

Curriculum Vitae

Civil status

First Name : Frédéric.
Surname : Mr. FERRATY.
Date of birth and place : May, 7, 1966, Talence (France).
Nationality : French
Marital status : Married, 2 children.
Professional status : Full Professor
Professional address : Toulouse Mathematics Institute
Toulouse Jean Jaurès University, France

Qualifications

1996 : PhD in Applied Mathematics (option Statistics)

2003 : “Habilitation à diriger les recherches”

1 Duties and memberships in brief

2022-26 Elected member of the Board of Directors of the European Regional Section of the IASC (International Association for Statistical Computing)

2021 2nd Spanish Society of Statistics and Operations Research – BBVA Foundation Awards (committee member)

2020- Associate Editor for Journal of the American Statistical Association (JASA)

2020- Co-chair with Jane-Ling Wang (UC Davis, US) of the Functional Data Analysis Specialized Team (ERCIM - CMStatistics)

2020 Inaugural member of the Peter Galvin Hall IMS Early Career Prize Committee

2019- Elected member at the french national council "CNU 26"

2017- Elected member of the International Statistical Institute

2016-2020 Head of *Computer Science and Mathematics* department - Jean Jaurès University

2015-2021 Toulouse Mathematics Institute’s official representative at Jean Jaurès University

2 Research area

- Functional Data Analysis
- High-Dimensional Statistics
- Linear/nonlinear structures
- Semi/Non-parametric Statistics
- Model Selection
- Methodological/Practical/Theoretical developments
- Applications (Biology, Chemometrics, Criminology, Econometrics, Environmetrics, Image Processing, Medicine, Remote Sensing, etc)

3 Publications

3.1 Published papers

1. D. PIGOLI, F. FERRATY, J. ASTON, A. MAZUMDER, C. RICHARDS AND M. HALL. Estimation of temperature-dependent growth profile for the assessment of time of hatching in Forensic Entomology. *Journal of the Royal Statistical Society (C)* (accepted).
2. F. FERRATY, S. NAGY (2022). Scalar-on-function local linear regression and beyond. *Biometrika*, **109**, 439-455 ([available online](#)).
3. S. NAGY, F. FERRATY (2019). Data Depth for Measurable Noisy Random Functions. *J. Multivariate Anal.*, **170**, 95-114.
4. F. FERRATY, A. ZULLO, M. FAUVEL (2019). Nonparametric regression on contaminated functional predictor with application to hyperspectral data. *Econometrics and Statistics*, **9**, 95-107.
5. A. ZULLO, M. FAUVEL, F. FERRATY (2018). Experimental comparison of functional and multivariate spectral-based supervised classification methods in hyperspectral image. *Journal of Applied Statistics*, **45**, 2219-2237.
6. F. FERRATY, A. QUINTELA-DEL-RIO (2016). Conditional VaR and expected shortfall : a new functional approach. *Econometric Rev.*, **35**, 263-292.
7. F. FERRATY, P. HALL (2015). An Algorithm for Nonlinear, Nonparametric Model Choice and Prediction. *J. Comput. Graph. Stat.*, **24**, 695-714.
8. M. FAUVEL, C. DESCHESNE, A. ZULLO, F. FERRATY (2015). Fast forward feature selection of hyperspectral images for classification with gaussian mixture model. *IEEE J. Sel. Topics Appl. Earth Observ. in Remote Sens.*, **8** 2824-2831.
9. G. ANEIROS, F. FERRATY, P. VIEU (2015). Variable selection in partial linear regression with functional covariate. *Statistics*, **49**, 1322-1347.
10. F. FERRATY (2014). What about sparsity when data are curves? Invited discussion around the paper "An Overview of Object Oriented Data Analysis". *Biometrical Journal*, **56**, 761-763.
11. F. FERRATY (2014). Regression on functional data : methodological approach with application to near-infrared spectrometry. *J. Soc. Fr. Stat.*, **155**, 100-120.
12. F. FERRATY, M. SUED, P. VIEU (2013). Mean estimation with data missing at random for functional covariables. *Statistics*, **47**, 688-706.
13. F. FERRATY, A. GOIA, E. SALINELLI, P. VIEU (2013). Functional projection pursuit regression. *TEST*, **22**, 293-320.
14. F. FERRATY, N. KUDRASZOW, P. VIEU (2012). Nonparametric estimation of a surrogate density function in infinite dimensional spaces. *J. Nonparametr. Stat.*, **24**, 447-464.
15. F. FERRATY, I. VAN KEILEGOM, P. VIEU (2012). Regression when both response and predictor are functions. *J. Multivariate Anal.*, **109**, 10-28.
16. F. FERRATY, A. LAKSACI, A. TADJ, P. VIEU (2012). Estimation de la fonction de régression pour variable explicative et réponse fonctionnelles dépendantes. *C. R. Acad. Sci. Paris, Ser. I*, **350**, 717-720

