

Curriculum vitae

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France *www* : <http://pageperso.lif.univ-mrs.fr/~kolja.knauer/>
Place and Date of Birth : Oldenburg, Germany | 5 August 1980
Citizenship : German

EMPLOYMENT, GRANTS, AND SCHOLARSHIPS

Departament de Matemàtiques i Informàtica, Universitat de Barcelona, Spain

Ramón y Cajal research position **Sept 2019 – present**
Member of the MICINN project ALCOIN **June 2020 – present**

LIS, Université Aix-Marseille, France

Maître de conférences (assistant professor) **Sept 2014 – Sept 2019 (on leave)**
Délégation CNRS (teaching free research year) **Sept 2018 – Sept 2019**
Individual PEPS research grant EROS **Jan 2015 – Dec 2015**
Efficient Representation of Oriented Structures
Member of the ANR project GATO **Oct 2016 – present**
Member of the ANR project DISTANCIA **Oct 2017 – present**
Member of the ANR project CAPPS **Oct 2017 – present**

LIRMM, Université Montpellier 2, France

PostDoc in the ANR project EGOS **Jan 2014 – Aug 2014**

I3M, Université Montpellier 2, France

PostDoc in the ANR project TEOMATRO **Jan 2013 – Dec 2013**

Technische Universität Berlin, Germany

Post Doctoral Research Assistant **Mar 2011 – Dec 2012**
Project of ESF (European Science Foundation) **July 2011 – Dec 2012**
Graph Drawings and Representations
Teaching Assistant **Mar 2011 – July 2011**
Postgraduate Scholarship of DFG (German Science Foundation) **Sept 2007 – Nov 2010**
Research Training Group *Methods for Discrete Structures*
Scholarship of DAAD (German Academic Exchange Service) **Mar 2004 – Mar 2005**
CINVESTAV, Mexico.

EDUCATION

Technische Universität Berlin, Germany

Dr. rer. nat. Summa Cum Laude (Ph.D., Mathematics, *with highest distinction*) **Nov 2010**

Dissertation : Lattices and Polyhedra from Graphs.

Supervisors : Stefan Felsner and Michael Joswig.

Area of Study : Graphs, Orders, Discrete Geometry, Algorithms.

Diploma (M.Sc.) **Aug 2007**

Thesis : Partial Orders on Orientations via Cycle Flips.

Supervisors : Stefan Felsner and Günter M. Ziegler.

Major field of study : Algorithmic Discrete Mathematics.

Subsidiary fields of study : Differential Geometry, Functional Analysis, Philosophy of Science.

FUNDING AND GRANTS

I was active participant of the successful application process for the following projects :

Ramón y Cajal research grant **2019**

members : 1 (I am the PI), duration : 5 years, amount : 200.000 €

CNRS teaching free research year *Oriented matroids and beyond* **2018**

MICINN ALCOIN *Álgebra Conmutativa y sus interacciones* **2020**

members : 6, duration : 3 years, amount : 46343 €

ANR CAPPs *Combinatorial Analysis of Polytopes and Polyhedral Subdivisions* **2017**

members : 6, duration : 4 years, amount : 164160 €

ANR DISTANCIA *Structures and algorithms of Metric Graph Theory* **2017**

members : 24, duration : 4 years, amount : 320704 €

ANR GATO *Graphes, Algorithmes et Topologie* **2017**

members : 21, duration : 4 years, amount : 350803 €

Individual PEPS research grant *Efficient Representation of Oriented Structures* **2015**

members : 1 (I was the PI) , duration : 1 year, amount : 6000 €

EuroGIGA research grant *Graph Drawings and Representations* **2011**

members : 10, duration : 4 year, amount : 200000 €

DFG PhD grant *Graphentheorie in Ebene und Raum* **2007**

members : 1 (finally I got another grant for my PhD) , duration : 3 year, amount : 162936 €

TEACHING AND SUPERVISION

TEACHING

My teaching at Aix-Marseille has been focused on first and second year students and on communicating them the methods and importance of mathematical reasoning in computer science. After reshaping an existing course on *Graphs*, I established a new TP(=exercise class) system based on oral presentations and math communication. This led to good results for students that thought to dislike mathematics. The new TP model is now being used at three Campuses of Aix-Marseille. Back in Berlin my teaching activity was dedicated to advanced courses in the Master's level.

