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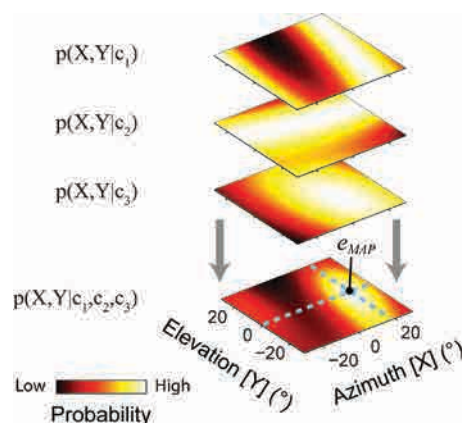
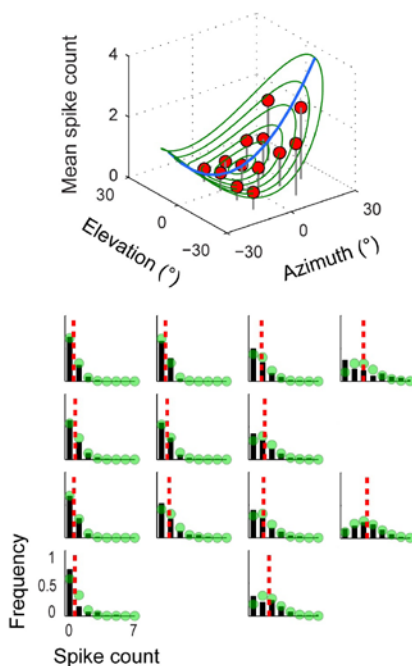
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Most of us rely on our sense of vision to navigate and interact with the world around us. The ease with which we do so, however, belies the challenging computational problems solved routinely by the brain. Our aim is to understand how neurons represent visual space for the purpose of goal-directed behaviours, such as reaching and walking. We record neural activity in visual cortex while subjects perform perceptual and motor tasks. We then combine the data with modelling and computer simulations to infer causal links between neural computations, perception, and behaviour.

Research Projects

1. The Neural Coding of Visual Space for Perception and Action
2. Tuning-in to the Sensory World: optimal neural coding for perception



Selected significant publications:

1. **Morris AP**, Bremmer F, & Krekelberg B. 2013. Eye-position signals in the dorsal visual system are accurate and precise on short timescales. *Journal of Neuroscience*, 33(30): 12395-12406.
2. **Morris AP**, Kubischik M, Hoffmann KP, Krekelberg B, Bremmer F. 2012. Dynamics of eye position signals in the dorsal visual system. *Current Biology*, 22(3): 173-179.
3. **Morris AP**, Liu CC, Cropper SJ, Forte JD, Mattingley JB. 2010. Summation of visual motion across eye movements reflects a non-spatial decision mechanism. *Journal of Neuroscience*, 30(29): 9821-9830.
4. **Morris AP**, Chambers CD, Mattingley JB. 2007. Parietal stimulation destabilizes spatial updating across saccadic eye movements. *Proc Natl Acad Sci USA* 104(21):9069-9074.
5. **Morris AP**, Kritikos A, Berberovic N, Pisella L, Chambers CD, Mattingley JB. 2004. Prism adaptation and spatial attention: a study of visual search in normals and patients with unilateral neglect. *Cortex* 40(4-5):703-721.