17. F. FERRATY, W. GONZALEZ-MANTEIGA, A. MARTINEZ-CALVO, P. VIEU (2012). Presmoothing in functional linear regression. *Statistica Sinica*, **22**, 69-94.
18. F. FERRATY, A. QUINTELA-DEL-RIO, P. VIEU (2012). Specification test for conditional distribution with Functional Data. *Econometry Theory*, **28**, 363-386.
19. F. FERRATY, A. LAKSACI, A. TADJ, P. VIEU (2011). Kernel regression with functional response. *Electronic J. Stat.*, **5**, 159-171 (<http://dx.doi.org/10.1214/11-EJS600>).
20. L. DELSOL, F. FERRATY, P. VIEU (2011). Structural test in regression on functional variables. *J. Multivariate Anal.*, **102**, 422-447.
21. F. FERRATY, A. QUINTELA-DEL-RIO, P. VIEU. Analysis of time of occurrence of earthquakes : a functional data approach. *Mathematical Geosciences*, **43**, 695-719 .
22. F. FERRATY, P. HALL, P. VIEU (2010). Most-predictive design points for functional data predictors. *Biometrika*, **97**, 807-824.
23. A. AIT SAIDI, M. BOURAINE, F. FERRATY, P. VIEU (2010). Choix optimal de l'indice multi-fonctionnel : méthode de validation croisée. *Rom. J. Pure & Applied Math.*, **55**, 355-367.
24. F. FERRATY, I. VAN KEILEGOM, P. VIEU (2010). On the validity of the bootstrap in nonparametric functional regression. *Scand. J. Stat.*, **37**, 286-306.
25. F. FERRATY, A. LAKSACI, A. TADJ, P. VIEU (2010). Rate of uniform consistency for nonparametric estimates with functional variables. *J. Stat. Plan. Infer.*, **140**, 335-352.
26. J. BARRIENTOS-MARIN, F. FERRATY, P. VIEU (2010). Locally Modelled Regression and Functional Data. *J. of Nonparametric Statistics*, **22**, 617-632.
27. F. FERRATY, A. LAKSACI, A. TADJ, P. VIEU (2010). Rate of uniform consistency for nonparametric estimates with functional variables. *J. Stat. Plan. Infer.*, **140**, 335-352.
28. F. BURBA, F. FERRATY, P. VIEU (2009). k -Nearest Neighbor method in functional nonparametric regression. *J. of Nonparametric Statistics*, **21**, 453-469.
29. F. FERRATY, P. VIEU (2009). Additive prediction and boosting for functional data. *Computational Statistics & Data Analysis*, **53**, 1400-1413.
30. A. AIT SAIDI, F. FERRATY, R. KASSA, P. VIEU (2008). Cross-validated estimations in the single functional index model. *Statistics*, **42**, 475-494.
31. F. BURBA, F. FERRATY, P. VIEU (2008). Convergence de l'estimateur à noyau des k plus proches voisins en régression fonctionnelle non-paramétrique. *C. R. Acad. Sci. Paris, Ser. I* **346**, 339-342.
32. A. AIT SAIDI, F. FERRATY, R. KASSA, P. VIEU (2008). Choix optimal du paramètre fonctionnel dans le modèle à indice fonctionnel simple. *C. R. Acad. Sci. Paris, Ser. I* **346**, 217-220.
33. F. FERRATY, A ; RABHI, P. VIEU (2008). Estimation non-paramétrique de la fonction de hasard avec variable explicative fonctionnelle. *Rom. J. Pure & Applied Math.*, **53**, 1-18.
34. K. BENHENNI, F. FERRATY, M. RACHDI, P. VIEU (2007). Local smoothing regression with functional data. *Comp. Statistics*, **22**, 353-369.
35. F. FERRATY, P. VIEU, S. VIGUIER-PLA (2007). Factor-based comparison of groups of curves. *Computational Statistics & Data Analysis*, **51**, 4903-4910.

36. S. DABO-NIANG, F. FERRATY, P. VIEU (2007). On the using of modal curves for radar waveforms classification. *Computational Statistics & Data Analysis*, **51**, 4878-4890.
37. F. FERRATY, A. MAS, P. VIEU (2007). Nonparametric regression on functional data : inference and practical aspects. *Aust N. Z. J. Stat.*, **49**, 267-286.
38. N. VILLANEIX, PAEGELOW M., CAMACHO-OLMEDO M.T., CORNEZ L., FERRATY F., FERRÉ L., SARDA P. (2007). Various approaches for predicting land cover in mountain areas. *Communications in Statistics - Simulation and Computation*, **36**, 73-86.
39. S. DABO-NIANG, F. FERRATY, P. VIEU (2006). Mode estimation for functional random variable and its application for curves classification. *Far East J. Theor. Stat.*, **18**, 93-119.
40. F. FERRATY, A. LAKSACI, P. VIEU (2006). Estimating some characteristics of the conditional distribution in nonparametric functional models. *Stat. Inference Stoch. Process*, **9**, 47-76.
41. F. FERRATY, A. RABHI, P. VIEU (2005). Conditional quantiles for functional dependent data with application to the climatic *El Niño* phenomenon. *Sankhya*, **67**, 378-398.
42. A. AIT SAIDI, F. FERRATY, R. KASSA (2005). Single functional index model for time series. *Rom. J. Pure & Applied Math.*, **50**, 321-330.
43. F. FERRATY, A. LAKSACI, P. VIEU (2005). Functional time series prediction via conditional mode estimation. *C. R. Acad. Sci. Paris, Ser. I* 340, 389-392.
44. S. DABO-NIANG, F. FERRATY, P. VIEU (2004). Estimation du mode dans un espace vectoriel semi-normé. *C. R. Acad. Sci. Paris, Ser. I* 339, 659-662.
45. M. PAEGELOW, N. VILLA, L. CORNEZ, F. FERRATY, L. FERRÉ, P. SARDA AND N. VILLANEIX (2004). Modélisations prospectives de l'occupation du sol. Le cas d'une montagne méditerranéenne. *Cybergeo*, **295** (19p).
46. F. FERRATY AND P. VIEU (2004). Nonparametric models for functional data, with applications in regression, time series prediction and curves discrimination. *J. of Nonparametric Statistics*, **16**, 111-125.
47. F. FERRATY, A. PEUCH ET P. VIEU (2003). Modèle à indice fonctionnel simple. *C. R. Acad. Sci. Paris, Ser. I* 336, 1025-1028.
48. H. CARDOT, F. FERRATY ET P. SARDA (2003). Spline Estimators for the Functional Linear Model. *Statistica Sinica*, **13**, 571-591.
49. F. FERRATY AND P. VIEU (2003). Curves discrimination : a nonparametric functional approach. *Computational Statistics & Data Analysis*, **44**, 161-173.
50. H. CARDOT, F. FERRATY, A. MAS ET P. SARDA (2003). Test of nullity in the Functional Linear Model. *Scand. J. Stat.*, **30**, 241-255.
51. F. FERRATY, A. GOIA, P. VIEU (2002). Functional Nonparametric Model for Time Series : a Fractal Approach for Dimension Reduction. *TEST*, **11**, 317-344.
52. F. FERRATY, P. VIEU (2002). The Functional Nonparametric Model and Application to Spectrometric Data. *Computational Statistics*, **17**, 545-564.
53. F. FERRATY, A. GOIA, P. VIEU (2002). Régression non-paramétrique pour des variables aléatoires fonctionnelles mélangeantes. *C. R. Acad. Sci. Paris, Ser. I* 334, 217-220.
54. H. CARDOT, F. FERRATY, P. SARDA (2000). Etude asymptotique d'un estimateur spline hybride pour le modèle linéaire fonctionnel. *C. R. Acad. Sci. Paris, t. 330, Série I*, 501-504.

