

# Extended CV

## 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.  
**Personal address :** 18 avenue F. Mitterrand  
31390 Marquefave, France  
**Professional status :** Academic Researcher  
**Professional address :** Institut de Mathématiques de Toulouse  
Université Paul Sabatier  
118 route de Narbonne  
31062 Toulouse Cedex 9, France

## Qualifications

1996 : PhD in Applied Mathematics  
2003 : “Habilitation à diriger les recherches”

## 1 In brief

<u>ARTICLES</u>	International Statistical Journals	33
	C.R.A.S.	8
	Others	6
<u>PUBLISHED PROCEEDINGS</u>		10
<u>SUBMITTED ARTICLES</u>		4
<u>BOOKS</u>	Monographs	3
	Chapters in collective book	9
<u>SOFTWARES</u>	NPFDA's website, Statlib,...(R/S+ routines)	9
<u>INVITATIONS</u>	(Lectures, seminars abroad,...)	41
<u>CO-SUPERVISOR</u>	PhD	10
	Master's dissertations	5
<u>CO-ORGANIZER OF CONFERENCES</u>	IWFOS's conferences, ERCIM's meetings, IASC'2008, STAPH's meetings, Compstat'2004,...	16
<u>EDITORIAL WORK</u>	Associate Editor (Comp. Stat., JMVA, Elec. J. Stat., Stat. Sinica)	4
	Guest Editor (Special Issue in JMVA)	1
	Editor of books	3
<u>EXPERT'S WORK</u>	Number of journals (as reviewer) (Ann. Stat., JASA, JMVA, PTRF, Technometrics, CSDA, JRSSB, ...)	26
	Jurys (PhD, HDR)	14

## 2 Research area

- Functional Data Analysis
- High-Dimensional Statistics
- Linear/nonlinear structures
- Nonparametric Statistics
- Model Selection
- Methodological/Practical/Theoretical developments
- Applications (Biology, Chemometrics, Econometrics, Environmetrics, geophysics, Medicine, etc)

## 3 Publications

### 3.1 Accepted/published papers

1. F. FERRATY, A. GOIA, E. SALINELLI, P. VIEU. Functional projection pursuit regression. *TEST* (to appear).
2. F. FERRATY, A. QUINTELA-DEL-RIO. Conditional VaR and expected shortfall : a new functional approach. *Econometric Rev.* (to appear).
3. F. FERRATY, N. KUDRASZOW, P. VIEU (2012). Nonparametric estimation of a surrogate density function in infinite dimensional spaces. *J. Nonparametr. Stat.*, **24**, 447-464.
4. F. FERRATY, I. VAN KEILEGOM, P. VIEU (2012). Regression when both response and predictor are functions. *J. Multivariate Anal.*, **109**, 10-28.
5. F. FERRATY, M. SUED, P. VIEU (2012). Mean estimation with data missing at random for functional covariables. *Statistics* (DOI :10.1080/02331888.2011.652119).
6. F. FERRATY, W. GONZALEZ-MANTEIGA, A. MARTINEZ-CALVO, P. VIEU (2012). Presmoothing in functional linear regression. *Statistica Sinica*, **22**, 69-94 (doi :<http://dx.doi.org/10.5705/ss.2010.085>).
7. F. FERRATY, A. QUINTELA-DEL-RIO, P. VIEU (2012). Specification test for conditional distribution with Functional Data. *Econometry Theory*, **28**, 363-386.
8. 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>).
9. L. DELSOL, F. FERRATY, P. VIEU (2011). Structural test in regression on functional variables. *J. Multivariate Anal.*, **102**, 422-447.
10. F. FERRATY, A. QUINTELA-DEL-RIO, P. VIEU. Analysis of time of occurrence of earthquakes : a functional data approach. *Mathematical Geosciences* (to appear).
11. F. FERRATY, P. HALL, P. VIEU (2010). Most-predictive design points for functional data predictors. *Biometrika*, **97**, 807-824.
12. F. FERRATY, I. VAN KEILEGOM, P. VIEU (2010). On the validity of the bootstrap in nonparametric functional regression. *Scand. J. Stat.*, **37**, 286-306.
13. 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.
14. J. BARRIENTOS-MARIN, F. FERRATY, P. VIEU (2010). Locally Modelled Regression and Functional Data. *J. of Nonparametric Statistics*, **22**, 617-632.

