

Wah Chiu, Ph.D.
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December 22, 2004

Indiana University
Biocomplexity Faculty Search Committee
c / o Prof. Rob de Ruyter van Steveninck
Department of Physics
Swain Hall West 117
Bloomington IN, 47405-7105

Dear Search Committee Members

It is my pleasure to write this letter to support Dr. Julio E Castrillon who is applying for the faculty position in your department. I know Julio through our collaboration with Prof. C Bajaj in co-developing visualization and segmentation tools for analysis of intermediate resolution structures of large biological assemblies determined by electron cryomicroscopy. The current trend in structural biology is to study assemblies with multiple molecular components. This type of sample is difficult to crystallize. Electron cryomicroscopy is an ideal methodology to determine its structure at subnanometer resolution. A large density map of an assembly with over several to tens of MDa molecular mass presents new challenge in interpreting them in terms of molecular boundaries and structural features such as domains and secondary structure elements. Therefore, Julio's research interest to develop tools to assist in density map interpretation is critical in structural proteomics of large biological assemblies. A number of research ideas that Julio has is rather novel and requires time to develop and apply to authentic structures which will be generated by structural biologists at a steadily increasing rate. I believe that Julio is well suited to tackle this research problem in computational imaging. In addition, Julio has a credible background in computer science that he is ready to get involved in solving other computational biology problems when he is in residence in a biomedical research environment. I strongly support his application to the faculty position in your department with very high enthusiasm.

Sincerely yours,

A handwritten signature in black ink that reads "Wah Chiu".

Wah Chiu, Ph.D.
Alvin Romansky Professor of Biochemistry