

**BERNARD RIES**

Professor  
 Head of the research group  
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**Personal information**

Date of birth	June 12, 1979	Phone	+41 26 300 8333
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	Boulevard de Pérolles 90	Google Scholar ID	Bernard Ries
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**Education**

- 2004-2007 Ph.D. in Mathematics, Swiss Federal Institute of Technology (EPFL), *Variations of coloring problems related to scheduling and discrete tomography*, supervised by Prof. Dominique de Werra
- 2003-2004 Master in Mathematics, Swiss Federal Institute of Technology (EPFL)
- 2001-2002 Exchange year at the University of Montreal, Canada
- 2000-2004 Studies in Mathematics, Swiss Federal Institute of Technology (EPFL)

**Employment history**

- 2020 - today Full Professor, Université de Fribourg, Fribourg, Switzerland
- 2015 - 2020 Associate Professor, Université de Fribourg, Fribourg, Switzerland
- 2010 - 2015 Associate Professor, Université Paris Dauphine (PSL Research University), Paris, France
- 2009 - 2010 Assistant Professor, University of Warwick, Warwick, United Kingdom
- 2008 - 2009 Postdoctoral Research Fellow, Columbia University, New York, United States

# 1 Publications

## 1.1 Peer-reviewed publications in international scientific journals

E. Galby, F. Mann, B. Ries, **Blocking total dominating sets via edge contractions**, to appear in *Theoretical Computer Science*

F. Bonomo, M. P. Mazzoleni, M. L. Rean, B. Ries, **On some special classes of contact B0-VPG graphs**, to appear in *Discrete Applied Mathematics*

N. Champseix, E. Galby, A. Munaro, B. Ries, **CPG graphs : some structural and hardness results**, *Discrete Applied Mathematics* (2021) 290 17-25

E. Galby, P.T. Lima, B. Ries, **Reducing the domination number of graphs via edge contractions and vertex deletions**, *Discrete Mathematics* (2021) 344(1) 112169

E. Galby, A. Munaro, B. Ries, **Semitotal Domination : New hardness results and a polynomial-time algorithm for graphs of bounded mim-width**, *Theoretical Computer Science* (2020) 814 28-48

P. Hauweele, A. Hertz, H. Mélot, B. Ries, G. Devillez, **Maximum Eccentric Connectivity Index for Graphs with given Diameter**, *Discrete Applied Mathematics* (2019) 268 102-111

E. Galby, M.P. Mazzoleni, B. Ries, **Proper circular arc graphs as intersection graphs of paths in a grid**, *Discrete Applied Mathematics* (2019) 262 195-202

A. Hujdurovic, M. Milanic, B. Ries, **Detecting strong cliques**, *Discrete Mathematics* 342(9) (2019) 2738-2750

D. Paulusma, C. Picouleau, B. Ries, **Critical Vertices and Edges in H-free Graphs**, *Discrete Applied Mathematics* 257 (2019) 361-367

E. Galby, P. T. Lima, D. Paulusma, B. Ries, **Classifying k-edge colouring for H-free graphs**, *Information Processing Letters* 146 (2019) 39-43

O.Y. Diner, D. Paulusma, C. Picouleau, B. Ries, **Contraction and Deletion Blockers for Perfect Graphs and H-free Graphs**, *Theoretical Computer Science* 746 (2018) 49-72

A. Hertz, V. Lozin, B. Ries, V. Zamaraev, D. de Werra, **Dominating induced matchings in graphs containing no long claw**, *Journal of Graph Theory* 88(1) (2018) 18-39

A. Hujdurovic, M. Milanic, B. Ries, **Graphs vertex-partitionable into strong cliques** *Discrete Mathematics* 341(5) (2018) 1392-1405

H. AbouEisha, S. Hussain, V. Lozin, J. Monnot, B. Ries, V. Zamaraev, **Upper Domination : towards a dichotomy through boundary properties**, *Algorithmica* 80 (2018) 2799-2817

A. Hujdurovic, U. Kacar, M. Milanic, B. Ries, A. I. Tomescu, **Complexity and algorithms for finding a perfect phylogeny from mixed tumor samples**, *IEEE/ACM Transactions on Computational Biology and Bioinformatics* 15(1) (2018) 96-108

L. Alcon, F. Bonomo, G. Duran, M. Gutierrez, M. P. Mazzoleni, B. Ries, M. Valencia-Pabon, **On the bend number of circular-arc graphs as edge intersection graphs of paths on a grid**, *Discrete Applied Mathematics* 234 (2018) 12-21

