Assaf Shapira

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Research interests

In my research, I am mostly interested in mathematical statistical physics. In my PhD I was mostly studying a certain type of interacting particle systems called kinetically constrained models, which were introduced in order to study glassy materials; where my main focus was on their behavior in a disordered environment.

Education

2016–2019 **PhD. in Mathematics**.
Paris Diderot University, under the supervision of Cristina Toninelli.

2014–2016 **M.Sc. in Theoretical Physics**.
École Normale Supérieure, Paris.

2010–2014 **B.Sc. in Mathematics and Physics**.
Technion, Haifa.

Work and Research

2017–2019 **Teaching assistant**, *Paris Diderot University*.

2016 **Research internship in statistical physics**, *LPTENS*, under the supervision of Kay Wiese.

2015 **Research internship in probability**, *LPMA*, under the supervision of Giambattista Giacomin and Cristina Toninelli.

2014 **Instructor in an experimental physics course**, *Technion's physics department*.

2013 **Section editor in "Netgar"**, *Technion's mathematics department journal*.

2013 **North Rhine-Westphalia scholarship program**, *research in experimental physics and nanotechnology*, University of Bielefeld.

2012 **Kupcinet Getz summer school**, research internship in probability under the supervision of Itai Benjamini, Weizmann Institute of Science.

Publications

F. Martinelli, A. Shapira, and C. Toninelli, "Diffusive scaling of the Kob-Andersen model in $\mathbb{Z}^d$," *arXiv preprint arXiv:1904.11078*, 2019.

A. Shapira and E. Slivken, "Time scales of the Fredrickson-Andersen model on polluted $\mathbb{Z}^2$ and $\mathbb{Z}^3$," *arXiv preprint arXiv:1906.09949*, 2019.

L. Benigni, C. Cosco, A. Shapira, and K. J. Wiese, "Hausdorff dimension of the record set of a fractional brownian motion," *Electron. Commun. Probab.*, vol. 23, 8 pp. 2018. DOI: 10.1214/18-ECP121. [Online]. Available: https://doi.org/10.1214/18-ECP121.

G. Giacomin, C. Poquet, and A. Shapira, "Small noise and long time phase diffusion in stochastic limit cycle oscillators," *Journal of Differential Equations*, vol. 264, no. 2, pp. 1019–1049, 2018.

A. Shapira, "Kinetically constrained models with random constraints," *arXiv preprint arXiv:1812.00774*, 2018.

——, "Metastable behavior of bootstrap percolation on Galton-Watson trees," *arXiv preprint arXiv:1706.08390*, 2017.

A. Lampert and A. Shapira, "On maximizing the speed of a random walk in fixed environments," *Electron. Commun. Probab.*, vol. 18, 9 pp. 2013. DOI: 10.1214/ECP.v18-2431. [Online]. Available: https://doi.org/10.1214/ECP.v18-2431.

Awards

2007 **Honorable mention**, *Asian Physics Olympiad*, Shanghai, China.
2007 **Silver Medal**, *International Chemistry Olympiad*, Moscow, Russia.
2007 **3rd place**, *National mathematics Tournament of Towns*.

Languages

Hebrue	**fluent**	*mother toungue*
English	**fluent**	
French	**fluent**	
German	**good knowledge**	