

UNIVERSITY OF MINNESOTA

Twin Cities Campus

*School of Mathematics
Institute of Technology*

*127 Vincent Hall
206 Church Street S.E.
Minneapolis, MN 55455
Fax: 612-626-2017*

October 28, 2003

Faculty Search Committee
Department of Physics
Indiana University
Swain Hall West
Bloomington, IN 47405-7105

Dear Colleague,

This is a letter of recommendation for **Dr. Maria Gracheva**, who has applied for a position in your department. Gracheva was a post-doc with me at Minnesota for the past two years, until she left to go to Illinois this summer.

While at Minnesota Gracheva worked on various aspects of modeling cell motility. This is currently a very active area of research, both from the experimental and the theoretical side, because of its importance in fundamental processes such as embryonic development, tumor angiogenesis, and the immune response. Her major objective was to develop a continuum model for cell motility, which involves developing continuum descriptions of stress in a material that generates active forces, dealing with the free boundary problem that arises because the shape changes, and developing appropriate computational techniques for solving the resulting equations of motion. The work progressed more slowly than I had hoped, largely because she had to learn both the biological background and the continuum mechanics background. Nonetheless, significant progress was made and a paper on that work will appear soon.

Maria is a very gentle person, and has a very pleasant personality and works well in a group. I believe she would make a real contribution to a group in Mathematical Biology, and I recommend her to you for your consideration.

Sincerely yours,



Hans G. Othmer

Professor of Mathematics
Member Graduate Faculty of Chemical Engineering