Thursday, February 16th, 2pm EDT

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"Resting state connectivity as a predictor of aphasia"

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Two months ago in this series Dorian Pustina described how different neuroimaging modalities provide complementary explanatory power. Specifically, he revealed that a combination of lesions, virtual tractography and resting state data are able to outperform any of these modalities in isolation. This finding is significant, as accurate predictions can in theory guide optimal bespoke therapies. Further, this finding is intuitive, as these modalities appear to be measuring different aspects of an injury. Unfortunately, in our own datasets we were unable to replicate Dr Pustina's findings: resting state tended to be a poor predictor and its prediction seemed to be largely redundant with the simple lesion maps. This mystery led us to reevaluate our resting state data processing and analysis. We discovered that traditional processing steps that have proved robust in handling data from healthy adults can have negative consequences when applied to data from individuals with large chronic injuries. These methods can lead to paradoxical results or simply emphasize the influence of the frank lesion. We outline a novel method for processing these datasets that not only generates physiologically plausible results but also provides better predictive power. This work highlights the potential of this emerging modality as well as the ability of this lecture series to impact our field.

Location: University of South Carolina, Discovery I, Room #140, 915 Greene Street, Columbia, SC 29208 Date: Thursday, February 16th, 2016 Time: 2pm – 3pm EDT This event will be catered!

The lecture can also be followed online from your computer, tablet or smartphone, via the following GoToMeeting address (no password required): https://global.gotomeeting.com/join/667426173

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C-STAR LECTURE SERIES

The Center for the Study of Aphasia Recovery (C-STAR; <u>http://cstar.sc.edu/lecture-series/</u>) houses researchers who examine the effects of behavioral treatment, brain stimulation, and residual brain function (brain plasticity) on recovery from aphasia. C-STAR is a collaboration between researchers from the University of South Carolina, the Medical University of South Carolina, Johns Hopkins University, and the University of California, Irvine. The Center is funded through the National Institute of Deafness and Communication Disorders (NIDCD) grant #NIH P50 DC014664. Biweekly public lectures, given by members and guests of C-STAR, are accessible live and online. Recordings of the lectures can be viewed via C-STAR YouTube channel: <u>https://www.youtube.com/channel/UC8p0CuG4He9nqCR4nnzhZ7w</u>