

Wesley Pegden

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- CURRENT POSITION **Carnegie Mellon University, Pittsburgh, PA**
Assistant Professor, 2013–present
- POSTDOCTORAL **Courant Institute, New York, NY**
NSF Postdoctoral Fellow, 2010–2013
- EDUCATION **Rutgers University, New Brunswick, NJ**
Torrey Fellow (2005–2007)
Ph.D., May 2010. Advisor: József Beck
Thesis: “Graphs, games and geometry”.
Budapest Semesters in Mathematics, Budapest, Hungary: 2004–2005
University of Chicago: 2001–2004
BA in Mathematics, with Honors.
- PUBLICATIONS The Apollonian structure of integer superharmonic matrices, with L. Levine and C. Smart (2013).
Apollonian structure in the Abelian Sandpile, with L. Levine and C. Smart. (2012): <http://arxiv.org/abs/1208.4839>.
Convergence of the Abelian Sandpile, with Charles K. Smart, to appear in *Duke Mathematical Journal* **162** (2013) 627–642.
An extension of the Moser-Tardos algorithmic Local Lemma, to appear in *SIAM J. Discrete Math.*
Critical graphs without triangles: an optimum density construction, to appear in *Combinatorica*.
The Lefthanded Local Lemma characterizes chordal dependency graphs, in *Random Structures & Algorithms* **41** (2012) 546–556
Highly nonrepetitive sequences: winning strategies from the Local Lemma, in *Random Structures & Algorithms* **38** (2011)
Sets resilient to erosion, in *Advances in Geometry* **11** (2011) 201–224.
The Hales-Jewett number is exponential, with J. Beck and S. Vijay, in *Analytic Number Theory: Essays in Honour of Klaus Roth* (Eds: W.W.L. Chen, W.T. Gowers, H. Halberstam, W.M. Schmidt, R.C. Vaughan), Cambridge University Press 2009.
A finite goal set in the plane which is not a winner, *Discrete Mathematics* **308** (2008) 6546–6551.
Distance Sequences in Locally Infinite Vertex-Transitive Digraphs, *Combinatorica* **26** (2006) 577–585.