Bachelors :

Course <i>Graphs</i> [English]	Barcelona 2020
Course <i>Graphs</i> [French]	Aix-Marseille 2018
Course <i>Introduction to Informatics</i> [French]	Aix-Marseille 2017
Course <i>Graphs</i> [French]	Aix-Marseille 2017
Course <i>Introduction to Informatics</i> [French]	Aix-Marseille 2016
Course <i>Graphs</i> [French]	Aix-Marseille 2016
Course <i>Introduction to Informatics</i> [French]	Aix-Marseille 2015
Course <i>Graphs</i> [French]	Aix-Marseille 2015
Course <i>Introduction to Informatics</i> [French]	Aix-Marseille 2014

Masters :

Course <i>Graphs : Geometry and Topology</i> [English]	TU Berlin 2012
Seminar <i>Graph Drawing</i> (Mentoring & Organization) [English]	TU Berlin 2012
Course <i>Combinatorics I</i> (Lectures & Exercises) [English]	TU Berlin 2011
Seminar <i>Topics in Combinatorics</i> (Mentoring) [German]	TU Berlin 2011
Seminar <i>Matroid Theory</i> (Mentoring & Organization) [English]	TU Berlin 2010
Seminar <i>Tilings</i> (Mentoring) [German]	TU Berlin 2009
Seminar <i>Markov Chains and Random Sampling</i> (Mentoring) [German]	TU Berlin 2008
Seminar <i>Algebraic Graph Theory</i> (Mentoring & Organization) [German]	TU Berlin 2007
Course <i>Introduction to Matroids</i> (Lectures) [Spanish]	CINVESTAV Mexico 2005

SUPERVISION

I have always enjoyed leading a student into research. In order to attract strong students I regularly propose topics to École Normale Supérieure (ENS), École Polytechnique, and École Centrale de Marseille (ECM), which are French elite universities. In the last years, I have attracted three of their student. One of them finished her Master's and is one of my two current PhD students. Moreover, I am proud to be the PhD co-advisor of Tilen Marc from Ljubljana, who finished his PhD in 2018.

Bachelor's thesis on <i>enumeration of k-connected orientations</i>	Universitat de Barcelona 2021
Master's thesis on <i>lattice path polytopes</i>	Universidad de los Andes 2021
Master's thesis on <i>symmetries in partial cubes</i>	Universitat de Barcelona 2020
PhD thesis co-advisor for <i>Manon Philibert</i>	Aix-Marseille 2018-2021
Master's thesis (ENS-Lyon) on <i>drawing graphs in convex position</i>	Aix-Marseille 2018
PhD thesis co-advisor for <i>Sarah Blind</i>	Metz 2017-2019
PhD thesis co-advisor for <i>Tilen Marc</i>	Ljubljana 2015-2018
Postdoctoral advisor for <i>Ignacio Garcia-Marco</i>	Aix-Marseille 2017
Research internship (ECM) on <i>Cayley posets</i>	Aix-Marseille 2017
Research internship on <i>Cayley graphs</i>	Aix-Marseille 2017
Research internship on <i>weakly stable marriages</i>	Aix-Marseille 2017
Master's thesis on <i>generation of graph orientations</i>	Aix-Marseille 2017
Research internship (ENS-Cachan) on <i>planar partial cubes</i>	Aix-Marseille 2016

Research internship on <i>enumeration of strong orientations</i>	Aix-Marseille 2016
Master's thesis on <i>toroidal domino tilings</i>	Aix-Marseille 2015
Bachelor's thesis on <i>toroidal flip graphs</i>	TU Berlin 2012
Master's thesis on <i>stable marriages</i>	TU Berlin 2012
Bachelor's thesis on <i>non-planar α-orientations</i>	TU Berlin 2010

DISSEMINATION AND RESPONSIBILITIES

I have lectured on several dissemination events, one for math high school students in Berlin, another for math high school teachers in Switzerland, one for students of the (elite) ENS graduate school, a PhD Spring school at CIRM (Luminy), and recently a short dissemination event for first year science students in Tenerife. Moreover, I have coauthored an introductory book into discrete mathematics for computer science students.

