CURRICULUM VITAE

FREDERIC DORN

PESSOAL

Data de Nasc.:	4 Junho, 1975	**Celular**:	+47 980 55 660
Lugar de Nasc.:	Freiburg i.B., Alemanha	**Trabalho**:	+47 555 84 385
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ÁREAS DE PESQUISA

- Ciência da computação teórica; Teoria dos algoritmos; Projeto e análise de algoritmos
- Matemática discreta; Teoria dos Grafos; Combinatória
- Engenharia de Algoritmo

FORMAÇÃO ACADÊMICA

Desde 11/2010	Pesquisador em Ciência da Computação na Universidade de Bergen, Noruega.
11/2008 – 10/2010	Pós-doutorando em Ciência da Computação na Universidade de Bergen, Noruega.
9/2007 – 9/2008	Pós-doutorando em Ciência da Computação na Humboldt-Universität zu Berlin, Alemanha.
2004–2007	Doutor em Ciência da Computação da Universidade de Bergen, Noruega. Tese de Doutorado: *Subexponential Algorithms: Problems, Techniques, and Structures*. Professor Supervisor: Fomin Fedor.
1999–2004	Mestrado em Ciência da Computação e Matemática Eberhardt-Karl-Universität Tübingen, Alemanha. Dissertação de mestrado: *Special Branch Decomposition: A Natural Link between Tree Decompositions and Branch Decompositions*. Trabalho individual: *Tuning Algorithms for Hard Planar Graph Problems*.
1996–1998	Graduação em Matemática pela Universität Augsburg, Alemanha.

EXPERIÊNCIA PROFESSIONAL

Outono 2010/09	Docente do curso *Algoritmos Avançados* para a pós-graduação, Departamento de Informática da Universidade de Bergen, Noruega.
Primavera 2010/06/05/03	Ensino como assistente do curso *Teoria da Complexidade* para a pós-graduação, Departamento de Informática da Universidade de Bergen, Noruega.
Primavera 2008	Orientação de trabalho individual, Departamento de Informática da Humboldt-Universität zu Berlin, Alemanha.
2000–2003	Assistente na graduação da Universidade de Tübingen, Alemanha: Criando o pacote de software *FPT-toolkit*: Implementação, análise e avaliação de algoritmos de parâmetros fixos (usando LEDA em C++).
1999–2000	Programação da empresa WWL em Pliezhausen/Stuttgart. Programação online de bancos de dados dinâmicos e páginas web em PL/SQL, HTML, Javascript e Perl.

Conhecimento em Programação

- Programação: C++, Java, Scheme, Perl, LEDA.
- Matemática simbólica e computacional: Mathematica, Matlab.
- Banco de dados : Oracle 9x, PL/SQL.

Prêmios / Bolsas

2006	Prêmio da European Association for Theoretical Computer Science (EATCS): Melhor artigo de aluno no ESA (European Symposium on Algorithms).
2005	Bolsa de projeto pela L. Meltzer Hoeyskolefond da Universidade de Bergen, Noruega.
2004	Bolsa de projeto pela L. Meltzer Hoeyskolefond da Universidade de Bergen, Noruega.
2003	Bolsa de estudo pelo serviço Alemão de Intercâmbio Acadêmico (DAAD).

Participação em projetos de pesquisa

Desde 2008	*Network Searching: New Foundational Directions* bolsa da NFR FRINAT (Fundação Norueguês de Pesquisa), Noruega. Orientador científico: Fedor Fomin.
2007-2008	*Complexity of constraint satifaction problems* bolsa da DFG (Fundação Alemã de Pesquisa), Alemanha. Orientador científico: Martin Grohe.
2004-2007	*Exact algorithms for hard problems* bolsa da NFR FRINAT (Fundação Norueguês de Pesquisa), Noruega. Orientador científico: Fedor Fomin.

Lista de Publicações

Em Periódicos

2010 *Tight Bounds and a Fast FPT Algorithm for Directed Max-Leaf Spanning Tree*, Paul Bonsma and Frederic Dorn. To appear in ACM Transactions on Algorithms.

2010 *Efficient Exact Algorithms on Planar Graphs: Exploiting Sphere Cut Decompositions*, Hans L. Bodlaender, Frederic Dorn, Fedor V. Fomin, and Eelko Penninkx. Algorithmica, 58(3): pages 790-810.

