

# Burcu Yucesoy

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## Education:

- B.S., 2004, Physics Engineering, Istanbul Technical University.
- M.Sc., 2007, Physics, Istanbul Technical University; advisor A.N. Berker
- Ph.D., 2013, Physics, University of Massachusetts Amherst; advisor J. Machta (2014 Kandula Sastry Thesis Award for outstanding Ph.D. thesis in Physics)

## Employment:

- 2001-07 Istanbul Technical University, *Teaching Assistant*
- 2007-09, University of Massachusetts Amherst, *Teaching Assistant*
- 2009-12, University of Massachusetts Amherst, *Research Assistant*
- 2013-17, Center for Complex Network Research, *Postdoctoral Research Associate*
- 2017-Present, Center for Complex Network Research, *Associate Research Scientist*

## Publications:

1. "Phase diagrams and crossover in spatially anisotropic  $d=3$  Ising, XY magnetic, and percolation systems: Exact renormalization-group solutions of hierarchical models"  
A. Erbas, A. Tuncer, **B. Yucesoy**, and A. N. Berker, Phys. Rev. E **72**, 026129 (2005).
2. "Field-driven hysteresis of the  $d=3$  Ising spin glass: Hard-spin mean-field theory"  
**B. Yucesoy** and A. N. Berker, Phys. Rev. B **76**, 014417 (2007).
3. Comment on "Finite-Size Berezinskii-Kosterlitz-Thouless Transition at Grain Boundaries in Solid 4He and the Role of 3He Impurities"  
**B. Yucesoy**, J. Machta, N. Prokofev, and B. Svistunov, Phys. Rev. Lett. **104**, 049601 (2010).
4. "Evidence of Non-Mean-Field-Like Low-Temperature Behavior in the Edwards-Anderson Spin-Glass Model"  
**B. Yucesoy**, H. G. Katzgraber, and J. Machta, Phys. Rev. Lett. **109**, 177204 (2012).
5. "Correlations between the dynamics of parallel tempering and the free-energy landscape in spin glasses"  
**B. Yucesoy**, J. Machta, H. G. Katzgraber, Phys. Rev. E **87**, 012104 (2013).
6. "Low-temperature behavior of the statistics of the overlap distribution in Ising spin-glass models"  
M. Wittmann, **B. Yucesoy**, H. G. Katzgraber, J. Machta and A. P. Young, Phys. Rev. B **90**, 134419 (2014).
7. "Untangling Performance from Success."  
**B. Yucesoy** and A-L Barabási, EPJ Data Science **5**, 17 (2016)
8. "Designing for insight: A case study from tennis player analysis"  
K. Albrecht and **B. Yucesoy**, IEEE Computer Graphics and Applications **36.4**, 102 (2016).

**Invited Talks:**

- The 4th Satellite On Quantifying Success at the International School and Conference on Network Science, Indianapolis, IN (June 19 - 23, 2017), "Success in Books: A Big Data Approach to Bestsellers and Beyond"

**Contributed Talks:**

1. 94th Statistical Mechanics Conference, Rutgers University, New Brunswick, NJ (December 18-20, 2005), "Phase diagrams and crossover in spatially anisotropic XY magnetic systems: Exact renormalization-group solutions of hierarchical models"
2. 96th Statistical Mechanics Conference, Rutgers University, New Brunswick, NJ (December 17-19, 2006), "Spin-Glass Hysteresis in  $d=3$ "
3. 9th Annual Greater Boston Area Statistical Mechanics Meeting, Brandeis University, Waltham, MA (October 13, 2007), "Field-driven hysteresis of the  $d = 3$  Ising spin glass: Hard-spin mean-field theory."
4. American Physical Society March Meeting, New Orleans, LA (March 13, 2008), "Field-Driven Hysteresis of the  $d=3$  Ising Spin Glass: Hard-Spin Mean-Field Theory".
5. American Physical Society March Meeting, Pittsburgh, PA, (March 18, 2009), "Superfluid networks with mesoscopic structure as models of supersolid  $4\text{He}$ ".
6. 60th Birthday Celebration Symposium in Honor of A. Nihat Berker, Massachusetts Institute of Technology, Cambridge, MA (October 17, 2009), "Superfluid networks with mesoscopic structure as models of supersolid  $4\text{He}$ "
7. 103rd Statistical Mechanics Conference, Rutgers University, New Brunswick, NJ (May 9-11, 2010), "Efficiency of parallel tempering for spin glasses"
8. American Physical Society March Meeting, Dallas, TX (March 23, 2011), "Characteristic time scales and overlap distributions in replica exchange Monte Carlo simulations of spin glasses".
9. 13th Annual Greater Boston Area Statistical Mechanics Meeting, Brandeis University, Waltham, MA (October 15, 2011), "Characteristic time scales and overlap distributions in replica exchange Monte Carlo simulations of spin glasses."
10. American Physical Society March Meeting, Boston, MA (March 2, 2012), "Replica exchange simulations of the three-dimensional Ising spin glass: static and dynamic properties".
11. 14th Annual Greater Boston Area Statistical Mechanics Meeting, Brandeis University, Waltham, MA (October 6, 2012), "The low-temperature phase of the Edwards-Anderson spin glass."
12. American Physical Society March Meeting, Baltimore, MD (March 19, 2013), "Evidence of Non-Mean-Field-Like Low-Temperature Behavior in the Edwards-Anderson Spin-Glass Model".
13. International School and Conference on Network Science, Berkeley, CA (June 2-6, 2014), "Success In Tennis: Performance and Recognition"
14. 8. Traditional International MIRROR CONFERENCE, Istanbul, TURKEY (December 26, 2014), "Success In Tennis: Performance and Recognition"
15. Conference on Complex Systems, Tempe, AZ (September 28, 2015), "Success In Tennis: Performance and Recognition"
16. 9. Traditional International MIRROR CONFERENCE, Istanbul, TURKEY (December 28, 2015), "Untangling Performance from Success"
17. American Physical Society March Meeting, Baltimore, MD (March 14, 2016), "Untangling Performance from Success".

**Organizing:**

- Co-organizer (with A.-L. Barabási, P. Deville, E. Renda) of Quantifying Success (ECCS'14 satellite meeting), September 24th 2014, Lucca - Italy

**Languages:**

Turkish (native), Spanish, German