Curriculum Vitae*

Stefan Felsner

Born:	December 30, 1961 Erlangen, Germany
Family:	Three children: Lina (15), Clara (14), Anton (3).
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Education and Profession

1969 – 1976	Colegio Andino, Bogotá, Colombia
1976 – 1980	Martino Katharineum, Braunschweig, Germany
Abitur:	December 1980
1981	Agricultural labour at 'Gut Grafenegg' Austria
1981 – 1987	Mathematics student at Universität Wien
Diplom:	*t-Designs mit* $t \geq 3$ Advisor: Prof. J. Cigler Sponsion: November 1987. *with distinction*
1988 – 1993	Member of the Discrete Mathematics Group at Technische Universität Berlin
PhD:	*Interval Orders: Combinatorial Structure and Algorithms*, Advisor: Prof. Dr. R.H. M"ohring. Rigorosum: April 28, 1992, Examiner: Prof. Dr. R.H. M"ohring and Prof. Dr. M. Aigner. *with distinction*
1993	*The thesis has been awarded the Joachim Tiburtius–Preis for outstanding dissertations at universities in Berlin*
1992 – 1993	Visiting year at Bellcore and DIMACS, USA, with a scholarship funded by the German science foundation (DFG).
1993 – 1999	Wissenschaftlicher Assistent at the Department of Mathematics and Computer Science of Freie Universität Berlin.
Habilitation:	Collected publications about algorithms and structure of partially ordered sets and discrete geometry. Habilitation-lecture: Mai 7, 1997,
1999 – 2003	Oberassistent (Associate Professor) at the Department of Mathematics and Computer Science Freie Universität Berlin.
2003 –	Professor for Discrete Mathematics Technische Universität Berlin.

Professional Activities

Member of editorial Board:

ORDER, Journal on the Theory of ordered sets and its applications.
DMTCS: Discrete Mathematics and Theoretical Computer Science

Member of organizing committee:

3. Berliner Algorithmen Tag, 1990
Berliner Tag der Mathematik, 1999
22. Kolloquium über Kombinatorik, 2002 23. Kolloquium über Kombinatorik, 2003
32. Berliner Algorithmen Tag 2004 (Vorsitzender)
24. Kolloquium über Kombinatorik, 2004
EuroComb 2005 (Vorsitzender)
Berliner Tag der Mathematik, 2006
25. Kolloquium über Kombinatorik, 2006
Berliner Tag der Mathematik, 2007

Member of program committee:

ORDAL 1999
SIAM Conf. on Discrete Math. 2000
Euroconf. on Comb., Graphs and Applications 2001 EuroComb 2005 (chair)
Formal Power Series and Algebraic Combinatorics (FPSAC) 2007
EuroComb 2007

Teaching Experience: Advanced Courses

- Partial Orders and Algorithms,
- Computational Geometry,
- Design and Analysis of Algorithms,
- Graph Theory,
- Algorithmic Graph Theory: Perfect Graphs,
- Discrete Mathematics,
- Randomized Algorithms.

Publications in Journals

[1] S. Felsner, *A 3/2-Approximation Algorithm for the Jump Number of Interval Orders*, Order, 6 (1990), pp. 325–334.

[2] S. Felsner, *Orthogonal Structures in Directed Graphs*, Journal of Combinatorial Theory (B), 57 (1993), pp. 309–321.

[3] S. Felsner, M. Habib, und R. H. Möhring, *On the Interplay of Interval Dimension and Dimension*, SIAM Journal on Discrete Mathematics, 7 (1994), pp. 32–40.

[4] S. Felsner, J. Gustedt, M. Morvan, und J.-X. Rampon, *Constructing Colorings for Diagrams*, Discrete Applied Mathematics, 51 (1994), pp. 85–93.

[5] S. Felsner und W. T. Trotter, *Colorings of Diagrams of Interval Orders and α-Sequences of Sets*, Discrete Mathematics, 144 (1995), pp. 23–32.

[6] S. Felsner, *Tolerance Graphs and Orders*, Journal of Graph Theory, 28 (1998), pp. 129–140.

[7] S. Felsner, *3-Interval Irreducible Partially Ordered Sets*, Order, 11 (1994), pp. 97–125.

