

ANIMGN11 / ANIMGN20: Advanced Imaging

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1.

Attwell, D., Iadecola, C.: The neural basis of functional brain imaging signals. *Trends in Neurosciences*. 25, 621–625 (2002). [https://doi.org/10.1016/S0166-2236\(02\)02264-6](https://doi.org/10.1016/S0166-2236(02)02264-6).

2.

Buxton, R.B., Uludağ, K., Dubowitz, D.J., Liu, T.T.: Modeling the hemodynamic response to brain activation. *NeuroImage*. 23, S220–S233 (2004). <https://doi.org/10.1016/j.neuroimage.2004.07.013>.

3.

Logothetis, N.K.: What we can do and what we cannot do with fMRI. *Nature*. 453, 869–878 (2008). <https://doi.org/10.1038/nature06976>.

4.

Edelman, R.R., Hesselink, J.R., Zlatkin, M.B.: MRI: clinical magnetic resonance imaging volume 1. Saunders, Philadelphia (1996).

5.

Logothetis, N.K.: What we can do and what we cannot do with fMRI. *Nature*. 453, 869–878 (2008). <https://doi.org/10.1038/nature06976>.

6.

Dynamic magnetic resonance imaging of human brain activity during primary sensory

stimulation. Proceedings of the National Academy of Sciences of the United States of America. 89, (15)AD.

7.

Norris, D.G.: Principles of magnetic resonance assessment of brain function. Journal of Magnetic Resonance Imaging. 23, 794–807 (2006). <https://doi.org/10.1002/jmri.20587>.

8.

Jezzard, P., Matthews, P.M., Smith, S.M.: Functional magnetic resonance imaging: an introduction to methods. Oxford University Press, Oxford (2001).

9.

Buxton, R.B.: Introduction to Functional Magnetic Resonance Imaging: Principles and Techniques. Cambridge University Press, Cambridge (2002).

10.

Huettel, S.A., Song, A.W., McCarthy, G.: Functional magnetic resonance imaging. Sinauer Associates, Inc., Publishers, Sunderland, Massachusetts, U.S.A. (2014).

11.

Human Brain Function, <http://www.fil.ion.ucl.ac.uk/spm/doc/books/hbf1/>.

12.

Triantafyllou, C., Hoge, R.D., Krueger, G., Wiggins, C.J., Potthast, A., Wiggins, G.C., Wald, L.L.: Comparison of physiological noise at 1.5 T, 3 T and 7 T and optimization of fMRI acquisition parameters. NeuroImage. 26, 243–250 (2005). <https://doi.org/10.1016/j.neuroimage.2005.01.007>.

13.

Wiggins, G.C., Triantafyllou, C., Potthast, A., Reykowski, A., Nittka, M., Wald, L.L.: 32-channel 3 Tesla receive-only phased-array head coil with soccer-ball element geometry.

Magnetic Resonance in Medicine. 56, 216–223 (2006). <https://doi.org/10.1002/mrm.20925>.

14.

Weiskopf, N., Hutton, C., Josephs, O., Deichmann, R.: Optimal EPI parameters for reduction of susceptibility-induced BOLD sensitivity losses: A whole-brain analysis at 3 T and 1.5 T. *NeuroImage*. 33, 493–504 (2006). <https://doi.org/10.1016/j.neuroimage.2006.07.029>.

15.

Glover, G.H., Li, T.-Q., Ress, D.: Image-based method for retrospective correction of physiological motion effects in fMRI: RETROICOR. *Magnetic Resonance in Medicine*. 44, 162–167 (2000). [https://doi.org/10.1002/1522-2594\(200007\)44:1<162::AID-MRM23>3.0.CO;2-E](https://doi.org/10.1002/1522-2594(200007)44:1<162::AID-MRM23>3.0.CO;2-E).

16.

Jezzard, P., Balaban, R.S.: Correction for geometric distortion in echo planar images from B0 field variations. *Magnetic Resonance in Medicine*. 34, 65–73 (1995). <https://doi.org/10.1002/mrm.1910340111>.

17.

Andersson, J.L.R., Hutton, C., Ashburner, J., Turner, R., Friston, K.: Modeling Geometric Deformations in EPI Time Series. *NeuroImage*. 13, 903–919 (2001). <https://doi.org/10.1006/nimg.2001.0746>.

18.

Friston, K.J., Harrison, L., Penny, W.: Dynamic causal modelling. *NeuroImage*. 19, 1273–1302 (2003). [https://doi.org/10.1016/S1053-8119\(03\)00202-7](https://doi.org/10.1016/S1053-8119(03)00202-7).

19.

Stephan, K.E.: On the role of general system theory for functional neuroimaging. *Journal of Anatomy*. 205, 443–470 (2004). <https://doi.org/10.1111/j.0021-8782.2004.00359.x>.

20.

Kahan, J., Foltynie, T.: Understanding DCM: Ten simple rules for the clinician. *NeuroImage*. 83, 542–549 (2013). <https://doi.org/10.1016/j.neuroimage.2013.07.008>.

21.

