
Julien JACQUES

Full Professor of Statistics, Université Lumière Lyon 2

Ph.D. of Applied Mathematics



Born on 24/10/1977 in Besançon (France), married, 3 children.

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Employment

- 2014-... **Full Professor of Applied Mathematics (Statistics)**, Université Lumière Lyon 2
(*Professeur des Universités de classe exceptionnelle en Mathématiques Appliquées, section CNU 26*)
Head of Laboratoire ERIC, Univ. Lyon 2 & Lyon 1
Teaching at Institut de la Communication
External Collaborator of INRIA Modal team
- 2006-14 **Assistant-Professor of Applied Mathematics**, Université Lille 1
(*Maître de Conférences en Mathématiques Appliquées*)
Research at Laboratoire Paul Painlevé, UMR CNRS 8524
Teaching at Polytech'Lille
- 2004-06 **Temporary Research and Teaching Attaché**, Université Pierre Mendès-France Grenoble 2.
Research at LabSAD
Teaching at IUT 2
- 2001-04 **Ph.D. student in Statistics**, INRIA Rhône-Alpes
IS2 and Mistis teams, CEA - INRIA grant

Education

- 2012 **Habilitation à Diriger des Recherches (HDR)** of Applied Mathematics
Contribution to statistical learning of complex data using generative models
Reviewers: Ali Gannoun, Jean-Michel Poggi and Brendan Murphy
Defended at Université Lille 1, on November, 29, 2012
- 2005 **Ph.D. of Applied Mathematics (statistics)**
Contributions to sensitivity analysis and generalized discriminant analysis
Advisor: Christian Lavergne. Reviewers: Alain Baccini, Jérôme Saracco
Defended Université Joseph Fourier, on December, 5, 2005
- 2001 **Master of Recherche (DEA)** in Mathematics and Applications
Obtained with honors, Université de Franche-Comté
- 2001 **Master Professional (DESS)** Mathematics, Scientific Computing and Statistics
Obtained with honors, Université de Franche-Comté

Research topics

- **Statistical learning on complex data:** classification, clustering and co-clustering of categorical data, functional data, mixed data, network.
- **Statistical learning for high dimensional data:** variable clustering in regression and classification.
- **Transfer learning:** transfer learning in regression and classification.
- **Applications of statistical learning:** digital humanities, biology and genetics, industrial applications.

Teaching

- 2014-... **Professor at Université Lumière Lyon 2** (~300h ETD/an)
- Model-based learning, M2 Data Mining
- Time series forecasting, M2 Informatics and Statistics for Data Science
- Big data mining, M2 Business Intelligence and Big Data
- Statistical inference, M1 Computer Science and L3 MIASHS
- Introduction to data mining, Doctoral Courses
- 2014-16
- Numerical machine learning, Erasmus Mundus Master DMKM
- Probability and Statistics, Erasmus Mundus Master DMKM
- Data Mining, University of Can Tho, Vietnam
- 2006-14 **Assistant-Professor at Université Lille 1** (~300h ETD/an)
- Statistical inference, Polytech'Lille
- Probability, Polytech'Lille
- Statistical modelling, Polytech'Lille
- Stochastic process, Polytech'Lille
- Time series, Polytech'Lille

Teaching responsibilities

- 2015-... **Director of the M2 Data Mining**, Université Lumière Lyon 2
2nd year specialty of Master Computer Science
- 2014-18 **Director of the L3 Data Science**, Université Lumière Lyon 2
3rd year specialty of Licence MIASHS
- 2015-17 **Coordinator of the DMKM European Master**, Université Lumière Lyon 2
Master in Data Mining and Knowledge Management in collaboration with University of Barcelona, University of Piemonte Orientale, Université Pierre et Marie Curie, Polytech'Nantes
- 2006-14 **Director of the 3rd year at Polytech'Lille**, Université Lille 1
3rd year of Statistics and Computer Science department
- 2007-10 **Director of the 4th year at Polytech'Lille**, Université Lille 1
4th year of Statistics and Computer Science department

Administrative responsibilities

- 2018-21 **Deputy Director of Institut de la Communication**, Université Lumière Lyon 2
- 2020-21 Educational manager of a short continuing education program in AI, Université de Lyon
- 2018-... Member of the council of Institut de la Communication, Université Lumière Lyon 2
- 2009-14 Chief of the Mathematics and Computer Science pole of Polytech'Lille, Université Lille 1
- 2009-14 Member of the Scientific and Educational councils of Polytech'Lille, Université Lille 1

