Curriculum vitae

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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 ($\exists \leq 5$ positions per year in Spain) **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**
- 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

Aix-Marseille Université, France

Habilitation à diriger des recherches (HDR) **Dec 2021**

Thesis : Oriented matroids and beyond : complexes, partial cubes, and corners.
Reviewers : Sandi Klavžar, Jorge Ramirez-Alfonsin, Ilda da Silva.
Jury : Victor Chepoi, Louis Esperet, Jesus de Loera, Yann Vaxès.

Technische Universität Berlin, Germany

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

Thesis : 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 :

ANR DAGDigDec *DAGs and Digraph Decompositions* **2022**
members : 7, duration : 4 years, amount : 5000 €

IN2SI project ACDG **2021**
members : 2, duration : 11 months, amount : 5000 €

CIMPA research in pairs with C. Benedetti (not realized due to COVID restrictions) **2021**
members : 2, duration : 6 weeks, amount : 5000 €

MICINN ALCOIN *Álgebra Conmutativa y sus interacciones* **2020**
members : 6, duration : 3 years, amount : 46343 €

Ramón y Cajal research grant **2019**
members : 1 (I am the PI), duration : 5 years, amount : 200000 €

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

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 used another PhD grant) , duration : 3 year, amount : 162936 €

Teaching and supervision

Teaching

In Barcelona I am redesigning the graph course for second year students, with attached programming courses. 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 *Graphs and C++* [English]	Barcelona **2021**
Course *Graphs and C++* [English]	Barcelona **2020**
Course *Graphs* [French]	Aix-Marseille **2018**
Course *Introduction to Informatics* [French]	Aix-Marseille **2017**
Course *Graphs* [French]	Aix-Marseille **2017**
Course *Introduction to Informatics* [French]	Aix-Marseille **2016**
Course *Graphs* [French]	Aix-Marseille **2016**
Course *Introduction to Informatics* [French]	Aix-Marseille **2015**
Course *Graphs* [French]	Aix-Marseille **2015**
Course *Introduction to Informatics* [French]	Aix-Marseille **2014**

Masters and higher :

Course *Algebraic graph theory* [English]	BGSMath **2021**
Course *Lattices and posets* [French]	Aix-Marseille **2021**
Course *Graphs : Geometry and Topology* [English]	TU Berlin **2012**
Seminar *Graph Drawing* (Mentoring & Organization) [English]	TU Berlin **2012**
Course *Combinatorics I* (Lectures & Exercises) [English]	TU Berlin **2011**
Seminar *Topics in Combinatorics* (Mentoring) [German]	TU Berlin **2011**
Seminar *Matroid Theory* (Mentoring & Organization) [English]	TU Berlin **2010**
Seminar *Tilings* (Mentoring) [German]	TU Berlin **2009**
Seminar *Markov Chains and Random Sampling* (Mentoring) [German]	TU Berlin **2008**
Seminar *Algebraic Graph Theory* (Mentoring & Organization) [German]	TU Berlin **2007**
Course *Introduction to Matroids* (Lectures) [Spanish]	CINVESTAV Mexico **2005**

Supervision

I have always enjoyed leading a student into research. I have co-advised three PhD students. 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.

Bachelor's thesis on *Woodall's conjecture*	Universitat de Barcelona **2022**

Bachelor's thesis on *enumeration of k-connected orientations*	Universitat de Barcelona	**2021**
Master's thesis on *lattice path polytopes*	Universidad de los Andes	**2021**
Master's thesis on *symmetries in partial cubes*	Universitat de Barcelona	**2020**
PhD thesis co-advisor for *Manon Philibert*	Aix-Marseille	**2018-2021**
Master's thesis (ENS-Lyon) on *drawing graphs in convex position*	Aix-Marseille	**2018**
PhD thesis co-advisor for *Sarah Blind*	Metz	**2017-2019**
PhD thesis co-advisor for *Tilen Marc*	Ljubljana	**2015-2018**
Postdoctoral advisor for *Ignacio Garcia-Marco*	Aix-Marseille	**2017**
Research internship (ECM) on *Cayley posets*	Aix-Marseille	**2017**
Research internship on *Cayley graphs*	Aix-Marseille	**2017**
Research internship on *weakly stable marriages*	Aix-Marseille	**2017**
Master's thesis on *generation of graph orientations*	Aix-Marseille	**2017**
Research internship (ENS-Cachan) on *planar partial cubes*	Aix-Marseille	**2016**
Research internship on *enumeration of strong orientations*	Aix-Marseille	**2016**
Master's thesis on *toroidal domino tilings*	Aix-Marseille	**2015**
Bachelor's thesis on *toroidal flip graphs*	TU Berlin	**2012**
Master's thesis on *stable marriages*	TU Berlin	**2012**
Bachelor's thesis on *non-planar α-orientations*	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 fist year science students in Tenerife. Moreover, I have coauthored an introductory book into discrete mathematics for computer science students.