Stephan, K.E., Penny, W.D., Moran, R.J., den Ouden, H.E.M., Daunizeau, J., Friston, K.J.: Ten simple rules for dynamic causal modeling. *NeuroImage*. 49, 3099–3109 (2010). <https://doi.org/10.1016/j.neuroimage.2009.11.015>.

22.

Marreiros, A.C., Kiebel, S.J., Friston, K.J.: Dynamic causal modelling for fMRI: A two-state model. *NeuroImage*. 39, 269–278 (2008). <https://doi.org/10.1016/j.neuroimage.2007.08.019>.

23.

Stephan, K.E., Kasper, L., Harrison, L.M., Daunizeau, J., den Ouden, H.E.M., Breakspear, M., Friston, K.J.: Nonlinear dynamic causal models for fMRI. *NeuroImage*. 42, 649–662 (2008). <https://doi.org/10.1016/j.neuroimage.2008.04.262>.

24.

Li, B., Daunizeau, J., Stephan, K.E., Penny, W., Hu, D., Friston, K.: Generalised filtering and stochastic DCM for fMRI. *NeuroImage*. 58, 442–457 (2011). <https://doi.org/10.1016/j.neuroimage.2011.01.085>.

25.

Daunizeau, J., Lemieux, L., Vaudano, A.E., Friston, K.J., Stephan, K.E.: An electrophysiological validation of stochastic DCM for fMRI. *Frontiers in Computational Neuroscience*. 6, (2013). <https://doi.org/10.3389/fncom.2012.00103>.

26.

Friston, K., Penny, W.: Post hoc Bayesian model selection. *NeuroImage*. 56, 2089–2099 (2011). <https://doi.org/10.1016/j.neuroimage.2011.03.062>.

27.

Rosa, M.J., Friston, K., Penny, W.: Post-hoc selection of dynamic causal models. *Journal of Neuroscience Methods*. 208, 66–78 (2012).
<https://doi.org/10.1016/j.jneumeth.2012.04.013>.

28.

Razi, A., Kahan, J., Rees, G., Friston, K.J.: Construct validation of a DCM for resting state fMRI. *NeuroImage*. 106, 1–14 (2015). <https://doi.org/10.1016/j.neuroimage.2014.11.027>.

29.

Jones, D.K.: *Diffusion MRI: theory, methods, and applications*. Oxford University Press, New York (2011).

30.

Johansen-Berg, H., Behrens, T.E.J. eds: *Diffusion MRI: from quantitative measurement to in vivo neuroanatomy*. Academic Press, Amsterdam (2014).

31.

Le Bihan, D.: Looking into the functional architecture of the brain with diffusion MRI. *Nature Reviews Neuroscience*. 4, 469–480 (2003). <https://doi.org/10.1038/nrn1119>.

32.

Questions and Answers in MRI, <http://mri-q.com/index.html>.

33.

Artifacts in Diffusion MRI, http://stbb.nichd.nih.gov/pdf/9780195369779_Jone-Pierpaoli.pdf.

34.

Golay, Xavier PhD*: Perfusion Imaging Using Arterial Spin Labeling. Topics in Magnetic Resonance Imaging. 15, 10–27.

35.

Parkes, L.M., Detre, J.A.: ASL: Blood Perfusion Measurements Using Arterial Spin Labelling. In: Tofts, P. (ed.) Quantitative MRI of the Brain. pp. 455–473. John Wiley & Sons, Ltd, Chichester, UK (2003). <https://doi.org/10.1002/0470869526.ch13>.

36.

Johnson, G.: Absolute Beginners Guide to Perfusion MRI, <http://cds.ismrm.org/ismrm-2008/files/Syllabus-036.pdf>.

37.

John Detre's slides on ASL fMRI, <https://cfn.upenn.edu/perfusion/index.htm>.

38.

Tofts, P., John Wiley & Sons, Ltd: Quantitative MRI of the brain: measuring changes caused by disease. Wiley, Chichester, West Sussex (2003).

39.

By: van Buchem, MA (van Buchem, MA); Tofts, PS (Tofts, PS): Magnetization transfer imaging. NEUROIMAGING CLINICS OF NORTH AMERICA NEUROIMAGING CLINICS OF NORTH AMERICA. 10, (2000).

40.

Schmitz, C., Hof, P.R.: Design-based stereology in neuroscience. Neuroscience. 130, 813–831 (2005). <https://doi.org/10.1016/j.neuroscience.2004.08.050>.

41.

Hobbs, N.Z., Pedrick, A.V., Say, M.J., Frost, C., Dar Santos, R., Coleman, A., Sturrock, A., Craufurd, D., Stout, J.C., Leavitt, B.R., Barnes, J., Tabrizi, S.J., Scahill, R.I.: The structural involvement of the cingulate cortex in premanifest and early Huntington's disease. *Movement Disorders*. 26, 1684–1690 (2011). <https://doi.org/10.1002/mds.23747>.

42.

Chupin, M., Mukuna-Bantumbakulu, A.R., Hasboun, D., Bardinet, E., Baillet, S., Kinkingnéhun, S., Lemieux, L., Dubois, B., Garnero, L.: Anatomically constrained region deformation for the automated segmentation of the hippocampus and the amygdala: Method and validation on controls and patients with Alzheimer's disease. *NeuroImage*. 34, 996–1019 (2007). <https://doi.org/10.1016/j.neuroimage.2006.10.035>.