Lecturer on <i>Combinatorial Cowork Space</i>	2020
Lecturer on <i>Fisquito de Matematicas</i> (Event for first year students in La Laguna)	2020
Lecturer on <i>École jeunes chercheurs en informatique mathématique</i> (Spring School in Mathematical Computer Science)	2019
Speaker on <i>Visite étudiants ENS Paris-Saclay</i> (Dissemination to strong students)	2017
Lecturer on <i>Colloque de la CRM</i> (Swiss continuous formation program for math teachers)	2017
Co-author : Introductory book to Discrete Mathematics for Computer Science students	2015
Speaker on <i>Tag der Mathematik</i> (Berlin math day for high-school students)	2012

I have been organizing research seminars first at TU Berlin and later the one of my team ACRO at LIS. Moreover, I organized three international workshops and am a reviewer for an extensive list of journals, conferences, and research grant applications in my field. I am editor-in-chief of Annals of Combinatorics and a section editor of DMTCS.

Editor-in-chief of Annals of Combinatorics	2019 – present
Organizer <i>DISTANCIA kick-off meeting</i>	2018
External expert for the review of projects ANR, Polish Academy of Science, Marie Curie Scholarships	2018 – present
Organizer <i>International Workshop on Graphs, Semigroups, and Semigroup Acts</i>	2017
Organizer of weekly research seminar <i>Réunion ACRO</i> at LIF Marseille	2015 – 2019
Organizer conference <i>Graph Drawings and Representations</i>	2012
Organizer of weekly research seminar <i>Discrete Structures</i> at TU Berlin	2007 – 2013
Section editor <i>Combinatorics</i> of DMTCS	2018 – present
Reviewer : ADAM, ALDAM2020, Comput. Geom., Combinatorica, Discrete Comput. Geom., Discrete Appl. Math., Discrete Math., Discuss. Math. Graph Theory, Discrete Math. Theor. Comput. Sci., EuroComb2019, Eur. J. Combin., Electron. J. Comb., FPSAC2018, FPSAC2019, GD2016, GD2018, Inf. Process. Lett., JCTB, JMD2016, J. Graph Algorithms Appl., LAGOS2017, LATIN2018, Mathematische Zeitschrift, ORDER, RIMA, SoCG2017, SoCG2020, SIDMA, STACS2020, Theor. Comput. Sci., WG2015, WG2018, WG2019, ZentralblattMATH.	

MOBILITY AND INTERNATIONAL ACTIVITY

I have collaborations on an international level. In the following I list research stays, workshop participations, talks on international conferences, and research seminars.

Research stays and workshops

UNAM-Juquilla, Mexico with Luis Montejano	Sept-Nov 2019
Universiad de La Laguna, Tenerife with Ignacio Garcia-Marco	July 2019
University of Ljubliana, Slovenia with Sandi Klavžar	May 2019
UNAM-Juquilla, Mexico with Luis Montejano	Jan-Mar 2019
Ciążeń Palace, Poland Workshop : Order and Geometry	Sept 2018
ULB (Université Libre de Bruxelles) with Jean Cardinal	Mar 2018
MSRI, Berkeley Workshop : Geometric and Topological Combinatorics	Sept 2017
Texas State University, San Marcos with Anton Dochtermann	Sept 2017
CIMAT, Guanajuato with Luis P. Montejano	Aug 2017
Jagiellonian University in Kraków with Piotr Micek	May 2017
Gultowy Palace, Poland Workshop : Order and Geometry	Sept 2016
Jagiellonian University in Kraków with Piotr Micek	June 2016
Université de Fribourg with Emanuele Delucchi	Feb 2016
KIT (Karlsruhe Institute of Technology) with Torsten Ueckerdt	Oct 2015
Universidad Nacional Autónoma de México with Luis Montejano	Aug 2015
Discrete Math TU Berlin with Stefan Felsner and Piotr Micek	Oct 2014
LIX (Laboratoire d'Informatique, École Polytechnique) with Vincent Pilaud	Feb 2014
Discrete Math TU Berlin with Piotr Micek and Torsten Ueckerdt	Dec 2013
Chair of Computational Geometry, EPFL with Bartosz Walczak	Nov 2013
Laboratoire d'Informatique Fondamentale with Victor Chepoi	July 2013
LIX (Laboratoire d'Informatique, École Polytechnique) with Gilles Schaeffer	June 2013
KIT (Karlsruhe Institute of Technology) with Maria Axenovich	Mar 2013
ULB (Université Libre de Bruxelles) with Jean Cardinal	Nov 2012
Universidad Nacional Autónoma de México with Ricardo Strausz	Nov 2010 – Feb 2011
Jagiellonian University in Kraków with Piotr Micek	Mar 2009 – April 2009
CINVESTAV and UNAM with Isidoro Gitler and Ricardo Strausz	Nov 2008 – Jan 2009

