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Education and employment history

The University of Rochester, Rochester, NY, U.S.A.

Summer 2005 -

Assistant professor in the Department of Computer Science.

The University of Chicago, Chicago, IL, U.S.A.

Autumn 1998 - Summer 2005

Ph.D. in Computer Science, awarded 06/2005,
advisor: László Babai, thesis: *Algorithms for curves on surfaces*.

Master's degree in Computer Science, awarded 12/2000,
advisor: László Babai, thesis: *Fourier transforms in computer science*.

Comenius University, Bratislava, Slovakia

Autumn 1993 - Summer 1998

Magister degree in Computer Science, awarded 06/1998,
advisor: Peter Ružička, thesis: *Multidimensional Interval Routing Schemes*.

Five selected publications

1. Daniel Štefankovič, Santosh Vempala, Eric Vigoda. *Adaptive simulated annealing: A near-optimal connection between sampling and counting*. FOCS 2007, p. 183–193, 2007.
2. Michael Pelsmajer, Marcus Schaefer, Daniel Štefankovič. *Odd crossing number is not crossing number*. To appear in Discrete and Computational Geometry (a preliminary version appeared in Graph Drawing 2005, p. 386–396).
3. Marcus Schaefer, Daniel Štefankovič. *Decidability of string graphs*. J. Comput. System Sci. 68(2):319–334, 2004 (a preliminary version appeared in STOC 2001, p. 241–246).
4. Marcus Schaefer, Eric Sedgwick, Daniel Štefankovič. *Recognizing string graphs in NP*. J. Comput. System Sci. 67(2):365–380, 2003 (a preliminary version appeared in STOC 2002, p. 1–6).
5. László Babai, Amir Shpilka, Daniel Štefankovič. *Locally testable cyclic codes*. IEEE Transactions on Information Theory, 51(8):2849–2858, 2005 (a preliminary version appeared in FOCS 2003, p. 116–125).

Journal publications (the selected publications above included)

1. Ivona Bezáková, Alistair Sinclair, Daniel Štefankovič, Eric Vigoda. *Accelerating Simulated Annealing for the Permanent and Combinatorial Counting Problems*. To appear in SIAM Journal of Computing (a preliminary version appeared in SODA 2006, p 900–907).
2. Michael Pelsmajer, Marcus Schaefer, Daniel Štefankovič. *Odd crossing number is not crossing number*. To appear in Discrete and Computational Geometry (a preliminary version appeared in Graph Drawing 2005, p. 386–396).
3. Michael Pelsmajer, Marcus Schaefer, Daniel Štefankovič. *Removing even crossings*. Journal of Combinatorial Theory, Series B, 97(4):489–500, 2007.
4. Manu Chhabra, Robert Jacobs, Daniel Štefankovič. *Behavioral Shaping for Geometric Concepts*. Journal of Machine Learning Research, 8(Aug), p. 1835–1865, 2007.
5. Peter Hui, Michael J. Pelsmajer, Marcus Schaefer, Daniel Štefankovič. *Train Tracks and Confluent Drawings*. Algorithmica 47(4):465–479, 2007.
6. Daniel Štefankovič, Eric Vigoda. *Phylogeny of Mixture Models: Robustness of Maximum Likelihood and Non-identifiable Distributions*. Journal of Computational Biology, 14(2):156–189, 2007.
7. Daniel Štefankovič, Eric Vigoda. *Pitfalls of Heterogeneous Processes for Phylogenetic Reconstruction*. Systematic Biology, 56(1):113–124, 2007.
8. Bruno Codenotti, Daniel Štefankovič. *On the computational complexity of Nash equilibria for $(0,1)$ -bimatrix games*. Information Processing Letters, 94(3):145–150, 2005.
9. Marcus Schaefer, Daniel Štefankovič. *Solvability of graph inequalities*. SIAM Journal on Discrete Mathematics, no. 19, p. 728–743, 2005.
10. László Babai, Amir Shpilka, Daniel Štefankovič. *Locally testable cyclic codes*. IEEE Transactions on Information Theory, 51(8):2849–2858, 2005 (a preliminary version appeared in FOCS 2003, p. 116–125).
11. Marcus Schaefer, Daniel Štefankovič. *Decidability of string graphs*. J. Comput. System Sci. 68 (2004), no. 2, p. 319–334 (a preliminary version appeared in STOC 2001).
12. M. Schaefer, E. Sedgwick, D. Štefankovič. Marcus Schaefer, Eric Sedgwick, Daniel Štefankovič. *Recognizing string graphs in NP*. J. Comput. System Sci. 67 (2003), no. 2, p. 365–380 (a preliminary version appeared in STOC 2002).
13. László Babai, Péter Frankl, Samuel Kutin, Daniel Štefankovič. *Set systems with restricted intersections modulo prime powers*. Journal of Combinatorial Theory A, 95(1):39–73, 2001.
14. Daniel Štefankovič. *Acyclic orientations do not lead to optimal deadlock free packet routing algorithms*. Information Processing Letters 73(5-6):221–225, 2000.
15. Peter Ružička, Daniel Štefankovič. *On the complexity of multidimensional routing schemes*. TCS 254(2):255–280, 2000.
16. Rastislav Kráľovič, Peter Ružička, Daniel Štefankovič. *The complexity of shortest path and dilation bounded interval routing*. TCS 234(1-2):85–107, 2000. (A preliminary version appeared at Europar 1997).

