

Dear Georgia Tech Research Institute Hiring Manager,

My name is Max Grinchenko and I am applying for the entry level physics position 952. Working in this position would be a dream job for me, and I believe that my extensive research experience uniquely qualifies me for the job. While conducting research at the University of Richmond for two summers I helped publish two articles. One covered the optimization of sparse matrix determinant computation, while the other involved weakening and breaking the RSA encryption algorithm. At Columbia University, I completed a third research experience in a single atom conduction, where I designed the software responsible for running the experiment, storing the results, and analyzing and displaying the data. Throughout these research tenures I successfully worked in a team environment with my compatriots to produce publishable data and results. These experiences have taught me how to support those around me, listen and learn from others, and work towards one unified goal with my team members. The experiences stoked my passion for solving problems. I love a good problem, physics is ripe with them, and behind every one there is also a beautiful, deep enriching conceptual nuggets.

In my time in physics I have also learned to love and appreciate electro-magnetic fields, ocean waves and tides, relativity and Einstein's biography, atom interaction on the quantum level, and how the Northern Lights are created by particle collisions in our atmosphere. I was lucky enough to witness this last phenomena in Alaska a few months ago. I remember walking outside that night, and seeing the glowing, luminous shifting clouds above me. I remember being moved beyond words and thoughts in that moment. A moment which was made more and not less special by my knowing the exact physics behind the effervescent waves of light flickering above me.

That feeling is what I took with me when I left Alaska. It clarified up the reason for my love for physics. The knowledge behind how something works, why something is, and the whole history of logic, experiment, and discovery behind it gives my life more meaning. I as part of the universe am able to understand a small part of the universe. That is physics for me. That is why I am willing to spend hours grappling with vector calculus equations and spend hours reading textbooks. I want to understand, and I am getting better at understanding. If you extend an opportunity for an interview you will see this trait. I promise you you will not find a candidate who is more curious about the world than I.

Finally, I promise you will not find a candidate more willing to spend hours and days and weeks trying to find a solution to a problem. I love problems because they allow me to learn, and because they give one that rare satisfaction that comes with finding a solution. In short I want to work the Georgia Tech Research Institute because I believe you will challenge me, I believe I will grow and learn working for your institution, and I believe that I can contribute meaningfully to the world.

Sincerely,

Max Grinchenko