55. F. FERRATY, P. VIEU (2000). Dimension fractale et estimation de la régression dans des espaces vectoriels semi-normés. *C. R. Acad. Sci. Paris*, t. 330, Série I, 139-142.
56. H. CARDOT, F. FERRATY, P. SARDA (1999). Linear Functional Model. *Statist. & Prob. Letters*, **45**, 11-22.
57. P. C. BESSE, H. CARDOT, F. FERRATY (1997). Simultaneous Non-parametric Regressions of Unbalanced Longitudinal Data, *Computational Statistics & Data Analysis*, **24**, 255-270.
58. F. FERRATY (1997). Estimations de Transformations Optimales en ACP Curvilinéaire, *Revue de Statistique Appliquée*, **XLV** (1), 5-39.
59. P. C. BESSE, F. FERRATY (1995). Curvilinear Fixed Effect Model, *Computational Statistics*, **10**, 339-351.

3.2 Monographs

60. F. FERRATY ET P. VIEU (2006). Nonparametric Functional Data Analysis : Theory and Practice. Springer Series in Statistics, Springer-Verlag, New York.
61. F. FERRATY, A. GOIA, P. VIEU (2002). Statistica funzionale ; Modelli di regressione non-parametrici. Ed. Franco Angeli, Collana : Economia e Statistica, Milano.
62. F. FERRATY, V. NUNEZ-ANTON, VIEU P. (2001). Regression No Parametrica : Desde la Dimension Uno Hasta la Dimension Infinita. Servicio Editorial de la Universidad del Pais Vasco, Bilbao.

3.3 Editor (Collective books, *Special Issue*)

63. F. Ferraty, Alois Kneip, P. Kokoszka, A. Petersen (2022). Second Special Issue on High-dimensional and functional data analysis (**Eds**). *Econometrics & Statistics*, **21**, 112-178.
64. F. Ferraty, P. Kokoszka, J.-L. Wang, Y. Wu (2019). 1st Special Issue on High-dimensional and functional data analysis (**Eds**). *Comput. Stat. Data Anal.*, **131**, 1-234.
65. F. Ferraty (2011). *Recent Advances on Functional Data analysis and Related Fields* (**Ed**). Contributions to Statistics, Physica-Verlag, Heidelberg.
66. F. Ferraty, Y. Romain (2011). *Oxford Handbook of Functional Data Analysis* (**Eds**). Oxford University Press.
67. F. Ferraty (2010). *Special Issue on Statistical Methods and Problems in Infinite-dimensional Spaces* (**Ed**). *J. Mult. Anal.*, **101**(2), 305-490.
68. S. Dabo-Niang, F. Ferraty (2008). *Functional and Operatorial Statistics* (**Eds**). Contributions to Statistics, Physica-Verlag, Heidelberg.

3.4 Chapters in collective books

69. F. FERRATY, P. VIEU (2013). Nonparametric Statistics and High/Infinite Dimensional Data. In *Contemporary Development in Statistical Theory*, Ed. S.N. Lahiri, A. Schick, A. Sengupta, and T.N. Sriram, Springer, New York.

