

Dear Sir or Madam

My name is Mostafa Mehrdad, a M.Sc. graduate in Civil and Environmental Engineering at Shahid Beheshti University. The following motivational letter aims to establish support for my application for the Ph.D. program at IIT Kharagpur and the University of Manchester. I am passionate about carrying out interdisciplinary research in this ever-demanding discipline of study.

I was always curious about mathematics, physics, and earth science. This eagerness to learn more and more about different subjects enhanced my problem-solving skills to a great extent and led me to the National Organization for Development of Exceptional Talents (NODET). One the next step, I achieved an excellent result in the National University Entrance Examination. Consequently, I began a Civil Engineering major at the University of Guilan. During my bachelor's degree, I took different courses like fluid and soil mechanics, dynamics, laboratory and project-based courses like hydraulics, fluid and soil mechanics lab, and other related courses. Taking these courses helped me experiment and grow enthusiasm to gain more knowledge about the earth's scientific theories and environmental issues. Moreover, working on different projects allowed me to learn computer softwares like R, ArcGIS, WaterCAD, and EPANET. While taking courses during my undergraduate studies, I acquired teamwork skills by playing a role in students' scientific association of Civil Engineering by planning different scientific seminars and events.

Shortly after finishing my undergraduate studies, I was accepted at Shahid Beheshti University to Studying Civil and Environmental engineering. My Civil Engineering background and knowledge enabled me to reach maximum efficiency in environmental studies during my master's studies. Moreover, I passed many courses, including "Air pollution engineering Principals," "Engineering Principals and Waste Management," Transmission and Dissemination Foundations and Pollutant Modeling," "RS & GIS Application in Civil Engineering and Lab" and many more courses which allowed me to learn many computer applications like ArcGIS, WaterCAD, R, EPANET, and many others. Similar to my undergraduate study period, I was an active student as a TA to teach Air Pollution Engineering Principals and Engineering Principals, and Waste Management under the supervision of Dr. Abbasi and Dr.Yeganeh. I worked on methane generation modeling from municipal landfills by taking advantage of intelligent models including neural net, support vector machine, and adaptive neuro-fuzzy inference system as my thesis subject under the collaborative supervision of Dr. Alighardashi and Dr. Abbasi. In the university, I also took a significant part in several extracurricular activities, despite my busy schedule during the research for my thesis. For example, I volunteered as a member of the Planning and Coordination of the Executive and Scientific committee units in the National Conference on Water loss and Consumption Management, Tehran, Iran, under the supervision of Dr. Tizghadam. After finishing my graduate study, I started my job as a research assistant to implement the Basel Convention in Iran at Shahid Beheshti University. As a research assistant, I learned multidisciplinary research skills and writing proposals competence for international funding competitions. As my research assistance period

has finished, I continued to work in Basel and Stockholm conventions regional center located in the Department of Environment of Iran.

Since the IIT Kharagpur and the University of Manchester specializes in engineering sciences, my education in the Shahid Beheshti University and my passion for specializing in my career would be relevant for a more technical approach towards a practical, future-oriented career. As a result, I'd like to pursue a job as an engineer while still honing my academic skills as a researcher to follow the Mechanical and Manufacturing Engineering program at the IIT Kharagpur and the University of Manchester. Becoming an expert in my area of interest and gaining experience in teaching and conducting research make this career path an ideal goal to pursue. In a nutshell, the courses would prepare me for a future in which I have a wider variety of options and chances, such as becoming an academic staff or launching an environmental firm in my hometown with a solid academic and research base.

In conclusion, what I most certainly would obtain by studying at the IIT Kharagpur and the University of Manchester, is not only formal education in a profession that has long piqued my interest, but it is also an effective way for me to expand my knowledge and talents so that I may be more well-informed and competent in both research and practice.