[8] S. Felsner und L. Wernisch, *Maximum k-Chains in Planar Point Sets: Combinatorial Structure and Algorithms*, SIAM Journal on Computing, 28 (1999), pp. 192–209.

[9] S. Felsner und W. T. Trotter, *On the Fractional Dimension of Partially Ordered Sets*, Discrete Mathematics, 136 (1994), pp. 101–117.

[10] S. Felsner, R. Müller, und L. Wernisch, *Trapezoid Graphs and Generalizations: Geometry and Algorithms*, Discrete Applied Mathematics, 74 (1997), pp. 13–32.

[11] S. Felsner und R. H. Möhring, *Semi Order Dimension Two is a Comparability Invariant*, Order, 15 (1998), pp. 385–390.

[12] S. Felsner, *On-line chain partitions of orders*, Theoretical Computer Science, 175 (1997), pp. 283–292.

[13] G. R. Brightwell, S. Felsner, und W. T. Trotter, *Balancing Pairs and the Cross Product Conjecture*, Order, 12 (1995), pp. 327–349.

[14] S. Felsner, *On the Number of Arrangements of Pseudolines*, Discrete & Computational Geometry, 18 (1997), pp. 257–267.

[15] S. Felsner und K. Reuter, *The Linear-Extension-Diameter of a Poset*, SIAM Journal on Discrete Mathematics, 12 (1999), pp. 360–373.

[16] S. Felsner und K. Kriegel, *Triangles in Euclidean Arrangements*, Discrete & Computational Geometry, 22 (1999), pp. 429–438.

[17] H. Alt, S. Felsner, F. Hurtado, M. Noy, und E. Welzl, *A class of point-sets with few k-sets*, Comp. Geom. Theory and Appl., 16 (2000), pp. 95–101.

[18] S. Felsner, P. C. Fishburn, und W. T. Trotter, *Finite Three Dimensional Partial Orders which are not Sphere Orders*, Discrete Mathematics, 201 (1999), pp. 101–132.

[19] S. Felsner und H. Weil, *Sweeps, Arrangements and Signotopes*, Discrete Applied Mathematics, 109 (2001), pp. 67–94.

[20] G. Agnarsson, S. Felsner, und W. T. Trotter, *The Maximum Number of Edges in a Graph of Bounded Dimension, with Applications to Ring Theory*, Discrete Mathematics, 1999 (201), pp. 5–19.

[21] S. Felsner, J. Gustedt, und M. Morvan, *Interval Reductions and Extensions of Orders: Bijections to Chains in Lattices*, 221–246, 1999 (Order), p. 15.

[22] S. Felsner und W. T. Trotter, *Dimension, Graph and Hypergraph Coloring*, Order, 17 (2000), pp. 167–177.

[23] S. Felsner und H. Weil, *A Theorem on Higher Bruhat Orders*, Discrete & Computational Geometry, 23 (2000), pp. 121–127.

[24] S. Felsner, R. Kant, C. P. Rangan, und D. Wagner, *The Complexity of Partial Order Properties*, Order, 17 (2000), pp. 179–193.

[25] S. Felsner, *The Skeleton of a Reduced Word and a Correspondence of Edelman and Greene*, Electronic Journal of Combinatorics, 8 (2001), p. 21p.

[26] S. Felsner, *Convex drawings of Planar Graphs and the Order Dimension of 3-Polytopes*, Order, (2001), pp. 19–37.

[27] S. Felsner und G. Ziegler, *Zonotopes Associated with Higher Bruhat Orders*, Discrete Mathematics, 241 (2001), pp. 301–312.

[28] S. Felsner und N. Morawe, *Infeasibility of systems of halfspaces*, in Discrete and Computational Geometry, The Goodman and Pollack Festschrift, vol. 25 of Algorithms and Combinatorics, Springer Verlag, 2003, pp. 405–424.

[29] S. Felsner, *Geodesic Embeddings and Planar Graphs*, Order, 20 (2003), pp. 135–150.

[30] S. Felsner, V. Raghavan, und J. Spinrad, *Recognition Algorithms for Orders of Small Width and Graphs of Small Dilworth Number*, Order, 20 (2003), pp. 351–364.