Talks on international conferences

<i>Plattenbauten : touching rectangles in space</i>	June 2020
46th International Workshop on Graph-Theoretic Concepts in Computer Science (WG2020), online.	
<i>The Merino-Welsh conjecture for lattice path matroids</i>	January 2020
V Congreso de Jóvenes Investigadores de la RSME, Castelló, Spain	
<i>Complete Acyclic Colorings</i>	November 2019
French Latin-American Conference on New Trends in Applied Mathematics, Santiago, Chile	

invited speaker

- Gráficas de tope de matroides orientados* **July 2019**
Algebra, geometría algebraica y singularidades, La Laguna, Spain
- On tope graphs of (complexes of) oriented matroids* **April 2019**
Colloquium Facets of Complexity, Berlin, Germany
- On tope graphs of (complexes of) oriented matroids* **April 2019**
Colloquium Fernuni Hagen ; Hagen, Germany
- Mas allá de matroides orientados* **Dec 2018**
IV Encuentro de Matroides ; Mexico City, Mexico
- On tope graphs of (complexes of) oriented matroids* **Dec 2018**
Combinatorial and Computational Aspects of Optimization, Topology and Algebra ; Merida, Mexico
- Tope graphs of complexes of oriented matroids* **Sept 2018**
Combinatorial Geometries : matroids, oriented matroids and applications ; Marseille, France
- Oriented Matroids and Beyond* **Feb 2018**
Séminaire Francilien de Géométrie Algorithmique et Combinatoire ; Institut Henri Poincaré, Paris, France
- invited speaker**
- Oriented Matroids and Beyond* **Nov 2017**
Journées Graphes et Algorithmes ; Bordeaux, France
- plenary speaker**
- Posets from semigroups* **Oct 2017**
International workshop on graphs, semigroups, and semigroup acts ; Berlin, Germany
- On Tope Graphs of Complexes of Oriented Matroids* **Aug 2017**
Pacific Rim Mathematical Association Congress ; Oaxaca, Mexico
invited to the Discrete Math session
- Graph Drawings with One Bend and Few Slopes* **April 2016**
Latin American Symposium on Theoretical Informatics ; Ensenada, Mexico
- Drawing graphs with vertices and edges in convex position* **Sept 2015**
Symposium on Graph Drawing ; Los Angeles, USA
- Convexity in partial cubes : the hull-number* **March 2014**
Latin American Symposium on Theoretical Informatics ; Montevideo, Uruguay
- Between partial cubes and oriented matroids* **April 2013**
Combinatorial Geometries : matroids, oriented matroids and applications ; Marseille, France
- Partial cubes : lattices and topology* **Dec 2012**
Combinatorial and Computational Aspects of Optimization, Topology and Algebra ; Hualtulco, Mexico
- Topological representations of planar partial cubes* **Nov 2012**
Kolloquium über Kombinatorik ; Berlin, Germany
- Simple treewidth* **Aug 2012**
Midsummer Combinatorial Workshop ; Prague, Czech Republic