Ph.D. students

- 2023-... **Selman Sezgin**
Title: Federated learning optimized for connected vehicles based on intelligent modeling. Grant: Orange (CIFRE).
- 2023-... **Youba Abed**
Title: Transfer learning for hydroprocessing kinetic models. Grant: IFPEN.
- 2022-... **Noé Lebreton**
Title: Predictive ensemble modelisation with functional data approach. Grant: Data Prisme (CIFRE).
- 2021-... **Matteo Ventura**
Title: . Grant: University of Brescia. Co-supervision with Paola Zuccolotto.
- 2021-... **Eliz Peyraud**
Title: Transplantation results modeling from complex data. Grant: Institut Georges Lopez (CIFRE).
- 2021-... **Jean-Steve Tamo Tchomgui**
Title: Prediction of the quality of experience of verticals carried by 5G slices and recommendation of corrective actions. Grant: Orange (CIFRE).
- 2021-... **Francesco Amato**
Title: Mixed data temporal clustering for modeling longitudinal surveys. Grant: Université de Lyon.
- 2019-23 **Martial Amovin**
Title: Modèles d'apprentissage pour données fonctionnelles appliqués aux réseaux de capteurs. Grant: ArpegeMasterK (CIFRE).
- 2019-22 **Loïc Iapteff**
Title: Transfer Learning for Smart Adaptative Analytics. Grant: IFPEN.
- 2018-22 **Jean Dupuy**
Title: Learning textual recommendations by formalizing expert reasoning. Grant: MeetSyS (CIFRE).
- 2018-21 **Antoine Gourru**
Title: Representation learning for structured dynamic data. Grant: Université Lumière Lyon 2.
- 2017-20 **Margot Selosse**
Title: Introducing parsimony to analyse complex data with model-based clustering. Grant: Université Lumière Lyon 2.
- 2016-20 **Komi Nagbe**
Title: Prediction of production and consumption of renewable energy. Grant: ENERCOOP (CIFRE).
- 2016-19 **Amandine Schmutz**
Title: Search for parameters of locomotion analysis of the athlete horse by setting up statistical tools and datamining. Grant: LIM Group (CIFRE).
- 2015-18 **Yosra Ben Slimen**
Title: Knowledge discovery for big data applied to the automatic management of radio networks. Grant: Orange (CIFRE).
- 2013-16 **Quentin Grimonprez**
Title: Kernel change-point detection for high-dimensional data. Grant: INRIA and DGA.
- 2013-16 **Florence Loingeville**
Title: Statistical tools for quality control. Grant: AGLAE (CIFRE).
- 2010-14 **Loic Yengo**
Title: Classification and variable selection in regression. Grant: CNRS.
- 2010-13 **Julie Hamon**
Title: Combinatorial optimization for variable selection in high dimensional regression: application to animal genetic. Grant: Gènes Diffusion (CIFRE).

Post-doc supervision

- 2014-15 **Abul Hasnat**
Topic: Temporal model-based clustering for web reputation analysis. Grant: ANR Imagiweb.

Scientific responsibilities

- 2021-... **Director of ERIC laboratory**
- 2015-20 Head of the Data Mining and Decision team of ERIC laboratory
- 2019-21 Deputy director of ERIC laboratory
- 2018-21 Member of the executive board (Treasurer) of the French Statistical Society
- 2016-... Member of the scientific committee of the journal "Management & Data Science"
- 2015-... Member of the board of ATLAS action, GdR MaDICS
- 2015-16 President of the "Statistics and Image" group of the French Statistical Society

Research evaluation

- 2023-... **Associate Editor** for Statistical Analysis and Data Mining (Wiley)
- 2020-21 Invited associate editor for Advance in Data Analysis and Classification
- 2015-... **Reviewer and comity member of Ph.D. theses**
 - Katarina Firdova, Université Savoie Mont Blanc, December 2023
 - Harold Antonio Hernandez Roig, University Carlos III de Madrid, Spain, July 2023
 - Alex Sharp, Waterloo University, Canada, July 2023
 - Emiliano Seri, Sapienza University of Rome, Italy, April 2023
 - Yinneth Léon Velasco, Université Montpellier 2, Mai 2022
 - Aymen Amara, Université Bourgogne Franche-Comté, February 2022,
 - Alvaro Rollon De Pinedo, Université Grenoble Alpes, France, December 2021
 - Alexandre Constantin, Université Grenoble Alpes, France, December 2021
 - Cécile Laurent, Montpellier SupAgro, France, December 2021
 - Regina Kampo, McMaster University, Canada, August 2021
 - Anis Fradi, Université de Clermont Auvergne, France, November 2021
 - Loïc Labache, Université de Bordeaux, France, October 2020
 - Aldo Moreno, University Carlos III, Madrid, Spain, September 2020
 - Bao-Tuyen Huynh, Université de Caen, December 2019
 - Serge Moulin, Université de Franche-Comté, December 2018
 - Aichetou Bouchareb, Université Paris 1 Panthéon-Sorbonne, November 2018
 - Lorenzo Mancini, Università di Bologna, Italy, January 2018
 - Ines Jlassi, Université de Monastir, Tunisia, January 2018
 - Valérie Robert, Université Paris Sud, April 2017
 - Antoine Barbieri, Université de Montpellier, June 2016
 - Basad El-Saray, Université de Franche-Comté, June 2016
 - Henri Wallard, Conservatoire National des Arts et Métiers, December 2015
 - Amaury Labenne, Université de Bordeaux, November 2015
 - Damien McParland, University College Dublin, Irlande, July 2014
 - Anastasios Bellas, Université Paris 1 Panthéon-Sorbonne, January 2014
- 2005-... **Reviewer for more than 20 international journals**
 - JASA, AoAS, STCO, Stat. in Med., CSDA, JSS, PRL, Neurocomp., SADM, JAS, CS, BA...

Workshop organization

- 2023 Member of the scientific and program committee of "Classification and Data Analysis Group" meeting, September 2023, Salerno (Italy)
- 2020 Member of the scientific and program committee of "Model-Based Clustering and Classification" workshop, September 2020, Catania (Italy)
- 2017 Organizer of the conference StatLearn'17
- 2018 Member of the scientific committee of "Rencontres de la SFC"
- 2015-... Member of the organizing committee of the conference StatLearn
<http://statlearn.sfds.asso.fr>
- 2015 Organizer of a special session at CMStatistics 2015, December 2015, London (UK)
- 2014 Organizer of the seminar of Probability and Statistics, Laboratoire Paul Painlevé, Université Lille 1
- 2012 Co-organizer of the conference StatLearn'12, April 2012, Lille
- 2011 Co-organizer of the "journées d'Astro-Statistique", December 2011, Grenoble
- 2010-... Member of the scientific committee of several conferences or workshop (BigIA 2016, Rencontres R 2012, MASHS 2010)