[31] S. Felsner, G. Liotta, und S. Wismath, *Straight-Line Drawings on Restricted Integer Grids in Two and Three Dimensions*, Journal of Graph Alg. and Appl., 7 (2003), pp. 363–398.

[32] S. Felsner, *Lattice Structures from Planar Graphs*, Electronic Journal of Combinatorics, (2004), p. 24p.

[33] S. Felsner und W. T. Trotter, *Posets and Planar Graphs*, Journal of Graph Theory, 49 (2005), pp. 262–272.

[34] S. Felsner, B. Gärtner, und F. Tschirschnitz, *Grid Orientations, (d,d+2)-Polytopes and Arrangements of Pseudolines*, Discrete & Computational Geometry, 34 (2005), pp. 411–437.

[35] S. Felsner, F. Hurtado, M. Noy, und I. Streinu, *Hamiltonicity and Colorings of Arrangement Graphs*, Discrete Applied Mathematics, to appear (2006).

[36] N. Bonichon, S. Felsner, und M. Mosbah, *Convex drawings of 3-connected planar graphs*, Algorithmica, to appear (2006).

Publications in Conference Proceedings

[1] S. Felsner, *A 3/2-Approximation Algorithm for the Jump Number of Interval Orders*, in Operations Research, Proc. 14th Symp., Ulm 1989, vol. 62, 1989, pp. 211–216.

[2] S. Felsner, *Bounds for the Jump Number of Partially Ordered Sets*, in Operations research, Proc. 15th Symp., Vienna/Austria 1990, vol. 64, 1990, pp. 117–121.

[3] S. Felsner und D. Wagner, *On the Complexity of Partial Order Properties*, in Proc. 18th Internat. Workshop Graph-Theoret. Concepts Comput. Sci., vol. 657 of Lecture Notes in Comput. Sci., Springer Verlag, 1993, pp. 225–235.

[4] S. Felsner, *Tolerance Graphs and Orders*, in Proc. 18th Internat. Workshop Graph-Theoret. Concepts Comput. Sci., vol. 657 of Lecture Notes in Comput. Sci., Springer Verlag, 1993, pp. 17–26.

[5] S. Felsner und L. Wernisch, *Maximum k-Chains in Planar Point Sets: Combinatorial Structure and Algorithms*, in Proceedings of the Twenty-Fifth Annual ACM Symposium on the Theory of Computing, 1993, pp. 146–153.

[6] S. Felsner und W. T. Trotter, *Balancing Pairs in Partially Ordered Sets*, in Combinatorics, Paul Erdös is eighty (Vol. 1.), D. Miklos, ed., Janos Bolyai Mathematical Society, 1993, pp. 145–157.

[7] S. Felsner, R. Müller, und L. Wernisch, *Trapezoid Graphs and Generalizations, Geometry and Algorithms*, in Algorithm Theory—SWAT '94: 4th Scandinavian Workshop on Algorithm Theory, vol. 824 of Lecture Notes in Computer Science, Springer Verlag, 1994, pp. 143–154.

[8] S. Felsner, *On the Number of Arrangements of Pseudolines*, in Proc. ACM Symposium on Computational Geometry, 1996, pp. 30–37.

[9] S. Felsner und L. Wernisch, *Markov Chains for Linear Extensions, the Two-Dimensional Case*, in Proceedings of the Eighth Annual ACM-SIAM Symposium on Discrete Algorithms, 1997, pp. 239–247.

[10] S. Felsner und K. Kriegel, *Triangles in Euclidean Arrangements*, in Proc. 22th Internat. Workshop Graph-Theoret. Concepts Comput. Sci., vol. 1517 of Lecture Notes in Comput. Sci., Springer Verlag, 1998, pp. 137–148.

[11] S. Felsner, J. Gustedt, und M. Morvan, *Interval Reductions and Extensions of Orders: Bijections to Chains in Lattices*, in Proceedings 10th Conference on Formal Power Series and Algebraic Combinatorics, 1998, pp. 261–274.

[12] H. Alt, S. Felsner, F. Hurtado, M. Noy, und E. Welzl, *Point-sets with few k-sets*, in Proc. ACM Symposium on Computational Geometry 1998, 1998, pp. 200–205.