15. 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.
16. F. BURBA, F. FERRATY, P. VIEU (2009).  $k$ -Nearest Neighbor method in functional nonparametric regression. *J. of Nonparametric Statistics*, **21**, 453-469.
17. F. FERRATY, P. VIEU (2009). Additive prediction and boosting for functional data. *Computational Statistics & Data Analysis*, **53**, 1400-1413.
18. A. AIT SAIDI, F. FERRATY, R. KASSA, P. VIEU (2008). Cross-validated estimations in the single functional index model. *Statistics*, **42**, 475-494.
19. 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.
20. 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.
21. 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.
22. K. BENHENNI, F. FERRATY, M. RACHDI, P. VIEU (2007). Local smoothing regression with functional data. *Comp. Statistics*, **22**, 353-369.
23. F. FERRATY, P. VIEU, S. VIGUIER-PLA (2007). Factor-based comparison of groups of curves. *Computational Statistics & Data Analysis*, **51**, 4903-4910.
24. 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.
25. F. FERRATY, A. MAS, P. VIEU (2007). Nonparametric regression on functional data : inference and practical aspects. *Aust N. Z. J. Stat.*, **49**, 267-286.
26. 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.
27. 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.
28. 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.
29. 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.
30. A. AIT SAIDI, F. FERRATY, R. KASSA (2005). Single functional index model for time series. *Rom. J. Pure & Applied Math.*, **50**, 321-330.
31. 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.
32. 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.

33. M. PAEGELOW, N. VILLA, L. CORNEZ, F. FERRATY, L. FERRÉ, P. SARDA AND N. VIL-LANEIX (2004). Modélisations prospectives de l'occupation du sol. Le cas d'une montagne méditerranéenne. *Cybergeo*, **295** (19p).
34. 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.
35. F. FERRATY, A. PEUCH ET P. VIEU (2003). Modèle à indice fonctionnel simple. *C. R. Acad. Sci. Paris*, Ser. I 336, 1025-1028.
36. H. CARDOT, F. FERRATY ET P. SARDA (2003). Spline Estimators for the Functional Linear Model. *Statistica Sinica*, **13**, 571-591.
37. F. FERRATY AND P. VIEU (2003). Curves discrimination : a nonparametric functional approach. *Computational Statistics & Data Analysis*, **44**, 161-173.
38. H. CARDOT, F. FERRATY, A. MAS ET P. SARDA (2003). Test of nullity in the Functional Linear Model. *Scand. J. Stat.*, **30**, 241-255.
39. F. FERRATY, A. GOIA, P. VIEU (2002). Functional Nonparametric Model for Time Series : a Fractal Approach for Dimension Reduction. *TEST*, **11**, 317-344.
40. F. FERRATY, P. VIEU (2002). The Functional Nonparametric Model and Application to Spectrometric Data. *Computational Statistics*, **17**, 545-564.
41. 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.
42. H. CARDOT, F. FERRATY, P. SARDA (2000). Étude asymptotique d'un estimateur spline hybride pour le modèle linéaire fonctionnel. *C. R. Acad. Sci. Paris*, t. 330, Série I, 501-504.
43. 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.
44. H. CARDOT, F. FERRATY, P. SARDA (1999). Linear Functional Model. *Statist. & Prob. Letters*, **45**, 11-22.
45. P. C. BESSE, H. CARDOT, F. FERRATY (1997). Simultaneous Non-parametric Regressions of Unbalanced Longitudinal Data, *Computational Statistics & Data Analysis*, **24**, 255-270.
46. F. FERRATY (1997). Estimations de Transformations Optimales en ACP Curvilinéaire, *Revue de Statistique Appliquée*, **XLV** (1), 5-39.
47. P. C. BESSE, F. FERRATY (1995). Curvilinear Fixed Effect Model, *Computational Statistics*, **10**, 339-351.

## 3.2 Monographs

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

### 3.3 Editor (Collective books, *Special Issue*)

51. F. Ferraty (2011). *Recent Advances on Functional Data analysis and Related Fields* (**Ed.**). Contributions to Statistics, Physica-Verlag, Heidelberg.
52. F. Ferraty, Y. Romain (2011). *Oxford Handbook of Functional Data Analysis* (**Eds.**). Oxford University Press.
53. F. Ferraty (2010). *Special Issue : Statistical Methods and Problems in Infinite-dimensional Spaces* (**Ed.**). *J. Mult. Anal.*, **101**(2), 305-490.
54. S. Dabo-Niang, F. Ferraty (2008). *Functional and Operatorial Statistics* (**Eds.**). Contributions to Statistics, Physica-Verlag, Heidelberg.

