

Charles BOUVEYRON
Full Professor of Statistics, Université Côte d'Azur
Chair INRIA in "Data Science"
Associate Editor for The Annals of Applied Statistics

Vita



Born on 12/01/1979 in Lyon (France), married, 3 children
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Employment

- 2017-... **Full Professor of Applied Mathematics (Statistics)**
(Formally: *Professeur des Universités de 1ère classe en Mathématiques Appliquées, section CNU 26*)
Laboratoire J.A. Dieudonné, UMR CNRS 7531, Université Côte d'Azur
- 2017-... **Senior Researcher & Chair of Excellence INRIA in "Data Science"**
Team Epione, INRIA Sophia-Antipolis
- 2013-2017 **Full Professor of Applied Mathematics**
Laboratoire MAP5, UMR CNRS 8145, Université Paris Descartes
- 2007-2013 **Assistant-Professor of Applied Mathematics**
(Formally: *Maître de Conférences en Mathématiques Appliquées*)
Laboratoire SAMM, EA 4543, Université Paris 1 Panthéon-Sorbonne
- 2006-2007 **Post-doctoral researcher in Statistics**
Department of Mathematics & Statistics, Acadia University, Canada
- 2003-2006 **Ph.D. student in Statistics**
Mistis team, INRIA Rhône-Alpes, Grenoble

Education

- 2012 **Habilitation à diriger des recherches (HDR) of Applied Mathematics**
Title: Some contributions to statistical learning in high dimension, adaptive and on complex data.
Reviewers: Adrian Raftery, Stéphane Robin & Fabrice Rossi.
Award: "Très honorable", defended on November, 29, 2012, Université Paris 1.
- 2006 **Ph.D. of Applied Mathematics (Statistics)**
Title: Modeling and classification of high-dimensional data with applications in image analysis.
Advisors: Cordelia Schmid & Stéphane Girard. Reviewers: Gilles Celeux & Fionn Murthagh.
Award: "Très Bien", Université Joseph Fourier, Grenoble 1.
- 2003 **Master of Research (DEA) of Statistics**
Obtained with honors, Université Grenoble 1

Teaching

- 2017-... **Professor Université Côte d'Azur** (~60h ETD/an)
- Model selection and resampling techniques, MSc Data Science
- Statistical analysis of networks, ED
- 2013-2017 **Professor IUT Paris Descartes** (~235h ETD/an)
- Multivariate Statistics, 1st year DUT STID
- Data analysis, 2nd year DUT STID
- Advanced methods in Data Mining, Licence Pro Data Mining
- Statistical analysis of networks, DU Analyste Big Data
- Classification, DU Data Visualisation
+ Classification, 2nd year Actuarial sciences, ISUP, Université Paris 6 (2013-2015)
+ Classification of high-dimensional data, 2nd School of AstroStatistics, Ecole de Physique des Houches (2015)

- 2007-2013 **Assistant and Associate-Professor at Université Paris 1 Panthéon-Sorbonne** (~240h ETD/an)
- Probability and Statistics, 1st year Magistère Finance
- Data analysis, M1 MAEF
- Probability and Statistics with R, M2 Pro TIDE
- Computational statistics, M2 Pro TIDE
- Data analysis and data mining, M2 Pro MIAGE
+ Classification, 2nd year Actuarial sciences, ISUP, Université Paris 6 (2013-2015)

Teaching responsibilities

- 2017-... **Director of the MSc Data Science, Université Côte d'Azur**
International training program in two years
- 2013-2017 **Director of the 2nd year of DUT (en alternance), IUT Paris Descartes**
Training program with half of time within companies