Lecturer on *Combinatorial Cowork Space*	**2020**
Lecturer on *Fisquito de Matematicas* (Event for first year students in La Laguna)	**2020**
Lecturer on *École jeunes chercheurs en informatique mathématique* (Spring School in Mathematical Computer Science)	**2019**
Speaker on *Visite étudiants ENS Paris-Saclay* (Dissemination to strong students)	**2017**
Lecturer on *Colloque de la CRM* (Swiss continuous formation program for math teachers)	**2017**
Co-author : Introductory book to Discrete Mathematics for Computer Science students	**2015**
Speaker on *Tag der Mathematik* (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 *DISTANCIA kick-off meeting*	**2018**

External expert for the review of projects ANR, Polish Academy of Science, Marie Curie Scholarships **2018 – present**

Organizer *International Workshop on Graphs, Semigroups, and Semigroup Acts* **2017**

Organizer of weekly research seminar *Réunion ACRO* at LIF Marseille **2015 – 2019**

Organizer conference *Graph Drawings and Representations* **2012**

Organizer of weekly research seminar *Discrete Structures* at TU Berlin **2007 – 2013**

Section editor *Combinatorics* of DMTCS **2018 – present**

Reviewer : Aequ. Math., 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, JGT, 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

Universdiad de La Laguna, Tenerife with Ignacio Garcia-Marco **June 2021**

UNAM-Juriquilla, Mexico with Luis Montejano **Sept-Nov 2019**

Universdiad de La Laguna, Tenerife with Ignacio Garcia-Marco **July 2019**

University of Ljubliana, Slovenia with Sandi Klavžar **May 2019**

UNAM-Juriquilla, 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

SAMple COMpression **February 2022**
Warwick DIMAP Seminar, online.

SAMple COMpression **December 2021**
Metric Graph Theory, Marseille, France.

Sensitivity in Cayley Graphs **June 2021**
Séminaire de combinatoire Philippe Flajolet, online.

Sensitivity in Cayley Graphs **April 2021**
Colloquium Facets of Complexity, online.

Plattenbauten : touching rectangels in space **June 2020**
46th International Workshop on Graph-Theoretic Concepts in Computer Science (WG2020), online.

The Merino-Welsh conjecture for lattic path matroids **January 2020**
V Congreso de Jóvenes Investigadores de la RSME, Castelló, Spain

Complete Acyclic Colorings **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 ; Huatulco, Mexico

Topological representations of planar partial cubes **Nov 2012**
Kolloquium über Kombinatorik ; Berlin, Germany

Simple treewidth **Aug 2012**
Midsummer Combinatorial Workshop ; Prague, Czech Republic

Three ways to cover a graph **June 2012**
Mini-Workshop Probabilistic Combinatorics and Graph Theory ; Graz, Austria

On the bend-number of outerplanar and planar graphs **April 2012**
Latin American Symposium on Theoretical Informatics ; Arequipa, Peru

Outerplanar graph drawings with few slopes **Mar 2012**
European Workshop on Computational Geometry ; Assisi, Italy

The hull-number of partial cubes **Dec 2011**
HOMONOLO ; Nova Louka, Czech Republic

The hull-number of partial cubes **Nov 2011**
Kolloquium über Kombinatorik ; Magdeburg, Germany

A graph-theoretical axiomatization of oriented matroids **Sept 2011**
European Conference on Combinatorics, Graph Theory and Applications ; Budapest, Hungary

Planar right-groups **July 2011**
Combinatorics Conference in Lisboa ; Lisbon, Portugal

The bend-number **Nov 2010**

Combinatorial and Computational Aspects of Optimization, Topology and Algebra ; Playa del Carmen, Mexico