Industrial grants

- 2023-26 **IFPEN**
Transfer learning for hydroprocessing kinetic models
- 2023-26 **Orange**
Federated learning optimized for connected vehicles based on intelligent modeling
- 2019-22 **IFPEN**
Transfer learning for smart adaptative analytics
- 2022-25 **Data Prisme**
Sales forecast modelling
- 2022-25 **Orange**
Prediction of the quality of experience of verticals carried by 5G slices and recommendation of corrective actions
- 2022-25 **Institut Georges Lopez**
Transplantation results modeling from complex data
- 2018-21 **MeetSys**
Learning textual recommendations by formalizing expert reasoning
- 2017-22 **MasterK**
Detection of correlation in time series
- 2017-19 **LIM Group**
Search for parameters of locomotion analysis of the athlete horse by statistical tools and data mining
- 2016-18 **ENERCOOP**
Prediction of production and consumption of renewable energy
- 2015-17 **Orange Lab**
Automatic management of radio networks
- 2014 **Auchan**
Determination of human factors in relation to the economic results of hypermarkets
- 2013-16 **AGLAE**
Statistical tools for quality control

- 2012-13 **Vallourec**
Experimental design and missing data
- 2010-13 **Gènes Diffusion**
Variable selection in high dimensional regression for animal genetic
- 2010 **L'Oréal**
Sensitivity analysis
- 2009-10 **Maïa Eolis**
Prediction of consumption of renewable energy
- 2008-10 **PGxIS**
Detection of genetic signal in pharmacogenetics

Research grants

- 2020-23 Member of AMI *TIGA* of PIA3
- 2020-23 Member of ANR *LIFRANUM*
- 2016-20 Grant "Model-based co-clustering of functional data", Fondation J. Hadamard
- 2017-18 Member of ISH project "Caodra"
- 2014-18 Member of ANR TecSan *ClinMine*
- 2016 Member of CNRS Imag'In *Q-Nano*
- 2015 Member of CONTINT *ImagiWeb*
- 2013-15 Member of CNRS Mastodons *Gargantua* and *Titant*

Publications

Publications type	Quantity	Publications type	Quantity
Journal articles	41	Internat. conf. with proceedings (A or A*)	11 (4)
Internat. conf. without proceedings	19	National conf.	45
Invitation in internat. conf.	16	Invitation in national conf.	7
Book chapters	2	Software	10

Journal articles

- [1] Amato F., Jacques J. and Prim-Allaz I. Clustering Longitudinal Ordinal Data via Finite Mixture of Matrix-Variate Distributions. To appear in *Statistics and Computing*.
- [2] Biernacki C., J. Jacques J. and Keribin C. A Survey on Model-Based Co-Clustering: High Dimension and Estimation Challenges. *Journal of Classification*, 40[2], 332-381, 2023.
- [3] Iapteff L., Jacques J., Celse B., Costa V. Reducing the number of experimental points to fit kinetic models: a Bayesian approach, *Industrial & Engineering Chemistry Research*, 2023, 62, 28, 10903–10914, 2023.
- [4] Amovin M., Gannaz I. and Jacques J.. Outlier detection in multivariate functional data through a contaminated mixture model. *Computational Statistics and Data Analysis*, 174, 107496, 2022.
- [5] Jacques J. and Samardzic, S.. Analyzing cycling sensors data through ordinal logistic regression with functional covariates. *Journal of the Royal Statistical Society, Series C*, 171[4], 969-986, 2022.
- [6] Bouveyron C., Jacques J., Schmutz A., Simoes F. and Bottini S. Co-Clustering of Multivariate Functional Data for the Analysis of Air Pollution in the South of France. *Annals of Applied Statistics*, 16, 1400-1422, 2022.
- [7] Ben Slimen Y., Allio S. and Jacques J. *Co-clustering for binary and functional data*, *Communications in Statistics - Simulation and Computation*, 51[9], 4845-4866, 2022.
- [8] Iapteff L., Jacques J., Rolland M., Celse B. Reducing the number of experiments required for modeling the hydrocracking process with kriging through Bayesian transfer learning, *Journal of the Royal Statistical Society, Series C*, 70, 1344-1364, 2021.

