

CURRICULUM VITÆ

PERSONAL DATA

First name: **Dömötör**

Surname: **Pálvölgyi**

Date of birth: 4th July, 1981.

Nationality: Hungarian

Other languages: English (fluent), French (good), Italian, German, Hindi, Telugu (basic)

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POSITIONS

2010– Eötvös Loránd University (ELTE), Budapest

Assistant Professor at Computer Science Department of Institute of Mathematics

-Grünwald Géza Prize by Bolyai Society, 2010.

STUDIES

2008–2010 Ecole Polytechnique Fédérale de Lausanne (EPFL)

Assistant-doctorant of János Pach

-PhD thesis in Combinatorial Geometry.

2000–2008 Eötvös Loránd University (ELTE), Budapest

Graduate Studies in Pure Mathematics, Theoretical Computer Science

-Supervisor: Zoltán Király.

-State scholarship for research in Communication Complexity, Complexity Theory, Combinatorial Geometry, Extremal Combinatorics, Network Information Flows since 2005.

-Member of the Communication Networks Laboratory.

Undergraduate Studies at Faculty of Science, Department of Mathematics

-Master thesis in Communication Complexity 2005.

-Holder of the State Scholarship Award (2004–2005).

-Holder of the Outstanding Student of the Faculty Award (2004).

TEACHING EXPERIENCE

2010–

-Lecturer and Teaching Assistant for Geometric Algorithms, Complexity Theory, Theory

of Algorithms at ELTE.

2008–2010

-Teaching Assistant for Linear Algebra, Calculus, Geometric Graphs at EPFL.

2005–2008

-Lecturer and Teaching Assistant for Complexity Theory, Theory of Algorithms, Cryptography at ELTE.

2002–2005

-Teaching Assistant for Calculus, Real Analysis, Measure Theory at ELTE.

PUBLICATIONS

- [1] Dömötör Pálvölgyi. Baljó S árnyak (english: Left compressed shadows - a simple proof of the Kruskal-Katona theorem). *Matematikai Lapok*, 10(2):13–16, 2005.
- [2] Dömötör Pálvölgyi. Revisiting sequential search using question-sets with bounded intersections. *J. Stat. Theory Pract.*, 1(2):199–204, 2007.
- [3] Dömötör Pálvölgyi. Deciding soccer scores and partial orientations of graphs. *Acta Univ. Sapientiae Math.*, 1(1):35–42, 2009.
- [4] János Pach and Dömötör Pálvölgyi. Bounded-degree graphs can have arbitrarily large slope numbers. *Electronic Journal of Combinatorics*, 13(1 N):1–4, 2006.
- [5] Balázs Keszegh, János Pach, Dömötör Pálvölgyi, and Géza Tóth. *Drawing cubic graphs with at most five slopes*, volume 4372 LNCS. 2007.
- [6] Balázs Keszegh, János Pach, Dömötör Pálvölgyi, and Géza Tóth. Drawing cubic graphs with at most five slopes. *Computational Geometry: Theory and Applications*, 40(2):138–147, 2008.
- [7] Dömötör Pálvölgyi. Combinatorial necklace splitting. *Electronic Journal of Combinatorics*, 16(1), 2009.
- [8] Balázs Keszegh, János Pach, Dömötör Pálvölgyi, and Géza Tóth. *Cubic graphs have bounded slope parameter*, volume 5417 LNCS. 2009.
- [9] Balázs Keszegh, János Pach, Dömötör Pálvölgyi, and Géza Tóth. Cubic graphs have bounded slope parameter. *Journal of Graph Algorithms and Applications*, 14(1):5–17, 2010.

- [10] Dömötör Pálvölgyi and Géza Tóth. Convex polygons are cover-decomposable. *Discrete and Computational Geometry*, 43(3):483–496, 2010.
- [11] Dömötör Pálvölgyi. Indecomposable coverings with concave polygons. *Discrete and Computational Geometry*, 44(3):577–588, 2010.
- [12] Dömötör Pálvölgyi. 2D-TUCKER is PPAD-complete. In *WINE*, volume 5929 LNCS, pages 569–574, 2009.
- [13] Dömötör Pálvölgyi. Partitionability to two trees is NP-complete. *Annales Universitatis Scientiarum Budapestinensis de Rolando Eötvös Nominatae - Sectio mathematica*, 52(1):131–135, 2009.
- [14] Dániel Gerbner, Balázs Keszegh, Nathan Lemons, Cory Palmer, Dömötör Pálvölgyi, and Balázs Patkós. Polychromatic colorings of arbitrary rectangular partitions. *Discrete Mathematics*, 310(1):21–30, 2010.
- [15] Friedrich Eisenbrand, Nicolai Hähnle, Dömötör Pálvölgyi, and Gennady Shmonin. Testing additive integrality gaps. In *SODA*, pages 1227–1234, 2010.
- [16] Dániel Gerbner, Dömötör Pálvölgyi, Balázs Patkós, and Gábor Wiener. Finding the maximum and minimum elements with one lie. *Discrete Applied Mathematics*, 158(9):988–995, 2010.
- [17] A. Gács, T. Héger, Z. L. Nagy, and Dömötör Pálvölgyi. Permutations, hyperplanes and polynomials over finite fields. *Finite Fields and their Applications*, 16(5):301–314, 2010.
- [18] Tobias Christ, Dömötör Pálvölgyi, and Miloš Stojaković. Consistent digital line segments. In *Symposium on Computational Geometry*, pages 11–18, 2010.
- [19] Padmini Mukkamala and Dömötör Pálvölgyi. Asymptotically optimal pairing strategy for tic-tac-toe with numerous directions. *Electronic Journal of Combinatorics*, 17(1), 2010.
- [20] Friedrich Eisenbrand, Dömötör Pálvölgyi, and Thomas Rothvoß. Bin packing via discrepancy of permutations. In *SODA*, pages 476–481, 2011.
- [21] Balázs Keszegh, János Pach, and Dömötör Pálvölgyi. *Drawing Planar Graphs of Bounded Degree with Few Slopes*, volume 6502 LNCS. 2010.
- [22] Kevin Buchin, Jiří Matoušek, Robin Moser, and Dömötör Pálvölgyi. Vectors in a box. *Mathematical Programming*, pages 1–13, 2011.