



Northeastern
U N I V E R S I T Y

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Biocomplexity Faculty Search Committee
c/o Prof. Rob de Ruyter van Steveninck
Biocomplexity Institute
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Dear Professor Rob de Ruyter van Steveninck:

I would like to enthusiastically recommend Dr. Jessica Newton for the assistant professor position in your program. I have known Jessica for about 7 years -- while she was a graduate student in the department of Psychology here at Northeastern and then as a postdoc at MIT. Even though I am not in the psychology department, I was a long time collaborator with her first thesis advisor, Dr. Alex Skavenski, and have considerable experience with the students in the psychology program. Furthermore, Jessica was a student in my interdisciplinary Neuroanatomy graduate course so I have knowledge of her academic abilities. I served as interim advisor for Jessica so she could complete her Master's degree in experimental psychology after Alex passed away; allowing her to complete her investigation of cross-modal plasticity. Therefore, I spent more time with Jessica than I might have otherwise, and developed good knowledge of her many strengths and occasional weaknesses in neurophysiological research.

Jessica was an excellent graduate student here at Northeastern, one of the best I've seen. I was doubly thrilled that she took a fine postdoc in Mriganka Sur's lab; in part because she decided to return to neurobiology (after completing her Ph.D. degree in psychophysics) but mainly because she was still in the neighborhood and I could keep an eye on her. She done nice work on visual/auditory plasticity and has grown as a independent researcher. I think she has excellent potential as a neuroscientist with a broad background in physiology and psychology.

Here are some observations on her abilities

Strengths

- Smart, very knowledgeable of neurobiology -- It was clear immediately that she came to Northeastern with excellent undergraduate preparation. Furthermore, I was impressed by how quickly she learned the intricacies of extracellular neurophysiological methods. Our equipment was designed for monkey single cell recordings during eye movements, and was largely homebrewed. Adapting it to do visual and somatosensory recordings in alert rabbits was an adventure. Jessica was very helpful and persistent during this conversion, much more so than I expect many other NU graduate students would have been.
- She mastered the recording techniques necessary for her thesis and developed a fine knowledge of the pertinent literature. Due to my busy teaching schedule, Jessica had to do a considerable number of her recording sessions alone. More than you would like for a developing graduate student. Nevertheless, she was successful in isolating hundreds of cells and mapping their visual and somatosensory fields accurately. I think her attention to details and persistent nature was key to the success of her thesis experiments.
- She has considerable experience in alert animal recording techniques. She is good at animal handling (rabbits and rats) and is very cognizant of animal ethical issues.
- Very hard working, well organized and quite able to work independently-- She was virtually always available, days, nights or weekends. Whatever the experiment demanded.
- Excellent communication skills -- Jessica is articulate, expressive and a good debater. She can make a point and support it logically but also can recognize when she is wrong and adapt her views. If only all graduate students were like that.
- Strong teaching potential. The Psychology Department at Northeastern provides their students with ample opportunities to teach. I never directly supervised her teaching, but we talked about her classes and it was clear to me that she was able to work well with students and would be a fine teacher someday. I'd imagine her skills have atrophied a bit during the post-doc, but her breadth of training in neurobiology and neuropsychology will let her adapt quickly to fill the teaching needs of your program.

Weaknesses

- Very Few. Her postdoc experience has helped her broaden her research skills and increase her ability for independent research. But then she has always been pretty independent. She a better writer now than when she graduated. Her grant writing skills have improved and she has made progress on her publications. Although she hasn't publish numerous articles, her work is very high quality and her studies of plasticity are cutting edge. A couple of very interesting publications are in press and she has some nice projects going.

As you see, her strengths are considerable and weaknesses few. I'm very confident that Jessica will become successful scientist. She has developed a viable line of research during her postdoc, and is quickly developing an active research program with a strong potential for funding. And I'm certain she will be a fine professor. I hope you will give her strong consideration for your position.

If you need additional information, don't hesitate to contact me.

Sincerely,



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