- [9] Selosse M., Jacques J., Biernacki C. ordinalClust: a package for analyzing ordinal data, R journal, 12[2], 173-188, 2020.
- [10] Selosse M., Jacques J., Biernacki C. Self-Organized Co-Clustering for textual data synthesis, Pattern Recognition, 103, 2020.
- [11] A. Schmutz, L. Chèze, P. Martin and J. Jacques. A method to estimate horse speed per stride from one IMU with Machine Learning method, Sensors, 20[2], 518, 2020
- [12] Schmutz A., Jacques J. Bouveyron C., Chèze L. and Martin P. Clustering multivariate functional data in group-specific functional subspaces, Computational Statistics, 35, 1101–1131, 2020.
- [13] Selosse M., Jacques J., Biernacki C. Model-based co-clustering for mixed type data, Computational Statistics and Data Analysis, 144, 2020.
- [14] Selosse M., Jacques J., Biernacki C. and Cousson-Gélie F. Analyzing health quality survey using constrained co-clustering model for ordinal data and some dynamic implication, Journal of the Royal Statistical Society, Series C, 68 [5], 1327–1349, 2019.
- [15] Martínez-Álvarez F., Schmutz A., Asencio-Cortés G. and Jacques J. (2018). A novel hybrid algorithm to forecast functional time series based on pattern sequence similarity with application to electricity demand, Energies, 12[1], 2019.
- [16] Bouveyron C., Bozzi L., Jacques J. and Jollois F-X.. *The Functional Latent Block Model for the Co-Clustering of Electricity Consumption Curves*, Journal of the Royal Statistical Society, Series C, 67 [4], 897–915, 2018.
- [17] Jacques J. and Biernacki C. *Model-based co-clustering for ordinal data*, Computational Statistics and Data Analysis, 123, 101–115, 2018.
- [18] Ben Slimen Y., Allio S. and Jacques J. *Model-based co-clustering for functional data*, Neurocomputing, 291, 97–108, 2018.
- [19] Nagbe, K., Cugliari J. and Jacques J. Electricity Demand Forecasting Using a Functional State Space Model, Energies, 11 [5], 1120, 2018.
- [20] Hasnat Md A., Velcin J., Bonnevey S. and Jacques J. *Evolutionary clustering for categorical data using parametric links among multinomial mixture models*, Econometrics and Statistics, 3, 141–159, 2017.
- [21] Bacou E., Haurogné K., Mignot G., Allard M., De Beaurepaire, L., Marchand J., Terenina E., Billon Y., Jacques J., Bach J., Mormède P., Hervé J., and Lieubeau B. (2016). *Acute social stress-induced immunomodulation in pigs high and low responders to ACTH*, Physiology and Behavior, 169, 1–8, 2017.
- [22] Jacques J. and Ruckebusch C. *Model-based co-clustering for hyperspectral images*, Journal of Spectral Imaging, 5[1], 1–6, 2016.
- [23] Biernacki C. and Jacques J. *Model-based clustering of multivariate ordinal data relying on a stochastic binary search algorithm*, Statistics and Computing, 26 [5], 929-943, 2016.
- [24] Yengo, L., Jacques J. and Biernacki, C. *Variable clustering in high dimensional linear regression: the R package clere*, R journal, 8[1], 92–106, 2016.
- [25] Bouveyron C., Côme E. and Jacques J. *The discriminative functional mixture model for the analysis of bike sharing systems*, Annals of Applied Statistics, 9[4], 1726–1760, 2015.
- [26] Herbert F., Tchitchek N. , Bansal D., Jacques J., Pathak S., Bécavin C., Fesel C., Dalko E., Cazenave P-A., Preda C., Ravindran B., Sharma S., Das B. and Pied S., *Evidence of IL-17, IP-10, and IL-10 involvement in multiple-organ dysfunction and IL-17 pathway in acute renal failure associated to Plasmodium falciparum malaria*, Journal of Translational Medicine, 13[1], 1–11, 2015.
- [27] Jacques J. and Biernacki C. *Model-based clustering for multivariate partial ranking data*, Journal of Statistical Planning and Inference, 149, 201–217, 2014.
- [28] Jacques J., Grimonprez Q. and Biernacki C. *Rankcluster: An R package for clustering multivariate partial rankings*, 6[1], 101–110, 2014.
- [29] Jacques J. and Preda C. *Functional data clustering: a survey*, Advances in Data Analysis and Classification, 8[3], 231–255, 2014.

- [30] Yengo, L., Jacques J. and Biernacki, C. *Variable clustering in high dimensional linear regression*, Journal de la Société Française de Statistique, 155[2], 38–56, 2014.
- [31] Jacques J. and Preda C. *Model-based clustering for multivariate functional data*, Computational Statistics and Data Analysis, 71, 92–106, 2014.
- [32] Bouveyron C. and Jacques J. *Adaptive mixtures of regressions: Improving predictive inference when population has changed*, Communications in Statistics – Simulation and Computation, 43[10], 2570–2592, 2014.
- [33] Jacques J. and Preda C. *Funclust: a curves clustering method using functional random variables density approximation*, Neurocomputing, 112, 164–171, 2013.
- [34] Biernacki C. and Jacques J. *A generative model for rank data based on sorting algorithm*, Computational Statistics and Data Analysis, 58, 162–176, 2013.
- [35] Bouveyron C. and Jacques J. *Model-based Clustering of Time Series in Group-specific Functional Subspaces*, Advances in Data Analysis and Classification, 5[4], 281–300, 2011.
- [36] Bouveyron C., Gaubert P. and Jacques J. *Adaptive models in regression for modeling and understanding evolving populations*, Case Studies in Business, Industry and Government Statistics, 4[2], 83–92, 2011.
- [37] Jacques J., Bouveyron C., Girard S., Devos O., Duponchel L. and Ruckebusch C. *Gaussian mixture models for the classification of high-dimensional vibrational spectroscopy data*, Journal of Chemometrics, 24[11-12], 719–727, 2010.
- [38] Bouveyron C. and Jacques J. *Adaptive linear models for regression: improving prediction when population has changed*, Pattern Recognition Letters, 31[14], 2237–2247, 2010.
- [39] Jacques J. and Biernacki C. *Extension of model-based classification for binary data when training and test populations differ*, Journal of Applied Statistics, 37[5], 749–766, 2010.
- [40] Langlois-Jacques C. and Jacques J. *Détection d'hétérogénéité au sein de mesures de qualité de l'environnement*, La Revue Modulad, 40, 41–52, 2009.
- [41] Jacques J. and Biernacki C. *Classement de données binaires lorsque les populations d'apprentissage et de test sont différentes*, Revue des Nouvelles Technologies de l'Information, RNTI-A-1 Data Mining et apprentissage, réf. 794, 2007.
- [42] Jacques J., Lavergne C. and Devictor N. *Sensitivity Analysis in presence of Model Uncertainty and Correlated Inputs*, Reliability Engineering and System Safety, 91, 1126–1134, 2006.