S. Dantas, M. Groshaus, A. Guedes, R.C.S. Machado, B. Ries, D. Sasaki, **On star and biclique edge-colorings**, *International Transactions In Operational Research* 24 (2017) 339-346

- G. D. da Fonseca, D. Sasaki, B. Ries, **On the ratio between maximum weight perfect matchings and maximum weight matchings in grids**, *Discrete Applied Mathematics* 207 (2016) 45-55
- M. Demange, T. Ekim, B. Ries, **On the Minimum and Maximum Selective Graph Coloring Problems in some Graph Classes**, *Discrete Applied Mathematics* 204 (2016) 77-89
- N. Barrot, J. Lang, B. Ries, **Vote par approbation pour les élections à vainqueurs multiples : une famille générale de règles**, *Revue d'Intelligence Artificielle* 29 (2015) 265-291
- V. Lozin, J. Monnot, B. Ries, **On the maximum independent set problem in subclasses of subcubic graphs**, *Journal of Discrete Algorithms* 31 (2015) 104-112
- D. Paulusma, P. A. Golovach, B. Ries, **Coloring graphs characterized by a forbidden subgraph** *Discrete Applied Mathematics* 189 (2015) 101-110
- C. Bazgan, C. Bentz, C. Picouleau, B. Ries, **Blockers for the stability number and the chromatic number**, *Graphs and Combinatorics* 31(1) (2015) 73-90
- M. Demange, T. Ekim, B. Ries, C. Tanasescu, **On Some Applications Of The Selective Graph Coloring Problem**, *European Journal of Operations Research* 240(2) (2015) 307-314
- E. Cohen, M. Golumbic, B. Ries, **Characterizations of cographs as intersection graphs of paths on a grid**, *Discrete Applied Mathematics* 178 (2014) 46-57
- M. Demange, J. Monnot, P. Pop, B. Ries, **On the complexity of the selective graph coloring problem in some special classes of graphs**, *Theoretical Computer Science* 541 (2014) 89-102
- A. Hertz, B. Ries, **A note on r-equitable k-colorings of trees**, *Yugoslav Journal of Operations Research* 24(2) (2014) 293-298
- D. Dereniowski, W. Kubiak, B. Ries, Y. Zwols, **Optimal edge-coloring with (edge) rate constraints**, *Networks* 62(3) (2013) 165-182
- F. Bonomo, D. Cornaz, T. Ekim, B. Ries, **Perfectness of clustered graphs**, *Discrete Optimization* 10 (2013) 296-303
- C. Bazgan, M. Chopin, B. Ries, **The firefighter problem with more than one firefighter on trees**, *Discrete Applied Mathematics* 161(7-8) (2013) 899-908
- M.C. Golumbic, B. Ries, **On the intersection graphs of orthogonal line segments in the plane : characterizations of some subclasses of chordal graphs**, *Graphs and Combinatorics* 29(3) (2013) 499-517
- C. Bentz, D. Cornaz, B. Ries, **Packing and Covering with Linear Programming : a survey**, *European Journal of Operational Research* 227(3) (2013) 409-422
- C. Bentz, M.-C. Costa, D. de Werra, C. Picouleau, B. Ries, **d-transversals of stable sets and vertex covers in weighted bipartite graphs**, *Journal of Discrete Algorithms* 17 (2012) 95-102
- B. Ries, D. de Werra, R. Zenklusen, **A note on chromatic properties of threshold graphs**, *Discrete Mathematics* 312(10) (2012) 1838-1843
- B. Birand, M. Chudnovsky, B. Ries, P. Seymour, G. Zussman, Y. Zwols, **Analyzing the Performance of Greedy Maximal Scheduling via Local Pooling and Graph Theory**, *IEEE/ACM Transactions on Networking* 20(1) (2012) 163-176

