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DIVISION OF CARDIOLOGY
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Biocomplexity Faculty Search Committee
c / o Prof. Rob de Ruyter van Steveninck
Department of Physics
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Dear Prof. van Steveninck :

This reference letter is provided at the request of Dr. Mingzhou (Joe) Song, who has asked me to serve as a reference on his behalf. I understand that Dr. Song is being considered by your institution for the position of assistant professor.

I knew Dr. Song for seven years while he was working on his master's project in ultrasound imaging simulation and his doctoral research in 3-D left ventricular border detection and reconstruction from 2-D ultrasound heart images at the University of Washington. As a member of his master's and doctoral supervising committee, I had an opportunity to observe and interact with Dr. Song in weekly research group meetings. I was the only physician on his committee, and I provided the impetus as well as all of the funding for his projects. I worked with his thesis advisor, Prof. Robert Haralick, from 1990 until 2001 and can judge Dr. Song in comparison with the three other PhD students and several MS students of Prof. Haralick's who also worked on my projects.

Dr. Song was unquestionably the best engineer. He tackled a difficult problem and came up with good solutions. In one project he had to take on work that a previous student had started and left undone. Dr. Song retrieved what was usable and improved on it until the project was completed.

Dr. Song clearly demonstrated his ability to do independent research through an unfortunate circumstance. During the last year and a half of his PhD. Dr. Song had to complete his research and thesis with minimal guidance because Prof. Haralick took unexpected early retirement and departed abruptly for New York on one month's notice. Dr. Song had to work alone, with only email contact with his advisor except for rare meetings when Prof. Haralick flew back to Seattle. Nevertheless he was the first to graduate among his fellow students who entered the program at the same time or earlier. The success of his thesis work was demonstrated by a strong paper in the prestigious journal IEEE Transactions on Medical Imaging shortly after his graduation.

To say that Dr. Song worked hard is probably superfluous, because all of Prof. Haralick's students worked very hard for their degrees. Indeed he had the reputation for being one of the hardest professors. Therefore I would like to comment on other traits that may be pertinent to your faculty search.

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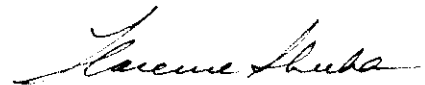
In my collaboration with Prof. Haralick, I insisted on weekly meetings in which each graduate student would present the results of his/her work for group discussion and comment. Dr. Song was very clear in his presentations. When I insisted that all of the engineers provide their explanations in English, not in mathematical formulae, he had no difficulty in complying. That he kept an excellently organized research notebook was evident from the speed with which he could always pull out graphs or data even from months before to answer questions on the spot. More importantly, he was able to explain the engineering to me, a cardiologist, in an easily understandable language without ever giving the impression of talking down to me. That level of clarity is a rare talent amongst engineers, but wonderful for the future of collaborations between the Schools of Medicine and Engineering. He was sincere and forthright, never concealing errors or problems. His interactions with the other students were great, and he shared both the tasks (such as back-up) as well as his software without reservation.

Dr. Song also interacted well with my computer programmer, sonographer and other staff members in my lab in learning how cardiac images are segmented manually, transferring data sets, learning basic cardiology concepts, and programming. He was respectful of my lab's schedule and competing priorities, and consequently these interactions were smoother and more efficient than with some of the other students.

Based upon his research performance and my understanding of the position for which he is applying, I believe Dr. Song to be a good fit for the job and that he will perform competently and handle new challenges and opportunities well. Dr. Song has made steady progress in research at Queens College. In his future career, I expect Dr. Song to contribute significantly in tackling problems in biology and medicine using his engineering expertise in computation and statistics.

If you would like to discuss this further, please feel free to contact me.

Sincerely yours,



Florence H. Sheehan, M.D.