70. L. DELSOL, F. FERRATY, A. MARTINEZ (2011). Functional data analysis : an interdisciplinary statistical topic. In *Statistical learning and Data Science*, Eds. B. Goldfarb, C. Pardoux, M. summa, M. Touati, Chapman & Hall (to appear).
71. F. FERRATY, P. VIEU (2011). Unifying presentation of functional regression modelling. In *Oxford Handbook of Statistics and Functional Data*, Ed. F. Ferraty, Y., Oxford University Press.
72. F. FERRATY, P. VIEU (2011). Kernel regression estimation for functional data. In *Oxford Handbook of Statistics and Functional Data*, Ed. F. Ferraty, Y. Romain, Oxford University Press.
73. F. Ferraty, P., Sarda, P. Vieu (2010). Statistical analysis of Functional Data. In *International Encyclopedia of Education 3rd Edition*, Ed. E. Baker, P. Peterson, and B. McGaw, Elsevier.
74. Camacho Olmedo M.T., Ferraty F., Ferré L., Sarda P., Paegelow, M., Villa N. (2008). Prospective modelling of environmental dynamics. A methodological comparison applied to mountain land cover changes. In *Modelling Environmental Dynamics*, Ed. Paegelow & Camacho Olmedo, Springer.
75. F. Ferraty, A. Goia and P. Vieu. Nonparametric functional methods : new tools for chemometric analysis (2006). In *Statistical methods for biostatistics and related fields*, Ed. W. Haerdle, Y. Mori and P. Vieu, 245-264.
76. F. Ferraty, M. Paegelow and P. Sarda (2006). Polychotomous regression : application to landcover prediction. In *Statistical methods for biostatistics and related fields* , Ed. W. Haerdle, Y. Mori, P. Vieu, 347-356.
77. F. Ferraty and P. Vieu (2006). Functional nonparametric statistics in action. In *The Art of Semiparametrics*, Contributions in Statistics, Physica-Verlag, **Springer**, Heidelberg, 112-129.
78. F. Ferraty and P. Vieu (2003). Functional nonparametric statistics : a double infinite dimensional framework. In *Recent Advances and Trends in Nonparametric Statistics*, Ed. M. Akritas and D. Politis, **Elsevier**, 61-76.

3.5 Published proceedings

79. M. FAUVEL, A. ZULLO, F. FERRATY (2014). Nonlinear parsimonious feature selection for the classification of hyperspectral images. 6th Workshop on Hyperspectral Image and Signal Processing : Evolution in Remote Sensing (WHISPERS).
80. A. ZULLO, M. FAUVEL, F. FERRATY (2014). Sélection de variables pour l'imagerie hyperspectrale. 46ème Journées de Statistique, SFDS.
81. F. FERRATY, A. GOIA, E. SALINELLI, P. VIEU (2014). Peak-Load Forecasting using a Functional Semi-Parametric Approach. In *Topics in Nonparametric Statistics*, M. G. Akritas, S. N. Lahiri, D. N. Politis (Eds.) Springer.
82. F. FERRATY, P. VIEU (2014). Nonparametric Statistics and High/Infinite Dimensional Data. In *Topics in Nonparametric Statistics*, M. G. Akritas, S. N. Lahiri, D. N. Politis (Eds.) Springer.

83. ZULLO, A., FAUVEL, M., FERRATY, F., GOULARD, M., VIEU, P. (2014). Non-parametric functional methods for hyperspectral image classification. In *Geoscience and Remote Sensing Symposium (IGARSS)*, IEEE International, 3422-3425.
84. G. ANEIROS, F. FERRATY, P. VIEU (2011). Variable Selection in Semi-Functional Regression Models. In *Recent Advances in Functional Data analysis and Related Topics*, Ed. F. Ferraty, Springer.
85. L. DELSOL, F. FERRATY, P. VIEU (2011). Structural Tests in Regression on functional Variable. In *Recent Advances in Functional Data analysis and Related Topics*, Ed. F. Ferraty, Springer.
86. F. FERRATY, A. GOIA, E. SALINELLI, P. VIEU (2011). Recent Advances on Functional Additive Regression. In *Recent Advances in Functional Data analysis and Related Topics*, Ed. F. Ferraty, Springer.
87. F. FERRATY, A. MARTINEZ-CALVO, P. VIEU (2011). Thresholding in Nonparametric Functional Regression with Scalar Response. In *Recent Advances in Functional Data analysis and Related Topics*, Ed. F. Ferraty, Springer.
88. F. FERRATY, A. MARTINEZ-CALVO, P. VIEU (2011). Estimation of Functional Single Index Model. In *Recent Advances in Functional Data analysis and Related Topics*, Ed. F. Ferraty, Springer.
89. A. QUINTELA-DEL-RIO, F. FERRATY, P. VIEU (2011). Nonparametric Conditional Density Estimation for Functional Data. Econometric Applications. In *Recent Advances in Functional Data analysis and Related Topics*, Ed. F. Ferraty, Springer.
90. F. FERRATY, P. VIEU (2008). Regressing on functional data : exploring nonlinear relationships. In *Proceedings of IASC2008*, Eds. M. Mizuta and J. Nakano, Japanese Society of Computational Statistics, Tokyo, 436-440.
91. S. DABO-NIANG, F. FERRATY AND P. VIEU (2004). Nonparametric unsupervised classification of satellite wave altimeter forms. In *Proceedings in Computational Statistics*, Ed. J. Antoch, Physica-Verlag, Heidelberg New-York, 879-886.