- K. Dabrowski, V. Lozin, R. Raman, B. Ries, **Coloring vertices of triangle-free graphs without forests**, *Discrete Mathematics* 312(7) (2012) 1372-1385
- A. Asinowski, B. Ries, **Some properties of edge intersection graphs of single bend paths in the grid**, *Discrete Mathematics* 212(2) (2012) 427-440
- M. Chudnovsky, B. Ries, Y. Zwols, **Claw-Free Graphs With Strongly Perfect Complements. Fractional and Integral Version. Part I. Basic graphs**, *Discrete Applied Mathematics* 159(17) (2011) 1971-1995
- M. Chudnovsky, B. Ries, Y. Zwols, **Claw-Free Graphs With Strongly Perfect Complements. Fractional and Integral Version. Part II. Nontrivial strip-structures**, *Discrete Applied Mathematics* 159(17) (2011) 1996-2029
- B. Ries, R. Zenklusen, **A 2-approximation for the Maximum Satisfying Bisection Problem**, *European Journal of Operational Research* 210(2) (2011) 169-175
- F.-X. Meuwly, B. Ries, N. Zufferey, **Solution methods for a scheduling problem with incompatibility and precedence constraints**, *Algorithmic Operations Research* 5 (2010) 75-85
- T. Ekim, B. Ries, D. de Werra, **Split-critical and uniquely split-colorable graphs**, *Discrete Mathematics and Theoretical Computer Science* 12(5) (2010) 1-24
- B. Ries, **Complexity of two coloring problems in cubic planar bipartite mixed graphs**, *Discrete Applied Mathematics* 158 (2010) 592-596
- M.-C. Costa, D. de Werra, C. Picouleau, B. Ries, **On the use of graphs in discrete tomography**, *Annals of Operations Research* 175 (2010) 287-307
- C. Bentz, M.-C. Costa, D. de Werra, C. Picouleau, B. Ries, R. Zenklusen, **Blockers and Transversals in some subclasses of bipartite graphs : when caterpillars are dancing on a grid**, *Discrete Mathematics* 310 (1) (2010) 132 - 146
- M.-C. Costa, D. de Werra, C. Picouleau, B. Ries, **Graph coloring with cardinality constraints on the neighborhoods**, *Discrete Optimization* 6 (2009) 362-369
- C. Bentz, M.-C. Costa, D. de Werra, C. Picouleau, B. Ries, R. Zenklusen, **Blockers and Transversals**, *Discrete Mathematics* 309 (13) (2009) 4306-4314
- H. Furmańczyk, A. Kosowski, B. Ries, P. Zyliński, **Mixed graph edge coloring**, *Discrete Mathematics* 309 (12) (2009) 4027-4036
- C. Bentz, M.-C. Costa, D. de Werra, C. Picouleau, B. Ries, **Degree-constrained edge partitionings in graphs arising from discrete tomography**, *Journal of Graph Algorithms and Applications* 13 (2) (2009) 99-118
- C. Bentz, M.-C. Costa, D. de Werra, C. Picouleau, B. Ries, **On a graph coloring problem arising from discrete tomography**, *Networks* 51 (4) (2008) 256-267
- D. de Werra, B. Ries, **On two coloring problems in mixed graphs**, *European Journal of Combinatorics* 29 (2008) 712-725
- M.-C. Costa, D. de Werra, C. Picouleau, B. Ries, **A tutorial on the use of graphs in discrete tomography**, *4OR* 6 (2008) 101-123

M.-C. Costa, D. de Werra, C. Picouleau, B. Ries, **Addendum to Bicolored matchings in some classes of graphs**, *Graphs and Combinatorics* 24 (2) (2008) 127-128

B. Ries, **Coloring some classes of mixed graphs**, *Discrete Applied Mathematics* 155 (2007) 1-6

M.-C. Costa, D. de Werra, C. Picouleau, B. Ries, **Bicolored matchings in some classes of graphs**, *Graphs and Combinatorics* 23 (1) (2007) 47-60

## 1.2 Peer-reviewed publications in conference proceedings

Z. Deniz, S. Nivelle, B. Ries, D. Schindl, **On some subclasses of split  $B_1$ -EPG graphs**, In Kohayakawa Y., Miyazawa F.K. (eds) *LATIN 2020 : Theoretical Informatics. LATIN 2021. Lecture Notes in Computer Science*, vol 12118. Springer, Cham. (LATIN 2021)

E. Galby, P.T. Lima, B. Ries, **Blocking dominating sets for H-free graphs via edge contractions**, *Leibniz International Proceedings in Informatics* 149 21 :1 - 21 :14 (2019), 30th International Symposium on Algorithms and Computation (ISAAC 2019)

E. Galby, P.T. Lima, B. Ries, **Reducing the domination number of graphs via edge contractions**, *Leibniz International Proceedings in Informatics* 138 41 :1 - 41 :13 (2019), 44th International Symposium on Mathematical Foundations of Computer Science (MFCS 2019)

Z. Deniz, E. Galby, A. Munaro, B. Ries, **On contact graphs of paths in a grid**, *Lecture Notes in Computer Science* 11282 (2019) 317-330, *Graph Drawing and Network Visualization (GD 2018)*

Z. Deniz, S. Nivelle, B. Ries, D. Schindl, **On split  $B_1$ -EPG graphs**, *Lecture Notes in Computer Science* 10807 (2018) 361-375, *Latin American Theoretical Informatics (LATIN 2018)*

