Youngmin Park, PhD
Department of Otorhinolaryngology
University of Pennsylvania
3400 Spruce St. 5 Ravdin
Philadelphia, PA 19104

October 31, 2018

Search Committee
New York University

Dear Search Committee Members,

I am applying for the Courant Institute Instructorships at NYU. I completed a PhD in mathematics at the University of Pittsburgh under the supervision of G. Bard Ermentrout, and I am now a postdoc at the University of Pennsylvania under the supervision of Maria N. Geffen.

I am an ambitious applied mathematician who positions himself at the forefront of discoveries in both mathematics and biology. At Pittsburgh, I developed my mathematical repertoire by applying dynamical systems theory to reduce the dimensionality of famous neural models, aiding in novel insights into these systems. At the University of Pennsylvania, I introduce ground-breaking insights and models for data produced by one of the world's leading auditory labs.

The Courant Institute harbors a wealth of resources to aid in my journey at the interface of mathematics and biology. For instance, Charles Peskin's work, "Analysis, simulation, and optimization of stochastic vesicle dynamics in synaptic transmission" (2018), aligns with my goals to explore the consequences of changing fundamental parameters on the statistics of the vesicle release, and provides a starting point for how synapses can influence network-level changes.

Under Bard's supervision I wrote three papers spanning diverse topics from single neurons (coupled oscillators) to the population-level (neural field models). We also published a pedagogical book chapter in computational neuroscience. I maintained collaborations from my masters institution, and published a fourth journal paper in dynamical systems theory. My research resulted in winning the prestigious Andrew Mellon Predoctoral Fellowship at the University of Pittsburgh, which is awarded to doctoral students of exceptional promise and ability. I was the first math-bio student at Pitt to receive this award.

My teaching portfolio boasts four years of teaching at different capacities (lectures, recitations, grading), at different levels (calculus sequence, differential equations, linear algebra, and discrete math), for three terms per year (Spring, Summer, and Fall). My teaching evaluations are consistently strong. As a result of my teaching I was shortlisted for the Elizabeth Baranger teaching award, the most prestigious teaching award at the University of Pittsburgh.

As part of my application I include a curriculum vitae, research statement, and teaching statement. Please request additional details as needed, and I look forward to our correspondence.

Sincerely,

Youngmin Park, PhD