Book chapters

- [43] Jacques J. and Faix-Burnet D., *Linear Regression in High Dimension and/or for Correlated Inputs*, in Statistics for Astrophysics: Methods and Applications of the Regression, EAS Publications Series, Vol. 66, 2014.
- [44] Beninel F., Biernacki C., Bouveyron C., Jacques J. and Lourme A., *Parametric link models for knowledge transfer in statistical learning*, in Knowledge Transfer: Practices, Types and Challenges, Nova Publishers, 2012.

Communications in international conferences with proceedings

- [45] Dupuy J., Guille A. and Jacques J. *Anchor Prediction: A Topic Modeling Approach*, TheWebConf 2022, Wiki Workshop, Lyon, France, April 2022.
- [46] Gourru A., Velcin J., Gravier C. and Jacques J. *Dynamic Gaussian Embedding of Authors*, TheWebConf 2022 (CORE rank: A*), Lyon, France, April 2022.
- [47] Selosse M., Gormley I., Jacques J. and Biernacki C. *A bumpy journey: exploring deep Gaussian mixture models*, ICBINB@NeurIPS 2020, online, December 2020.
- [48] Gourru A., Velcin J. and Jacques J. *Gaussian Embedding of Linked Documents from a Pretrained Semantic Space*, IJCAI-PRICAI 2020 (CORE rank: A*), Lisbon, Portugal, April 2020.
- [49] Gourru A., Velcin J., Jacques J. and Guille A. *Document Network Projection in Pretrained Word Embedding Space*, ECIR 2020 (CORE rank: A), Lisbon, Portugal, April 2020.
- [50] Dupuy J., Guille A. and Jacques J. *Document Network Embedding: Coping for Missing Links and Missing Content*, SAC 2020 (CORE rank: B), Brno, Czech Republic, April 2020.

- [51] Ben Slimen Y., Allio S. and Jacques J. *Anomaly Prevision in Radio Access Networks Using Functional Data Analysis*. IEEE Globecom 2017 (CORE rank: B), Singapore, October 2017.
- [52] Hasnat M.A., Velcin, J., Bonnevey S., Jacques J. *A Comparative Study of Clustering Methods with Multinomial Distribution*, in the proceedings of the 14th International Symposium on Intelligent Data Analysis, IDA 2015 (CORE rank: A), Saint-Etienne, October 2015.
- [53] Jacques J. and Preda C. *Curves clustering with approximation of the density of functional random variables*. in the proceedings of the 20th European Symposium on Artificial Neural Networks, Computational Intelligence and Machine Learning (ESANN'12) (CORE rank: B), Bruges, Belgique, April 2012.
- [54] Devictor N., Marques M., Jacques J. and Lavergne C. *Advances in methods for Uncertainty and Sensitivity Analysis*. Proc. Workshop level 2 PSA and severe accident management, Cologne, Germany, March 2004.
- [55] Jacques J., Lavergne C. and Devictor N. *Sensitivity Analysis in presence of Model Uncertainty and Correlated Inputs*. Proc. Fourth International Conference on Sensitivity Analysis of Model Output (SAMO'04), Santa-Fe (NM), USA, March 2004.

Communications in international conferences without proceedings

- [56] Jacques J., Amovin-Assagba M., Gannaz I. *Functional data clustering with outlier detection*. 24th International Conference on Computational Statistics (COMPSTAT 2022), Bologna, Italy, August 2022.
- [57] Iapteff L., Lameiras Franco Da Costa V., Jacques J. and Celse B. *Bayesian Transfer Learning to Improve Predictive Performance of an ODE-Based Kinetic Model*, AICHE 2022, San Antonio (TX, USA), April 2022.
- [58] Amovin-Assagba M., Gannaz I., Jacques J. *Outlier detection in sensor networks*. ENBIS-21 Annual Conference, online, September 2021.
- [59] Iapteff L., Jacques J., Celse B. and Lameiras Franco da Costa, V.. *Bayesian Transfer Learning for modelling the hydrocracking process using kriging*. ENBIS-21 Annual Conference, online, September 2021.
- [60] Iapteff L., Rolland M., Jacques J. and Celse B. *Modeling the Hydrocracking Process with Kriging through Bayesian Transfer Learning*, AICHE 2021, online, March 2021.
- [61] Selosse M., Jacques J., Biernacki C. *ordinalClust: a package for analyzing ordinal data*, USER 2019, Toulouse, France, July 2019.
- [62] Ben Slimen Y., Allio S. and Jacques J. *Model-based co-clustering for functional data*. 24th International Conference on Computational Statistics (COMPSTAT'16), Oviedo, Spain, August 2016.
- [63] Jacques J. and Ruckebusch C. *Co-clustering for hyperspectral images*. 6th international conference in spectral imaging (IASIM'16), Chamonix, France, July 2016.
- [64] Bouveyron C. and Jacques J. *Un algorithme EM pour une version parcimonieuse de l'analyse en composante principale probabiliste*, EGC2015, Luxembourg, January 2015.
- [65] Hamon J., Dhaenens C., Even G., Jacques J. *Feature selection in high dimensional regression problems for genomics*. 10th International Meeting on Computational Intelligence Methods for Bioinformatics and Biostatistics, CIBB'2013, Nice, France, June 2013.
- [66] Hamon J., Dhaenens C., Jacques J., Even G. *Feature selection for high dimensional regression using local search and statistical criteria*. 4th International Conference on Metaheuristics and Nature Inspired Computing, META'2012, Sousse, Tunisia, October 2012.
- [67] Jacques J. and Preda C. *Clustering multivariate functional data*. 20th International Conference on Computational Statistics (COMPSTAT'12), Limassol, Chypre, August 2012.
- [68] Lebre R., Biernacki C., Iovleff S., Jacques J., Preda C., McCarthy A. and Delrieu O. *Genetic apistasis analysis using 'taxonomy3'*. 2nd International BIO-SI Workshop, Rennes, France, October 2011.
- [69] Bouveyron C. and Jacques J. *Model-based Clustering of Time Series in Group-specific Functional Subspaces*. 12th annual conference of the International Federation of Classification Societies, Frankfurt, Germany, July 2011.
- [70] Jacques J. and Biernacki C. *A generative model for rank data based on sorting algorithm*. 19th International Conference on Computational Statistics (COMPSTAT'10), Paris, France, August 2010.

