

“Understanding functional reorganization to explain recovery of language after stroke”

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This talk will consider how and when neural systems can functionally re-organize themselves after damage; and why functional re-organisation is faster in some patients than others. I will argue on the basis of anatomical and functional neuroimaging data that some tasks can be successfully completed, more or less effectively, in more than one way. Some of these alternative strategies (and neural pathways) are present in the healthy brain, explaining why damage to only one system can be compensated for by learning to rely on another available system. Other potential neural pathways are atypical (only seen when all the typical systems have been damaged) and in these cases re-learning takes time, with slower and less accurate performance. Identifying all the different ways that a task can be performed requires an iterative combination of lesion, behavioural and functional neuroimaging studies in large cohorts of patients with diverse lesion sites. It also requires us to make a clear distinction between inconsistency in outcomes that are the consequence of inter-patient variability in lesion site versus inter-patient variability in functional anatomy. This endeavour is challenging but important for understanding why patients with language difficulties (i.e. aphasia) after stroke can have very different recovery trajectories even when they have seemingly similar brain lesions, baseline language impairments and therapy input.

Location: University of South Carolina, Discovery I, Room #140
915 Greene Street, Columbia, SC 29208
Date: **Wednesday November 16th, 2016**
Time: **2.30pm – 3.30pm EDT**

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