

Department of Mathematics
University of Minnesota
127 Vincent Hall
206 Church St. S.E.
Minneapolis, MN 55455 USA

November 3, 2005

A letter of Support for **Boris Shakhnovich**

To the Chair of the Hiring Committee,

This letter intends to express strong support for Boris Shakhnovich (Borya) who has applied for a Tenure Track position at your department. It emphasizes our involvement in an active collaboration as well as my very strong impressions of Borya as a scientist. Indeed, Borya is a highly knowledgeable, creative, active, and independent multidisciplinary researcher who is involved in many ongoing collaborations. He is dedicated to his inspiring plan of describing both the systematic relationship between genes, as well as the evolutionary processes that may have led to them.

My own primary research interests are within mathematics and its applications. I have met Borya in a workshop at IPAM (Institute for Pure and Applied Mathematics in UCLA). While discussing mathematics and bioinformatics, Borya suggested to me the mathematical problem of measuring distances between proteins based on Gene Ontology data. Since then, we have been communicating enthusiastically, and we have come up with a very satisfying way of doing it. We are currently in the process of submitting our result and moving on to different applications where extensions of our tools are expected to work.

Borya is an exceptional young scientist. He has a very clear and independent vision which he pursues actively. On the one hand he has a broad overview which makes him an excellent multidisciplinary researcher. On the other hand he is incredible with mathematical details and computational issues, so that he can communicate well with computer scientists, statisticians and mathematicians. Borya is also a careful reporter who searches genuinely for the truth. Due to the objectivity of truth in biology, this property makes him an invaluable research collaborator. Borya was very cautious incorporating various tests, checking that our algorithm produced satisfying results. In particular, we have tested carefully the sensitivity of our results to change of parameters, noise and randomness. We have also made sure to compute the numerical results (given by our

algorithm) independently of the biological inference, in order to prevent the possibility of bias.

Above all, Borya has a deep understanding of evolutionary biology and a unique point of view that directs his research in an interesting and independent direction. He also communicates it very well to others. It seems to me that at this early stage of his life, Borya is already on the rise as a leader in his area, pursuing his promising vision.

In view of my experience with him, Borya is a remarkable candidate for a computational biology position in a leading university. I believe that people from many departments (biology, biochemistry, school of medicine, computer science, statistics and mathematics) will find him an asset, and that the university as a whole will find him a very precious future investment.

Sincerely yours,

Gilad Lerman, Assistant Professor
Department of Mathematics
University of Minnesota
127 Vincent Hall
206 Church St. S.E.
Minneapolis, MN 55455 USA
e-mail: lerman@math.umn.edu