### 3.4 Chapters in collective books

55. L. DELSOL, F. FERRATY, A. MARTINEZ. 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).
56. 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.
57. 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.
58. 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.
59. 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.
60. 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.
61. 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.
62. 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.
63. 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

64. F. FERRATY, A. GOIA, E. SALINELLI, P. VIEU (2013). Peak-Load Forecasting using a Functional Semi-Parametric Approach. In *ISNPS 2012's proceedings*, Springer (to appear).
65. F. FERRATY, P. VIEU (2013). Nonparametric Statistics and High/Infinite Dimensional Data. In *ISNPS 2012's proceedings*, Springer (to appear).
66. 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.
67. 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.
68. 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.
69. 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.
70. 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.
71. 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.
72. 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.
73. 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.

### 3.6 Submitted papers

74. F. FERRATY, P. HALL. An Algorithm for Nonlinear, Nonparametric Model Choice and Prediction.
75. F. FERRATY, A. MARTINEZ-CALVO, P. VIEU. Thresholding in Nonparametric Functional Regression : an Exploratory Tool.
76. G. ANEIROS-PEREZ, F. FERRATY, P. VIEU. Variable selection in partial linear regression with functional covariate.
77. F. FERRATY, F. MORLAIS, P. VIEU, G. LAUNOY, L. GUITTET. Cutting-based curves discrimination in cytological analysis for cancer screening.

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

### 4.1 Invitations for collaborations

78. 2013 : Université de Saint Jacques de Compostelles, Espagne (W. Gonzalez-Manteiga)
79. 2012 : Institute of Mathematical Sciences, Singapore (P. Hall)
80. 2011 : Université de Saint Jacques de Compostelles, Espagne (W. Gonzalez-Manteiga)
81. 2010 : Université de Melbourne, Australie (P. Hall)
82. 2010 : Université de Singapore, Singapore (H. Lian)
83. 2010 : Univerité de la Corogne, Espagne (A. Quintela-del-Rio)
84. 2010 : London School of Economics, UK (Q. Yao)

### 4.2 Invited seminars abroad

85. Department of Mathematics and Statistics at Masary University, Rep. Czech : March 2010.
86. Dipartimento di Scienze Economiche e Metodi Quantitativi, Navarra, Italia, September, 2009.
87. Department of Statistics at Warwick University, UK, June, 2009.
88. Department of Statistics, Santiago University, Spain, May, 2009.
89. Department of Mathematics and Statistics, University of Lancaster, UK, 2007.

### 4.3 Invited PhD Lectures

90. Department of Mathematics and Statistics at Masary University, Rep. Czech, March 2010.
91. Department of Fundamental Economical Analysis, Université d'Alicante, Spain, 2007.
92. Dipartimento di scienze economiche e metodi quantitativi, Univesita del Piemonte orientale, Italia, 2002

### 4.4 Invited talks

93. International Workshop on Functional and Operatorial Statistics (University of the East Piedmont, Novara, Italia, June 2014)
94. Conférence "STATLEARN" (Bordeaux, France, Avril 2013)
95. Workshop "Statistique et Image" (Strasbourg, France, November 2012)
96. High dimensional and dependent functional data (Workshop, Bristol, UK, September 2012)
97. Meeting the Challenges of High Dimension – Statistical Methodology, Theory and Applications (Institute of Mathematical Sciences, Singapore, August 2012)
98. IMS-China international Conference on Statistics and Probability (distinguished lecturer, XiAn, China, July 2011)

99. Eighth International Chinese Statistical Association International Conference (Guangzhou University, China, December 2010).
100. European Research Consortium of Informatics and Mathematics Conference (December 2010, London,UK)
101. Modélisation Stochastique et Statistique - MSS'2010 (plenary lecture - Université d'Alger, Algérie, Novembre 2010).
102. Workshop on Statistical Frontiers, 2009 ISS (Taiwan, Taipei, December 2009).
103. S.Co. 2009 : Complex Data Modelling and Computationally Intensive Statistical Methods for Estimation and Prediction (Italia, Milan, September 2009).
104. 6ème Journées de Statistique Fonctionnelle et Opératoireielle : Most informative design points in functional predictors (Dijon, June 2009).
105. Symposium on Learning and Data Science (Paris, April 2009)
106. 4th World Conference of IASC (International Association for Statistical Computing) : Exploring nonlinear relationships in Functional Data (Japan, Yokohama, December 2008)
107. Research workshop on functional and longitudinal data analysis : Regressing on functional data (Denmark, Copenhagen, September 2008)
108. 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).
109. 2ème Journées de Statistique Théorique et Appliquée : “Traitement statistique d’objets mathématiques” (Algérie, Biskra, 2007)
110. ISNI 2005 (International Seminar on Nonparametric Inference) : “Nonparametric modelling for functional data” (Espagne, La Corogne 2005).
111. CLADAG 2005 (Classification and Data Analysis Group) : “Nonparametric approach for Classification for classifying functional data : theory and methodology” (Italie, Parme, 2005).
112. 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).
113. Canada-France Meeting of Mathematics : “Nonparametric Methods for Functional Data : Regression, Discrimination and classification” (Toulouse, 2004).
114. MSS'2004 (Modélisation Stochastique et Statistique) : “Récentes avancées en statistique de variables aléatoires fonctionnelles” (Algérie, Alger, 2004).
115. Conférence annuelle de la société de Probabilités et Statistique de Roumanie : “Some characteristics of the conditional distribution of functional variables” (Bucarest, 2004).
116. 3èmes Rencontres d'Analyse et Mathématiques Appliquées : “Quelques modèles non-paramétriques autour des variables fonctionnelles” (Algérie, Bejaia, 2002).