<i>Three ways to cover a graph</i>	June 2012
Mini-Workshop Probabilistic Combinatorics and Graph Theory ; Graz, Austria	
<i>On the bend-number of outerplanar and planar graphs</i>	April 2012
Latin American Symposium on Theoretical Informatics ; Arequipa, Peru	
<i>Outerplanar graph drawings with few slopes</i>	Mar 2012
European Workshop on Computational Geometry ; Assisi, Italy	
<i>The hull-number of partial cubes</i>	Dec 2011
HOMONOLO ; Nova Louka, Czech Republic	
<i>The hull-number of partial cubes</i>	Nov 2011
Kolloquium über Kombinatorik ; Magdeburg, Germany	
<i>A graph-theoretical axiomatization of oriented matroids</i>	Sept 2011
European Conference on Combinatorics, Graph Theory and Applications ; Budapest, Hungary	
<i>Planar right-groups</i>	July 2011
Combinatorics Conference in Lisboa ; Lisbon, Portugal	
<i>The bend-number</i>	Nov 2010
Combinatorial and Computational Aspects of Optimization, Topology and Algebra ; Playa del Carmen, Mexico	
<i>Lattices and polytopes from graphs</i>	June 2010
SIAM Conference on Discrete Mathematics ; Austin, USA	
Invited to the Mini-symposium on Posets by Tom Trotter	
<i>Lattices and polytopes from graphs</i>	June 2010
Berlin-Poznan Seminar ; Berlin, Germany	
<i>Cubic time recognition of cocircuit graphs of oriented matroids</i>	Nov 2009
V Latin-American Algorithms, Graphs and Optimization Symposium ; Gramado, Brazil	
<i>Chip-firing, antimatroids and polyhedra</i>	Sept 2009
European Conference on Combinatorics, Graph Theory and Applications ; Bordeaux, France	
<i>How to eat 4/9 of a pizza</i>	Dec 2008
Combinatorial and Computational Aspects of Optimization, Topology and Algebra ; Oaxaca, Mexico	
<i>Distributive lattices, polyhedra and generalized flow</i>	Sept 2008
XLI Congreso Nacional de la Sociedad Matematica Mexicana ; Valle de Bravo, Mexico	
<i>Distributive polytopes</i>	Aug 2008
Fete of Combinatorics and Computer Science ; Keszthely, Hungary	
<i>Distributive polytopes</i>	Jun 2008
Colloquium of the MDS ; Berlin, Germany	
<i>Distributive lattices on graph orientations</i>	Nov 2007
Kolloquium über Kombinatorik ; Magdeburg, Germany	
<i>Distributive lattices on graph orientations</i>	June 2007
Conference on Semigroups, Acts and Categories with Applications to Graphs ; Tartu, Estonia	

Research Seminar Talks : CIMAT Guanajuato, COATI Sophia Antipolis-Nice, Courant Institute NYU, DCG EPFL Lausanne, Goethe-Universität Frankfurt, G-SCOP Grenoble, I3M Université Montpellier (2), IMJ Paris Jussieu, Jagiellonian University Kraków (4), Karlsruhe Institute of Technology (3), LaBRI Université Bordeaux, LIRMM Université Montpellier (3), LIP ENS Lyon, LIS Université Marseille (14), LIX École Polytechnique Palaiseau (3), Texas State San Marcos, UNAM Juriquilla (3), Universitat de Barcelona (2), Technical University Berlin (22), Universidad de La Laguna (2), Universidad Javeriana Bogota, Université de Fribourg, Université Libre de Bruxelles, University of Ljubljana.

PUBLICATIONS

I have co-authored two books, one book chapter, 43 journal papers (two of which have been the most downloaded of their issue), the strongest journals being JCTA, JCTB(x2), and COMBINATORICA. Moreover, I have 20 publications in conference proceedings, the strongest venue probably being SODA. Furthermore, 5 papers of mine are submitted.

Books

U. Knauer, K. Knauer.

Algebraic graph theory. Morphisms, monoids and matrices.

De Gruyter Studies in Mathematics, (to appear).

U. Knauer, K. Knauer.

Diskrete und algebraische Strukturen - kurz gefasst.

Springer Spektrum, 271 pages, (2015).

Book chapter

K. Knauer.

Popopo - posets, polynômes, polytopes.

Informatique Mathématique, Une photographie en 2019, Jérémie Chalopin et Pierre Guillon (éd.), CNRS Éditions, (2019).

Journals

1. I. García-Marco, G. Mercui-Voyant, K. Knauer.
Cayley posets
accepted at Mediterranean Journal of Mathematics.
2. S. Blind, K. Knauer, P. Valicov.
Enumerating k -arc-connected orientations
accepted at Algorithmica.
3. S. Felsner, W. Hochstättler, K. Knauer, R. Steiner.
Complete Acyclic Colorings,
Electronic Journal of Combinatorics, 27(2), p2.40, (2020).
4. V. Chepoi, K. Knauer, M. Philibert.
Two-dimensional partial cubes,
Electronic Journal of Combinatorics, 27 (40), p3.29, (2020).
5. O. Aichholzer, J. Cardinal, T. Huynh, K. Knauer, T. Mütze, R. Steiner, B. Vogtenhuber.
Flip distances between graph orientations,
accepted at Algorithmica.

