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Dear Committee Members,

I am pleased to have the opportunity to write a letter of support for Kelly Hasler. I have known Kelly for two years, and have watched her develop into one of our top Mathematics and Computer Science majors. To obtain these two hard-to-acquire degrees in four years, while maintaining a high GPA is an accomplishment that very few of our students can match.

This past summer, Kelly and I were able to design a new numerical method for approximating solutions to certain PDE's (see her report for more details about the method). My graduate thesis involved the development of a similar numerical method. Much of the framework used in developing the new method was inherited from my old method, but the *heart* of Kelly's new numerical method is a decision making routine which accomplishes a key approximation more accurately *and* more efficently than the routine in my old method. I attribute the primary idea which lead to this new method to Kelly. We were having a typical discussion involving the research and we were talking about what would work and what would not work. At one point, she proposed a simple idea. I was sure that the method she was proposing was too simplistic to be of any real use, but we decided to try it in the hopes that we could improve upon it after we discovered it's limitations. As it turns out, I was wrong; the limitations that I thought would exist simply do not, and the simplistic nature of the idea led to fewer computations.

Kelly will be the sole presenter of the material at the Sixty-Eighth Annual Meeting of the Mathematics Association of America. This is a gathering of Mathematics faculty and students from around the state. Most of the presentations will be made by faculty, but with Kelly's understanding of this material, I am confident that she will fit right in. Kelly has presented this material to a more general science gathering at the Argonne Symposium for Undergraduate Research, and it was very well received. Presenting to a Mathematics audience outside of the university is the next logical step for disseminating the information.

Many members of the Mathematics Department plan to attend the meeting every year. This spring, the meeting is too far off (Superior, WI) to attend without staying two nights. If other costs arise, I expect that the department will cover them.

Thank you for considering this request.

Sincerely,

Robert A. Hoar

Dr. Robert Hoar