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Prof. David Sheinberg, PhD
Brown Institute for Brain Science
Department of Neuroscience
Alpert Medical School, Brown University

April 16, 2012

Dear Prof. Sheinberg,

This is a letter of recommendation for Dr. Wilson Truccolo who is being considered for a tenure-track position in your institution. I came to know Wilson in 1996 when he joined the Center for Complex Systems and Brain Sciences at Florida Atlantic University to work with me and Steve Bressler on dynamical analysis of brain networks. Over the past 15 years I have witnessed his remarkable evolution from a naïve young student hungry for knowledge and scientific adventure to a mature and productive neuroscientist routinely breaking new ground in brain machine interface, statistical modeling of neuronal data, and mechanisms of neurological conditions. Undoubtedly, the intellectually stimulating environment provided by the Brown Institute for Brain Science and the Department of Neuroscience will further accelerate his upward trajectory and personal growth. In turn, Wilson's passion and enthusiasm for science and his solid track record for collaborative research make him an outstanding addition to any institution that seeks excellence in interdisciplinary endeavors.

Since his graduation in 2002 Wilson has produced an impressive record of high quality publications. The method on point process analysis of ensemble spiking activity, published in the *Journal of Neurophysiology* (2005), is powerful and elegant; it has been attracting widespread interest. The finding that patterns of single neuron firing in human motor cortex are correlated with intended movement parameters, published in the *Journal of Neuroscience* (2008), is a fine example of translational neuroscience. To date I have been most impressed by his discovery, published in *Nature Neuroscience* (2010), that neuronal spiking can be predicted not only by local ensemble spiking history, but also by spiking histories of distant neuronal ensembles. This finding will have profound implications on our understanding of how different brain areas work together to achieve thought and behavior and how such coordinated activity breaks down in neurological and psychiatric disorders.

Wilson has a solid grasp on theoretical issues ranging from dynamical systems theory to statistics to multivariate signal processing. His experience in experimental neurophysiology and close collaboration with experimental neurophysiologists make him a "full package" for launching multifaceted computational attacks on important basic and clinical neuroscience problems. The 600+ SCI citations to his papers attest to the impact of his work. His versatility in consistently generating high quality output across a broad research front has never ceased to amaze me. Peers have recognized his contributions by awarding him a NINDS K01, and more recently a R01, a remarkable achievement in today's funding climate.

Wilson is a critical thinker, always careful in his interpretation of methods and experimental data. I have enjoyed my interactions with him over the last 15 years and have often benefited from his scientific insights. Although I have not seen him in action in an undergraduate teaching environment, I have no doubt he will approach this endeavor as he would any other, thoughtful and with total dedication. I am convinced that Wilson is ready to assume the responsibility of a tenure-track faculty member in your growing program. In fact it is my firm belief that Wilson has the talent, the expertise, the right colleagues, and most importantly, the passion and the drive to become a leader in computational neuroscience and neuroengineering research. This is why I give his application my highest endorsement.

Sincerely yours,

A handwritten signature in blue ink, appearing to read 'M. Ding', is positioned below the 'Sincerely yours,' text.

Mingzhou Ding
J. Crayton Pruitt Family Professor