Random walks, random configurations, and horocyclic products WOESS Wolfgang P 19115-N18

Review

1. Scientific success of the project

Contribution and importance of the work to the further development of the scientific discipline, any importance for related disciplines (transdisciplinary questions and methods), quality of the dissemination of the scientific results (publications, activities at conferences and so on)

Comments

The project has lead to a considerable body of very good work, which has served to advance the core area: graphs and random configurations associated with random walks. Particularly noteworthy is the work on percolation and the lamplighter group, that of the PhD student Huss on ,router models', and the harmonic analysis work of Georgakopoulos.

The dissemination via publication, conferences etc. Is very good.

2. Development of human resources in the course of the project

Improvement of the project leader's standing in the relevant scientific community; involvement of young scientists in the project work; development of international contacts

Comments

The PL has been able to leverage this grant to build up a very strong team of researchers associated with his University. The outcomes of the training of junior researchers are excellent, with all the researchers having moved to good positions at good Universities, most of them internationally.

3. Effects of the project beyond the scientific field

(in the sense of applications in or impacts on social, cultural, ecological, medical, economic and/or technological areas)

Comments

I would not expect this (usually) from a project in pure mathematics.

4. Project performance (in the sense of efficient use of available resources)

Were the goals achieved? Were the changes to the original plan sensible? What is the relation between the results obtained, the duration of the project and the resources available?

Comments

The project outcomes are broadly in line with the original plan.

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5. Future perspectives of the research work

Should the topic be pursued or should the scientists involved be advised to switch their attention to a different area? What goals does the referee feel should be set for future work?

Comments

In general terms the project is developing our understanding of "complex stochastic systems", an area at the centre of modern probability theory and statistical physics. So continuation of this work is strongly advised.