



BROWN

DEPARTMENT OF CHEMISTRY

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Biocomplexity Faculty Search  
c/o Ms. Yana Teterina  
Department of Physics  
Indiana University  
Swain West 117  
727 East 3rd St.  
Bloomington, IN 47405-7105

Dear Search Committee:

This letter is in support of a recent application by Dr. Art Cho for a position in your department. I have known Art for the past dozen years, first while he worked with me as a Ph.D. student, then as he was a postdoctoral fellow with Bill Goddard and Bruce Berne. Art's graduate student work with me was interrupted by South Korean national service demands.

Let me say at the outset that Art is a strong candidate. He actually started graduate studies in Applied Math, switching later to Physics. Because of our overlapping interest in condensed-matter physics, he then chose to do his doctoral work with me in Chemistry. As if this were not enough, Art did his South Korean national service work in the advanced parallel computing group at Samsung!

Art's unusually diverse background in the physical, mathematical and computational sciences is one of his real strengths. In particular, it gives him both a unique perspective on modern science and the formal, computational and phenomenological skills to enable him to pursue diverse applications in a coherent fashion.

In his thesis work with me, Art made good use of his diverse background by formulating a wavelet approach to equilibrium path integral problems. This work, conceived and executed totally on his own, offers the possibility of a compact, numerically efficient approach to many-body quantum problems.

I have not followed Art's work as closely since he left the group, but I would be quite surprised if Art has not taken advantage of the strong laboratories of Goddard and Berne to add to his already impressive set of research tools. I am sure those researchers will provide a more complete view of his current activities.

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One of Art's strengths is his ability to work with others. Evident in both his graduate studies and in his Samsung research, he has an easy-going style that seems to permit him to work effectively with a broad range of colleagues. Based on this and on his well-delivered research seminars, I would anticipate that he would be a strong and effective classroom teacher.

I have the very good fortune of having a number of excellent graduate students and postdoctoral fellows work with me over the years. I would include Art in this list and recommend him to you strongly. If I can be of further assistance, please do not hesitate to contact me.

Yours truly,

A handwritten signature in black ink, appearing to read "J. D. Doll". The signature is written in a cursive style with a large, prominent initial "J".

J. D. Doll

*Jesse H. and Louisa Sharpe Metcalf Professor*