

# FAST

## FLUIDES, AUTOMATIQUE et SYSTÈMES THERMIQUES

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Orsay, December 8<sup>th</sup> 2003

Dear Colleagues,

German Drazer has asked me to write a letter on behalf of his application for a position in the Indiana University and I am glad to send it to you.

I have known G. Drazer since 1995 and followed his career ever since. He prepared at that time his Doctorate Thesis and worked for a large part in an experimental group of the "Facultad de Ingenieria" of the Buenos-Aires University led by Pr. Marta Rosen. We have a close cooperation with this group for many years - particularly in the field of porous media in which he was active at the time. I had been struck at the time by the particularly promising qualities of German : he displayed an exceptional blend of abilities : he had first an outstanding theoretical and mathematical background which he applied to the basic study of stochastic processes. At the same time, he already played an important part in the group by interacting effectively with experimentalists of diverse fields, suggesting new experiments and contributing decisively to their interpretation. German acquired quickly in this way a status of intellectual leadership in this group of excellent scientific level and managed to publish several papers in world class journals during this period. In view of his impressive achievements, I encouraged him very strongly to look for a postdoctoral position in a foreign country and recommended his applications without reserve.

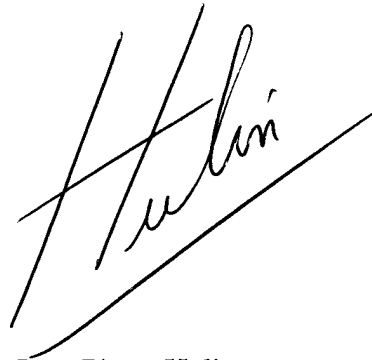
These promises were fully confirmed by the work of German Drazer in CUNY : we remained in close contact with him during that period since he works for a part on the themes of our CNRS-NSF cooperation program with CUNY (led by Pr. J. Koplik on the US side). This part of his work deals with transport in self-affine rough fractures : the cooperation with my colleague H. Auradou and myself has been extremely fruitful and G. Drazer has suggested many novel ideas (for instance on the relation between the fractal structure of the fluid displacement fronts and the self-affine exponent of the surface). These suggestions were verified both through his numerical simulations using powerful lattice Boltzmann gas techniques and through our experiments. His work is opening many new possibilities in this field. During the same period, he proved able to realize original and high quality work in other - quite different - fields such as the rheology of sheared suspensions, mixing processes and anomalous diffusion processes. He has also lately developed a very strong (and fruitful)

interest in the modelization of flow and transport processes in nanostructures, a domain in which the molecular dynamics methods which he masters are particularly succesful.

In short, I have a very high opinion of German Drazer and consider him as a top level scientist - in the top 2-3% of the young scientists I meet recently -. I do sincerely believe that his exceptional scientific abilities are up to the high standards of your departement : I am particularly impressed by his adaptability to new topics and the way in which he combines an outstanding theoretical and numerical background with excellent abilities to interact with experimentalists and generate new ideas and research. He also had a good interaction in his work with younger students and has acquired a good experience with teaching in Argentina. He is a very hard worker who proved in Argentina that he could produce autonomously a large amount of high quality results in a difficult environment : his desire for progress pushed him towards a postdoc in the United States where, in my opinion, he has fully confirmed these qualities. He has also always been very autonomous and able to identify important issues in the problems he dealt with and I am sure he will become a leader in the field he will chose.

I recommend therefore without any reserve the application of this very promising scientist for the position you offer in the Indiana University.

With my best regards,

A handwritten signature in black ink, appearing to read 'Hulin', written in a cursive style. The signature is positioned above a horizontal line that extends to the right.

Jean-Pierre Hulin  
Directeur de Recherches, CNRS