



Dr. rer. nat. Ben Glocker

Lecturer in Medical Image Computing

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RESEARCH POSITIONS

| | |
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| University Lecturer Department of Computing Imperial College London, UK | since 2013 |
| 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

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| 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

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

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| 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

BG (h-index=29, citations >2900) is Lecturer (eq. Assistant Professor) in Medical Image Computing at the Department of Computing, Imperial College London, and deputy head of the Biomedical Image Analysis Group. He is Research Stream lead for Image Computing in the EPSRC CDT in Medical Imaging. His research focus is on machine learning for biomedical image computing. He has published >70 peer-reviewed conference papers, 24 journal articles and holds 4 international patents. His image registration software has been downloaded >2,600 times. He has received several awards including the Medical Image Analysis – MICCAI Best Paper Award 2013 and the prestigious Francois Erbsmann Prize in 2007. In 2016, he was invited as a Young Scientist to the World Economic Forum, an honour awarded to selected world leading scientists under the age of forty. He is PI on EPSRC Grant (EP/N023668/1), and Co-I on EPSRC Healthcare Impact Partnership (EP/P023509/1) and EPSRC-NIHR HTC Partnership Plus Award (EP/N026993/1), MRC DPFS (MR/M025004/1), and NIHR EME (13/122/01), and several others. BG is currently supervising 1 postdoc and 6 PhD students as first supervisor.

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

Program Committee & Area Chair

MICCAI 2013/2015/2016
SPIE Medical Imaging 2015/2016/2017/2018
WBIR 2014
ISVC Special Track 2009

Sponsoring & Demo Chair

BMVC 2017

Co-Organizer

Conferences BMVC 2017, 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 Conf. on Biomedical Engineering 2005

Affiliations

World Economic Forum's Young Scientists Community
Imperial Tech Foresight
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

Co-Founder

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

Journal & Conference Reviewer

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

Funding Body Reviewer

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

External 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

PATENTS

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

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| 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 | |

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| Big Data, Multimodality & Dynamic Models in Biomedical Imaging Machine Learning for Medical Image Analysis Isaac Newton Institute, Cambridge, UK, March 9 | 2016 |
| Royal College of Radiologists Machine Learning Event London, UK, January 7 | 2016 |
| Alan Turing Institute: Scientific Scoping Workshop Big data in medical imaging: passing fad or paradigm shift British Library, London, UK, December 7 | 2015 |
| UCL Medical Image Computing Summer School London, UK, August 10 | 2015 |
| Girls' Engineering Summer School London, UK, July 23 | 2015 |
| Launch Event: Imperial's Clinical Imaging Facility and the Biological Imaging Centre Semantic Imaging: Machine Learning in Medical Image Analysis Wolfson Education Centre, Hammersmith Campus, London, UK, July 16 | 2015 |
| 1st ICML Workshop on Machine Learning meets Medical Imaging Lille, France, July 11 | 2015 |
| 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

GRANTS

EPSRC Healthcare Impact Partnerships, EP/P023509/1

Intelligent and Personalised Risk Stratification and Early Diagnosis of Lung Cancer

Start 01/07/2017 End 30/06/2020

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 Stratton, 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 Stratton, Co-I: Dr Ben Glocker (1% 0.5h/w)

Total value: £100,000