Refereed conference publications (publications with journal versions included)

1. Daniel Štefankovič, Santosh Vempala, Eric Vigoda. *Adaptive Simulated Annealing: A Near-optimal Connection between Sampling and Counting*. FOCS 2007, p. 183–193, 2007.
2. Marcus Schaefer, Eric Sedgwick, Daniel Štefankovič. *Spiralling and Folding: The Topological View*. Canadian Conference on Computational Geometry, p. 73–76, 2007.
3. Michael J. Pelsmajer, Marcus Schaefer and Daniel Štefankovič. *Crossing Number of Graphs with Rotation Systems*. Graph Drawing, 2007 (to appear).
4. Michael Pelsmajer, Marcus Schaefer, Daniel Štefankovič. *Crossing Numbers and Parameterized Complexity*. Graph Drawing, 2007 (to appear).
5. Michael Pelsmajer, Marcus Schaefer, Daniel Štefankovič. *Removing Even Crossings on Surfaces*. Eurocomb 2007, Electronic Notes in Discrete Mathematics, 29, p. 85–90, 2007.
6. Marcus Schaefer, Eric Sedgwick, Daniel Štefankovič. *Spiralling and Folding: The Word View*. Eurocomb 2007, Electronic Notes in Discrete Mathematics 639, 2007 (to appear).
7. Daniel Gildea and Daniel Štefankovič. *Worst-Case Synchronous Grammar Rules*. Human Language Technologies 2007: The Conference of the North American Chapter of the Association for Computational Linguistics; Proceedings of the Main Conference, p. 147–154, 2007.
8. Ivona Bezáková, Alistair Sinclair, Daniel Štefankovič, Eric Vigoda. *Negative Examples for Sequential Importance Sampling of Binary Contingency Tables*. ESA 2006, p. 136–147, 2006.
9. Ivona Bezáková, Daniel Štefankovič, Vijay Vazirani, Eric Vigoda. *Approximating the permanent in $O^*(n^7)$ time*. SODA 2006, p. 900–907, 2006.
10. Michael Pelsmajer, Marcus Schaefer, Daniel Štefankovič. *Odd Crossing Number Is Not Crossing Number*. Graph Drawing 2005, LNCS 3843, p. 386–396, 2005.
11. Michael Pelsmajer, Marcus Schaefer, Daniel Štefankovič. *Removing Even Crossings*. EuroComb 2005, Discrete Mathematics and Theoretical Computer Science Proceedings, p. 105–110., 2005.
12. Peter Hui, Marcus Schaefer, Daniel Štefankovič. *Train tracks and confluent drawings*. Graph Drawing, LNCS 3383, p. 318–328, 2004.
13. László Babai, Daniel Štefankovič. *Simultaneous Diophantine approximation with excluded primes*. SODA 2004, p. 1123–1129, 2004.
14. László Babai, Amir Shpilka, Daniel Štefankovič. *Locally testable cyclic codes*. FOCS 2003, p. 116–125, 2003.
15. Marcus Schaefer, Eric Sedgwick, Daniel Štefankovič. *Recognizing string graphs in NP*. STOC 2002, p. 1–6, 2002.
16. Marcus Schaefer, Eric Sedgwick, Daniel Štefankovič. *Algorithms for normal curves and surfaces*. COCOON 2002, p. 370–380, 2002.
17. Marcus Schaefer, Daniel Štefankovič. *Decidability of string graphs*. STOC 2001, p. 241–246, 2001.
18. Rastislav Kráľovič, Branislav Rován, Peter Ružička, Daniel Štefankovič. *Efficient Deadlock-Free Multi-dimensional Interval Routing in Interconnection Networks*. DISC 1998, LNCS 1499, p. 273–287, 1998.
19. Rastislav Kráľovič, Peter Ružička, Daniel Štefankovič. *The complexity of shortest path and dilation bounded interval routing*. Euro-Par 1997, LNCS 1300, p. 258–265, 1997.

