



Dr. rer. nat. Ben Glocker

Senior Lecturer in Medical Image Computing

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RESEARCH POSITIONS

University Senior Lecturer Department of Computing Imperial College London, UK	since 2013 Senior since 2017
Postdoctoral Researcher Machine Learning and Perception Group Microsoft Research, Cambridge, UK	2010 – 2013
Research Assistant Computer Aided Medical Procedures Technische Universitaet Muenchen, Germany	2006 – 2010
Visiting Researcher Laboratoire MAS Ecole Centrale Paris, France	May – Oct 2006

EDUCATION

Doctoral Degree in Computer Science with High Distinction Computer Aided Medical Procedures Technische Universitaet Muenchen, Germany	2011
Diploma in Computer Science with High Distinction Technische Universitaet Muenchen, Germany Minor Subject: Theoretical Medicine	2006

FELLOWSHIPS

Microsoft Research Fellow Darwin College University of Cambridge, UK	2010 – 2012
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AWARDS / HONOURS

Philips Impact Award – MIDL 2018	2018
Member of the World Economic Forum's Young Scientists Community	2016
NVIDIA Global Impact Award – Honorable Mention	2016
ERCIM Cor Baayen Award – Honorable Mention	2013
Medical Image Analysis – MICCAI Best Paper Award	2013
Werner von Siemens Excellence Award	2007
Francois Erbsmann Prize	2007

EXECUTIVE SUMMARY

Ben Glocker (h-index=33, citations >4000) is Senior Lecturer in Medical Image Computing at the Department of Computing, Imperial College London, and one of three academics leading the Biomedical Image Analysis Group. He holds a PhD from TU Munich and was a post-doc at Microsoft and a Research Fellow at the University of Cambridge. His research is at the intersection of medical image analysis and artificial intelligence aiming to build computational tools for improving diagnosis, therapy and intervention. He has published over 100 peer-reviewed conference papers and journal articles and holds 5 international patents. He has received several awards including a Philips Impact Award, Medical Image Analysis – MICCAI Best Paper Award and the prestigious Francois Erbsmann Prize. In 2016, he was invited to join the Young Scientists Community of the World Economic Forum. Ben holds an ERC Starting Grant (Project MIRA) and is investigator on multiple grants awarded by UK Research Councils.

PROFESSIONAL ACTIVITIES

Editorial Board

Elsevier's Journal on Medical Image Analysis, Elsevier's Journal on Image and Vision Computing

Steering Committee

EPSRC-NIHR HTC Partnership Award: Medical Image Analysis
WEF Young Scientists' Code of Ethics

Scientific Lead

HeartFlow-Imperial Research Team

Scientific Advisor

Kheiron Medical Technologies
Definiens

Program Committee & Area Chair

MICCAI 2013/15/16, SPIE Medical Imaging 2015/16/17/18, WBIR 2014, ISVC Special Track 2009

Co-Organizer

MICCAI 2018 Tutorial on Deep Learning for Medical Imaging (Deep-A2Z)
NIPS Workshop Medical Imaging meets NIPS (MEDNIPS) 2017
British Machine Vision Conference (BMVC) 2017
1st MedIAN CodeFest 2017 – Medical Imaging Hackathon
International Workshop on Biomedical Image Registration (WBIR) 2016
BIH 2015 Symposium on clinical applications of machine learning in neuroimaging
MICCAI Workshop & Challenge CSI 2014/2015/2016, mTOP 2016, MSKI 2017
ISBI Special Session on Graphical Models for Biomedical Image Analysis 2015
MICCAI Tutorial on Intensity-based Deformable Registration 2010
1st Russian-Bavarian Conference on Biomedical Engineering 2005

Departmental Roles

Champion for Public Engagement

Affiliations

World Economic Forum's Young Scientists Community
Imperial Neurotrauma Centre
EPSRC Centre for Doctoral Training in Medical Imaging
EPSRC Centre for Doctoral Training in High Performance Embedded and Distributed Systems
Science and Solutions for a Changing Planet DTP
Centre for Doctoral Training in Neurotechnology

Guest Editor

Medical Image Analysis Special Issue on Discrete Graphical Models in Biomedical Image Analysis

Society Memberships

MICCAI Society, European Society of Medical Imaging Informatics (EuSoMII), British Machine Vision Association (BMVA), European Society of Radiology (ESR)

Co-Founder

SpineWeb - Collaborative Platform for Research on Spine Imaging and Image Analysis

Journal & Conference Reviewer

IEEE T-PAMI, TMI, TIP, TBME, Springer Nature, IJCV, Elsevier MEDIA, CVIU, IMAVIS, Annals of Biomedical Engineering, MICCAI, IPMI, NIPS, CVPR, ICCV, ECCV, ISBI, SPIE

Funding Body Reviewer

European Research Council, Research Council UK, The Wellcome Trust (UK), Technology Foundation STW (NL), Action Medical Research (UK)

