



Dr. Stefan Forcey
Department of Mathematics
December 11, 2018

University of Southern California
Viterbi School of Engineering
Computer Science, PhD program

Dear Graduate Committee,

This is a letter of reference in support of Mohammed Ahmed. I have had the privilege of being Mr. Ahmed's professor for two classes in his course of study towards a Master's degree in Computer Engineering from the University of Akron. Mr. Ahmed achieved the highest grade of A both times I taught a course in which he was enrolled: Combinatorics and Graph Theory, and Advanced Combinatorics and Graph Theory. The material we covered included generating functions, both ordinary and exponential. In graph theory we discussed features of planar and non-planar graphs. In the Advanced course we focused on polytopes and linear programming. Mohammed showed that he could quickly grasp complex ideas and present them to the other students.

In the advanced course students presented topics to the class, and Mr. Ahmed did very well in this regard, both in teams and individually. For the first presentation he studied the approach of linear programming for the minimum cut, maximum flow problem--- comparing the Ford and Fulkerson algorithm to the cut polytope method. For the second presentation he explained the features of the polytope family known as the multiplihedra. All his work was exemplary, and his high grades demonstrate that he has the ability to master any subject he chooses, as well as the consistent diligence required to put in the necessary efforts.

To summarize, I believe Mr. Ahmed has the potential to succeed as a graduate student at USC, and highly recommend his acceptance as well as any financial support that he may be eligible for.

Sincerely,

A handwritten signature in black ink, appearing to read "Stefan Forcey".

Dr. Stefan Forcey
Associate Professor of Mathematics

Department of Theoretical and Applied Mathematics
Buchtel College of Arts and Sciences
Akron, OH 44325-4002
330-972-7400 • 330-374-8630 Fax • www.math.uakron.edu

The University of Akron is an Equal Education and Employment Institution