

Dear Members of the Selection Committee for Postdoctoral Positions at the University of British Columbia,

I am currently a PhD student in Mathematics at the University of Wisconsin-Madison, and expect to graduate in the coming spring. My Research Interests lie primarily in harmonic analysis, geometric measure theory, and probability theory, though I am also beginning to explore problems related to nonlinear wave equations. My thesis problem focuses on studying spectral multipliers on compact manifolds using methods of Fourier integral operators, which I am working on under the supervision of Professor Andreas Seeger.

At the University of British Columbia, I am primarily interested in working with Professor Pablo Shmerkin on topics related to decoupling and random fractals, though my future research plans involve problems related to problems for multipliers connected to counting tangencies of annuli, and the study of dispersive partial differential equations using the vector field method, and thus interact with the work of Professors James Colliander, Izabella Łaba, Malabika Pramanik, Alexia Yavicoli, and Joshua Zahl. More details about such research projects can be found in my Research Statement.

Thank you for your consideration,

Jacob Denson