PhD Examiner

Dr Bo Xiang (Ecole CentraleSupélec, N. Paragios), 28 Nov 2013; Dr Meelis Lootus (University of Oxford, A. Zisserman), 02 July 2015; Dr Monica Enescu (University of Oxford, J. Schnabel), 28 Sep 2015; Dr Vivien Fecamp (Ecole CentraleSupélec, N. Paragios), 12 Jan 2016; Dr Malte Hoffmann (University of Cambridge, G. Williams), 30 Jan 2017; Dr Martin Kochan (University College London, D. Stoyanov), 27 Oct 2017; Dr Jianyu Lin (Imperial College London, D. Elson), 21 Feb 2018; Amir Jamaludin, (Oxford, A. Zisserman, T. Kadir), 25 April 2018; Guotai Wang, (University College London, S. Ourselin, T. Vercauteren), 17 May 2018; Annegreet van Opbroek (Rotterdam MC, W. Niessen), 06 June 2018

PATENTS

Modelling a Three-Dimensional Space

Pub. No. WO2016189274

Tracking using Sensor Data

Pub. No. US2015347846

Camera/Object Pose from Predicted Coordinates

Pub. No. US2014241617

Method for Combining Images and Magnetic Resonance Scanner

Pub. No. US2010067762

System and Method for Dense Image Registration using Markov Random Fields and Efficient Linear Programming

Pub. No. US2009046951

INVITED TALKS, KEYNOTES & LECTURES

ISMRM 2018: Machine Learning for Magnetic Resonance in Medicine	2018
Deep Learning for MR Image Analysis Paris expo Porte de Versailles, Paris, June 20	
ECR 2018: Artificial intelligence and radiology: a perfect match?	2018
Deep learning for fully automatic segmentation of normal and pathological structures in medical images Austria Center Vienna, Austria, March 1	
ECR 2018: Artificial intelligence: a strategic view	2018
Machine learning for analysing medical images Austria Center Vienna, Austria, March 1	
Emerging Technologies in Medicine: Artificial Intelligence and Robotics	2018
Can we build a machine capable of interpreting medical scans with super-human performance? Universitaets-Klinik Essen, Germany, February 16	
EuSoMII Academy 2017: Game Changers in Radiology	2017
Unlocking patterns in medical images with AI	

Erasmus MC, Rotterdam, Netherlands, November 18	
BMVA Symposium: Computer Vision in Cancer	2017
Brain Tumour Segmentation with Deep Neural Nets British Computer Society, London, UK, October 11	
Deep Learning in Healthcare Summit	2017
Deep Learning in Medical Imaging – Successes and Challenges LSO St Luke's, London, UK, February 28	
Medical Computer Vision: Algorithms for Big Data	2016
Deep Learning for Brain Lesion Segmentation MICCAI Workshop Invited Talk, Athens, Greece, October 21	
Bayesian and Graphical Models for Biomedical Imaging – BAMBI	2016
Solving Continuous Problems with Discrete Optimization MICCAI Workshop Keynote, Athens, Greece, October 21	
Medical Imaging Summer School – MISS	2016
Medical Imaging meets Machine Learning Favignana, Sicily, Italy, July 31 – August 6	
UCL Medical Image Computing Summer School	2016
CMIC, London, UK, July 22	
Girls' Engineering Summer School	2016
London, UK, July 19/20	
World Economic Forum IdeasLab	2016
Unlocking Patterns in Medical Images with Artificial Intelligence WEF Annual Meeting of the New Champions, Tianjin, China, June 26	
Deep Learning in Healthcare Summit	2016
Deep Learning for Semantic Understanding of Medical Images LSO St Luke's, London, UK, April 7	
Academy of Medical Sciences	2016
Machine Learning for Complex Data Analyses London, UK, March 14	
Big Data, Multimodality & Dynamic Models in Biomedical Imaging	2016
Machine Learning for Medical Image Analysis Isaac Newton Institute, Cambridge, UK, March 9	
Royal College of Radiologists	2016
Machine Learning Event London, UK, January 7	
Alan Turing Institute: Scientific Scoping Workshop	2015
Big data in medical imaging: passing fad or paradigm shift British Library, London, UK, December 7	
UCL Medical Image Computing Summer School	2015
London, UK, August 10	
Girls' Engineering Summer School	2015
London, UK, July 23	
Launch Event: Imperial's Clinical Imaging Facility and the Biological Imaging Centre	2015
Semantic Imaging: Machine Learning in Medical Image Analysis Wolfson Education Centre, Hammersmith Campus, London, UK, July 16	
1st ICML Workshop on Machine Learning meets Medical Imaging	2015
Lille, France, July 11	

3rd Biomedical Image Analysis Summer School Institut Henri Poincare, Paris, France, July 10	2015
CSAIL Biomedical Imaging and Analysis Seminar Series Learning to Understand Medical Images MIT, Boston, USA, September 12	2014
London Critical Care Data Marathon Semantic Imaging – Learning to Understand Medical Images IDEALondon, London, UK, September 6	2014
Symposium of the Rank Prize Funds Medical Imaging meets Computer Vision Grasmere, Lake District, UK, March 18	2013
Darwin College Sciences Group Medical Image Computing – The role of computer science in clinical routine University of Cambridge, UK, November 11	2010