Ph.D. students and postdocs

- 2017-... **Supervision of the postdoc of Marco Corneli**
Topic: Co-clustering of textual data matrices. Université Côte d'Azur.
- 2017-... **Supervision of the postdoc of Fanny Orhac**
Topic: Joint statistical analysis of radiomic and metabolomic features to improve diagnosis and therapy in oncology. Inria Sophia-Antipolis.
- 2015-2016 **Supervision of the postdoc of Laurent Bergé**
Topic: Clustering of networks with textual edges. Université Paris 5.
- 2017-... **Supervision of the Ph.D. thesis of Nicolas Jouvin**
Title: Statistical learning for image segmentation with a textual supervision: application to cancer detection. Université Paris 1 & Institut Curie.
- 2017-... **Supervision of the Ph.D. thesis of Alexandre Saint-Dizier**
Title: Bayesian deep learning for image restoration. Université Paris 5 & Ecole Polytechnique.
- 2016-... **Supervision of the Ph.D. thesis of Warith Harchaoui**
Title: Model-based deep learning for mixed and complex data. Université Paris 5 & Oscaro.com.
- 2014-2017 **Supervision of the Ph.D. thesis of Pierre-Alexandre Mattei**
Title: Model-based sparse clustering for massive and high-dimensional data. Defended on September 2017, Université Paris 5.
- 2013-2016 **Supervision of the Ph.D. thesis of Rawya Zreik**
Title: Statistical analysis of temporal networks and applications to historical sciences. Defended on November 2016, Univ. Paris 1 & Paris 5.
- 2011-2014 **Supervision of the Ph.D. thesis of Anastasios Bellas**
Title: Anomaly detection in high-dimensional data streams. Defended on January 2014, Paris 1 & SNECMA.
- 2008-2011 **Supervision of the Ph.D. thesis of Camille Brunet**
Title: Sparse and discriminative clustering with application to Cytology. Defended on December 2011, Univ. Evry.

Research evaluation

- 2014-... **Reviewer and comity member of 1 HDR thesis**
Stéphane Chrétien, Université de Franche-Comté, Besançon, November 2104
- 2012-... **Reviewer and comity member of 7 Ph.D. theses**
Alexis Arnaud, Université Grenoble Alpes, October 2018
Kevin Kaye, Université Grenoble Alpes, November 2017
Vincent Audigier, AgroCampus Ouest, November 2015
Johanna Baro, Université Paris-Est, Marne-La-Vallée, March 2015
Julie Hamon, Université Lille 1, Lille, November 2013
Marie Galligan, University College Dublin, Irlande, February 2013
Sanjeena Subedi-Dang, University of Guelph, Canada, July 2012.

2010-... **Member of 8 Ph.D. thesis comities**
 Antoine Houdard, Université Paris Descartes, October 2018,
 Valérie Robert, Université Paris Sud, April 2017
 Jérémie Kellner, Université Lille 1, December 2016
 Alberto Lumbreras, Université Lyon 2, October 2016
 Rebecca Baeur, Université Paris Descartes, November 2015
 Nadia Kalfha, Université Pierre et Marie Curie, September 2015
 Romain Bar, Université de Lorraine, Nancy, November 2013
 Cécila Damon, Université Paris Sud, Saclay, September 2010

2005-... **Supervision of 9 Master students**
 A. Saint-Dizier (Polytechnique), N. Jouvin (Paris 7), P.A. Mattei (ENS Cachan); R. El Hassan (Paris 6); Y. Jernite (Polytechnique); L. Bergé (Paris 1); C. Brunet (Paris 1); J. Kannala (Univ. of Olu, Finlande); A. Echenim (Univ. de Franche-Comté).

Scientific responsibilities

2016-... Associate editor of "The Annals of Applied Statistics", a journal of the Institute of Mathematical Statistics
 2017-... Member of the steering committee of the Medical Data Lab, Université Côte d'Azur
 2014-2017 Member of the steering committee of the Fondation des Sciences Mathématiques de Paris (FSMP)
 2010-2015 President of the «Statistics and Image» group of the French Statistical Society (SFdS)
 2011-... Expert for the French (ANR), Belgian (FNRS) and Czech (GACR) research agencies
 2011-... Invited editor for 3 special issues of the Journal of the French Statistical Society (J-SFdS)
 2012-... Member of the scientific committee of 4 international conferences (GFKL, ESANN, JDS-SFdS, SFC)
 2005-... Reviewer for 15 international journals (JRSS, CSDA, STCO, COST, ADAC, ...)

Academic responsibilities

2013-2017 Head of the department of Statistics, Laboratoire MAP5, Université Paris Descartes
 2013-2017 Member of the scientific board of laboratoire MAP5, Université Paris Descartes
 2012-2013 Elected member of the scientific board of laboratoire SAMM, Université Paris 1
 2010-2014 Elected member of the consultative scientific council 26-27, Université Paris 1
 2010-... Member of 9 selection committees for Professor and Assitant-Professor positions (Univ. Paris 1, Univ. Paris 5, TelecomParis and Univ. Bordeaux 1)