Talks

Adaptive Annealing: A Near-optimal Connection between Sampling and Counting.

FOCS, November 2007.

DIMACS, Georgia Tech, March 2007 (invited).

NYU/CUNY, March 2007 (invited).

University of Toronto, Theory Seminar, December 2006 (invited).

University of Chicago, Theory Seminar, December 2006.

University of Rochester, Colloquium, December 2006.

Odd crossing number is not crossing number.

RIT, Math Department Colloquium, October 2005 (invited).

Graph Drawing, September 2005.

Discrete and Computational Geometry—Twenty Years Later, June 2006 (invited).

Phylogeny of mixture models: maximum likelihood, ambiguity, and linear tests.

IIT, December 2005 (invited).

Simultaneous diophantine approximation with excluded primes.

SODA, January 2004.

MIT, Theory of Computation Seminar, November 2003 (invited).

Locally testable cyclic codes.

DePaul, Theory Seminar, September 2003 (invited).

FOCS, October 2003.

Recognizing string graphs in NP.

DIMACS Workshop on Geometric Graph Theory, October 2002 (invited).

STOC, May 2002.

University of Wisconsin - Madison, Theory Seminar, February 2002 (invited).

Midwest Theory Day, December 2001.

DePaul, Theory Seminar, November 2001 (invited).

Decidability of string graphs.

STOC, July 2001.

DePaul, Theory Seminar, February 2001 (invited).

Midwest Theory Day, December 2000.

The complexity of shortest path and dilation bounded interval routing.

Europar, August 1997.

Honors and awards

ACM Collegiate Programming Contest World Finals 1996, 12th place (team of 3)
International Olympiad in Informatics 1993, gold medal
International Mathematical Olympiad 1993, bronze medal

Fellowships

Research Intern at Microsoft Research Summer 2002
PCMI/IAS Graduate Summer School in Computational Complexity Summer 2000

Service

- Referee for Theory of Computing Systems, Discrete&Computational Geometry, Journal of Graph Theory, Journal of Combinatorial Theory (Series B), SIAM Journal of Computing.
- Referee for ESA'07, ICALP'07, STACS'07, HiPC'06, STOC'05, WG'04, CCC'03, WG'03, CCC'02, MFCS'01, WG'99.
- Technical support for STOC'04 PC.

Teaching Experience

Advanced algorithms (CSC 284/484) Spring 2007
Graduate algorithms, University of Rochester.

Markov Chains (CSC 574) Spring 2006
Graduate seminar course on (theoretical) Markov chain Monte Carlo, University of Rochester.

Algorithms (CSC 282) Fall 2006, Fall 2007
Undergraduate algorithms, University of Rochester.

Research experiences for undergraduates Summer 2003, Summer 2004
TA for REU courses Discrete Mathematics and Linear Algebra at the University of Chicago.

Introduction to WWW-2 (Java) Summer 2001
Lecturer for CS102 at the University of Chicago.

Algorithms Winter 2000, Winter 2001
TA for CS270 at the University of Chicago.

Discrete Mathematics Autumn 1998, Autumn 1999
TA for CS174 taught at the University of Chicago.