PHD STUDENTS

Daniel Coelho De Castro, 1st Supervisor, since Oct 2016
Robert Robinson, 1st Supervisor, since Oct 2016
Nick Pawlowski, 1st Supervisor, since Oct 2016
Ian Walker, 1st Supervisor, since Oct 2016
Konstantinos Kamnitsas, 1st Supervisor, since Oct 2014
Matthew Lee, 1st Supervisor, since Oct 2014
Sebastian Popescu, 2nd Supervisor, since Oct 2017
Vanya Valindria, 2nd Supervisor, since Apr 2015
Amir Alansary, 2nd Supervisor, since Oct 2014
Fahdi Kanavati, 2nd Supervisor, since Oct 2013 (graduated Dec 2017)

RESEARCH GRANTS

ERC Starting Grant, ERC-2017-STG-757173-MIRA
 Next Generation Machine Intelligence for Medical Image Representation and Analysis
 Start 01/02/2018 End 31/01/23
 PI: Dr Ben Glocker (60% 22.5h/w)
 Total value: €1,499,292

MRC/NIHR Efficacy and Mechanism Evaluation, 16/68/34
 Machine Learning In Myeloma Response (MALIMAR study)
 Start 01/07/2018 End 30/09/2021
 PI: Prof Andrea Rockall, Co-I: Dr Ben Glocker (4% 1.5h/w)
 Total value: £646,787

EPSRC, EP/R005982/1, EP/R005516/1
 Efficient and Robust Assessment of Cardiovascular Disease Using Machine Learning and Ultrasound
 Imaging
 Start 01/02/2018 End 31/01/2021
 PI: Prof Daniel Rueckert, Dr Andy King, Co-I: Dr Ben Glocker (10% 4h/w)
 Total value: £707,983

EPSRC Healthcare Impact Partnerships, EP/P023509/1
 Intelligent and Personalised Risk Stratification and Early Diagnosis of Lung Cancer
 Start 01/10/2017 End 30/09/2020
 PI: Prof Julia Schnabel, Co-I: Dr Ben Glocker (5% 2h/w)
 Total value: £947,232

EPSRC First Grant, EP/N023668/1

QuantifyTBI: A Machine Learning Approach to Automatic Segmentation and Quantification of TBI Lesions
Start 01/06/2016 End 31/05/2017
PI: Dr Ben Glocker (8% 3h/w)
Total value: £97,534

EPSRC NetworksPlus, EP/N026993/1

EPSRC-NIHR HTC Partnership Award 'Plus': Medical Image Analysis Network (MedIAN)
Start 01/10/2016 End 30/09/2019
PI: Prof Alison Noble, Co-I: Dr Ben Glocker (4% 1.5h/w)
Total value: £507,583

Dunhill Medical Trust, R401/0215

Optimising diagnosis and prediction of outcome of spinal decompression surgery in older people
Start 01/10/2015 End 30/09/2017
PI: Dr Paul Strutton, Co-I: Dr Ben Glocker (1% 0.5h/w)
Total value: £176,510

MRC Developmental Pathway Funding Scheme, MR/M025004/1

Repurposing Low-Cost Consumer Technology for Motion Correction in Dementia Neuroimaging
Start 01/07/2015 End 31/12/2016
PI: Prof Roger Gunn, Co-I: Dr Ben Glocker (3% 1h/w)
Total value: £255,501

MRC/NIHR Efficacy and Mechanism Evaluation, 13/122/01

MALIBO – Machine Learning in Whole Body Oncology
Start 01/02/2015 End 31/07/2018
PI: Prof Andrea Rockall, Co-I: Dr Ben Glocker (5% 2h/w)
Total value: £578,090

AMR Paediatric

Network Dysfunction following Paediatric Traumatic Brain Injury
Start 01/02/16 End 31/01/19
PI: Prof David Sharp, Co-I: Dr Ben Glocker (1% 0.5h/w)
Total value: £200,000

EPSRC Pathways to Impact

Fast and fully automatic segmentation of magnetic resonance images for computer-aided diagnosis
Start 01/09/2014 End 31/08/2015
PI: Prof Daniel Rueckert, Co-I: Dr Ben Glocker (3% 1h/w)
Total value: £53,770

Wellcome Trust ISSF Networks of Excellence

Augmented Reality and Advanced Visualization of Medical Images for Education, Training and Interventional Planning
Start 01/11/2014 End 31/10/2015
PI: Dr Ben Glocker (10% 4h/w)
Total value: £53,667

Wellcome Trust ISSF Networks of Excellence

Optimising diagnosis and prediction of outcome of spinal surgery using DTI and machine learning
Start 01/10/2014 End 30/09/2015
PI: Dr Paul Strutton, Co-I: Dr Ben Glocker (1% 0.5h/w)
Total value: £100,000