**Developing cognitive interventions to boost cognition in older adults and people with mild cognitive impairment**

DPhil project – Supervisors: Dr Susannah Murphy and Prof Kia Nobre

There is a lot of interest in whether cognitive interventions, such as ‘brain training’, can be used to boost the cognitive abilities of older adults, reduce the risk of developing dementia and slow the progression of cognitive decline in patients with dementia.  In general, results from cognitive training studies (involving repeated practice on specific cognitive tasks) have been disappointing, with many studies suggesting no cognitive improvement beyond improved performance on the particular tasks trained, and no benefits for people with dementia. The aim of this programme of research is to develop more effective emotion- and attention-based cognitive interventions to boost cognitive function in older adults and people with mild cognitive impairment. There are a range of potential D.Phil projects that could fit into this program of research:

1. Establishing attentional deficits associated with ageing and developing interventions to enhance aspects of selective attention
2. Investigating the effect of interventions designed to enhance positive mood on cognitive function in older adults and people with mild cognitive impairment
3. Developing easily accessible cognitive interventions through the use of computer games and ‘apps’

These projects would involve a range of techniques, including neuroimaging (MEG, fMRI) in healthy volunteer and/or patient samples.

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