## 5 Additional oral communications

117. About forty talks, sometimes presented by co-authors, have been exposed around the world.

## 6 Editorial duties and expert activities

118. **Associate Editor** for “Computational Statistics” (2005-2012).
119. **Associate Editor** for “Journal of Multivariate Analysis” (2007-).
120. **Associate Editor** for “Statistica Sinica” (2008-).
121. **Associate Editor** for “Electronic Journal of Statistics” (2010-).
122. **Editor of Collective books/Special Issue** (see Section 3.3)
123. **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”.
124. **Assessment of research projects** :
  - expert for the “Mathematics of Information Technology And Complex Systems Network of Centres of Excellence” (Canada).
  - expert for the “Agencia Nacional de Evaluación y Prospectiva” (Spain).
125. **expert for ”tenure-track” procedures**
126. **Reviewer for “Mathematical Reviews”**
127. **Thesis’ Committees**
  - Abdallah Elamine (2010, Montpellier II - examiner)
  - Sonia Hedli-Griche : “Estimation de l’opérateur de régression pour des données fonctionnelles 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 PhD's students

128. 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 FORestière) and co-granted (50%) by the CNES (Centre National d'Etudes Spatiales) and the regional council (50%).
129. Co-supervisor Mohand Bouraine (Univ. Béjaia, Algérie) "Quelques avancées sur les modèles à indice fonctionnel simple" (defense expected Juin 2013).
130. 2007-2013 Co-supervisor of Adella Martinez-Calvo (Univ. Santiago, Espagne) "Presmoothing and boosting in Statistics for functional data".
131. 2009-2011 Co-supervisor of Fabrice Morlais (CHU Caen, France) : "Découpage optimal de courbes et application au despistage précoce du cancer".
132. 2007-2011 Co-supervisor of Amel Tadj (Univ. Sidi Bel Abbes, Algérie/Univ. Toulouse III, France) : "Sur les modèles nonparamétriques conditionnels en statistique fonctionnelle".
133. 2005-2008 Co-supervisor of Laurent Delsol (Univ. Toulouse III, France) : "Inférence statistique et modèle nonparamétriques pour variables fonctionnelles".
134. 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".
135. 2003-2007 Co-supervisor of Jorge Barrientos-Marin (Univ. Alicante, Spain) : "Polynômes locaux et variable fonctionnelle".
136. 2002-2005 Co-supervisor of Ali Laksaci (Univ. Sidi Bel Abbes, Algérie/Univ. Toulouse III, France) : "Statistique nonparamétrique des processus fonctionnels".
137. 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, etc

138. **Scientific committee member** of "Workshop on New Perspectives in FDA", September 2012, Italia.
139. **Co-chair of the Scientific Committee** of "2nd International Workshop on Functional and Operatorial Statistics", June 2011, Santander, Spain.
140. **Co-chair** of the Specialized Group "Statistics for Functional Data" (SFD : <http://www.dcs.bbk.ac.uk/matrix/ercim/TrackSFD.html>) in the "European Research Consortium for Informatics and Mathematics" (ERCIM : <http://www.ercim.org>).
141. **Co-organisateur** de 2 sessions invitées sur le thème de la modélisation statistique pour variable fonctionnelle aux Journées de la SFDS (Mai 2010, Marseille).
142. **Session co-organizer** of "Sparseness and Functional Data" in the ERCIM-2009 meeting (October 2009, Cyprus).
143. **Session co-organizer** IASC'2008 (December, Yokohama, Japan) "Statistics for functional data"