6. V. Chepoi, K. Knauer, T. Marc.
Hypercellular graphs : partial cubes without Q_3^- as partial cube minor,
Discrete Mathematics, 343 (4), (2020).
7. G. Guégan, K. Knauer, J. Rollin, T. Ueckerdt.
The interval number of a planar graph is at most three,
accepted at Journal of Combinatorial Theory Series B.
8. I. García-Marco, K. Knauer, L.P. Montejano.
Chomp on generalized Kneser graphs and others,
accepted at International Journal of Game Theory.
9. K. Knauer, T. Marc.
On tope graphs of complexes of oriented matroids,
Discrete & Computational Geometry, 63 (2), pages 377-417, (2020).
10. D. Gonçalves, K. Knauer, B. Lévêque.
On the Structure of Schnyder labelings on orientable surfaces,
Journal of Computational Geometry, 10 (1), pages 127-163, (2019).
11. K. Knauer, N. Nisse.
Computing metric hulls in graphs,
Discrete Mathematics & Theoretical Computer Science 21 (1), ICGT 2018, (2019).
12. A. V. Zhuchok, K. Knauer.
Abelian doppelsemigroups,
Algebra & Discrete Mathematics 26 (2), pages 290-304, (2019).
13. K. Knauer, P. Valicov.
Cuts in matchings of 3-connected cubic graphs,
European Journal of Combinatorics, 76, pages 27-36, (2019).
14. K. Knauer, T. Ueckerdt.
Decomposing 4-connected planar triangulations into two trees and one path,
Journal of Combinatorial Theory Series B, 134, pages 88-109, (2019).
15. I. García-Marco, K. Knauer.
Chomp on numerical semigroups,
Algebraic Combinatorics, 1(3), pages 371-394, (2018).
16. K. Knauer, L. Martínez-Sandoval, J. L. Ramírez Alfonsín.
On lattice path matroid polytopes : integer points and Ehrhart polynomial,
Discrete & Computational Geometry, 60(3), pages 698–719, (2018).
17. K. Knauer, L. P. Montejano, J. L. Ramírez Alfonsín.
How many circuits determine an oriented matroid ?,
Combinatorica 38(4), pages 861-885, (2018).
18. H.-J. Bandelt, V. Chepoi, K. Knauer.
COMs : Complexes of oriented matroids,
Journal of Combinatorial Theory Series A, 156, pages 195-237, (2018).
19. K. Knauer, L. Martínez-Sandoval, J. L. Ramírez Alfonsín.
A Tutte polynomial inequality for lattice path matroids,
Advances in Applied Mathematics, 94, pages 23-38, (2018).
20. R. Desgranges, K. Knauer.
A correction of a characterization of planar partial cubes,
Discrete Mathematics, 340(6), pages 1151-1153, (2017).

