

BERNARD RIES

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**Personal information**

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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

- 2018 - today Professor, Université de Fribourg, Fribourg, Switzerland
- 2015 - 2018 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

P. Hauweele, A. Hertz, H. Mélot, B. Ries, G. Devillez, **Maximum Eccentric Connectivity Index for Graphs with given Diameter**, to appear in *Discrete Applied Mathematics*

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

- E. Galby, P.T. Lima, B. Ries, **Reducing the domination number of graphs via edge contractions**, to appear in *Leibniz International Proceedings in Informatics (accepted at the 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 B1-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 B0-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 (IWOCA 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 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

- 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 Seminar projects

- Daniela Gehrig, *Nachfrageprognose der Bäckerei Lanz AG*, Université de Fribourg, 2017
- Fabian Muff, *Lineare Programmierung im Bereich der Ablaufplanung*, Université de Fribourg, 2017
- Julien Beguelin, *Die Problematik der Saisonalität im Kontext der Nachfrageprognosen : das Beispiel des Tourismus in der Schweiz*, Université de Fribourg, 2017
- Alexander Grindat, *Vergleich und Anwendung von drei Nachfrageprognose-Modellen an dem Fahrradmarkt der Schweiz*, Université de Fribourg, 2017
- Alexander Lischewski, *Produktplanung : Von der Idee zum Produkt aus der Sicht eines Grosshändlers*, Université de Fribourg, 2016
- Jimena Lazarte, *The Analytic Network Process : A Simple Step-by-Step Guide*, Université de Fribourg, 2016

4.2 Bachelor theses

- Catherine Lischewski, *Analyse der Importkosten und Entwicklung von Optimierungsmöglichkeiten aus den gewonnenen Erkenntnissen für die GTH GmbH*, Université de Fribourg, 2019
- Guillaume Bach, *Réapprovisionnement des emballages en production à Mifroma SA*, Université de Fribourg, 2018
- Prisca Lemm, *Reihenfolge- und Materialbedarfsplanung bei ROBOR AG*, Université de Fribourg, 2018
- Marco Personeni, *Prozessmanagement als Instrument der Qualitätssicherung am Beispiel der Swisscom Schweiz AG*, Université de Fribourg, 2018

- Alexander Grindat, *Nachfrageprognose mit Saisonalität - Theoretische Erarbeitung, Durchführung und Vergleich zweier Prognosemethoden anhand vom Beispiel eines Bergbahnunternehmens*, Université de Fribourg, 2018
- Jonas Urwyler, *Projektplanung : Mobiles Container-Restaurant*, Université de Fribourg, 2017
- Fabienne Jungo, *Organspende und Transplantation : Welche Lösungsansätze könnten angewandt werden, um die Organspendethematik der Bevölkerung näher zu bringen ?*, Université de Fribourg, 2017
- Alexander Lischewski, *Grundung einer Start-Up für den Weinimport*, Université de Fribourg, 2017
- Loïc Voillat, *Système d'aide à la décision : Conception et développement d'un calculateur d'itinéraire optimal pour véhicules électriques*, Université de Fribourg, 2016
- Killian Tournier, *Studie zur Anstellungsfähigkeit der Kellner eines Restaurants so wie der Verwaltung der Lagerbestände eines Start-Up-Unternehmens.*, Université de Fribourg, 2016
- Chris Weyland, *Entscheidungsunterstützung in Zusammenarbeit mit - Voyages Emile Weber*, Université de Fribourg, 2016

4.3 Master theses

- Matthias Schwaller, *Analyse und Optimierung einer Waren-Verteilzentrale am Beispiel von Denner Schmiten*, Université de Fribourg, ongoing
- Thierry Meister, *Tourenplanung für die KurierZentrale GmbH*, Université de Fribourg, ongoing
- Joël Rosset, *Résolution d'un problème de routage de véhicule dans les ramassages de déchets pour les particuliers et les entreprises*, Université de Fribourg, 2019
- Chris Weyland, *Tourenoptimierung mit der Haldimann AG in der Gemeinde Kerzers*, Université de Fribourg, 2018
- Loïc Voillat, *Système d'aide à la décision : Planificateur hebdomadaire de repas avec optimisation des coûts et respect des contraintes nutritionnelles et des préférences des utilisateurs*, Université de Fribourg, 2018
- Lukas von Rotz, *Decision Support in Composing a Project Team*, Université de Fribourg, 2017
- Vera Fischer, *Analyse der Tourenplanung eines Online-Supermarktes*, Université de Fribourg, 2017
- Daniel Dumauthioz, *Prüfleitfaden Adcubum Syrius : Good-Practice-Empfehlungen zu IT-spezifischen Kontrollen aus Revisions- und Risikosicht*, Université de Fribourg, 2016
- Nitish Bansal, *Heuristics for a shared resource scheduling problem*, Warwick University, 2010
- Basil Eteri, *Travelling Salesman Problem : a state-of-the-art literature review*, Warwick University, 2010
- François-Xavier Meuwly, *Heuristiques pour la coloration des sommets de graphes mixtes*, Ecole Polytechnique Fédérale de Lausanne, 2007
- Liliana Costantini, *Multileaf collimator field segmentation*, Ecole Polytechnique Fédérale de Lausanne, 2007
- Anouk Brossard, *Tournées pour des véhicules de transport de valeurs*, Ecole Polytechnique Fédérale de Lausanne, 2005

4.4 PhD theses

- 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-today
- Nathanaël Barrot, Universté Paris Dauphine, 2012-2015, co-supervision with Jérôme Lang

4.5 Postdoctoral researchers

- 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 Symposium on Graphs and Optimisation XI (GO XI), Spa (Belgium), 2020
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 **reviewing activities** 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	Amount
2019-21	Innosuisse	Decision support for an efficient and sustainable waste collection	Principal investigator	CHF 495'232
2019	CSL Behring	Planungsunterstützung	Coordinator	CHF 30'000
2018-19	Schwendimann AG	Effiziente und nachhaltige Kehrrichtsammlung	Coordinator	CHF 42'056
2015-16	PHC Proteus grant	Structural and Algorithmic Aspects of Graph Classes Defined by Cliques and Stable Sets	Coordinator for France	EUR 7'100
2014-15	MATH-AmSud grant	Discrete mathematics : graph partition problems	Coordinator for France	EUR 22'400
2013-14	MATH-AmSud grant	Algorithmic, Algebraic and Structural issue on coloring and matching theory of graphs	Member	EUR 26'000
2012	GdR - RO grant	Décoloration : d-bloqueur minimum pour le nombre chromatique d'un graphe	Member	EUR 2'500
2012-13	PHC Bosphore grant	The selective graph coloring problem	Coordinator for France	EUR 32'800
2012	GdR - RO grant	Problèmes de coloration avec sélection	Coordinator	EUR 2'000

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