

Curriculum Vitae

James Morvan Kilner

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Current position

2007-2012 Wellcome Trust Research Career Development Fellowship “A Bayesian account of the mirror system” (Grant awarded £380,070). Research Fellow at the Wellcome Trust Centre of Imaging Neuroscience

Previous positions

2004-2007 Research Fellow and Head of EEG and MEG user groups at the Wellcome Department of Imaging Neuroscience, London under the direction of Prof. Chris Frith and Prof. Karl Friston.

2002-2004 Final year of the Wellcome International Prize Travelling Fellowship entitled “Functional and effective connectivity within visuomotor intergration” at the Functional Imaging Laboratory, London supervised by Prof. Karl Friston.

2001-2002 Wellcome International Prize Travelling Fellowship entitled “Functional and effective connectivity within visuomotor intergration”. The first two years of this award were spent at the Institut des Sciences Cognitives, Lyon, France, where I was supervised by Dr. Driss Boussaoud.

1996-2000 The Wellcome Four Year PhD programme in Neuroscience Prize Studentship at UCL undertaken in the Sobell Department of Neurophysiology. My thesis was entitled “Oscillatory activity in the Human Motor System” and was supervised by Prof. Roger Lemon.

University Education

1992-1996 Master of Biochemistry, Lincoln College, Oxford University. Upper Class Second.

4th Year Part II research project with Prof. Susan Greenfield studying the non-cholinergic properties of acetylcholinesterase on mid-brain dopaminergic neurons.

Publications:

Papers published in peer review journals

1. Garrido, M.I., Friston, K.J., Kiebel, S.J, Stephan, K.E., Baldeweg, T., and **Kilner, J.M.** (2008) *The functional anatomy of the MMN: A DCM study of the roving paradigm.* Neuroimage
2. Garrido, M.I., **Kilner, JM**, Kiebel, S.J., Stephan, K.E., and Friston K.J. (2007) *Evoked brain responses are generated by feedback loops.* PNAS *In Press*
3. **Kilner, JM** and Frith CD (2007) *Action observation: Inferring intentions without mirror neurons.* Current Biology. *In Press*
4. A.P. Leff, P. Iverson, T.M. Schofield, **J.M. Kilner**, J.(T) Crinion, K.J. Friston and C.J.Price (2007) *Vowel-Specific Mismatch Responses in the Anterior Superior Temporal Gyrus.* Cortex *In Press*
5. **Kilner, JM** and Frith CD (2007) *Is the primary motor cortex part of the MNS?* PNAS *In Press*
6. Garrido, M.I., **Kilner, JM**, Kiebel, S.J., Stephan, K.E., and Friston K.J. (2007) *Dynamic causal modelling of the mismatch negativity.* Neuroimage *In Press.*
7. **James Kilner**, Antonia F de C Hamilton, and Sarah-Jayne Blakemore (2007) *Interference effect of observed human movement on action is due to velocity profile of biological motion.* Social Neuroscience *In Press.*
8. **Kilner, JM**, Friston KJ, and Frith CD (2007) *Predictive coding: An account of the Mirror Neuron system.* Cognitive Processing *In Press.*
9. **Kilner, JM** and Blakemore, SJ (2007) *How does the mirror neuron system change during development?* Developmental Science *In Press*
10. **Kilner, JM**, Friston KJ, and Frith CD (2007) *The mirror neuron system: A Bayesian perspective.* Neuroreport *In Press.*
11. Penny, W and **Kilner JM** Blakenburg, F.(2007) *Robust Bayesian General Linear Models.* Neuroimage *In Press.*
12. Weil RS, **Kilner JM**, Haynes JD, Rees G (2007) *Neural correlates of perceptual filling-in of an artificial scotoma in humans* PNAS *In Press*