Workshop organization

2010-... Founder and organizer of the 9 editions of the conference StatLearn (<http://statlearn.sfds.asso.fr>)
 2014-... Principal co-organizer of the Working Group on Model-Based Clustering, University of Washington, USA
 2013-2017 Organizer of the seminar of Statistics, Laboratoire MAP5, Université Paris 5
 2011-2013 Organizer of the seminar "Statistical analysis of networks", Université Paris 1
 2011 Co-organizer of the "journées d'Astro-Statistique", December 2011, Grenoble
 2010 Organizer of the session "Classification", Journées MAS, September 2010, Bordeaux
 2009 Organizer of the workshop "Statistics for image analysis", January 2009, Université Paris 1

Awards

2017-2022 Chair of Excellence INRIA in "Data Science", INRIA Sophia-Antipolis & UCA
 2009-2022 Prime d'Encadrement Doctoral et de Recherche (PEDR), Universités Paris 1, Paris 5 & UCA
 2012 Simon Régnier Award, Société Francophone de Classification
 2011 Chikio Hayashi Award, International Federation of Classification Societies
 2010 Young Researcher Award, International Association for Statistical Computing
 2006 Honorary mention prize, Indian Conference ICVGIP

Research grants

- 2018-2020 Grant "Exploring functional data", Idex Jedi, Université Côte d'Azur (15k€)
- 2017-2020 Grant "Co-clustering of textual data matrices", SATT Idflnnov (200 k€)
- 2016-2018 Grant "Statistical analysis of networks with textual edges", SATT Idflnnov (50 k€)
- 2016-2020 Grant "Model-based co-clustering of functional data", Fondation J. Hadamard (50 k€)
- 2013-2017 Grant "Statistical analysis of networks for digital humanities", ISC-PIF, CNRS (102 k€)
- 2012-2013 Grant "Statistical analysis of networks", Université Paris 1 (23 k€)
- 2011-2014 Grant "Anomaly detection in high-dimensional streams", Snecma (150 k€)
- 2008-2011 Grant "Statistical learning with complex data", Université Paris 1 (15 k€)
- 2008-2009 Grant "Cervical cancer detection from cytological images", Novacyt (10 k€)

Research topics

- Statistical learning in high dimensions:** supervised and unsupervised classification of high-dimensional data, intrinsic dimension estimation, variable selection in clustering and regression, visualization of high-dimensional data.
- Adaptive statistical learning:** robust classification (with uncertain labels), weakly-supervised classification, regression with evolutive populations, classification with unobserved classes.
- Statistical learning on complex data:** supervised and unsupervised classification of networks, clustering of functional data, classification of heterogeneous data.
- Applications of statistical learning:** image analysis, bio-medical data, chemometrics, digital humanities, aeronautics.

Publications

Publication type	Quantity	Publication type	Quantity
Preprint	6	Invited conferences	14
Journal articles	35	Com. in conferences	53
Book chapters	4	Softwares	16
Editorials and discussions	6	Patents	2

Preprints (6)

- [1] L. Bergé, C. Bouveyron, M. Corneli & P. Latouche, *The Latent Topic Block Model for the Co-Clustering of Textual Interaction Data*, Preprint HAL 01835074, Université Côte d'Azur, 2018.
- [2] A. Saint-Dizier, J. Delon & C. Bouveyron, *A unified view on patch aggregation*, Preprint HAL 01865340, Université Côte d'Azur, 2018.
- [3] F. Orhac, P.-A. Mattei, C. Bouveyron & N Ayache, *Class-specific Variable Selection in High-Dimensional Discriminant Analysis through Bayesian Sparsity*, Preprint HAL 01811514, Université Côte d'Azur, 2018.
- [4] C. Bouveyron, L. Cheze, J. Jacques, P. Martin & A. Schmutz, *Clustering multivariate functional data in group-specific functional subspaces*, Preprint HAL 01652467, Université Côte d'Azur, 2018.
- [5] C. Bouveyron, J. Delon & A. Houdard, *Probabilistic High-dimensional Clustering and Model Selection for Patch-based Image Denoising*, Preprint HAL 01544249, Université Paris Descartes, 2017.
- [6] C. Bouveyron, P. Latouche & P.-A. Mattei, *Exact Intrinsic Dimensionality Selection in Bayesian Probabilistic PCA*, Preprint HAL 01484099, Université Paris Descartes, 2017.