21. K. Knauer, P. Valicov, P. S. Wenger.
Planar digraphs without large acyclic sets,
Journal of Graph Theory 85(1), pages 288-291, (2017).
22. B. Albar, D. Gonçalves, K. Knauer.
Orienting triangulations,
Journal of Graph Theory 83(4), pages 392-405, (2016).
23. I. García-Marco, K. Knauer,
Drawing graphs with vertices and edges in convex position,
Computational Geometry : Theory and Applications, pages 25-33, (2017).
most downloaded paper of CGTA in 2017.
24. S. Felsner, G. Mertzios, K. Knauer, T. Ueckerdt,
Intersection graphs of L-shapes and segments in the plane,
Discrete Applied Mathematics 206, pages 48-55, (2016).
25. M. Albenque, K. Knauer.
Convexity in partial cubes : the hull number,
Discrete Mathematics 339, pages 866-876, (2016).
26. K. Knauer, T. Ueckerdt.
Three ways to cover a graph,
Discrete Mathematics 339, pages 745-758, (2016) .
27. J. Chappelon, K. Knauer, L. P. Montejano, J. L. Ramírez Alfonsín.
Connected covering numbers,
Journal of Combinatorial Designs 23 (12), pages 534-549, (2015).
28. K. Knauer, U. Knauer.
On planar right groups,
Semigroup Forum 92 (1), pages 142-157, (2016).
29. B. Bosek, S. Felsner, K. Knauer, G. Matecki.
On the duality of semiantichains and unichain coverings,
Order 33 (1), pages 29-38, (2016).
30. L. Luecken, J. P. Pade, K. Knauer.
Classification of coupled dynamical systems with multiple delays : Finding the minimal number of delays,
SIAM Journal of Applied Dynamical Systems 14 (1), pages 286-304, (2015).
31. D. Heldt, K. Knauer, T. Ueckerdt.
On the bend-number of planar and outerplanar graphs,
Discrete Applied Mathematics 179, pages 109-119, (2014).
32. J. Cardinal, K. Knauer, P. Micek, T. Ueckerdt.
Making Octants Colorful, and Related Covering Decomposition Problems,
SIAM Journal of Discrete Mathematics 28 (4), pages 1948-1959, (2014).
33. M. Axenovich, K. Knauer, J. Stump, T. Ueckerdt.
Online and size anti-Ramsey numbers,
Journal of Combinatorics 5 (1), pages 87-114, (2014).
34. K. Knauer, P. Micek, B. Walczak.
Outerplanar graph drawings with few slopes,
Computational Geometry : Theory and Applications 47 (5), pages 614-624, (2014).

35. D. Heldt, K. Knauer, T. Ueckerdt.
Edge-intersection graphs of grid paths : the bend-number,
Discrete Applied Mathematics 167, pages 144-162, (2014).
36. K. Knauer, J. J. Montellano-Ballesteros, R. Strausz.
A graph-theoretical axiomatization of oriented matroids,
European Journal of Combinatorics 35, pages 388-391, (2014).
37. J. Cardinal, K. Knauer, P. Micek, T. Ueckerdt.
Making triangles colorful,
Journal of Computational Geometry 4 (1), pages 240-246, (2013).
38. L. Lücken, J. P. Pade, K. Knauer, S. Yanchuk.
Reduction of interaction delays in networks,
Europhysics Letters 103, 6 pages, (2013).
39. S. Felsner, K. Knauer.
Distributive lattices, polyhedra, and generalized flows,
European Journal of Combinatorics 32, pages 45-59, (2011).
40. S. Felsner, R. Gómez, K. Knauer, J. J. Montellano-Ballesteros, R. Strausz.
Cubic time recognition of cocircuit graphs of uniform oriented matroids,
European Journal of Combinatorics 32, pages 60-66, (2011).
41. K. Knauer, P. Micek, T. Ueckerdt.
How to eat $4/9$ of a pizza,
Discrete Mathematics 311, pages 1635-1645, (2011)
most downloaded paper of DM in 2011.
42. K. Knauer, U. Knauer.
Toroidal embeddings of right-groups,
Thai Journal of Mathematics 8, pages 483-490, (2010).
43. S. Felsner, K. Knauer.
ULD-lattices and Δ -bonds,
Combinatorics, Probability and Computing 18, pages 707-724, (2009).

Conference Proceedings

1. S. Felsner, K. Knauer, T. Ueckerdt.
Plattenbauten : touching rectangles in space,
accepted at WG2020.
2. O. Aichholzer, J. Cardinal, T. Huynh, K. Knauer, T. Mütze, R. Steiner, B. Vogtenhuber.
Flip distances between graph orientations,
WG 2019, Graph-Theoretic Concepts in Computer Science, pages 120-134, (2019).
3. K. Knauer, P. Micek, T. Ueckerdt.
The queue-number of posets of bounded width or height,
GD 2018, Lecture Notes in Computer Science 11282, 200-212 (2018).
4. K. Knauer, B. Walczak.
Graph Drawings with One Bend and Few Slopes,
LATIN 2016, Lecture Notes in Computer Science 9644, pages 549-561, (2016).
5. I. García-Marco, K. Knauer.
Drawing graphs with vertices and edges in convex position,
GD 2015, Lecture Notes in Computer Science 9411, pages 348-359, (2015).

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