BIOGRAPHICAL SKETCH (19 June 2012)

NAME	POSITION TITLE
Daniel C. Alexander	Professor of Imaging Sciences

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
University College London, London.	Ph.D.	1994-1997	Computer Science
University College London, London.	M.Sc.	1993-1994	Computer Science
Wadham College, Oxford Univ., Oxford.	B.A.	1989-1993	Mathematics

RESEARCH AND PROFESSIONAL EXPERIENCE

2009- Professor of Imaging Sciences, CMIC and Dept. Comp. Sci., UCL.
2007-2009 Reader in Imaging Sciences, CMIC and Dept. Comp. Sci., UCL.
2005-2007 Senior Lecturer, Centre for Medical Imaging Computing and Department of Computer Science, UCL.
2000-2005 Lecturer, Department of Computer Science, University College London, London, UK.
1998-2000 Postdoctoral Fellow, Dept. of Comp. and Info. Science, University of Pennsylvania, Philadelphia.
1997-1998 Research Associate, Dept. of Biomed. Eng., Royal National Orthopaedic Hospital, Stanmore, London.

SUMMARY

Prof. Alexander has over 200 peer reviewed publications in computer vision, medical imaging, MRI and neuroscience. He is associate editor of IEEE Trans. Med. Im. (since 2007), editorial board member for NeuroImage, and regular reviewer for the top journals and conferences in medical imaging, computer vision and neuroscience. He was program chair of the British Machine Vision Conference in 2009 and for several international workshops previously. He is an EPSRC Leadership Fellow since 2008 and steering committee member for the EU CONNECT consortium www.brain-connect.eu. Teaching experience includes programming, image processing, research methods and medical imaging, at undergraduate and postgraduate levels. He has graduated eight PhD students and runs a group of six students and four post-docs; see cmic.cs.ucl.ac.uk/mig. More details: www.cs.ucl.ac.uk/staff/D.Alexander.

SELECTED PUBLICATIONS (Full list: http:// www.ucl.ac.uk/research/publications/pubs/?users[]=ucacdxa)

1. Fonteijn, H. M., Modat, M., Clarkson, M. J., Barnes, J., Lehmann, M., Hobbs, N. Z., Scahill, R. I., Tabrizi, S. J., Ourselin, S., Fox, N. C., Alexander, D. C. *An event-based model for disease progression and its application in familial Alzheimer's disease and Huntington's disease*. Neuroimage 60, 1880-1889, 2012.
2. Shepherd, T., Prince, S. J. D., Alexander, D.C. Interactive Lesion Segmentation with Shape Priors from Off-line and On-line Learning. *IEEE Trans. Medical Imaging* 2012.
3. Zhang, H., Schneider, T., Wheeler-Kingshott, C. A., Alexander, D. C. *NODDI: practical in vivo neurite orientation dispersion and density imaging of the human brain*. Neuroimage 61, 1000-1016, 2012.
4. Alexander D.C., Hubbard P.L., Hall M.G., Moore E.A., Ptito M., Parker G.J.M., Dyrby T.D. *Orientationally invariant indices of axon diameter and density from diffusion MRI.* NeuroImage, 52(4), 1374-1389, 2010.
5. Hall M.G. and Alexander D.C. *Convergence and parameter choice for Monte-Carlo simulations of diffusion MRI.* IEEE Trans. Medical Imaging 28, 1354-1364, 2009.
6. Alexander D.C. *A general framework for experiment design in diffusion MRI and its application in measuring direct tissue-microstructure features.* Magnetic Resonance in Medicine 60, 439-448, 2008.
7. Draganski B., Kherif F., Kloppel S., Cook P.A., Alexander D.C., Parker G.J., Deichmann R., Ashburner J., Frackowiak R.S. *Evidence for segregated and integrative connectivity patterns in the human Basal Ganglia*. J. Neuroscience 28, 7143-7152, 2008.
8. Cercignani M. and Alexander D.C. *Optimal acquisition schemes for in-vivo quantitative magnetization transfer MRI.* Magnetic Resonance in Medicine, 56, pp 803-810, 2006.
9. Newton J.M., Ward N.S., Parker G.J.M., Deichmann R., Alexander D.C., Friston K.J. and Frackowiak R.S.J. *Non-invasive mapping of corticofugal fibres from multiple motor areas - relevance to stroke recovery.* Brain 129(7), 1844-1858, 2006.
10. Alexander D.C. *Multiple-fibre reconstructions in diffusion MRI.* Annals of the NYAS, 1046, pp. 113-133, 2005.
11. Powell H.W.R., Parker G.J.M., Alexander D.C., Symms M.R., Boulby P.A., Barker G.J., Koepp M.J. and Duncan J.S., *MR-Tractography predicts visual field defects following temporal lobe resection.* Neurology, 64, pp. 596-599, 2005.
12. Alexander D.C., Barker G.J., *Optimal imaging parameters for fibre-orientation estimation...* NeuroImage, 27, 357-367, 2005.
13. Parker G.J.M. and Alexander D.C., *Probabilistic anatomic connectivity derived from the microscopic persistent angular structure of cerebral tissue*. Philosophical Transactions of the Royal Society B. 360, 893-902, 2005.
14. Jansons K.M., Alexander D.C. *Persistent Angular Structure: new insights from diffusion MRI*. Inv. Prob. 19, 1031--1046, 2003.
15. Alexander D.C., Barker G.J. and Arridge S.R. *Detection and modeling of non-Gaussian apparent diffusion coefficient profiles in human brain data*. Magnetic Resonance in Medicine. 48, 331-40, 2002.
16. Alexander D.C. and Buxton B.F. *Statistical Modeling of Colour Data*. Int. J. Computer Vision. 44(2), 87-109, 2001.
17. Alexander D.C., Pierpaoli C., Basser P.J. and Gee, J.C. *Spatial transformations of diffusion tensor MR Images*. IEEE Transactions on Medical Imaging, 20(11), 1131-1139, 2001.