F. Bonomo, M. P. Mazzoleni, M. L. Rean, B. Ries, **Characterising chordal contact  $B_0$ -VPG graphs** *Lecture Notes in Computer Science* 10856 (2018) 89-100, *International Symposium on Combinatorial Optimisation (ISCO 2018)*

D. Paulusma, C. Picouleau, B. Ries, **Blocking Independent Sets for H-free graphs via Edge Contractions and Vertex Deletions**, *Lecture Notes in Computer Science* 10185 (2017) 470-483, *Theory and Applications of Models of Computation (TAMC 2017)*

H. Aboueisha, S. Hussain, V. Lozin, J. Monnot, B. Ries, V. Zamaraev, **A boundary property for upper domination**, *Lecture Notes in Computer Science* 9843 (2016) 229-240, *International Workshop on Combinatorial Algorithms (IWOCA 2016)*

D. Paulusma, C. Picouleau, B. Ries, **Reducing the clique and chromatic number via edge contractions and vertex deletions**, *Lecture Notes in Computer Science* 9849 (2016) 38-49, *International Symposium on Combinatorial Optimisation (ISCO 2016)*

A. Hujdurovic, U. Kacar, M. Milanic, B. Ries, A.I. Tomescu, **Finding a perfect phylogeny from mixed tumor samples**, *Lecture Notes in Bioinformatics* 9289 (2015) 80-92, *15th International Workshop on Algorithms in Bioinformatics (WABI 2015)*

O.Y. Diner, D. Paulusma, C. Picouleau, B. Ries, **Contraction Blockers for Graphs with Forbidden Induced Paths**, *Lecture Notes in Computer Science* 9079 (2015) 194-207, *9th International Conference on Algorithms and Complexity (CIAC 2015)*

Y. Amanatidis, N. Barrot, J. Lang, V. Markakis, B. Ries, **Multiple referenda and multiwinner elections using Hamming distances : complexity and manipulability**, *Proceedings of the 14th International Conference on Autonomous Agents & Multiagent Systems (AAMAS 2015)*, Ordini, Elkind, Weiss, Yolum (eds)

715-723 (2015)

H. AbouEisha, S. Hussain, V. Lozin, J. Monnot, B. Ries, **A dichotomy for upper domination in monogenic classes**, *Lecture Notes in Computer Science 8881 (2014) 258-267, 10th Annual International Conference on Combinatorial Optimization and Applications (COCO A 2014)*

N. Barrot, J. Lang, B. Ries, **Approval Voting for Committee Elections : a General Family of Rules**, *19ème Congrès national sur la Reconnaissance de Formes et l'IA (RFIA 2014)*

N. Barrot, L. Gourves, J. Lang, J. Monnot, B. Ries, **Possible winners in approval voting** *Lecture Notes in Artificial Intelligence 8176 (2013) 57-70, Algorithmic Decision Theory (ADT 2013)*

V. Lozin, J. Monnot, B. Ries, **On the maximum independent set problem in subclasses of subcubic graphs**, *Lecture Notes in Computer Science 8288 (2013) 314-326, International Workshop on Combinatorial Algorithms (IWOC A 2013)*

D. Paulusma, P. A. Golovach, B. Ries, **Coloring graphs characterized by a forbidden subgraph**, *Lecture Notes in Computer Science 7464 (2012) 443-454, International Symposium on Mathematical Foundations of Computer Science (MFCS 2012)*

M. Demange, J. Monnot, P. Pop, B. Ries, **Selective Graph Coloring on Some Special Classes of Graphs**, *Lecture Notes in Computer Science 7422 (2012) 320-331, International Symposium on Combinatorial Optimization (ISCO 2012)*

C. Bentz, M.-C. Costa, D. de Werra, C. Picouleau, B. Ries, **Minimum d-Transversals of Maximum-Weight Stable Sets in Trees**, *Electronic Notes in Discrete Mathematics 38 (2011) 129-134, European Conference on Combinatorics, Graph Theory and Applications (EuroComb 2011)*

K. Dabrowski, V. Lozin, R. Raman, B. Ries, **Coloring vertices of triangle-free graphs**, *Lecture Notes in Computer Science 6410 (2010) 184-195, International Workshop on Graph Theoretic Concepts in Computer Science (WG 2010)*

B. Birand, M. Chudnovsky, B. Ries, P. Seymour, G. Zussman, Y. Zwols, **Analyzing the Performance of Greedy Maximal Scheduling via Local Pooling and Graph Theory**, *Proceedings IEEE Conference on Computer Communications (INFOCOM 2010), 2213-2221 (2010)*