Lattices and polytopes from graphs **June 2010**

SIAM Conference on Discrete Mathematics ; Austin, USA
Invited to the Mini-symposium on Posets by Tom Trotter

Lattices and polytopes from graphs **June 2010**

Berlin-Poznan Seminar ; Berlin, Germany

Cubic time recognition of cocircuit graphs of oriented matroids **Nov 2009**

V Latin-American Algorithms, Graphs and Optimization Symposium ; Gramado, Brazil

Chip-firing, antimatroids and polyhedra **Sept 2009**

European Conference on Combinatorics, Graph Theory and Applications ; Bordeaux, France

How to eat 4/9 *of a pizza* **Dec 2008**

Combinatorial and Computational Aspects of Optimization, Topology and Algebra ; Oaxaca, Mexico

Distributive lattices, polyhedra and generalized flow **Sept 2008**

XLI Congreso Nacional de la Sociedad Matematica Mexicana ; Valle de Bravo, Mexico

Distributive polytopes **Aug 2008**

Fete of Combinatorics and Computer Science ; Keszthely, Hungary

Distributive polytopes **Jun 2008**

Colloquium of the MDS ; Berlin, Germany

Distributive lattices on graph orientations **Nov 2007**

Kolloquium über Kombinatorik ; Magdeburg, Germany

Distributive lattices on graph orientations **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, Graphes en Rhône-Alpes et Auvergne, 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), Technical University Berlin (22), Texas State San Marcos, UNAM Juriquilla (3), Universidad de La Laguna (4), Universidad de los Andes Bogota, Universidad Javeriana Bogota, Universitat de Barcelona (2), Université de Fribourg, Université Libre de Bruxelles, University of Ljubljana.

Publications

I have co-authored two books, one book chapter, 46 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 22 publications in conference proceedings, the strongest venue probably being SODA. Furthermore, 10 papers of mine are submitted.

Books

U. Knauer, K. Knauer.
Algebraic graph theory. Morphisms, monoids and matrices.
De Gruyter Studies in Mathematics Vol. 4. 1 XVIII, 329 pages, (2019).

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, K. Knauer.
On sensitivity in bipartite Cayley graphs,
Journal of Combinatorial Theory, Series B (accepted).
2. P. Aboulker, F. Havet, K. Knauer, C. Rambaud.
On the dichromatic number of surfaces,
Electronic Journal of Combinatorics (accepted).
3. V. Chepoi, K. Knauer, M. Philibert.
Ample completions of oriented matroids and complexes of uniform oriented matroids,
SIAM Journal of Discrete Mathematics.
4. S. Klavžar, K. Knauer, T. Marc.
On the Djoković-Winkler relation and its closure in subdivisions of fullerenes, triangulations, and chordal graphs
MATCH Commun. Math. Comput. Chem., 86, pages 327-342, (2021).
5. I. García-Marco, G. Mercui-Voyant, K. Knauer.
Cayley posets
Mediterranean Journal of Mathematics, 17(186), (2020).
6. S. Blind, K. Knauer, P. Valicov.
Enumerating k-arc-connected orientations
Algorithmica, 82, pages 3588–3603, (2020).
7. S. Felsner, W. Hochstättler, K. Knauer, R. Steiner.
Complete Acyclic Colorings,
Electronic Journal of Combinatorics, 27(2), p2.40, (2020).
8. V. Chepoi, K. Knauer, M. Philibert.
Two-dimensional partial cubes,
Electronic Journal of Combinatorics, 27 (40), p3.29, (2020).
9. O. Aichholzer, J. Cardinal, T. Huynh, K. Knauer, T. Mütze, R. Steiner, B. Vogtenhuber.
Flip distances between graph orientations,
accepted at Algorithmica.
10. V. Chepoi, K. Knauer, T. Marc.
Hypercellular graphs : partial cubes without Q_3^- as partial cube minor,
Discrete Mathematics, 343 (4), (2020).
11. G. Guégan, K. Knauer, J. Rollin, T. Ueckerdt.
The interval number of a planar graph is at most three,
Journal of Combinatorial Theory, Series B, 146, pages 61-67, (2021).

