



Brandeis University

Volen National Center
for Complex Systems

Mailstop 013
P.O. Box 549110
Waltham, Massachusetts
02454-9110

781-736-4870
781-736-2398 Fax

December 18, 2003

Dear Committee

It is with great pleasure that I am writing in support of Sridhar (Sri) Raghavachari's application for a faculty position in your department. After completing his Ph.D. in physics, Sri came to Brandeis University to pursue research in computational neuroscience in John Lisman's lab. We have now worked on two large projects together, and I have come to hold Sri in high regard, as a talented computational modeler and an expert in the analysis of oscillations and time-series phenomena in neural data.

When he came to Brandeis, Sri's first project was a collaboration with my lab to study the physiological correlates of recognition memory function. He analyzed physiological data that we had collected from implanted depth electrodes in neurosurgical patients. Sri's analyses revealed that oscillations in the 4-8 Hz theta-frequency band were gated by the onset and offset of each trial of a short-term recognition memory task. This work, which was reported in the *Journal of Neuroscience* (Raghavachari et al., 2001), used cutting edge methods to demonstrate a link between brain oscillations and human working memory function. Through his work on this paper, Sri developed novel statistical and time series methods that serve as a model for how to search for oscillations in neural recordings. Since the time of its publication the methods which Sri developed have been adopted in a number of other electrophysiological laboratories. Following up on these earlier findings, Sri is currently writing up new results that show how neural synchrony plays a key role in human working memory function.

Sri has an impressive command over cutting edge techniques in computational neuroscience. In particular, he has pioneered the use of multitaper methods in the analysis of electrophysiological signals. Unlike many computational types, Sri writes with clarity and confidence; he is a terrific public speaker, and I think he will make an excellent teacher. Finally, Sri is a warm individual who has a genuine interest in a wide range of areas within neuroscience. I believe that he will make an excellent colleague.

In sum, Sri Raghavachari is a talented computational neuroscientist who will be a valued colleague and an excellent teacher. I urge you to consider him seriously for a position in your department.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael J. Kahana".

Michael J. Kahana
Associate Professor of Psychology and
Neuroscience
Volen Center for Complex Systems