[13] S. Felsner, F. Hurtado, M. Noy, und I. Streinu, *Hamiltonicity and Colorings of Arrangement Graphs*, in Proceedings 11th Annual ACM-SIAM Symposium on Discrete Algorithms, 2000, pp. 155–164.

[14] S. Felsner, *The Skeleton of a Reduced Word and a Correspondence of Edelman and Greene*, in Proceedings 12th Conference on Formal Power Series and Algebraic Combinatorics, D.Krob, A.A.Mikhalev, und A.V.Mikhalev, eds., Springer Verlag, 2000, pp. 179–190.

[15] S. Felsner, G. Liotta, und S. Wismath, *Straight-Line Drawings on Restricted Integer Grids in Two and Three Dimensions*, in Proceedings of Graph Drawing 2001, P. Mutzel und M. Jünger, eds., Lecture Notes in Comput. Sci., Springer Verlag, 2001.

[16] N. Bonichon, S. Felsner, und M. Mosbah, *Convex drawings of 3-connected planar graphs*, in Proceedings of Graph Drawing 2004, J. Pach, ed., vol. 3383 of Lecture Notes in Comput. Sci., Springer Verlag, 2004, pp. 60–70.

[17] S. Felsner und F. Zickfeld, *Schnyder Woods and Orthogonal Surfaces*, in Proceedings of Graph Drawing 2006, D. Wagner, ed., vol. 4372 of Lecture Notes in Comput. Sci., Springer Verlag, 2006.

[18] C. Dangelmayr und S. Felsner, *Chordal Graphs as Intersection Graphs of Pseudosegments*, in Proceedings of Graph Drawing 2006, D. Wagner, ed., vol. 4372 of Lecture Notes in Comput. Sci., Springer Verlag, 2006.

[19] S. Felsner und M. Massow, *Thickness of Bar 1-Visibility Graphs*, in Proceedings of Graph Drawing 2006, D. Wagner, ed., vol. 4372 of Lecture Notes in Comput. Sci., Springer Verlag, 2006.

Miscellaneous

[1] S. Felsner, *t-designs für $t \geq 3$*, Diplomarbeit, Universität Wien, 1988.

[2] S. Felsner und M. Morvan, *More Bounds for the Dimension of Interval Orders*, Tech. Rep. MA 265-1990, Technische Universität Berlin, 1990.

[3] S. Felsner, *Interval Orders: Combinatorial Structure and Algorithms*, Dissertation, Technische Universität Berlin, 1992.

[4] Studenten und S. Felsner, *Perfekte Graphen*. Skript, 1994. www.math.tu-berlin.de/~felsner/Paper/skript.ps.gz.

[5] H. Alt, S. Felsner, und L. Scharf, *Storage Area Network Optimization: Final Report*, Tech. Rep. B 00-18, Freie Universität Berlin, 2000.

[6] S. Felsner, *Interval dimension of a partially ordered set*, in Encyclopedia of Mathematics, Supplement 2, Kluwer Acad. Publ., 2000, pp. 277–278.

[7] S. Felsner, Geometric Graphs and Arrangements, Advanced Lectures in Mathematics, Vieweg Verlag, 2004.

[8] S. Felsner, *Empty rectangles and graph dimension*. arxiv:math.CO/0601767.

[9] S. Felsner und S. Kappes, *Orthogonal surfaces*. arxiv:math.CO/0602063.

[10] B. Bosek, S. Felsner, K. Kloch, und P. Micek, *On line chain partitions of up-growing semi-orders*. in preparation.

[11] S. Felsner, C. Huemer, S. Kappes, und D. Orden, *Binary labelings for plane quadrangulations and their relatives*. arXiv:math.CO/0612021, 2007. submitted to SIAM J. on Discr. Math.

[12] S. Felsner und J. Nilsson, *On the dimension of outerplanar maps*. in preparation.

[13] S. Felsner, M. Noy, und D. Orden, *Baxter, Schröder, Schnyder and primes: Bijections and counting*. in preparation.

[14] S. Felsner und F. Zickfeld, *On the number of α-orientations*, 2007. arXiv:math.CO/0701771.