

To whom it may concern

I am glad to be writing this letter of recommendation for Mr. Vishal Kabi. He joined Defence Research & Development Laboratory (DRDL) as a Junior Research Fellow after graduating with a M.Tech degree from Indian Institute of Technology, Kharagpur in 2021 and he has been working specifically in the Computational Combustion Division. Over the last one year and four months, he has mostly been involved in flow/thermal simulations of internal flows related to aerospace propulsion. He has become proficient in many of the software tools that are used in this area and is contributing significantly many of missile projects here. In addition, he has also been working on chemical kinetics modeling using both CHEMKIN, a commercial software package and CANTERA, a Python based open source framework.

There are many sequential tasks associated with propulsion system simulations. Starting with a Computer Aided Design (CAD) drawings, computational meshes have to be generated, appropriate algorithms and sub-models for relevant phenomena have to be picked for conducting the simulations and finally required information has to be extracted in the post-processing stage. Skills in these areas imparted by experts here have added to his domain knowledge and made him very consequential. Over his time in DRDL, he has simulated both internal flows and plumes of solid rocket motors and SCRAMJET combustors with a range of fuels.

Vishal was always a very intellectually curious person and it comes as no surprise that he has decided to pursue a career in research by enrolling for a doctoral program at IIT, Kharagpur. Specifically, he is interested in the research areas related to fluid/thermal/chemical sciences fields where he is well trained and quite knowledgeable. I recommend him strongly for the Ph.D. program involving these areas. He will be an asset to your research group as well as the institute.

As for my qualification, I have a Masters' and Ph.D. Degrees in Aerospace Engineering from Georgia Institute of Technology, USA. After graduation, I worked at Oak Ridge National Laboratory, Tennessee for 11 years before returning to India. For the last 12 years, I have been a scientist at DRDL, Hyderabad, India.

Sincerely,



V. Kalyana Chakravarthy
DRDL
Kanchanbagh
Hyderabad - 500058
India
Ph : (011) 40-2358-3308
e-mail : v_kalyana_chakravarthy@yahoo.co.in