- [71] Ruckebusch C., Bouveyron C. and Jacques J. *Classification of High-Dimensional NIR Spectroscopic Data*. RENACQ-4, Beni Mellal, March 2010.
- [72] Lebreton R., Iovleff S., Biernacki C., Jacques J., Preda C., McCarthy A. and Delrieu O. *Rapid multivariate analysis of 269 Hapmap subjects and 1 million SNPs using 'taxonomy3'*. Cold Spring Harbor/Wellcome Trust meeting on Pharmacogenomics, Hinxton, UK, September 2009.
- [73] Bouveyron C. and Jacques J. *Adaptive linear models for regression*. First joint meeting of the Statistical Society of Canada and the Société Française de Statistique, Ottawa, Canada, May 2008.
- [74] Jacques J. and Biernacki C. *Generalized discriminant rule for binary data when training and test populations differ on their descriptive parameters*. 17th International Conference on Computational Statistics (COMPSTAT'06), Rome, Italy, August 2006.

Invited communications in international conferences or workshops

- [75] J. Jacques, Functional data clustering with outlier detection, Compstat 2022, Bologna, August 2022.
- [76] Jacques J. *Co-clustering model for three-way data*. Chimométrie 2020, Liège, January 2020.
- [77] J. Jacques, Self-Organized Co-Clustering for textual data synthesis, 26th Summer Working Group on Model-Based Clustering of the Department of Statistics of the University of Washington, Vienna, Austria, July 2019.
- [78] J. Jacques, Co-clustering with functional data, SOCO2019, Sevilla, Spain, May 2019.
- [79] J. Jacques, Classification, clustering and co-clustering for ordinal data, MBC2 2018, Catane, Italy, October 2018.
- [80] J. Jacques, Co-clustering for mixed data, 25th Summer Working Group on Model-Based Clustering of the Department of Statistics of the University of Washington, Ann Arbor, USA (MI), July 2018.
- [81] J. Jacques, Model based co-clustering for functional data, CMStatistics 2017, 10th International Conference of the ERCIM working group on Computational and Methodological Statistics, Londres, Royaume-Uni, December 2017.
- [82] J. Jacques, Model based co-clustering for functional data, 20th Conference of the Romanian Probability and Statistics society, Brasov, Roumanie, April 2017.
- [83] J. Jacques, Co-clustering for functional data, 20th Conference of the Romanian Probability and Statistics society, Brasov, Roumanie, April 2017.
- [84] J. Jacques, Co-clustering for ordinal data, 23th Summer Working Group on Model-Based Clustering of the Department of Statistics of the University of Washington, Paris, France, July 2016.
- [85] J. Jacques, Clustering functional data with FunFEM, CMStatistics 2015, 8th International Conference of the ERCIM working group on Computational and Methodological Statistics, Londres, Royaume-Uni, December 2015.
- [86] J. Jacques, Clustering multivariate ranking data, ISI2015, 60th World Statistics Congress, Rio de Janeiro, Brésil, July 2015.
- [87] J. Jacques, Clustering multivariate ordinal data, International Workshop on Ordinal Data, Naples, Italy, October 2015.
- [88] J. Jacques, Clustering multivariate ordinal data, ERCIM 2014, 7th International Conference of the ERCIM working group on Computational and Methodological Statistics, Pise, Italy, December 2014.
- [89] J. Jacques, Model-based clustering for multivariate functional data, ERCIM 2013, 6th International Conference of the ERCIM working group on Computational and Methodological Statistics, Londres, Royaume-Uni, December 2013.
- [90] J. Jacques, Clustering multivariate ordinal data, 20th Summer Working Group on Model-Based Clustering of the Department of Statistics of the University of Washington, Bologna, Italy, July 2013.

Invited communications in national conferences or workshops

- [91] Jacques J. *Co-clustering for multivariate functional data*. 53èmes Journées de Statistiques de la Société Française de Statistique, Lyon, May 2022.
- [92] Jacques J. *Co-clustering de données ordinales*, Twitter workshop, Grenoble, October 2018.
- [93] Jacques J. *Shrinkage methods for regression*, Ecole d'Astrostatique, Annecy, October 2013.
- [94] Jacques J. *Generative models for classification and clustering of spectroscopic data*. Chimiométrie 2012, Lille, December 2012.
- [95] Jacques J. *Model-based clustering of functional data*. Premières rencontres Astrostatique en France, Grenoble, December 2011.
- [96] Jacques J. *Apprentissage adaptatif en classification et régression*. Colloquium Statistique pour le traitement d'Images (STATIM08), Paris, January 2009.
- [97] Jacques J. and Biernacki, C. *Analyse discriminante généralisée: cas des données binaires avec modèles des classes latentes*. Colloque Data Mining et Apprentissage Statistique: applications en assurance, banque et marketing, Niort, May 2005.