4 Invitations (conferences, seminars abroad,...)

4.1 Invitations for collaborations

92. 2023 Lab. LaTICE, Université de Monastir, Tunisie (M. Zrigui)
93. 2022 Lab. PDEs, Algebra & Spectral Geometry, Université de Kénitra, Maroc (M. El Fatini)
94. 2019 Department of Statistics, University of Melbourne, Australia (A. Delaigle)
95. 2018 Department of Statistics, University of Melbourne, Australia (A. Delaigle)
96. 2018 Department of Probability and Mathematical Statistics, Charles University, Czech Republic (S. Nagy)
97. 2016 : Department of Applied Mathematics, Hong Kong Polytechnic University, China (C. Liu)
98. 2015 : Department of Statistics, KU Leuven, Belgium (I. Gijbels)

- 99. 2014 : University of Cambridge, UK (J. Aston)
- 100. 2013 : University of Santiago de Compostella, Spain (W. Gonzalez-Manteiga)
- 101. 2012 : Institute of Mathematical Sciences, Singapore (P. Hall)
- 102. 2011 : University of Santiago de Compostella, Spain (W. Gonzalez-Manteiga)
- 103. 2010 : University of Melbourne, Australia (P. Hall)
- 104. 2010 : University of Singapore, Singapore (H. Lian)
- 105. 2010 : University of Coruna, Spain (A. Quintela-del-Rio)
- 106. 2010 : London School of Economics, UK (Q. Yao)

4.2 Invited talks (Conf. / seminars abroad / PhD Lectures)

- 107. Invited Master/PhD Lectures (Université de Monastir, Tunisie, April 2023)
- 108. Tutorial on nonparametric functional Data (Univ. Kénitra, Maroc, June 2022)
- 109. Invited Plenary Talk at 3rd Spanish Young Statisticians and Operational Researchers Meeting (Elche, Spain, September 2022)
- 110. The 6th International Workshop on Stochastic Modelling & Statistics (June 6th, 2022 - University of Kénitra, Maroc)
- 111. 2021 King's College, London, UK (webinar)
- 112. Invited talk to the Functional/Complex Data Analysis Workshop (Peking University, 23-26 August 2020 - postponed)
- 113. Faculté des Sciences, University of Monastir, Tunisia (26-29 May 2020 - postponed)
- 114. Econometrics & Statistics Seminar Series, University of Bonn (January 2020)
- 115. Oberwolfach Workshop "Statistical Methodology and Theory for Functional and Topological Data" - Invited talk (Oberwolfach, germany, June 2019)
- 116. CRoNoS MDA 2019 - Invited talk (Limassol, Cyprus, April)
- 117. International MATRIX research program on FDA 2018 - Invited talk (Creswick, Australia, 3-14 December)
- 118. CRoNoS 2018 - Invited talk (Iasi, Romania, August 2018)
- 119. COMPSTAT 2018 - Tutorial on functional/complex data and nonparametric modelling (Iasi, Romania, August 2018)
- 120. CMStatistics 2017 - 10th International Conference of the ERCIM WG on Computational and Methodological Statistics (London, UK, December 2017)
- 121. Learning with functional data - keynote talk (Lille, France, October 2016)
- 122. Meet the Jury Seminar - Invited seminar (KU Leuven, Belgium, December 2016)
- 123. Peter Hall Memorial Conference - Invited talk (UC-Davis, California, US, Sept. 30 - Oct. 1, 2016)
- 124. Compstat'2016 : satellite CRoNoS Workshop on Functional Data Analysis - Keynote talk (Oviedo, Spain, August 2016)
- 125. Guangxi University of Science and Technology - Invited PhD Lecture (Liuzhou, Guangxi, China, June/July 2016)

126. Symposium *Frontiers of Statistics and Data Sciences* - Invited talk (Hong Kong, China, June 2016)
127. Workshop on Functional Data Analysis (Geneva, Switzerland, May 2016)
128. 8th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2015) - Special Invited Session *Statistics for Functional Data* (London, UK, December 2015)
129. Department of Statistics, KU Leuven - Invited Seminar (Belgium, November 2015)
130. ISI World Statistics Congress - Invited Paper Session on *Recent Advances in Functional Data Analysis* (Rio de Janeiro, Brazil, July 2015)
131. Internatioal Workshop on *Frontiers in Functional Data Analysis* (Banff International Research Station, Canada, June/July 2015).
132. Statistical Laboratory, University of Cambridge, UK, November, 2014 (Seminar).
133. Colloque Franco-Roumain (Lyon, France, August 2014)
134. Conference "STATLEARN" (Bordeaux, France, April 2013)
135. Workshop "Statistique et Image" (Strasbourg, France, November 2012)
136. High dimensional and dependent functional data (Workshop, Bristol, UK, September 2012)
137. Meeting the Challenges of High Dimension – Statistical Methodology, Theory and Applications (Institute of Mathematical Sciences, Singapore, August 2012)
138. IMS-China international Conference on Statistics and Probability (distinguished lecturer, XiAn, China, July 2011)
139. Department of Statistics, London School of Economics, UK, 2010 (Seminar).
140. Department of Mathematics and Statistics at Masary University, Rep. Czech : March 2010 (Seminar).
141. Eighth International Chinese Statistical Association International Conference (Guangzhou University, China, December 2010).
142. Department of Mathematics and Statistics, Univ. Melbourne, Australia, 2010 (Seminar).
143. European Research Consortium of Informatics and Mathematics Conference (December 2010, London,UK)
144. Modélisation Stochastique et Statistique - MSS'2010 (plenary lecture - Université d'Alger, Algérie, Novembre 2010).
145. Department of Mathematics and Statistics at Masary University, Rep. Czech, March 2010 (PhD lecture).
146. Workshop on Statistical Frontiers, 2009 ISS (Taiwan, Taipei, December 2009).
147. S.Co. 2009 : Complex Data Modelling and Computationally Intensive Statistical Methods for Estimation and Prediction (Italia, Milan, September 2009).
148. Dipartimento di Scienze Economiche e Metodi Quantitativi, Novarra, Italia, September, 2009 (Seminar).
149. Department of Statistics at Warwick University, UK, June, 2009 (Seminar).

