Come to find out how your brain navigates in space

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# **Brain & Cognitive Sciences for** Adaptive Intelligence **FOCUS LECTURE SERIES**



## http://bit.ly/3IG7FDi

Meeting ID: 832 9922 2652 Passcode: 1010



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00 000 0 0 0 0 April 19 (Mon) ( 10:00 a.m.









Brain & Cognitive Sciences 뇌인지과학과

**SPEAKER:** 

## **Douglas A. Nitz**

Chair

Department of Cognitive Science UCSD

### **Encoding of Environmental Structure at the Juncture of Hippocampus and Cortex**

Most navigational problem-solving demands knowledge of spatial and orientational relationships among available paths. The hippocampus and posterior parietal cortex encode location within the spaces defined by environment boundaries and known routes, respectively. Lying an atomically between these structures, neurons of the subiculum and retrosplenial cortex accurately encode location, but also encode multiple additional features of environment structure. These features include recurrent structural features as well as distance from any single location along a path to all others. In this lecture, I will discuss the multiple different forms of spatial information that are observed as one moves from hippocampus to subiculum to retrosplenial cortex to posterior parietal cortex. Time allowing, I will also discuss how spatial information can be transitioned to navigational actions and how temporal offsets in the integration of self-motion can yield an encoding of trajectory shape.