2010 *Dynamic Programming and Planarity: Improved Tree-Decomposition Based Algorithms*, Frederic Dorn. Discrete Applied Mathematics, 158: pages 800-808.

2009 *Semi-nice tree-decompositions: the best of branchwidth, treewidth and pathwidth with one algorithm* , Frederic Dorn and Jan Arne Telle. Discrete Applied Mathematics, 157: pages 2737-2746. Special Issue on Tree Decompositions.

2008 *Subexponential parameterized algorithms*, Fedor V. Fomin, Frederic Dorn, and Dimitrios M. Thilikos. Computer Science Review, 2(1): pages 29-39.

2005 *Experimental Evaluation of a Tree Decomposition Based Algorithm for Vertex Cover on Planar Graphs*, Jochen Alber, Frederic Dorn and Rolf Niedermeier. Discrete Applied Mathematics, 145(2): pages 219-231.

Em Congressos

2010 *Fast Minor Testing in Planar Graphs*, Isolde Adler, Frederic Dorn, Fedor V. Fomin, Ignasi Sau, and Dimtrios M. Thilikos. Proceedings of the 18th Annual European Symposium on Algorithms (ESA 2010), vol. 6346 of LNCS, Springer, pages 97 - 109.

2010 *Efficient Algorithms for Eulerian Extension*, Frederic Dorn, Hannes Moser, Rolf Niedermeier, and Mathias Weller. Proceedings of the 36th International Workshop on Graph Theoretic Concepts in Computer Science (WG 2010), vol. 6410 of LNCS, Springer, pages 100 - 111.

2010 *Faster Parameterized Algorithms for Minor Containment*, Isolde Adler, Frederic Dorn, Fedor V. Fomin, Ignasi Sau, and Dimtrios M. Thilikos. Proceedings of the 12th Scandinavian Symposium and Workshops on Algorithm Theory (SWAT 2010), vol. 6139 of LNCS, Springer, pages 322-333.

2010 *Planar Subgraph Isomorphism Revisited*, Frederic Dorn. Proceedings of the 27th International Symposium on Theoretical Aspects of Computer Science (STACS 2010), pages 263-274.

2010 *Beyond Bidimensionality: Parameterized Subexponential Algorithms on Directed Graphs*, Frederic Dorn, Fedor V. Fomin, Daniel Lokshtanov, Venkatesh Raman, and Saket Saurabh. Proceedings of the 27th International Symposium on Theoretical Aspects of Computer Science (STACS 2010), pages 251-262.

2008 *Tight Bounds and a Fast FPT Algorithm for Directed Max-Leaf*, Paul Bonsma and Frederic Dorn. Proceedings of 16th Annual European Symposium (Algorithms/ESA 2008), vol. 5193 of LNCS, Springer, pages 222-233.

2008 *Catalan Structures and Dynamic Programming in H-minor-free graphs*, Frederic Dorn, Fedor V. Fomin, and Dimitrios M. Thilikos. Proceedings of the 19th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA 2008), pages 631-640.

2007 *Subexponential parameterized algorithms*, Frederic Dorn, Fedor V. Fomin, and Dimitrios M. Thilikos. Proceedings of the 34th International Colloquium on Automata, Languages and Programming (ICALP 2007), vol. 4596 of LNCS, Springer, pages 15-27.

2007 *How to use planarity efficiently: new tree-decomposition based algorithms*, Frederic Dorn. Proceedings of the 33rd International Workshop on Graph-Theoretic Concepts in Computer Science (WG 2007), vol.4769 of LNCS, Springer, pages 280-291.

2006 *Dynamic Programming and Fast Matrix Multiplication*, Frederic Dorn. Proceedings of 14th Annual European Symposium (Algorithms/ESA 2006), Springer LNCS 4168, pages 280-291. *ESA 2006 EATCS award: Best student ESA paper*.

2006 *Fast Subexponential Algorithm for Non-local Problems on Graphs of Bounded Genus*, Frederic Dorn, Fedor V. Fomin, and Dimitrios M. Thilikos. Proceedings of 10th Scandinavian Symposium and Workshops on Algorithm Theory (SWAT 2006), Springer LNCS 4059, pages 172-183.