Journal articles (35)

- [7] C. Bouveyron, M. Corneli, P. Latouche & F. Rossi, *The dynamic stochastic topic block model for dynamic networks with textual edges*, *Statistics and Computing*, in press, 2018.
- [8] C. Bouveyron, P. Latouche & P.-A. Mattei, *Bayesian Variable Selection for Globally Sparse Probabilistic PCA*, Preprint HAL 01310409, *Electronic Journal of Statistics*, in press, 2018.

- [9] J. Ulloa, T. Aubin, D. Llusia, C. Bouveyron & J. Sueur, *Estimating animal acoustic diversity in tropical environments using unsupervised multiresolution analysis*, Ecological Indicators, vol. 90, pp. 346-355, 2018.
- [10] C. Bouveyron, L. Bozzi, J. Jacques & F.-X. Jollois, *The Functional Latent Block Model for the Co-Clustering of Electricity Consumption Curves*, Journal of the Royal Statistical Society, Series C, vol. 67(4), pp. 897-915, 2018.
- [11] C. Bouveyron, P. Latouche & R. Zreik, *The Stochastic Topic Block Model for the Clustering of Networks with Textual Edges*, Statistics and Computing, vol. 28(1), pp. 11-31, 2018.
- [12] C. Bouveyron, G. Fouetillou, P. Latouche & D. Marié, *Présidentielle 2017 : l'analyse des tweets renseigne sur les recompositions politiques*, Statistique et Société, vol. 5(3), pp. 39-44, 2017.
- [13] C. Bouveyron, P. Latouche & R. Zreik, *The Dynamic Random Subgraph Model for the Clustering of Evolving Networks*, Computational Statistics, vol. 32(2), pp. 501-533, 2017.
- [14] C. Bouveyron, G. Hébrail, F.-X. Jollois & J.-M. Poggi, *Un DU d'Analyste Big Data en formation continue courte, au niveau L3*, Statistique et Enseignement, vol. 7 (1), pp. 127-134, 2016.
- [15] C. Bouveyron, J. Chiquet, P. Latouche & P.-A. Mattei, *Combining a Relaxed EM Algorithm with Occam's Razor for Bayesian Variable Selection in High-Dimensional Regression*, Journal of Multivariate Analysis, vol. 146, pp. 177-190, 2016.
- [16] C. Bouveyron, M. Fauvel & S. Girard, *Parsimonious Gaussian process models for the classification of hyperspectral remote sensing images*, IEEE Geoscience and Remote Sensing Letters, vol. 12, pp.2423-2427, 2015.
- [17] C. Bouveyron, E. Côme & J. Jacques, *The discriminative functional mixture model for the analysis of bike sharing systems*, The Annals of Applied Statistics, vol. 9 (4), pp. 1726-1760, 2015.
- [18] C. Bouveyron, P. Latouche & R. Zreik, *Classification automatique de réseaux dynamiques avec sous-graphes : étude du scandale Enron*, Journal de la Société Française de Statistique, vol. 156(3), pp. 166-191, 2015.
- [19] C. Bouveyron, S. Girard & M. Fauvel, *Kernel discriminant analysis and clustering with parsimonious Gaussian process models*, Statistics and Computing, vol. 25(6), pp. 1143-1162, 2015.
- [20] Y. Jernite, P. Latouche, C. Bouveyron, P. Rivera, L. Jegou & S. Lamassé, *The random subgraph model for the analysis of an ecclesiastical network in merovingian Gaul*, The Annals of Applied Statistics, vol. 8(1), pp. 377-405, 2014.
- [21] C. Bouveyron, *Adaptive mixture discriminant analysis for supervised learning with unobserved classes*, Journal of Classification, vol. 31(1), pp. 49-84, 2014.
- [22] C. Bouveyron & C. Brunet, *Model-based clustering of high-dimensional data: A review*, Computational Statistics and Data Analysis, vol. 71, pp. 52-78, 2014.
- [23] C. Bouveyron & J. Jacques, *Adaptive mixtures of regressions: Improving predictive inference when population has changed*, Communications in Statistics : Simulation and Computation, vol. 43(10), pp. 2570-2592, 2014.
- [24] C. Bouveyron & C. Brunet, *Discriminative variable selection for clustering with the sparse Fisher-EM algorithm*, Computational Statistics, vol. 29(3-4), pp. 489-513, 2014.
- [25] C. Bouveyron, *Probabilistic model-based discriminant analysis and clustering methods in Chemometrics*, Journal of Chemometrics, vol. 27(12), pp. 433-446, 2013.
- [26] A. Bellas, C. Bouveyron, M. Cottrell & J. Lacaille, *Model-based clustering of high-dimensional data streams with online mixture of probabilistic PCA*, Advances in Data Analysis and Classification, vol. 7(3), pp. 281-300, 2013.
- [27] C. Bouveyron & C. Brunet, *Theoretical and practical considerations on the convergence properties of the Fisher-EM algorithm*, Journal of Multivariate Analysis, vol. 109, pp. 29-41, 2012.
- [28] L. Bergé, C. Bouveyron & S. Girard, *HDclassif : an R Package for Model-Based Clustering and Discriminant Analysis of High-Dimensional Data*, Journal of Statistical Software, vol. 42(6), pp. 1-29, 2012.
- [29] C. Bouveyron & C. Brunet, *Probabilistic Fisher discriminant analysis : A robust and flexible alternative to Fisher discriminant analysis*, Neurocomputing, vol. 90 (1), pp. 12-22, 2012.
- [30] C. Bouveyron & C. Brunet, *Simultaneous model-based clustering and visualization in the Fisher discriminative subspace*, Statistics and Computing, vol. 22 (1), pp. 301-324, 2012.
- [31] C. Bouveyron & C. Brunet, *On the estimation of the latent discriminative subspace in the Fisher-EM algorithm*, Journal de la Société Française de Statistique, vol. 152 (3), pp. 98-115, 2011.
- [32] C. Bouveyron, P. Gaubert and J. Jacques, *Adaptive models in regression for modeling and understanding evolving populations*, Journal of Case Studies in Business, Industry and Government Statistics, vol. 4 (2), pp. 83-92, 2011.

