B, Cross J, Trivedi RA, Pickard JD, Sahakian BJ, Hutchinson PJ. Advanced Magnetic Resonance Imaging and Neuropsychological Assessment for Detecting Brain Injury in a Prospective Cohort of University Amateur Boxers. *Neuroimage Clin*. 2017; 15:194-199 doi: 10.1016/j.nicl.2017.04.026

Hart MG, Price SJ, Suckling J. Functional connectivity networks for pre-operative brain mapping in neurosurgery. *J Neurosurg*. 2017; 126(6):1941-1950. doi: 10.3171/2016.6.JNS1662

Hart MG, Price SJ, Suckling J. Connectome analysis for pre-operative brain mapping in neurosurgery. *Br J Neurosurg*. 2016; 30(5):506-517. doi: 10.1080/02688697.2016.1208809

Hart MG, Ypma RJ, Romero-Garcia R, Price SJ, Suckling J. Graph theory analysis of complex brain networks: new concepts in brain mapping applied to neurosurgery. *J Neurosurg*. 2016; 124(6):1665-1778 doi: 10.3171/2015.4.JNS142683

Hart MG, Czosnyka M, Czosnka ZH, Fernandes HM. Combined Intracranial Pressure Monitoring and Cerebrospinal Fluid Infusion Study to Guide Management of Slit Ventricle Syndrome. *Pediatr Neurosurg*. 2013; 49(2):113-118. doi: 10.1159/000358561

Hart MG, Santarius T, Trivedi R. Muscle and Nerve Biopsy for the Neurosurgical Trainee. *Br J Neurosurg*. 2013; 27(6):727-734. doi: 10.3109/02688697.2013.793288

Hart MG, Sarkies NJ, Santarius T, Kirolos RW. Ophthalmological Outcome After Resection of Tumours Based on the Pineal Gland. *J Neurosurg*. 2013; 119(2):420-426. doi: 10.3171/2013.3.JNS122137

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Hart MG, Santarius T, Kirillos RW. How I Do It: Pineal Surgery - Supracerebellar Infratentorial Versus Occipital Transtentorial Approach. *Acta Neurochir (Wien)*. 2013; 155(3):463-467. doi: 10.1007/s00701-012-1589-5

Hart MG, Garside R, Rogers G, Stein K, Grant R. Temozolomide for High Grade Glioma. *Cochrane Database Syst Rev*. 2013. CD007415. doi: 10.1002/14651858.CD007415.pub2.

Hart MG, Nowell M, Coakham HB. Radiofrequency Thermocoagulation for Trigeminal Neuralgia Without Intra-operative Patient Waking. *Br J Neurosurg*. 2012; 26(3):392-396. doi: 10.3109/02688697.2012.673650

Hart MG, Trivedi RA, Hutchinson PJ. Boxing Sparring Complicated by an Acute Subdural Haematoma and Brainstem Haemorrhage. *Br J Neurosurg*. 2012; 26(5):776-778. doi: 10.3109/02688697.2012.657270

Hart MG. Neurosurgery: External Ventricular Drain Insertion. *Core Surgery*. 2012; 2(1):50-54.

Hart MG, Grant R, Garside R, Rogers G, Somerville M, Stein K. Chemotherapy Wafers for High Grade Glioma. *Cochrane Database Syst Rev*. 2011. CD007294. doi: 10.1002/14651858.CD007294.pub2

Erridge SC, **Hart MG**, Kerr GC, Smith C, McNamara S, Grant R, Gregor A, Whittle IR. Trends in Classification, Referral and Treatment and the Effect on Outcome of Patients with Glioma: a 20 Year Cohort. *J Neurooncol*. 2011; 104(3):789-800. doi: 10.1007/s11060-011-0546-0.

Hart MG. Neurosurgery: Hydrocephalus. *Core Surgery*. 2011; 1(6):54-60.

Hart MG, Trivedi RA. Neurosurgery: Spinal Cord Trauma. *Core Surgery*. 2011; 1(3):42-48

Connor S, **Hart MG**, Redhead DN, Ireland H, Madhavan KK, Parks RW, Garden OJ. Follow-up and Outcomes for Resection of Colorectal Liver Metastases in Edinburgh. *Eur J Surg Oncol*. 2007; 33(1):55-60. doi: 10.1016/j.ejso.2006.09.017

Hart MG, Hooper G. Clinical Associations of Dupuytren's Disease. *Postgrad Med J*. 2005; 81(957):425-428. doi: 10.1136/pgmj.2004.027425

Hart MG, Grant R, Walker M, Dickinson H. Surgical Resection and Whole Brain Radiation Therapy Versus Whole Brain Radiation Therapy Alone for Single Brain Metastases. *Cochrane Database Syst Rev*. 2005. CD003292. doi: 10.1002/14651858.CD003292.pub2

BOOK CHAPTERS

Hart MG, Grant R. Chapter 16: Evidence Based Neuro-oncology. In: Damaerschalk BM, Wingerchuk DM. *Evidence-Based Neurology: Management of Neurological Disorders*. Chennai, India: John Wiley & Sons Ltd; 2015. p143-152.

Hart MG, Grant R, Whittle IR. Chapter 25 - Steroids and Brain Tumours. In: Aminoff MJ, Boller F, Swaab DF. (eds.) *Handbook of Clinical Neurology: Neuro-Oncology*. Radarweg, Netherlands: Elsevier; 2012. p.371-379.