Communications in national conferences

- [98] Iapteff L., Jacques J., Celse B., Da Costa V. Design of experiment for Bayesian transferred model. 53èmes Journées de Statistiques de la Société Française de Statistique, Lyon, May 2022.
- [99] Amato F., Jacques, J. Clustering longitudinal ordinal data via finite mixture of matrix-variate latent Gaussians. 53èmes Journées de Statistiques de la Société Française de Statistique, Lyon, May 2022.
- [100] Tamo Tchomgui J-S., Jacques J., Chértien S., Fraysse G., Barriac V. Prédiction de la qualité d'expérience dans les réseaux mobiles : cas de la VOIP. 53èmes Journées de Statistiques de la Société Française de Statistique, Lyon, May 2022.
- [101] Amovin-Assagba, M., Gannaz I., Jacques J. Clustering et détection d'anomalies dans les données fonctionnelles multivariées. 53èmes Journées de Statistiques de la Société Française de Statistique, Lyon, May 2022.
- [102] Gourru A., Velcin J., Jacques J. Représentation d'auteurs par des distributions gaussiennes dans un contexte dynamique. Conférence sur l'Apprentissage Automatique (CAp2021), Saint-Etienne, June 2021.
- [103] Dupuy J., Guille A. and Jacques J. Contextual-RTM: un cadre général pour la modélisation de thématiques dans les réseaux de documents. Conférence sur l'Extraction et la Gestion des Connaissances (EGC), Montpellier, January 2021.
- [104] Amovin-Assagba, M., Jacques, J. Gannaz, I., Fossi F. and Mozul J.. Détection d'anomalies dans des données fonctionnelles multivariées. 52èmes Journées de Statistiques de la Société Française de Statistique, Nice, May 2020.
- [105] Iapteff, L., Jacques, J. Rolland, M., Celse B.. Bayesian inference for transfer learning. 52èmes Journées de Statistiques de la Société Française de Statistique, Nice, May 2020.
- [106] Selosse, M., Gourru, A., Jacques, J. and Velcin, J.. Tri-clustering pour données de comptage. 51èmes Journées de Statistiques de la Société Française de Statistique, Nancy, June 2019.
- [107] Bouveyron C., Bozzi L., Jacques J. and Jollois F-X. *Model-Based Functional Co-Clustering for the Analysis and the Prediction of Electric Power Consumption*, PGMO Days 2018.
- [108] Schmutz A., Jacques J., Bouveyron, C., Chèze L. and Martin P. funHDDC: extension du package R pour le clustering de courbes fonctionnelles multivariées, 7èmes Rencontres R, Rennes, June 2018.
- [109] Selosse, M., Jacques, J. and Biernacki C. Co-clustering de données textuelles et continues, 50èmes Journées de Statistique organisée par la Société Française de Statistique, Paris, June 2018.
- [110] Nagbe, K., Cugliari, J. and Jacques J.. Préviation journalière de la consommation d'électricité à l'aide d'un modèle à espace d'états fonctionnel, 50èmes Journées de Statistique organisée par la Société Française de Statistique, Paris, June 2018.
- [111] Schmutz A., Jacques J., Chèze L. and Martin P. Données fonctionnelles multivariées issues d'objets connectés: une méthode pour classer les individus, 50èmes Journées de Statistique organisée par la Société Française de Statistique, Paris, June 2018.