- [33] C. Bouveyron, G. Celeux & S. Girard, *Intrinsic Dimension Estimation by Maximum Likelihood in Probabilistic PCA*, Pattern Recognition Letters, vol. 32 (14), pp. 1706-1713, 2011.
- [34] C. Bouveyron & J. Jacques, *Model-based Clustering of Time Series in Group-specific Functional Subspaces*, Advances in Data Analysis and Classification, vol. 5 (4), pp. 281-300, 2011.
- [35] C. Bouveyron, O. Devos, L. Duponchel, S. Girard, J. Jacques & C. Ruckebusch, *Gaussian mixture models for the classification of high-dimensional vibrational spectroscopy data*, Journal of Chemometrics, vol. 24 (11-12), pp. 719-727, 2010.
- [36] C. Bouveyron & J. Jacques, *Adaptive linear models for regression: improving prediction when population has changed*, Pattern Recognition Letters, vol. 31 (14), pp. 2237-2247, 2010.
- [37] C. Bouveyron & S. Girard, *Robust supervised classification with mixture models: learning from data with uncertain labels*, Pattern Recognition, vol. 42 (11), pp. 2649-2658, 2009.
- [38] C. Bouveyron & S. Girard, *Classification supervisée et non supervisée des données de grande dimension*, La revue Modulad, vol. 40, pp. 81-102, 2009.
- [39] C. Bouveyron, S. Girard & C. Schmid, *High-Dimensional Data Clustering*, Computational Statistics and Data Analysis, vol. 52 (1), pp. 502-519, 2007.
- [40] C. Bouveyron, S. Girard & C. Schmid, *High Dimensional Discriminant Analysis*, Communications in Statistics: Theory and Methods, vol. 36 (14), pp. 2607-2623, 2007.
- [41] C. Bouveyron, S. Girard & C. Schmid, *Class-Specific Subspace Discriminant Analysis for High-Dimensional Data*, In Lecture Notes in Computer Science n.3940, pp. 139-150, Springer-Verlag, 2006.

Book chapters (4)

- [42] C. Bouveyron, C. Ducruet, P. Latouche & R. Zreik, *Cluster dynamics in the collapsing Soviet shipping network*, in Advances in Shipping Data Analysis and Modeling, Routledge, 2018.
- [43] C. Bouveyron, *Model-based clustering of high-dimensional data in Astrophysics*, in Statistics for Astrophysics: Clustering and Classification, EAS Publications Series, EDP Sciences, vol. 77, pp. 91-119, 2016
- [44] C. Bouveyron, C. Ducruet, P. Latouche & R. Zreik, *Cluster Identification in Maritime Flows with Stochastic Methods*, in Maritime Networks: Spatial Structures and Time Dynamics, Routledge, 2015.
- [45] F. Beninel, C. Biernacki, C. Bouveyron, J. Jacques & A. Lourme, *Parametric link models for knowledge transfer in statistical learning*, in Knowledge Transfer : Practices, Types and Challenges, Ed. Dragan Ilic, Nova Publishers, 2012.