43.

Ashburner, J., Friston, K.J.: Voxel-Based Morphometry—The Methods. *NeuroImage*. 11, 805–821 (2000). <https://doi.org/10.1006/nimg.2000.0582>.

44.

Barnes, J., Foster, J., Boyes, R.G., Pepple, T., Moore, E.K., Schott, J.M., Frost, C., Scahill, R.I., Fox, N.C.: A comparison of methods for the automated calculation of volumes and atrophy rates in the hippocampus. *NeuroImage*. 40, 1655–1671 (2008). <https://doi.org/10.1016/j.neuroimage.2008.01.012>.

45.

Fischl, B., Dale, A.M.: Measuring the thickness of the human cerebral cortex from magnetic resonance images. *Proceedings of the National Academy of Sciences*. 97, 11050–11055 (2000). <https://doi.org/10.1073/pnas.200033797>.

46.

FIRST - FslWiki, <http://fsl.fmrib.ox.ac.uk/fsl/fslwiki/FIRST>.

47.

Ashburner, J., Klöppel, S.: Multivariate models of inter-subject anatomical variability. *NeuroImage*. 56, 422–439 (2011). <https://doi.org/10.1016/j.neuroimage.2010.03.059>.

48.

Mechelli, A.: Structural Covariance in the Human Cortex. *Journal of Neuroscience*. 25, 8303–8310 (2005). <https://doi.org/10.1523/JNEUROSCI.0357-05.2005>.

49.

Wright, I.C., McGuire, P.K., Poline, J.-B., Traverso, J.M., Murray, R.M., Frith, C.D., Frackowiak, R.S.J., Friston, K.J.: A Voxel-Based Method for the Statistical Analysis of Gray and White Matter Density Applied to Schizophrenia. *NeuroImage*. 2, 244–252 (1995). <https://doi.org/10.1006/nimg.1995.1032>.

50.

Ashburner, J., Friston, K.J.: Voxel-Based Morphometry—The Methods. *NeuroImage*. 11, 805–821 (2000). <https://doi.org/10.1006/nimg.2000.0582>.

51.

Good, C.D., Johnsrude, I.S., Ashburner, J., Henson, R.N.A., Friston, K.J., Frackowiak, R.S.J.: A Voxel-Based Morphometric Study of Ageing in 465 Normal Adult Human Brains. *NeuroImage*. 14, 21–36 (2001). <https://doi.org/10.1006/nimg.2001.0786>.

52.

Ashburner, J., Friston, K.J.: Unified segmentation. *NeuroImage*. 26, 839–851 (2005). <https://doi.org/10.1016/j.neuroimage.2005.02.018>.

53.

Mechelli, A., Price, C., Friston, K., Ashburner, J.: Voxel-Based Morphometry of the Human Brain: Methods and Applications. *Current Medical Imaging Reviews*. 1, 105–113 (2005). <https://doi.org/10.2174/1573405054038726>.

54.

Ashburner, J.: A fast diffeomorphic image registration algorithm. *NeuroImage*. 38, 95–113 (2007). <https://doi.org/10.1016/j.neuroimage.2007.07.007>.

55.

Ashburner, J., Friston, K.J.: Computing average shaped tissue probability templates. *NeuroImage*. 45, 333–341 (2009). <https://doi.org/10.1016/j.neuroimage.2008.12.008>.

56.

Ashburner, J.: Computational anatomy with the SPM software. *Magnetic Resonance Imaging*. 27, 1163–1174 (2009). <https://doi.org/10.1016/j.mri.2009.01.006>.

57.

Studholme, C., Hill, D.L.G., Hawkes, D.J.: An overlap invariant entropy measure of 3D medical image alignment. *Pattern Recognition*. 32, 71–86 (1999). [https://doi.org/10.1016/S0031-3203\(98\)00091-0](https://doi.org/10.1016/S0031-3203(98)00091-0).

58.

Pennec, X., Cachier, P., Ayache, N.: Understanding the "Demon's Algorithm": 3D Non-rigid Registration by Gradient Descent. In: Taylor, C. and Colchester, A. (eds.) *Medical Image Computing and Computer-Assisted Intervention – MICCAI'99*. pp. 597–605. Springer Berlin Heidelberg, Berlin, Heidelberg (1999). https://doi.org/10.1007/10704282_64.

59.

Rueckert, D., Sonoda, L.I., Hayes, C., Hill, D.L.G., Leach, M.O., Hawkes, D.J.: Nonrigid registration using free-form deformations: application to breast MR images. *IEEE Transactions on Medical Imaging*. 18, 712–721 (1999). <https://doi.org/10.1109/42.796284>.

60.

Rohlfing, T.: Image Similarity and Tissue Overlaps as Surrogates for Image Registration Accuracy: Widely Used but Unreliable. *IEEE Transactions on Medical Imaging*. 31, 153–163 (2012). <https://doi.org/10.1109/TMI.2011.2163944>.