- [112] Jacques J. *Tutoriel on model-based learning*. StatLearn'18, Nice, April 2018.
- [113] Nagbe, K., Cugliari, J., Thebault, A. and Jacques J.. Prédiction de génération d'électricité à partir de sources renouvelables, 49èmes Journées de Statistique organisée par la Société Française de Statistique, Avignon, June 2017.
- [114] Schmutz A., Jacques J., Chèze L. and Martin P. Prédiction de la vitesse du cheval de sport à partir de données accélérométriques et gyroscopiques, 49èmes Journées de Statistique organisée par la Société Française de Statistique, Avignon, June 2017.
- [115] Jacques J. and Biernacki C. *Model-based co-clustering for ordinal data*. 48èmes Journées de Statistique organisée par la Société Française de Statistique, Montpellier, June 2016.
- [116] Ben Slimen Y., Allio S. and Jacques J. *Model-based co-clustering for functional data*. 48èmes Journées de Statistique organisée par la Société Française de Statistique, Montpellier, June 2016.
- [117] Bouveyron C., Côme E. and Jacques J. *Le modèle DFM pour une analyse comparative des systèmes de vélos en libre service*. 48èmes Journées de Statistique organisée par la Société Française de Statistique, Montpellier, June 2016.
- [118] Jacques J. *Tutoriel on functional data*. StatLearn'16, Vannes, April 2016.
- [119] Loingeville F., Jacques J., Preda C., Guarini P. and Molinier O. *Modèle Linéaire Généralisé Hiérarchique Gamma-Poisson à 3 facteurs aléatoires - Application au contrôle de qualité*. 47èmes Journées de Statistique organisée par la Société Française de Statistique, Lille, June 2015.
- [120] Bouveyron C. and Jacques J. *Un algorithme EM pour une version parcimonieuse de l'analyse en composante principale probabiliste*, EGC2015, Luxembourg, January 2015.
- [121] Bouveyron C. and Jacques J. *funFEM: an R package for functional data clustering*, Quatrième Rencontres R, Grenoble, June 2015.
- [122] Yengo L., Jacques J. and Biernacki C. *Variable Clustering in High Dimensional Probit Regression Models*. 46èmes Journées de Statistique organisée par la Société Française de Statistique, Rennes, June 2014.
- [123] Loingeville F., Jacques J., Preda C., Guarini P. and Molinier O. *Analyse de variance à 2 facteurs imbriqués sur données de comptage: Application au contrôle de qualité*. 46èmes Journées de Statistique organisée par la Société Française de Statistique, Rennes, June 2014.
- [124] Grimonprez Q., Jacques J. and Biernacki C. *Rankclust: An R package for clustering multivariate partial rankings*, Deuxième Rencontres R, Lyon, June 2013.
- [125] Hamon J., Dhaenens C., Jacques J., Even G. *Modèles mixtes en génétique animale: sélection de variables par optimisation combinatoire*, 44èmes Journées de Statistique organisée par la Société Française de Statistique, Toulouse, May 2012.
- [126] Jacques J. *Classification automatique de données hétérogènes*. 44èmes Journées de Statistique organisée par la Société Française de Statistique, Bruxelles, Belgique, May 2012.
- [127] Biernacki C. and Jacques J. *Modèle génératif pour données ordinales*. 44èmes Journées de Statistique organisée par la Société Française de Statistique, Bruxelles, Belgique, May 2012.
- [128] Jacques J. and Preda C. *Functional data clustering using density approximation*. 44èmes Journées de Statistique organisée par la Société Française de Statistique, Bruxelles, Belgique, May 2012.
- [129] Yengo L., Jacques J. and Biernacki C. *Classification et sélection de variables en régression*. 44èmes Journées de Statistique organisée par la Société Française de Statistique, Bruxelles, Belgique, May 2012.
- [130] Hamon J., Dhaenens C., Jacques J., Even G. *Coopération entre optimisation combinatoire et statistique pour la sélection animale*, 13e congrès annuel de la Société française de Recherche Opérationnelle et d'Aide à la Décision, Angers, April 2012.
- [131] Yengo, L. and Jacques, J. and Biernacki, C. *A Block Regression approach for Simultaneous Variables Clustering and Selection: Application to Genetic Data*, in "JOBIM - Journées Ouvertes Biologie Informatique Mathématiques", Paris, 2011.
- [132] Hamon J., Dhaenens C., Jacques J., Even G. *Combining combinatorial optimization and statistic to mine high-throughput genotyping data*, in "JOBIM - Journées Ouvertes Biologie Informatique Mathématiques", Paris, 2011.

- [133] Bouveyron C. and Jacques J. *Adaptive mixtures of regressions: improving predictive inference when population has changed*. 4th conference on Computational Methods for Modelling and Learning in Social and Human Sciences (MASHS'10), Lille, France, June 2010.
- [134] Jacques J. and Biernacki C. *Model-based clustering for rank data based on an insertion sorting algorithm*. 17ème Rencontres de la Société Francophone de Classification, La Réunion, June 2010.
- [135] Biernacki C. and Jacques J. *Modèles génératifs de rangs relatifs à un algorithme de tri par insertion*. 42èmes Journées de Statistique organisée par la Société Française de Statistique, Marseille, May 2010.
- [136] Jacques J. and Biernacki C. *Model-based clustering for rank data based on an insertion sorting algorithm*. 17ème Rencontres de la Société Francophone de Classification, La Réunion, June 2010.
- [137] Bouveyron C. and Jacques J. *Adaptive mixtures of regressions: improving predictive inference when population has changed*. 4th conference on Computational Methods for Modelling and Learning in Social and Human Sciences (MASHS'10), Lille, France, June 2010.
- [138] Jacques J. and Bouveyron C. *Modèles adaptatifs pour les mélanges de régressions*. 41èmes Journées de Statistique organisée par la Société Française de Statistique, Bordeaux, May 2009.
- [139] Bouveyron C. and Jacques J. *Adaptive linear models in regression for the modeling of housing market in different U.S. cities*. Computational Methods for Modelling and Learning in Social and Human Sciences (MASHS'08), Créteil, France, June 2008.
- [140] Jacques J. and Biernacki, C. *Analyse discriminante généralisée: cas des données binaires avec modèles des classes latentes*. Première Rencontre des Jeunes Statisticiens, Aussois, August-Septembre 2005.
- [141] Langlois, C., Jacques J. and Danzon, A. *Une modélisation âge-période-cohorte des cas incidents de cancers cutanés*. 37èmes Journées de Statistique organisée par la Société Française de Statistique, Pau, June 2005.
- [142] Jacques J., Lavergne, C. and Devictor N. *Sensitivity analysis for model with correlated inputs*. Colloque Lambda-Mu 14, Bourges, October 2004.
- [143] Jacques J., Lavergne, C. and Devictor N. *Analyse de sensibilité globale*. 36èmes Journées de Statistique organisée par la Société Française de Statistique, Montpellier, May 2004.

Softwares

- [144] FREG (R, available on CRAN): regression for continuous, categorical nominal or ordinal output with functional covariates [5].
- [145] ordinalClust (R, available on CRAN): clustering, classification and co-clustering of ordinal data [23].
- [146] funLBM (R, available on CRAN): co-clustering of functional data [16].
- [147] FunFEM (R, available on CRAN): clustering of functional data [25].
- [148] FunHDDC (R, available on CRAN): clustering of functional data [35].
- [149] Clere (R, available on CRAN): variable clustering in high-dimensional regression [30, 24].
- [150] Funclustering (R, available on CRAN): multivariate functional data clustering [33] et [31].
- [151] Rankcluster (R, available on CRAN): ranking data clustering [34, 29].
- [152] AdaptReg: transfer learning for mixture of regression [38].
- [153] SAinterface: toolbox for sensitivity analysis.