150. 6ème Journées de Statistique Fonctionnelle et Opératoireielle : Most informative design points in functional predictors (Dijon, June 2009).
151. Department of Statistics, Santiago University, Spain, May, 2009 (Seminar).
152. Symposium on Learning and Data Science (Paris, April 2009)
153. 4th World Conference of IASC (International Association for Statistical Computing) : Exploring nonlinear relationships in Functional Data (Japan, Yokohama, December 2008)
154. Research workshop on functional and longitudinal data analysis : Regressing on functional data (Denmark, Copenhagen, September 2008)
155. Department of Mathematics and Statistics, University of Lancaster, UK, 2007 (Seminar).
156. 2ème Journée “Analyse de tableaux multiples” : Analyse nonparamétrique de données fonctionnelles et perspectives pour le traitement des tableaux multiples (Institut National Agronomique Paris-Grignon, 2007).
157. Department of Fundamental Economical Analysis, University of Alicante, Spain, 2007 (PhD lecture)
158. 2ème Journées de Statistique Théorique et Appliquée : “Traitement statistique d’objets mathématiques” (Algérie, Biskra, 2007)
159. ISNI 2005 (International Seminar on Nonparametric Inference) : “Nonparametric modeling for functional data” (Espagne, La Corogne 2005).
160. CLADAG 2005 (Classification and Data Analysis Group) : “Nonparametric approach for Classification for classifying functional data : theory and methodology” (Italie, Parme, 2005).
161. COMPSTAT’2004 (16th Symposium of IASC, Prague, aout 2004) : “Nonparametric Un-supervised Classification of waveforms registering by the TOPEX/POSEIDON altimeter” (session organizer : Modelling and Functional Data analysis).
162. Canada-France Meeting of Mathematics : “Nonparametric Methods for Functional Data : Regression, Discrimination and classification” (Toulouse, 2004).
163. MSS’2004 (Modélisation Stochastique et Statistique) : “Récents avancées en statistique de variables aléatoires fonctionnelles” (Algérie, Alger, 2004).
164. Conférence annuelle de la société de Probabilités et Statistique de Roumanie : “Some characteristics of the conditional distribution of functional variables” (Bucarest, 2004).
165. Dipartimento di scienze economiche e metodi quantitativi, Univesita del Piemonte orientale, Italia, 2002 (PhD lecture)
166. 3èmes Rencontres d’Analyse et Mathématiques Appliquées : “Quelques modèles nonparamétriques autour des variables fonctionnelles” (Algérie, Bejaia, 2002).

5 Recent Research Networks

167. Elected member of the Board of Directors of the European Regional Section of the IASC (International Association for Statistical Computing)
168. Co-chair (2020-) with Jane-Ling Wang (UC Davis, US) of the Functional Data Analysis Specialized Team (European Research Consortium for Informatics and Mathematics - Working Group on Computational and Methodological Statistics)

- 169. Active member of the network *Computationally-intensive methods for the robust analysis of non-standard data (CRoNoS)*
- 170. Participation to the project *Équipe de Recherche sur les Techniques d'Estimation de l'Effizienz et de la Productivité en Microfinance* granted by MSHS-T (2018-2019)
- 171. Participation to the ATLAS action (2015-2017) (Apprentissage, optimisation Large-échelle et calculs distribués) GDR MaDICS (Massive datasets, Informations and Knowledges in Sciences)
- 172. Participation to PEPS INS2I (Functional Data Analysis and Machine Learning)

6 Expert activities and editorial duties

- 173. **Elected member at CNU 26 (2020-)** (French national committee managing the career of academic teacher's/researcher's)
- 174. **Associate Editor :**
 - 2020- Journal of the American Statistical Association
 - 2016- Computational Statistics and Data Analysis
 - 2016- Econometrics and Statistics
 - 2010-2016 Electronic Journal of Statistics
 - 2008-2014 Statistica Sinica
 - 2007-2016 Journal of Multivariate Analysis
 - 2005-2012 Computational Statistics
- 175. **Editor of Collective books/Special Issue** (see Section 3.3)
- 176. **Elected member of the International Statistical Institute**
- 177. **Reviewer** for "Biometrics", "Biometrika", "The Annals of Statistics", "Computational Statistics", "Computational Statistics and Data Analysis", "Comptes rendus de l'Académie des Sciences", "ISUP", "Electronic Journal of Statistics", "IEEE Transactions on Information Theory", "Journal of the American Statistical Association", "Journal of Computational and Graphical Statistics", "Journal of the Korean statistical Society", "Journal of Multivariate Analysis", "Journal of NonParametric Statistics", "Journal of the Royal Statistical Society B", "Journal of the Royal Statistical Society C", "Journal of Statistical Planning and Inference", "Journal of Systems Science and Complexity", "Metrika", "Probability Theory and Related Fields", "Revue de Statistique Appliquée", "Sankhya", "Statistica Neerlandica", "Statistica Sinica", "Statistics" and "Technometrics".
- 178. **Recent assessments for national/international organizations :**
 - 2nd Spanish Society of Statistics and Operations Research – BBVA Foundation Awards (committee member, 2021)
 - Expert for the *Natural Sciences Engineering Research Council of Canada 2021 - Discovery Grants Program*
 - 2020 Inaugural member of the Peter Galvin Hall IMS Early Career Prize Committee (IMS = Institute of Mathematical Statistics)
 - 2019 - Expert for *EPSRC (Engineering and Physical Sciences Research Council)*
 - 2018 - Expert for *ANR in the field of Data, knowledges, Big data, Multimedia content, Artificial Intelligence*