13. Friston, K., **Kilner, J.** and Harrison, L. (2006). *A free energy principle for the brain*. J. Phys. Paris. *In Press*
14. **Kilner, JM**, Marchant, J, and Frith, C.D (2006). *Modulation of the mirror system by social relevance*. Social Cognitive and Affective Neuroscience. *In Press*
15. Winston JS, O'Doherty J, **Kilner JM**, Perrett DI, Dolan RJ. (2006) *Brain systems for assessing facial attractiveness*. Neuropsychologia. *In Press*
16. David O, **Kilner JM**, Friston KJ (2006) *Mechanisms of Induced and Evoked oscillations*. Neuroimage *In Press*
17. David O, Kiebel S, Harrison, LM, Mattout, **Kilner JM**, Friston KJ (2006) *Dynamical Causal Modeling of Evoked Responses in EEG and MEG*. Neuroimage *In Press*
18. Winston, JS, Gottfried, JA, **Kilner, JM**, Dolan, RJ. (2005) *Integrated neural representations of odor intensity and affective valence in human amygdala*. Journal of Neuroscience. *In Press*
19. **Kilner, JM**, Mattout J, Henson R, Friston KJ. (2005) *Hemodynamic correlates of EEG: A heuristic Neuroimage*.
20. **Kilner J**, Bott L, Posada A (2005) *Modulations in the degree of synchronization during ongoing oscillatory activity in the human brain*. Eur J Neurosci. 21(9):2547-54.
21. **Kilner JM**, Kiebel SJ, Friston KJ. (2005) *Applications of random field theory to electrophysiology*. Neurosci Lett. 374(3):174-8.
22. **Kilner JM**, Vargas C, Duval S, Blakemore SJ, Sirigu A. (2004) *Motor activation prior to observation of a predicted movement*. Nat Neurosci. 7(12):1299-301
23. **Kilner, JM**, Paulignan, Y. and Boussaoud, D. (2004) *Functional connectivity during real vs imagined visuomotor tasks: an EEG study*. Neuroreport. 15:4 pp 637-42.
24. **Kilner, JM**, Fisher, R.J. and Lemon, R.N. (2004) *The coupling of oscillatory activity between muscles is strikingly reduced in a deafferented subject compared with normal controls*. J Neurophysiol 92(2):790-6.
25. Posada A, Hugues E, Franck N, Vianin P, **Kilner J** (2003) *Augmentation of induced visual gamma activity by increased task complexity* Eur J Neurosci. 18:8 pp 2351-6.
26. **Kilner, JM**, Paulignan, Y. and Blakemore, S-J. (2003) *An interference effect of observed biological movement on action*. Current Biology 18: pp1-20
27. **Kilner, JM**, Salenius, S., Baker, S.N., Jackson, A., Hari, R., and Lemon, R.N. (2003). *Bilateral task-dependent modulations of MEG and EMG coherent oscillatory activity in human subjects*. Neuroimage. 18:1 pp 67-73.
28. Penny, W.D., Kiebel, S.J., **Kilner, JM**, Rugg, M.D. (2002) *Event-related brain dynamics*. TINS 25:8 pp 387-9.

29. **Kilner, JM**, Alonso-Alonso, M., Fisher, R., Lemon, R.N. (2002) *Modulation of synchrony between single motor units during precision grip tasks in humans. J.Physiol. 541:3 pp 937-48.*
30. **Kilner, JM**, Baker, S.N., Lemon, R.N. (2002) *A novel algorithm to remove electrical cross-talk between surface EMG recordings and its application to the measurement of short-term synchronisation in humans.. J. Physiol. 538:3 pp 919-30.*
31. **Kilner, JM**, Baker, S.N., Salenius, S., Hari, R., and Lemon, R.N. (2000). *Human cortical muscle coherence is directly related to specific motor parameters J. Neurosci. 20:23 pp 8838-45.*
32. **Kilner, JM**, Baker, S.N., Salenius, S., Jousmaki, V., Hari, R., and Lemon, R.N. (1999) *Task-dependent modulation of 15-30 Hz coherence between rectified EMGs from human hand and forearm muscles. J.Physiol. 516:2 pp 559-70*
33. Baker, S.N., **Kilner, JM**, Pinches, E. and Lemon, R.N. (1999) *The role of synchrony and oscillations in the motor output Exp. Brain Res. 128. pp 109-117*

Proceedings Papers

1. Biomag 2004 *Studying effective connectivity with a neural mass model of evoked MEG/EEG responses.* David O, Harrison L, **Kilner J**, Penny W, Friston KJ.
2. Nonlinear Dynamics 2005 *Forward models for multimodal brain imaging.* **James M. Kilner**, Lee Harrison and Karl J Friston

Book Chapters

1. **JM Kilner**, O. David and K. Friston (2006) *Neuronal models for EEG.* Statistical Parametric Mapping. Elsevier.
2. S.Kiebel, **JM Kilner** and K. Friston (2006) *Hierarchical models for EEG/MEG.* Statistical Parametric Mapping. Elsevier.