

July 1, 2018

To whom It May Concern:

It is my great pleasure to write a reference letter for Mr. Mohammad Afzal Shadab, who is applying for the visiting position in your institute. I knew him one and half years ago when he joined my research group. At that time, he enrolled for my courses on Multiscale Modelling and Computational Fluid Dynamics (CFD) for inviscid flows, offered by the Department of Mathematics. Most of my research students come from Mathematics background, however, he, being an exception, comes with a background in Mechanical Engineering. This reflects on his physical approach to solving fundamental problems with a powerful imagination and engineering insight. I would consider him an excellent researcher with brilliant mathematical skills and be an excellent postgraduate students I know so far.

His mathematical intellect is reflected from his work on extending higher-order finite volume reconstruction from Cartesian grids to generally structured grids, where he meticulously derived fundamental mathematical relations from the scratch. For his research, he also received an invitation to give a conference talk in one of the focused conferences on the numerical simulation organized by Institute of Applied Physics and Computational Mathematics in Beijing, attended by highly acclaimed computational physicists across the world.

With my experience of supervising him, I would like to emphasize that Afzal is a self-motivated and hardworking researcher who requires minimal supervision. He possesses a sound practical knowledge of CFD concepts as evidenced from his research work and academic performance where he scored a perfect A+ in my course on Multiscale Modelling. He also possesses critical thinking skills and is open to discussing new ideas. He demonstrated his quick learning skills by literature reviewing, proposing, and numerically experimenting his idea in a very short duration. He is more focused towards physics of the problems, as I realized from his fundamental questions during the class lectures and personal meetings. While working on the research for a long time without presenting anything, he demonstrated his patience and perseverance in formulating a well-organized approach for his research problem and deriving the mathematical relations, before presenting it for the first time in our group meeting. He possesses a considerable experience of working with the conventional schemes.

As the Chairman of Scientific Computation Concentration (SCC) at HKUST, I witnessed his great enthusiasm for scientific computing from the involvement in many seminars organized by our committee. His desire of actively sharing his knowledge is evidenced from his building of research collaborations and volunteering for teaching

duties in the department. I have experienced his admirable communication and presentation skills and punctuality during our group meetings involving presentations and even personal meetings where he always showed up with a PowerPoint presentation.

In the end, I would like to encourage Afzal to take a visiting position in your institute. I wish him all the best in his future endeavours!

If you have any further questions, please feel free to contact me.

Sincerely yours,



Kun Xu  
Chair Professor