2006 *Two birds with one stone: the best of branchwidth and treewidth with one algorithm*, Frederic Dorn and Jan Arne Telle. Proceedings of 7th Latin American Theoretical Informatics Symposium (LATIN 2006), Springer LNCS 3887, pages 386-397.

2005 *Efficient Exact Algorithms on Planar Graphs: Exploiting Sphere Cut Branch Decompositions*, Hans L. Bodlaender, Frederic Dorn, Fedor V. Fomin, and Eelko Penninkx. Proceedings of 13th Annual European Symposium (Algorithms-ESA 2005), LNCS 3669, pages 95-106.

Trabalhos Acadêmicos

2007 *Designing Subexponential Algorithms: Problems, Techniques & Structures.*, Frederic Dorn. Tese de Doutorado. Online publication, Bergen, Noruega.
`https://bora.uib.no/handle/1956/2449`

2004 *Special Branch Decomposition: A Natural Link between Tree Decompositions and Branch Decompositions*, Frederic Dorn. Dissertação de mestrado, Universität Tübingen, Alemanha.

2003 *Tuning Algorithms for Hard Planar Graph Problems*, Frederic Dorn. Trabalho individual, Universität Tübingen, Alemanha. (Documentation of the FPT-TOOLKIT).

Outros

2007 *An FPT Algorithm for Directed Spanning k-Leaf*, Paul Bonsma and Frederic Dorn. Technical report, http://arxiv.org/abs/0711.4052

2001 *Experiments on Optimally Solving NP-complete Problems on Planar Graphs*, Jochen Alber, Frederic Dorn, and Rolf Niedermeier. Manuskript, http://citeseer.ist.psu.edu/478627.html.

OUTRAS ATIVIDADES DE PESQUISA

Participação em Comitês

- Comitê de organização do SWAT'10, Scandinavian Symposium and Workshops on Algorithm Theory, in Bergen, Norway, June 2010.
- Comitê do programa de IMAGINE'07, First international workshop on Mobility, Algorithms, Graph theory In dynamic Networks, in conjunction with DISC'07, Cyprius, September 2007.
- Comitê de organização do WG'06, Graph theoretical concepts in computer science, in Bergen, Norway, June 2006.

Revisor de Periódicos e Conferências

- SIAM J. on Discrete Mathematics, Discrete Applied Mathematics, Theoretical Computer Science, Computational Optimization and Applications;
- SODA Symposium on Discrete Algorithms,
- ALENEX Workshop on Algorithm Engineering and Experiments,
- ICALP International Colloquium on Automata, Languages and Programming,
- STACS Symposium on Theoretical Aspects of Computer Science,
- SWAT Scandinavian Symposium and Workshops on Algorithm Theory,
- IWPEC International Workshop on Parameterized and Exact Computation,
- WG Graph Theoretic Concepts of Computer Science.

Pesquisador Visitante

- Max-Planck-Institut für Informatik, Saarbrücken, Alemanha, visitando Dr. Danny Hermelin, Março 2010.
- Department of Computer Science, University of Jena, Alemanha, visitando Professor Rolf Niedermeier, Outubro 2009.
- Department of Computer Science, University of Victoria, Canadá, visitando Professor Ulrike Steger, Outubro 2006.
- Department of Mathematics, Simon-Fraser-University, Vancouver, Canadá, visitando Professor Bojan Mohar, Outubro 2006–Março 2007.
- Department of Computer Science, University of Utrecht, Holanda, visitando Professor Hans Bodlaender, Setembro 2005 e Setembro 2006.
- Department of Computer Science, Universitat Politecnica de Catalunya, Barcelona, Espanha, visitando Professor Dimitrios Thilikos, Dezembro 2005.
- Department of Computer Science, University of Lund, Suécia, visitando Professor Andrzej Lingas, Setembro 2005.