### 1.3 Book chapters

A. Hertz, B. Ries, **Graph coloring variations**, to appear in *Topics in Algorithmic Graph Theory*, edited by R.J. Wilson and L. Beineke, Cambridge University Press

C. Bentz, M.-C. Costa, D. de Werra, C. Picouleau, B. Ries, **Weighted transversals and blockers for some optimization problems in graphs**, *Progress in Combinatorial Optimization*, edited by A. Ridha Majhoub, ISTE-WILEY (2012)

## 2 Participation in conferences

### 2.1 Invited/Plenary talks at conferences and workshops

Swiss Operations Research Days, Bern (Switzerland) 2018

*Plenary speaker*

**Title : On some graph modification problems**

10 Year Anniversary DIMAP Workshop, Warwick (UK), 2017

*Plenary talk* **Title : On contact VPG graphs**

Workshop on Interdisciplinary Applications of Graphs, Combinatorics and Algorithms, Haifa (Israel) 2017

*Plenary speaker - 8th Uri Natan Peled Memorial Lecture*

**Title : On edge intersection graphs of paths in a grid**

30th European Chapter on Combinatorial Optimization conference, Koper (Slovenia) 2017

*Plenary speaker*

**Title : On some graph modification problems**

4th International Conference on Operations Research and Enterprise Systems, Lisbon (Portugal) 2015

*Plenary speaker*

**Title : Analyzing the Performance of Greedy Maximal Scheduling via Local Pooling and Graph Theory**

16èmes Journées Graphes et Algorithmes, Dijon (France) 2014

*Plenary speaker*

**Title : On some graph modification problems related to graph parameters**

11th Simposio Argentino de Investigación Operativa, Cordoba (Argentina) 2013

*Plenary speaker*

**Title : Analyzing the Performance of Greedy Maximal Scheduling via Local Pooling and Graph Theory**

25th European Chapter on Combinatorial Optimization conference, Antalya (Turkey) 2012

*Plenary speaker*

**Title : Why some vertices/edges are more important than others**

2nd Workshop in Graph Theory and Applications, Istanbul (Turkey), 2011

*Invited speaker*

**Title : Graph Coloring Problems and Their Applications**

Graph Theory and Applications Colloquium, Luxembourg (Luxembourg), 2011

*Invited speaker*

**Title : On some graph theoretical problems with applications in scheduling, chip manufacturing and wireless networks**

One-Day Conference on Structural Graph Theory, Paris (France), 2011

*Invited speaker*

**Title : Claw-Free Graphs With Strongly Perfect Complements. Fractional and Integral Version**

## 2.2 Conferences and workshops

\* = with presentation

- Dagstuhl Seminar on Graph Colouring : from Structure to Algorithms, Dagstuhl (Germany), 2019
- \*32nd European Chapter on Combinatorial Optimization conference, St Julian's (Malta), 2019
- Winter School on Optimization and Operations Research, Zinal (Switzerland), 2019
- 31st European Chapter on Combinatorial Optimization conference, Fribourg (Switzerland), 2018
- Winter School on Optimization and Operations Research, Zinal (Switzerland), 2018
- \*Latin American Theoretical Informatics (LATIN), Buenos Aires (Argentina), 2018
- \*Latin and American Algorithms, Graphs and Optimization Symposium, Marseille (France), 2017
- Swiss Operations Research Days, Fribourg (Switzerland) 2017