- 2018 - Expert for *Project ESR 2018 - Region Nouvelle-Aquitaine*
- Expert for *tenure-track* (associate/full professorship for UK, US)
- Expert for the *Swiss National Science Foundation 2017*
- Expert for the *Mathematics of Information Technology And Complex Systems Network of Centres of Excellence* (Canada)
- Expert for the *Natural Sciences Engineering Research Council of Canada 2017 - Discovery Grants Program*
- Expert for *NSA-AMS 2015 - NSA Mathematical Sciences Grants Program* (US)

179. **Expert for "tenure-track" procedures (2013/2014/2017/2018/2021/2022)**

180. **PhD/HdR Committees**

- Dennis Mueller : "Minimax Estimation of the Mode of Functional Data" (November 2021, Institute of Mathematics, Univ. Rostock, Germany - PhD - **External Reviewer**)
- Housseem Abdellaoui : "Towards an Automatic System for Sentiment Analysis of Arabic" (September 2020, ISITCom Univ. Sousse, Tunisia - PhD - **Reviewer**)
- Christophe Crambes (June 2020, Univ. Montpellier - HdR - **Reviewer**)
- Joydeep Chowdhury : "Nonparametric Regression and ANOVA in Infinite Dimensional Spaces" (December 2019, Statistical Indian Institute, Calcutta, India - PhD - **External Reviewer**)
- Hachem Kadri : "Learning with Operator-valued Kernels : Foundations and Algorithms" (Juin 2019, Université d'Aix-Marseille - HdR - **Reviewer**)
- Adam Kashlak : "A concentration inequality based statistical methodology for inference on covariance matrices and operators" (June 2017, University of Cambridge, UK - PhD - **External Examiner**)
- Stanislav Nagy : "Statistical Depth for Functional Data" (October 2016, Leuven, Belgium - PhD - **Reviewer**)
- Camille Ternynck : "Contributions à la modélisation de données spatiales et fonctionnelles. Applications" (November 2014, Lille 3 - PhD - **Reviewer**)
- Loyal El Hajj : "Inférence Statistique pour des Variables Fonctionnelles à Sauts" (2013, Paris 6 - PhD - **Reviewer**)
- Yousri Henchiri : "L'approche Support Vector Machines pour le traitement des données fonctionnelles" (2013, Université de Montpellier 2 - PhD - examiner)
- Nabil Zougab : "Approche Bayésienne dans l'estimation non-paramétrique de la densité de probabilité et la courbe de régression de la moyenne" (2013, Université A. MIRA de Béjaia, Algérie - PhD - **Reviewer**)
- Stephen Lane : "topics in Functional Data Analysis" (August 2012, University of Melbourne, Australia - PhD - **Reviewer**)
- Etienne Josserand : "Sondages pour données fonctionnelles : construction de bandes de confiance asymptotiques et prise en compte d'information auxiliaire" (2011, Université de Bourgogne, Dijon - PhD - **Reviewer**)
- Alexandre Lekina "Estimation non-paramétrique des quantiles extrêmes conditionnels" (2010, Université Joseph Fourier, Grenoble - PhD - **Reviewer**)
- Abdallah Elamine : "Régression nonparamétrique pour variables fonctionnelles" (2010, Montpellier II - examiner)
- Sonia Hedli-Griche : "Estimation de l'opérateur de régression pour des données fonc-

- tionnelles et des erreurs corrélées” (2008, Université Pierre Mendès France, Grenoble - **Reviewer**)
- Céline Turbillon : “Estimation et prévision des processus moyenne mobile fonctionnels” (2007, Paris VI - **Reviewer**)
 - Ahmad Younso : “Estimation et classification non paramétriques par la méthode du noyau sur les champs aléatoires mélangeants” (avril 2007, Montpellier II - **Reviewer**)
 - Christophe Crambes : “Modèles de régression linéaire pour variables explicatives fonctionnelles” (2006, Toulouse III - **Chair of the committee**)
 - Juan Carlos Pardo Fernández : “Tests in nonparametric regression based on the error distribution” (2005, Santiago de Compostella, Espagne - **Reviewer**)
 - Hervé Cardot : “Contributions à la modélisation statistique fonctionnelle” (HDR : 2004, Toulouse III - examiner).
 - Jean-François Robineau : “Méthodes de sélections de variables parmi un grand nombre dans un cadre de discrimination” (2004, Grenoble - **Reviewer**).
 - Aldo Goia : “Contribution à l’étude des modèles de régression pour variables aléatoires fonctionnelles” (2003, Toulouse III - examiner).
 - Christine Camlong : “Estimation de la régression multivariée par la méthode d’intégration” (2000, Toulouse III - examiner).

