



भारतीय प्रौद्योगिकी संस्थान खड़गपुर

खड़गपुर - ७२१३०२, भारत

Indian Institute of Technology Kharagpur  
Kharagpur - 721 302, India

Department of Metallurgical & Materials Engineering

**Letter of Recommendation in favour of Mr. Manikandan Muruganandam**

I am writing this letter to give the highest possible recommendation for my postgraduate student, Mr. Manikandan Muruganandam. I met him in spring 2019-2020 semester for the first time when he approached me to be his advisor for his Master's thesis. Although he had an outstanding academic record, I could not judge his true potential as he was not a part of the postgraduate students' courses taught by me. However, when I explained his Master's thesis outline, he asked some intriguing questions and appeared intelligent in his first approach to the project. At our second meeting, I learnt that he had attended multiple computational materials science courses online from reputed universities and learnt several techniques to apply in microstructure modelling and simulation extensively. He did this independently even though I did not ask him to do so. I was pretty impressed by his motivation and independence.

As the COVID-19 pandemic took over the world by a storm, the new regulations instructed me to guide Manikandan remotely for his Master's thesis. The computational skills that he had developed in the first year of his Master's program allowed me to modify his project from an experimental work into a computationally intensive modelling project. The modification of his project into modelling work enabled us to work remotely and still perform impactful research. He is consistent in his efforts to publish a manuscript based on his project work.

In the summer of 2020, I teamed him up with a research scholar in our institute to collaborate and generate the algorithms necessary for his thesis. I enquired him about Manikandan and his project work progress in the meetings we had about every other week. He consistently reported positive feedback about Manikandan's performance and collaborative work ethic.

In summary, Manikandan is one of the most promising postgraduate students I have guided in recent years, and I firmly believe that he will be an outstanding asset to your institution. I give him my the highest recommendation.

*Sumantra Mandal*  
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Associate Professor      19/04/2021