



To whom it may concern

July 12, 2013

Internship of Mr. Nilesh Kulkarni

Dear sirs and ladies,

This letter is to confirm that Mr. Nilesh Kulkarni, Student of the Indian Institute of Technology Bombay, participated in research work at our institute between May 06 and July 12, 2013, funded by a research scholarship of our institute.

During his stay in Braunschweig, Mr. Kulkarni worked on current research problems in algorithmics, under my direct supervision. Particular activities included theoretical and practical algorithmic aspects of robot navigation, in particular

“Online Triangulation and Navigation Using a Swarm of Simple robots”.

In this context, he managed to make great contributions to an ongoing international research project that aims at combining theory and practice of a state-of the art platform developed by our colleagues at Rice University in Houston, USA, and robot navigation approaches developed by us. The particular twist is that these robots are relatively cheap, making it possible to employ swarms of them, but only have limited sensing capabilities. Mr. Kulkarni worked on practical aspects and managed to implement a number of delicate maneuvers, demonstrating that it is possible to achieve accuracies far beyond those of the involved sensors. He also made valuable contributions to the corresponding theoretical work, where he

helped in improving a current research paper. In addition, he participated in the planning stages of future work, which will undoubtedly lead to further publications involving him. His work involved direct interaction with me and other group members, but also frequent interaction (via video conferencing) with our colleagues in the USA.

Mr. Kulkarni has been a pleasure to work with. He managed to easily grasp a variety of novel ideas that go beyond the published state of the art, and contributed to extensions. He also managed to spot a number of mistakes in an existing paper draft, and thus contributed to its publication success. His strength in combining theory and practice is impressive and goes way beyond what can be expected of an excellent graduate student, not to mention a sophomore.

In addition, Mr. Kulkarni attended a graduate class on Online Algorithms that focused on a number of current research papers. His participation was quite good, and demonstrated his excellent intellectual capabilities.

Overall, Mr. Kulkarni's stay has been extremely successful. I have no doubt whatsoever that he will become a productive scientist, if he chooses to be one; I am also sure that he will succeed at anything that captures his attention and dedication.

With best regards,

A handwritten signature in blue ink, appearing to read 'Sándor Fekete', with a stylized, cursive script.

Prof. Dr. Sándor P. Fekete