Editorials and discussions (6)

- [46] C. Bouveyron, G. Fouetillou, P. Latouche & D. Marié, *Elections 2017 : une réorganisation politique du web social ?*, The Conversation, juin 2017.
- [47] C. Bouveyron & P. Latouche, *Des réseaux, des textes et de la Statistique*, La lettre de l'INSMI, CNRS, édition de décembre, 2016.
- [48] C. Bouveyron, *Apprentissage statistique en grande dimension : enjeux et avancées récentes*, Journal de la Société Française de Statistique, vol. 155 (2), pp. 36-37, 2014.
- [49] C. Bouveyron, *Discussion on the paper by J. Fan, Y. Liao and M. Mincheva*, Journal of the Royal Statistical Society, Serie B, 2013.
- [50] C. Bouveyron, *Discussion on the paper by C. Hennig and T. Liao*, Journal of the Royal Statistical Society, Serie C, 2013.
- [51] C. Bouveyron, S. Girard & F. Forbes, *Nouveaux défis en apprentissage statistique*, Journal de la Société Française de Statistique, vol. 152 (3), pp. 1-2, 2011.

Invited communications in international conferences (14)

- [52] C. Bouveyron, *The stochastic topic block model*, President's Invited Address, Annual Conference of The American Classification Society, New York, June 2018.
- [53] C. Bouveyron, *Bayesian sparsity for statistical learning in high dimensions*, Chimiométrie 2018, Paris, January 2018.
- [54] C. Bouveyron, *Model-based coclustering of functional data*, Annual Conference of the Italian Statistical Society, Florence, Italy, June 2016.

- [55] C. Bouveyron, *The discriminative functional mixture model for the analysis of bike sharing systems*, 22nd International Conference on Computational Statistics, Oviedo, Spain, August 2016.
- [56] C. Bouveyron, *Model-based clustering of functional data: application to the analysis of bike sharing systems*, 12th International Conference on Operation Research, Havana, Cuba, March 2016.
- [57] C. Bouveyron, *Kernel discriminant analysis with parsimonious Gaussian process models*, 8th International Conference of the ERCIM, WG on Computational and Methodological Statistics, London, UK, December 2015.
- [58] C. Bouveyron, *Discriminative clustering of high-dimensional data*, Workshop on Model-Based Clustering and Classification, Catania, Italy, September 2014.
- [59] C. Bouveyron, *Discriminative variable selection for clustering*, 6th International Conference of the ERCIM, WG on Computational and Methodological Statistics, London, UK, December 2013.
- [60] C. Bouveyron, *The random subgraph model for the analysis of an ecclesiastical network in merovingian Gaul*, 20th Summer Working Group on Model-Based Clustering of the Department of Statistics of the University of Washington, Bologna, Italy, July 2013.
- [61] C. Bouveyron, *Clustering discriminatif et parcimonieux de données de grande dimension*, Conférence du prix Simon Régnier, 19ème rencontres de la Société Francophone de Classification, Marseille, 2012.
- [62] C. Bouveyron, *Parsimonious and sparse Gaussian models for high-dimensional clustering*, International Classification Conference 2011, St Andrews, UK, July 2011.
- [63] C. Bouveyron, *Model-based clustering of high-dimensional data : an overview and some recent advances*, 17th Summer Working Group on Model-Based Clustering of the Department of Statistics of the University of Washington, Grenoble, France, July 2010.
- [64] C. Bouveyron, *Classification of complex data with model-based techniques*, 1st joint meeting of the Statistical Society of Canada and the Société Française de Statistique, Ottawa, Canada, 2008.
- [65] C. Bouveyron, *An overview on high-dimensional data classification with model-based techniques*, 8th International Conference on Operations Research, Havana, Cuba, 2008.

Patents (2)

- [66] L. Bergé, C. Bouveyron, M. Corneli & P. Latouche, *Method for co-clustering senders and receivers based on text or image data files*, EU patent, 2018.
- [67] C. Bouveyron & P. Latouche, *Method for clustering nodes of a textual network taking into account textual content*, US patent, 2017.