



UNIVERSITY OF MASSACHUSETTS
AMHERST

Polymer Science & Engineering Department

Murugappan Muthukumar
Wilmer D. Barrett Professor

Silvio Conte National Center for Polymer Research
120 Governors Drive
Amherst, MA 01003-9263
(413) 577-1212
Fax (413) 545-0082
Email muthu@polysci.umass.edu
<http://theory.pse.umass.edu>

October 14, 2003

Faculty Search Committee
c/o Professor James Glazier
Department of Physics
University of Indiana
Swain Hall West 117
Bloomington, IN 47405-7105

Dear Search Committee,

It is a great pleasure for me to write this letter in support of Dr. Liviu Movileanu, who has applied for a position in your department.

Liviu is a fantastic scientist, with a keen mind. His measurements, in collaboration with Hagan Bayley, of single-molecule-translocation through heptameric α -hemolysin protein channels are both pioneering and revolutionary. His stochastic sensing research using PEG-attached protein channels is very beautiful, and has opened a way of engineering nanoscopic channels with ionic activity. Liviu's work has initiated a rich trail, where many prominent researchers [for example, Branton (Harvard), Deamer (UCSC), Kasianowicz (NIST)] have begun to implement this technology for detecting and sequencing single polymers, and for stochastic sensing of a very small number of molecules of analytes. Liviu's approach will be a significant tool in biomedical engineering and analytical chemistry, and there are too many problems this approach can solve. The research area of Liviu has a very high potential to deliver many molecular devices and conceptual breakthroughs. More importantly, the intellectual strength and the scientific background of Liviu make him an ideal candidate, and I sincerely expect him to become one of the leaders in the future.

I have known Liviu for the past four years, primarily through my theoretical interests on his research on stochastic sensing. I have held numerous discussions with him. He is articulate and imaginative. I have listened to his technical presentation, which is thorough and penetrating. I fully expect him to be an excellent teacher in classrooms as well.

I very strongly recommend Liviu for a faculty position in your department. If my department were to have a search in single-molecule detection, I am confident that we would select Liviu. Please do not hesitate to contact me if you have any questions.

Yours sincerely,

A handwritten signature in black ink that reads 'M. Muthukumar'.

M. Muthukumar