- \*Theory and Applications of Models of Computation (TAMC), Bern (Switzerland), 2017
- Winter School on Optimization and Operations Research, Zinal (Switzerland), 2017
- 10th International Colloquium on Graphs and Optimization, Rigi Kaltbad (Switzerland), 2016
- Swiss Operations Research Days, Lugano (Switzerland) 2016
- Winter School on Optimization and Operations Research, Zinal (Switzerland), 2016
- Summer School on Optimization and Operations Research, Zinal (Switzerland), 2016
- \*International Colloquium on Graph Theory and Combinatorics, Grenoble (France), 2014
- Graphs & Decisions, Luxembourg (Luxembourg), 2014
- 9th International Colloquium on Graphs and Optimization, Sirmione (Italy), 2014
- \*27th European Chapter on Combinatorial Optimization conference, Munich (Germany), 2014
- 26th European Chapter on Combinatorial Optimization conference, Paris (France), 2013
- \*Bordeaux Graph Workshop, Bordeaux (France), 2012
- \*8th International Colloquium on Graphs and Optimization, Leukerbad (Switzerland), 2012
- 38th International Workshop on Graph Theoretic Concepts in Computer Science, Jerusalem (Israel), 2012
- \*International Symposium on Combinatorial Optimization, Athens (Greece), 2012
- \*Dagstuhl Seminar on Exploiting Graph Structure to cope with hard problems, Dagstuhl (Germany), 2011
- \*European Conference on Combinatorics, Graph Theory and Applications, Budapest (Hungary), 2011
- \*DIMAP Workshop on Combinatorics and Graph Theory, Warwick (United Kingdom), 2011
- \*EURO XXIV, Lisbon (Portugal), 2010
- \*European Conference on Combinatorics, Graph Theory and Applications, Bordeaux (France), 2010
- \*2nd Canadian Discrete and Algorithmic Mathematics Conference, Montreal (Canada), 2010
- \*7th International Colloquium on Graphs and Optimisation, Ovronnaz (Switzerland), 2010
- DIMACS Workshop on Graph Coloring and Structure, Princeton University, New Jersey (United States), 2009
- \*Troisième cycle romand de recherche opérationnelle, Zinal (Switzerland), 2008
- \*Fifth Joint Operations Research days, Zurich (Switzerland), 2007
- \*6th International Symposium on Graphs and Optimisation, Cademario (Switzerland), 2007
- \*Conférence conjointe Francoro V/ROADEF, Grenoble (France), 2007
- \*Troisième cycle romand de recherche opérationnelle, Zinal (Switzerland), 2007
- \*Fourth Joint Operations Research Days, Lausanne (Switzerland), 2006
- \*Sixth Czech-Slovak International Colloquium on Combinatorics, Graph Theory Algorithms and Applications, Prague (Czech Republic), 2006



- \*Fifth International Symposium on Graphs and Optimisation, Leukerbad (Switzerland), 2006
- \*Troisième cycle romand de recherche opérationnelle, Zinal (Switzerland), 2006
- \*7th International Colloquium on Graph Theory, Hyères (France), 2005
- \*Troisième cycle romand de recherche opérationnelle, Zinal (Switzerland), 2005

### 2.3 Invited talks at seminars

- Seminar at the Institute of Computing Science, Poznan University of Technology (Poland), 2020
- Seminar at the Department of Mathematics, University de Fribourg (Switzerland), 2018
- Seminar at Universität der Bundeswehr, Munich (Germany), 2013
- Seminar at ENS Lyon, Lyon (France), 2013
- Séminaire *Algorithmique distribuée et graphes*, Université Paris 7 (France), 2012
- Istanbul Discrete Mathematics Meetings, Bogazici University (Turkey), 2012
- ACiD Seminar, Durham University (United Kingdom), 2012
- GERAD Seminar, Université de Montréal (Canada), 2011
- Combinatorial Optimization Seminar, Université Pierre et Maire Curie, Paris (France), 2010
- Séminaire Optimisation Combinatoire, Université Paris Dauphine, Paris (France), 2010
- Combinatorics Research Seminar, University of Birmingham, Birmingham (United Kingdom), 2010
- DIMAP Seminar, University of Warwick, Coventry (United Kingdom), 2009
- CRI Seminar, University of Haifa, Haifa (Israel), 2009
- Discrete Mathematics Seminar, Columbia University, New York (United States), 2008
- Seminar at Gdansk University of Technology (Poland), 2007
- Seminar at Universität der Bundeswehr, Munich (Germany), 2007

## 3 Short term visits

01/2020	Poznan University of Technology, Poznan, Poland
07/2019	University of Bergen, Bergen, Norway
02/2018	Université Paris-Dauphine, Paris, France
04/2015	University of Primorska, Koper, Slovenia
09/2014	Kadir Has University, Istanbul, Turkey
04/2013	University of Warsaw, Warsaw, Poland
12/2012	University of Warsaw, Warsaw, Poland
01/2012	Durham University, Durham, United Kingdom
06/2011	Ecole Polytechnique de Montréal, Montréal, Canada
09/2009	University of Haifa, Haifa, Israel
07/2009	Memorial University, St. John's, Canada
09/2008	Conservatoire National des Arts et Métiers, Paris, France
11/2007	Gdansk University of Technology, Gdansk, Poland

## 4 Supervision of students

### 4.1 PhD students

- Felicia Lucke, Université de Fribourg, 2020-today
- Narmina Baghirova, Université de Fribourg, 2020-today
- Felix Mann, Université de Fribourg, 2019-today
- Vera Fischer, Université de Fribourg, 2018-today
- Pierre Hauweele, Université de Mons, visiting PhD student, 2018 (4 months)
- Paloma Lima, University of Bergen, visting PhD student, 2018 (4 months)
- Zakir Deniz, Suleyman Demirel University, visiting PhD student, 2017 4 (months)
- Mariano Rean, University of Buenos Aires, visiting PhD student, 2016 (4 months)
- Esther Galby, Université de Fribourg, 2015-2020
- Nathanaël Barrot, Universté Paris Dauphine, 2012-2015, co-supervision with Jérôme Lang

