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CINFIDENTIAL

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Professor Jan Trlifaj,
Vice-Dean, Research and International Affairs Department

Recommendation for Dr. Marco La Mantia

I know Dr. Mantia very well. I write this assessment from Habilitation thesis and my experience with him.

Research activity

Dr. Mantia joined the group of Prof. Ladik Skrbek in 2009. The group of Prof. Skrbek is one of the most outstanding groups in the field of low temperature physics. After the attendance, Dr. Mantia has made lots of important contributions. His research field is hydrodynamics of superfluid helium. This topic is old and starts from 1940's. The recent developments come from the novel visualization experiments. There are a few experimental groups capable of cryogenic visualization in the world, and the Prague group is one of them. Dr. Mantia built up the optical cryostat with the particle seeding system, and succeeded in the experiments and published lots of papers in the high-quality journals. Thanks to the contribution of Dr. Mantia, the Prague group can address several kinds of flows such as thermal counterflow, coflow and oscillating flow. The most important interest is what happens to the velocity field in turbulent flow of superfluid He. Dr. Mantia obtained the PDF of the velocity field and the acceleration field, and found the crossover between the classical behavior at large scales and the quantum behavior at small scales. Because of these successful works, he has been invited to many international conferences like APS and DPG etc. He makes international collaboration with many worldwide scientists. He now plans to study the wall-bounded quantum flow, which is one of the hot topics in the field, and so he is awarded in 2015 a Czech Science Foundation grant. I can tell that Dr. Mantia is currently one of the leading scientists in the field.

Educational activity

I do not know very well his educational activity. However, he successfully supervised some graduate and undergraduate students, and seems to do well with them in the Prague group. It is a good news for evaluating his educational activity.

Conclusion

Dr. Mantia should be appointed as an associate professor.

Sincerely yours,

Professor Makoto Tsubota
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