7 Supervisor of defended PhD

181. Co-supervisor of project ANISETTE 2013-2016 (ANalyse fonctionnelle d’Images à grande dimension SpEcTrale et Temporelle : application à la caractérisation des éléments semi-naturels en écologie du paysage) ; partnership with UMR DYNAFOR (DYNamique FO-Restière) and co-granted (50%) by the CNES (Centre National d’Etudes Spatiales) and the regional council (50%).
182. 2007-2013 Co-supervisor of Adella Martinez-Calvo (Univ. Santiago, Espagne) “Presmoothing and boosting in Statistics for functional data”.
183. 2009-2011 Co-supervisor of Fabrice Morlais (CHU Caen, France) : “Découpage optimal de courbes et application au despistage précoce du cancer”.
184. 2007-2011 Co-supervisor of Amel Tadj (Univ. Sidi Bel Abbes, Algérie/Univ. Toulouse III, France) : “Sur les modèles nonparamétriques conditionnels en statistique fonctionnelle”.
185. 2005-2008 Co-supervisor of Laurent Delsol (Univ. Toulouse III, France) : “Inférence statistique et modèle nonparamétriques pour variables fonctionnelles”.
186. 2004-2008 Co-supervisor of Abbes Rabhi (Univ. Sidi bel Abbes, Algérie) : “Estimation nonparamétrique de quantiles pour des processus fonctionnels et application à la prévision”.
187. 2003-2007 Co-supervisor of Jorge Barrientos-Marin (Univ. Alicante, Spain) : “Polynômes locaux et variable fonctionnelle”.
188. 2002-2005 Co-supervisor of Ali Laksaci (Univ. Sidi Bel Abbes, Algérie/Univ. Toulouse III, France) : “Statistique nonparamétrique des processus fonctionnels”.
189. 1999-2003 Co-supervisor of Aldo Goia (Univ. Novara, Italia/Univ. Toulouse III, France) : “Contribution à l’étude des modèles de régression pour variables aléatoires fonctionnelles”.

8 Organizational duties (Meetings, Workshops,...)

190. Functional Data Analysis Workshop - **Co-chair/Co-organizer** with S. Dabo-Niang, Univ. Lille 3, France, and A. Delaigle, Univ. Melbourne, Australia (African Institute for Mathematical Sciences in Senegal, 14-18 April 2020 - <https://sites.google.com/view/fda-workshop-aims-senegal> - postponed)
191. **Invited Paper Session Organizer** "Recent Advances around Functional Data" - 2019 ISI World Statistics Congress (Kuala Lumpur, Malaysia, August 2019)
192. CRoNoS MDA 2019 - **session organizer** (Limassol, Cyprus, 14-16 April)
193. International MATRIX research program on FDA - **Co-chair/Co-organizer** with Aureore Delaigle, Univ. Melbourne and Debashis Paul, Davis Univ. of California (Creswick, Australia, 3-14 December 2018)
194. CRoNoS workshop 2018 - **SPC member - session organizer** (Iasi, Romania, 31 August - 2 September)
195. CMStatistics 2017 - **Invited session organizer** "Towards Functional Data Exploration" (London, UK, 16-18 December)
196. **Invited Paper Session Organizer** "New methodologies for Functional Data Analysis" - 2017 ISI World Statistics Congress (IPS029 - Marrakech, Morocco, July 2017)
197. **Scientific Program Committee member** of Compstat'2016 satellite meeting CRoNoS Workshop on Functional Data Analysis - **Invited session organizer** (Oviedo, Spain, August 2016)
198. **Organizing committee member** of "3rd International Workshop on Functional and Operatorial Statistics", June 2014, Stresa, Italy.
199. **Scientific committee member** of "Workshop on New Perspectives in FDA", September 2012, Italia.
200. **Co-chair of the Scientific Committee** of "2nd International Workshop on Functional and Operatorial Statistics", June 2011, Santander, Spain.
201. **Co-chair** of the Specialized Group "Statistics for Functional Data" (SFD : <http://www.cfe-csda.org/ercim/TrackSFD.html>) in the "European Research Consortium for Informatics and Mathematics" (ERCIM : <http://www.ercim.org>).
202. **Co-organizer** 2 invited sessions on Functional Data Analysis. Journées de la SFDS (Mai 2010, Marseille).
203. **Session co-organizer** of "Sparseness and Functional Data" in the ERCIM-2009 meeting (October 2009, Cyprius).
204. **Session co-organizer** IASC'2008 (December, Yokohama, Japan) "Statistics for functional data"
205. **Co-chair of the Scientific Committee** of "1rst International Workshop on Functional and Operatorial Statistics", June 2008, Toulouse.
206. **Co-organizer** "Journées en statistique fonctionnelle et opératorielle", June 2007, Lille.
207. **Co-organizer** "Journées en statistique fonctionnelle et opératorielle", June 2006, P. Mendès France University, Grenoble.

208. **Co-organizer** “Journées en statistique fonctionnelle et opératorielle”, June 2005, Paul Sabatier University.
209. **Session organizer** for COMPSTAT’2004 (August, Prague) : "Functional Data : Modelling and Application".
210. **Co-organizer** “Journées en statistique fonctionnelle et opératorielle”, June 2003, Paul Sabatier University, Toulouse.
211. **Co-chair of the organizing committee** “9èmes Rencontres de la Société Francophone de Classification”, September 2002, Toulouse Le Mirail University.
212. **Co-organizer** “Journées en statistique fonctionnelle et opératorielle”, June 2002 Paul Sabatier University, Toulouse.
213. **Founding member and Co-organizer (1999-2013)** of the working group STAPH inside the Institute of Mathematics of Toulouse. The main goal of this research team is to develop statistical methods and tools around high-dimensional statistics (including functional data analysis, operatorial statistics, model selection, linear and nonlinear modelling, applications with implementation in various fields of Sciences).

Toulouse, July 2022,

Frédéric FERRATY.