### 4.2 Postdoctoral researchers

- Carolina Lucia Gonzales, Université de Fribourg, 2021 (2 months)
- Zakir Deniz, Université de Fribourg, 2019 (4 months)
- Andrea Munaro, Université de Fribourg, 2018 (4 months)
- Diana Sasaki, Université Paris Dauphine, 2014 (1 year)

## 5 Membership in PhD thesis committees

- Vassilis Papapanagioto, University of Lugano, Switzerland, 2018  
External committee member
- Grégoire Cotté, Conservatoire National des Arts et Métiers, Paris, France, 2016  
External committee member
- Mario Gstrein, Université de Fribourg, Fribourg, Switzerland, 2016  
President of the committee

## 6 Organisation of conferences/workshops

### 6.1 Conferences

- International Workshop on Graph-Theoretic Concepts in Computer Science, Fribourg (Switzerland), 2023  
Co-Chair of the Organizing/Program Committee with Daniel Paulusma
- International Symposium on Graphs and Optimisation XI (GO XI), Spa (Belgium), 2022  
Chair of the Organizing Committee
- 31st European Chapter in Combinatorial Optimization (ECCO) conference, Fribourg (Switzerland), 2018  
Chair of the Organizing Committee and the Program Committee
- International Symposium on Graphs and Optimisation X (GO X), Rigi Kaltbad (Switzerland), 2016  
Chair of the Organizing Committee

- International Symposium on Graphs and Optimisation IX (GO IX), Sirmione (Italy), 2014  
Chair of the Organizing Committee
- 26th European Chapter in Combinatorial Optimization (ECCO) conference, Paris (France), 2013  
Chair of the Organizing Committee and the Program Committee
- International Symposium on Graphs and Optimisation VIII (GO VIII), Leukerbad (Switzerland), 2012  
Member of the Organizing Committee
- Operations Research Symposium, Lausanne (Switzerland), 2008  
Member of the Organizing Committee
- International Symposium on Graphs and Optimisation VI (GO VII), Cademario (Switzerland), 2007  
Member of the Organizing Committee
- International Symposium on Graphs and Optimisation V (GO V), Leukerbad (Switzerland), 2006  
Member of the Organizing Committee

## 6.2 Workshops

- 15th Swiss Operations Research Days, Fribourg (Switzerland), 2017  
National conference  
Chair of the Organizing Committee
- Graphs & Decisions, Luxembourg (Luxembourg), 2014  
Member of the Organizing Committee
- Workshop on Intersection Graphs, Haifa (Israel), 2012  
Member of the Organizing Committee
- DIMAP Workshop on Combinatorics and & Graph Theory, Warwick (UK), 2011  
Member of the Organizing Committee

## 7 Editorial responsibilities

- 2020 Co-editor (with Silvano Martello, Bo Chen) of the special issue *New Progress in Combinatorial Optimization* of the journal *Discrete Applied Mathematics*
- 2019 Co-editor (with Yves Crama, Bernard Gendron) of the special issue *GO X Meeting* of the journal *Discrete Applied Mathematics*
- 2015 Co-editor (with Silvano Martello) of the special issue *Advances in Combinatorial Optimization* of the journal *Discrete Applied Mathematics*
- 2010 Co-editor (with Marc Demange, Vadim Lozin, Christophe Picouleau) of the special issue *GO VII Meeting* of the journal *Discrete Applied Mathematics*

## 8 Memberships in boards, scientific societies and individual scientific reviewing activities

2019	member of the program committee of OR 2019
2019	member of the scientific committee of the 10th LAGOS conference
2018	program co-chair of the European Chapter in Combinatorial Optimisation conference (ECCO)
2018	member of the program committee of the EURO XXIX conference
2017 - today	member of the executive committee of the Swiss Operations Research Society (ASRO/SVOR)
2017	member of the scientific committee of the 9th LAGOS conference
2013	program co-chair of the European Chapter in Combinatorial Optimisation conference (ECCO)
2005 - 2008	member of the executive committee of the Swiss Operations Research Society (ASRO/SVOR)
2004 - today	member of the Swiss Operations Research Society (SORS)
2004 - today	<b>reviewing activities</b> for various journals : 4OR, Annals of Operations Research, Discrete Applied Mathematics, Discrete Mathematics, Discussiones Mathematicae Graph Theory, Discrete Optimization, European Journal of Operations Research, Journal of Scheduling, Journal of Combinatorial Theory Series B, SIAM Journal on Discrete Mathematics, Mathematical Methods in Operations Research, Journal of Graph Theory, OR Letters