12. I. García-Marco, K. Knauer, L.P. Montejano.
Chomp on generalized Kneser graphs and others,
International Journal of Game Theory, (2019).
13. K. Knauer, T. Marc.
On tope graphs of complexes of oriented matroids,
Discrete & Computational Geometry, 63 (2), pages 377-417, (2020).
14. 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).
15. K. Knauer, N. Nisse.
Computing metric hulls in graphs,
Discrete Mathematics & Theoretical Computer Science 21 (1), ICGT 2018, (2019).
16. A. V. Zhuchok, K. Knauer.
Abelian doppelsemigroups,
Algebra & Discrete Mathematics 26 (2), pages 290-304, (2019).
17. K. Knauer, P. Valicov.
Cuts in matchings of 3-connected cubic graphs,
European Journal of Combinatorics, 76, pages 27-36, (2019).
18. 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).
19. I. García-Marco, K. Knauer.
Chomp on numerical semigroups,
Algebraic Combinatorics, 1(3), pages 371-394, (2018).
20. 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).
21. K. Knauer, L. P. Montejano, J. L. Ramírez Alfonsín.
How many circuits determine an oriented matroid ?,
Combinatorica 38(4), pages 861-885, (2018).
22. H.-J. Bandelt, V. Chepoi, K. Knauer.
COMs : Complexes of oriented matroids,
Journal of Combinatorial Theory Series A, 156, pages 195-237, (2018).
23. 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).
24. R. Desgranges, K. Knauer.
A correction of a characterization of planar partial cubes,
Discrete Mathematics, 340(6), pages 1151-1153, (2017).
25. K. Knauer, P. Valicov, P. S. Wenger.
Planar digraphs without large acyclic sets,
Journal of Graph Theory 85(1), pages 288-291, (2017).
26. B. Albar, D. Gonçalves, K. Knauer.
Orienting triangulations,
Journal of Graph Theory 83(4), pages 392-405, (2016).

27. I. García-Marco, K. Knauer,
Drawing graphs with vertices and edges in covex position,
Computational Geometry : Theory and Applications, pages 25-33, (2017).
most downloaded paper of CGTA in 2017.
28. 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).
29. M. Albenque, K. Knauer.
Convexity in partial cubes : the hull number,
Discrete Mathematics 339, pages 866-876, (2016).
30. K. Knauer, T. Ueckerdt.
Three ways to cover a graph,
Discrete Mathematics 339, pages 745-758, (2016) .
31. J. Chappelon, K. Knauer, L. P. Montejano, J. L. Ramírez Alfonsín.
Connected covering numbers,
Journal of Combinatorial Designs 23 (12), pages 534-549, (2015).
32. K. Knauer, U. Knauer.
On planar right groups,
Semigroup Forum 92 (1), pages 142-157, (2016).
33. B. Bosek, S. Felsner, K. Knauer, G. Matecki.
On the duality of semiantichains and unichain coverings,
Order 33 (1), pages 29-38, (2016).
34. 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).
35. D. Heldt, K. Knauer, T. Ueckerdt.
On the bend-number of planar and outerplanar graphs,
Discrete Applied Mathematics 179, pages 109-119, (2014).
36. 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).
37. M. Axenovich, K. Knauer, J. Stumpp, T. Ueckerdt.
Online and size anti-Ramsey numbers,
Journal of Combinatorics 5 (1), pages 87-114, (2014).
38. K. Knauer, P. Micek, B. Walczak.
Outerplanar graph drawings with few slopes,
Computational Geometry : Theory and Applications 47 (5), pages 614-624, (2014).
39. D. Heldt, K. Knauer, T. Ueckerdt.
Edge-intersection graphs of grid paths : the bend-number,
Discrete Applied Mathematics 167, pages 144-162, (2014).
40. K. Knauer, J. J. Montellano-Ballesteros, R. Strausz.
A graph-theoretical axiomatization of oriented matroids,
European Journal of Combinatorics 35, pages 388-391, (2014).

41. J. Cardinal, K. Knauer, P. Micek, T. Ueckerdt.
Making triangles colorful,
Journal of Computational Geometry 4 (1), pages 240-246, (2013).
42. L. Lücken, J. P. Pade, K. Knauer, S. Yanchuk.
Reduction of interaction delays in networks,
Europhysics Letters 103, 6 pages, (2013).
43. S. Felsner, K. Knauer.
Distributive lattices, polyhedra, and generalized flows,
European Journal of Combinatorics 32, pages 45-59, (2011).
44. S. Felsner, R. Gómez, K. Knauer, J. J. Montellano-Ballesteros, R. Strausz.
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