Apresentações selecionadas

Apresentações em conferências internacionais

- *Fast Minor Testing in Planar Graphs*, 18th Annual European Symposium on Algorithms (ESA 2010), Liverpool, UK, September 2010.
- *Faster Parameterized Algorithms for Minor Containment*, 12th Scandinavian Symposium and Workshops on Algorithm Theory (SWAT 2010), Bergen, Norway, June 2010.
- *Planar Subgraph Isomorphism Revisited* und *Beyond Bidimensionality: Parameterized Subexponential Algorithms on Directed Graphs*, 27th International Symposium on Theoretical Aspects of Computer Science (STACS 2010), Nancy, France, March 2010.
- *Catalan Structures and Dynamic Programming in H-minor-free graphs*, 19th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA 2008), San Francisco, USA, January 2008.
- *How to use planarity efficiently: new tree-decomposition based algorithms*, 33rd International Workshop on Graph-Theoretic Concepts in Computer Science (WG 2007), Dornburg (Jena), Germany, June 2007.
- *Dynamic Programming and Fast Matrix Multiplication*, 14th Annual European Symposium (Algorithms/ESA 2006), Zürich, Switzerland, September 2006.
- *Fast Subexponential Algorithm for Non-local Problems on Graphs of Bounded Genus*, 10th Scandinavian Workshop on Algorithm Theory (SWAT 2006), Riga, Lettland, July 2006.
- *Two birds with one stone: the best of branchwidth and treewidth with one algorithm*, 7th Latin American Theoretical Informatics Symposium (LATIN 2006), Valdivia, Chile, March 2006.
- *Efficient Exact Algorithms on Planar Graphs: Exploiting Sphere Cut Branch Decompositions*, 13th Annual European Symposium (Algorithms-ESA 2005), Palme de Mallorca, Spain, September 2005.

Apresentações em workshops

- *A faster FPT-algorithm for Planar Subgraph Isomorphism*, Dagstuhl seminar „Parameterized complexity and approximation algorithms“, Saarbrücken, Germany, December 2009.
- *Designing subexponential algorithms*, Fall School des Graduiertenkollegs „Methods for Discrete Structures“ der FU Berlin, HU Berlin, und TU Berlin, 05.10.2007
- *Subexponential algorithms for non-local problems on H-minor-free graphs*, Sixth Czech-Slovak International Symposium on Combinatorics, Graph Theory, Algorithms and Applications (CS'06), Prague, Czech Republic, July 2006.
- *Subexponential algorithms for planar hamiltonicity*, in Workshop on Graph Classes, Width Parameters and Optimization (Wlab'05), Prague, Czech Republic, September 2005.

Outras Apresentações

- *Beyond bidimensionality: parameterized subexponential algorithms on directed graphs*, Seminar, MPI Saarbrücken, Germany, March 2010.
- *Subgraph isomorphism and related problems on planar graphs*, Informatik-Kolloqium, Jena, Germany, October 2009.
- *Designing subexponential algorithms*, Fall School on Algorithmic Graph Structure Theory, organized by the DFG Research Training Group Methods for Discrete Structures, Schloss Blankensee, Germany, October 2007.

- *Improving dynamic programming based algorithms*, SFU CS Theory Seminar, Vancouver, Canada, November 2006.
- *New techniques for solving NP-hard planar graph problems*, CAG Seminar, Victoria, Canada, October 2006.
- *Dynamic programming & Fast matrix multiplication*, CS Theory Seminar, Utrecht, Netherlands, September 2006.
- *Efficient exact algorithms on planar graphs: Exploiting sphere cut decompositions*, CS Theory Seminar, Utrecht, Netherlands, September 2005.
- *Subexponential algorithms for planar hamiltonicity*, ARCO, Lund, Sweden, Sept. 2005.

OUTRAS ATIVIDADES

Disciplinas cursadas na pós-graduação

◇ Tópicos em algoritmos: algoritmos paramétricos; biologia computacional; teoria da complexidade.

◇ Tópicos em matemática pura e aplicada: geometria diferencial, geometria de Riemann, topologia algébrica, bio-matemática.

◇ Tópicos sobre a ética: movimento de resistência *Weisse Rose* no nacional-socialismo; a ética na medicina e na biologia, investigação e cura - uma discussão sobre a nova genética.

◇ Sistemas operacionais e sistemas distribuídos - computação paralela e distribuída.

◇ Arquitetura de Computadores - básica, paralela e de alta performance; verificação de hardware.

Conhecimento em Línguas

- Fluente: Alemão (nativo), Inglês e Norueguês (Bokmål)
- Conhecimentos Avançados: Espanhol
- Conhecimentos básicos: Português, Italiano, Francês e Latim

  Meta: Ser fluente em português o mais breve possível.

Passatempos

- Violoncelo, Caminhadas, Esquiar, Andar de bicicleta, Tango, Literatura.