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David Sheinberg, PhD
Search Committee Chair
Department of Neuroscience
Brown University Providence, RI
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Dear David,

It is my pleasure to write a recommendation letter for Kendrick Kay who is applying to a tenure track position as an assistant professor in computational neuroscience. I know Kendrick since 2009 when he became a postdoctoral fellow at Stanford University in Brian Wandell's lab. Our vision group meets each week (including my lab, Wandell's lab, and Norcia's lab) through which I had the opportunity to hear Kendrick present his research results many times and had many conversations with him on research-related topics. In addition, Kendrick was the head TA in my Introduction to Perception class in Fall 2011 and I have seen him teach.

Kendrick is a very original thinker, extremely mathematical, and one of the best methods-oriented researchers I know in the field of neuroimaging of visual processing. His 2008 Nature paper with Jack Gallant has been a groundbreaking paper, cited already more than 200 times (according to scholar.google). The reason for the transformative effect of this paper is that while decoding has become increasingly popular in fMRI research in recent years, it has not substantially advanced our understanding of the visual system, because it does not provide a generative model of the visual system. Instead of decoding, Kendrick built a forward model of primary visual cortex, V1, and has shown that such a model can predict fMRI responses to thousands of natural images. This paper thus produced a paradigm shift in the field because it showed the feasibility of building generative models of the human visual system and testing them empirically with fMRI. Presently, he is continuing this type of research building quantitative models of V1 and other retinotopic regions. His ongoing research builds hierarchical models of the visual system and examines the non-linear transformations of information across the visual system. This research has the potential to generate a precise, computational model of the human visual system.

Kendrick is extremely sharp and knowledgeable. He is enthusiastic about computations and statistics, and is on a mission to educate researchers. He has a blog on statistical analyses: <http://randomanalyses.blogspot.com/> and is presently teaching a new graduate-level class at Stanford University, Psych216A: Statistics and data analysis in MATLAB, which has generated significant interest as many students take his class. You can see him teach as lecture videos are posted on the website: <http://white.stanford.edu/~knk/Psych216A/>. He was an extra-ordinary TA in my Introduction to Perception class in fall 2011, working the extra mile, highly attentive to students, spending a significant amount of time patiently explaining topics to the students, and helping them with projects. Further, Kendrick, presented in sections complicated topics in a clear way (e.g. Fourier Transform and signal detection theory).

Overall, I have the highest recommendation for Kendrick. I believe he is a perfect exemplar of a computational neuroscientist who will significantly advance the field of visual neuroscience by building and testing precise computational models of the visual system.

Sincerely,

Kalanit Grill-Spector