## 9 Teaching activities

### 9.1 PhD courses

- Algorithmic Graph Theory, Université Paris Dauphine, 2015
- Quantitative Research Methods, Warwick University, 2010

### 9.2 Master courses

- Advanced Topics in Decision Support, Université de Fribourg, 2016 - today
- Graph Theory & Applications, Université de Fribourg, 2016 - 2018
- Combinatorial Optimization, Université de Fribourg, 2015
- Optimisation Combinatoire, Université Paris Dauphine, 2014 - 2015
- Introduction au langage C++, Université Paris Dauphine, 2010 - 2012
- Mathematical Programming, Warwick University, 2009

### 9.3 Bachelor courses

- Decision Support I, Université de Fribourg, 2015 - today
- Operations Management, Université de Fribourg, 2016 - 2018
- Graphes : modélisation et algorithmes, Université Paris Dauphine, 2013 - 2014
- Algorithmique générale (exercice sessions), Université Paris Dauphine, 2010 - 2013
- Management Scientifique et Aide à la Décision (exercice sessions), Université Paris Dauphine, 2010 - 2012
- Logistique et Gestion de Production, Université Paris Dauphine, 2010

## 10 Third party funding

Year	Source	Title	Role
2019-21	Innosuisse	Decision support for an efficient and sustainable waste collection	Principal investigator
2019	CSL Behring	Planungsunterstützung	Coordinator
2018-19	Schwendimann AG	Effiziente und nachhaltige Kehrrichtsammlung	Coordinator
2015-16	PHC Proteus grant	Structural and Algorithmic Aspects of Graph Classes Defined by Cliques and Stable Sets	Coordinator for France
2014-15	MATH-AmSud grant	Discrete mathematics : graph partition problems	Coordinator for France
2013-14	MATH-AmSud grant	Algorithmic, Algebraic and Structural issue on coloring and matching theory of graphs	Member
2012	GdR - RO grant	Décoloration : d-bloqueur minimum pour le nombre chromatique d'un graphe	Member
2012-13	PHC Bosphore grant	The selective graph coloring problem	Coordinator for France
2012	GdR - RO grant	Problèmes de coloration avec sélection	Coordinator

## 11 Institutional responsibilities

- 2019 - today : Vice rector, in charge of International Relations, Digitalisation, Interdisciplinarity, Université de Fribourg
- 2018 - 2019 : Member of the *Commission de promotion de la recherche*, Université de Fribourg
- 2018 - 2019 : Member of the *Commission Promotion*, Faculty of Social Sciences and Economics, Université de Fribourg
- 2017 - 2019 : Member of the *Commission locale de recherche du FNS*, Université de Fribourg
- 2018 - today : Member of the *Commission Qualité*, Faculty of Social Sciences and Economics, Université de Fribourg
- 2018 : Member of the *Commission Bachelor*, Faculty of Social Sciences and Economics, Université de Fribourg
- 2017 - 2018 : President of the recruitment commission for a professor position in Digitalisation and Information Systems, Université de Fribourg
- 2016 - today : Member of the branch committee of the *Swiss Joint Master in Computer Science*, Université de Fribourg
- 2014 - 2015 : Assistant director of the research laboratory LAMSADE, Université Paris Dauphine
- 2013 - 2015 : Member of the *Commission Consultative Représentative* in Computer Science, Université Paris Dauphine
- 2012 - 2014 : Responsible for the stream *Informatique de la Décision* within the 1st year Master program *Informatique des Organisations*, Université Paris Dauphine

## 12 Prizes, awards and fellowships

- 2014, 2015 *Prime d'excellence scientifique* (bonus for scientific excellence), Paris (France)
- 2008 Postdoctoral research fellowship (EUR 24'000) from *Fonds National de la Recherche* Luxembourg
- 2004 Swiss Operations Research Society Award for *Best Master Thesis* in OR in Switzerland

## 13 General contributions to science, Outreach activities

- 2019 Presentation during the *Collaborating with the Industry in Practice* event organised by Tech Transfer Fribourg
- 2015, 2014 Participation at the *Chercheurs à l'Ecole* event organised by the *Fonds National de la Recherche* (Luxembourg) in order to promote research in Mathematics and Computer Science  
2012
- 2005-2008 Member of the *Swiss Operations Research Society* committee whose goal is to promote  
2017-today Operations Research among young students and among industrials
- 2005-2008 Co-organiser (with other members of the *Swiss Operations Research Society* committee) of  
2017-today optimisation contests for young high school students