## DEPARTMENT OF PHYSICS

Faculty of Science



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To Whom It May Concern:

## Hyunbum Jang - Junior faculty position in biocomplexity

Hyunbum worked on his PhD at the University of Auckland with me for five years. His PhD research topic was the interface localization-delocalization transition in thin films. His PhD thesis was presented in August 1999 and the degree was subsequently been awarded. The fact that his thesis was essentially based upon 4 papers published in high quality journals (Phys.Rev.B, J.Phys.:Condensed Matter and Phys.Rev.E) is testament to the excellence of his work. After completing his PhD, Hyunbum took up a post-doctoral position in Carol Hall's group at North Carolina State University where he worked on simulation studies of biomolecular systems. Subsequently he moved to the Department of Physiology at the Johns Hopkins University School of Medicine where he is working with Tom Woolf at present. However we have kept in touch over this time and collaborated in further simulation studies of hysteresis and the dynamic phase transition in thin ferromagnetic films. This work has been the subject of four one published in Phys.Rev.B and Phys.Rev.E.

As a student Hyunbum was hard working and conscientious. His PhD took longer than some might expect. But this was primarily a result of emigration to New Zealand, acquiring a working fluency in English, switching from experimental to computational work and the addition of a child to his family. I can personally confirm that the first and last of these events can play havoc with one's research output.

His research work with me has been of a uniform high standard, marked by a workmanlike thoroughness. In Auckland Hyunbum concentrated on Monte Carlo methods, but also acquired good appreciation of molecular dynamics. A skill that was later put to good effect in his postdoctoral work with Carol Hall at North Carolina State University and Tom Woolf at Johns

Hopkins. Hyunbum's backgound in Korea was in the area of liquid crystals and he maintains a strong interest in this area. However this did not stop his PhD work ranging across a wide range of systems - ferromagnets, ferroelectrics and uniaxial liquid crystals - in his investigations of the interface localization-delocalization transition in thin films. Subsequently he has applied and developed his simulation skills in studies of biomolecular systems at both North Carolina State University and Johns Hopkins University. I believe this demonstrates his wide interests and abilities for tackling interdisciplinary problems.

Hyunbum is a quiet, but sociable character that would make an excellent addition to your department. Not only in establishing an innovative research program in that should attract substantial external funding, but also in his contribution to both undergraduate and graduate teaching. I have no doubt he would make a suitable candidate for a post you might have available.

If you need any further information, do not hesitate to contact me

Yours truly,

Malcolm J Grimson Associate Professor

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