

October 24th 2013
N3Cat

Dear Members of the selection committee:

This letter to apply for a PhD studentship at N3Cat. I would like to apply for this position and I believe my academic background and experience are well suited for the needs of this endeavor.

I did my M.Sc in electronics and information technologies at the Karlsruhe Institute of Technology in Karlsruhe Germany, and the Politecnico di Torino in Turin, Italy. The curriculum of my course modules has covered a wide range of topics in electronics and communications engineering; it covered analogue and digital electronics design, wireless communications, optics and photonics, light and display engineering. This provides me with a strong background for working with wireless sensors. Furthermore, I had some courses related to management like entrepreneurship, economics and innovation management which gave me the experience to work on collaborative research projects with real life applications. My Master's thesis was named "*Development of an integrated liquid crystal phase shifter*" under the supervision of Prof. Dr. Christian Koos. The main goal of this project was to take advantage of the effect of a Liquid Crystal layer on top of a photonic waveguide to modulate an optical signal in phase. This experience has heightened my passion for the world of research and offered me valuable insight into how labs and experiments work in a professional environment.

As my curriculum vitae indicates, I have been exposed to excellent opportunities concerning research and laboratory-based environments. Furthermore, my experience doing an internship in Ireland boosted my interest in the topic of energy harvesting for wireless sensor networks. The most important thing is that thanks to my experiences I have developed the necessary skills to manage, lead and collaborate effectively with different sets of people and people from all over the world. I believe that I have the capability and potential to fulfill this PhD position and am confident that I could be an active, open-minded and useful researcher in N3Cat. I'm particularly interested in developing self-powered wireless sensor networks, which use an energy harvester as the main energy source. Would it be possible to do such a PhD at N3Cat?

It would be an honor to discuss this studentship with you in person. Enclosed, please find my CV for your review. I would be happy to provide additional references upon requests. Please, do not hesitate to contact me at any time should you require additional information or if I may be of further assistance.

Thank you for your time and consideration.

Sincerely yours,

M.Sc Jorge Méndez Astudillo