144. **Co-chair of the Scientific Committee** of “1rst International Workshop on Functional and Operatorial Statistics”, June 2008, Toulouse  
(<http://www.math.univ-toulouse.fr/staph/IWFOS2008>).
145. **Co-organisateur** des “Journées en statistique fonctionnelle et opératorielle”, Juin 2007, Lille  
(<http://www.math.univ-toulouse.fr/staph/JOURNEES-FONCTIONNELLES/index2007.html>).
146. **Co-organisateur** des “Journées en statistique fonctionnelle et opératorielle”, Juin 2006, Université P. Mendès France, Grenoble  
(<http://www.math.univ-toulouse.fr/staph/JOURNEES-FONCTIONNELLES/index2006.html>).
147. **Co-organisateur** des “Journées en statistique fonctionnelle et opératorielle”, Juin 2005, Université Paul Sabatier  
(<http://www.math.univ-toulouse.fr/staph/JOURNEES-FONCTIONNELLES/index2005.html>).
148. **Session organizer** for COMPSTAT’2004 (August, Prague) : “Functional Data : Modelling and Application” (<http://compstat2004.cuni.cz>)
149. **Co-organisateur** des “Journées en statistique fonctionnelle et opératorielle”, Juin 2003, Université Paul Sabatier  
(<http://www.math.univ-toulouse.fr/staph/JOURNEES-FONCTIONNELLES/index2003.html>).
150. **Vice-Président du Comité d’organisation** des “9èmes Rencontres de la Société Francophone de Classification”, Septembre 2002, Université Toulouse Le Mirail (<http://www.irit.fr/SFC2002>).
151. **Co-organisateur** des “Journées en statistique fonctionnelle et opératorielle” se déroulant en Juin 2002 à l’Université Paul Sabatier  
(<http://www.math.univ-toulouse.fr/staph/JOURNEES-FONCTIONNELLES/index2002.html>).
152. **Founding member and Co-organizer** 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). The activities of this working group is available online at the webpage :  
<http://www.math.univ-toulouse.fr/staph>

## 9 Scientific collaborators

You will find hereafter a list of collaborators (of published/current works) in alphabetical order :

A. Ait Saidi (Univ. de Béjaia, Algérie), G. Aneiros-Perez (Univ. de La Corogne, Espagne), J. Barrientos-Marin (Univ. d’Alicante, Espagne), K. Benhenni (Univ. de Grenoble), P. Besse (IMT, Toulouse), F. Burba, D. Campbell (Univ. Vancouver, Canada), H. Cardot (Univ. de Dijon), S. Dabo-Niang (Univ. Lille 2), L. Delsol (Univ. d’Orléans), A. Goia (Univ. de Novara, Italie), W. Gonzalez-Manteiga (Univ. de St-Jacques de Compostelle, Espagne), P. Hall (Univ. de Melbourne, Australie), A. Martinez-Calvo (Univ. de St-Jacques de Compostelle, Espagne), A. Laksaci (Univ. de Sidi-Bel-Abbes, Algérie), A. Mas (Univ. Montpellier 2), F. Morlais (Univ. de Caen), A. Nunez-Anton (Univ. de Bilbao), A. Quintela-del-Rio (Univ. de La Corogne, Espagne), A. Rabhi (Univ. de Sidi-Bel-

Abbes, Algérie), M. Rachdi (Univ. de Grenoble), E. Salinelli (Univ. de Novara, Italie), P. Sarda (IMT, Toulouse), A. Tadj (Univ. de Sidi-Bel-Abbes, Algérie), I. Van Keilegom (Univ. Catholique de Louvain, Belgique), P. Vieu (IMT, Toulouse), S. Viguier-Pla (IMT, Toulouse).

## 10 Developments towards practitioners

153. **Multivariate nonparametric variable selection** : R set of routines with a parallelized version.
154. **Most predictive design points for functional data predictors** : R set of routines.
155. **Development of a companion website of “NonParametric Functional Data Analysis** : <http://www.math.univ-toulouse.fr/staph/npfda> (R/S+ set of routines with guidelines, datasets, examples of use).
156. **Predicting landcover from a time series of images** : R/S+ set of routines.
157. **Unsupervised classification of curves** : R/S+ set of routines.
158. **Curves discrimination** : R/S+ set of routines.
159. **Régression nonparamétrique fonctionnelle** : programme écrit dans les langages R et S+.
160. **Smoothing simultaneously a collection of curves** : S+ set of routines available online at <http://www.math.univ-toulouse.fr/SOFTWARES/logiciels.html>.
161. **Curvilinear PCA** : S+ set of routines called *SALSA* (Smoothing Alternating with Least Squares Algorithm), available at *Statlib* (<http://lib.stat.cmu.edu/S/salsa>).

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