CURRICULUM VITAE
Mohamed Boutahar

• Biographical data and contact details

Birth place and date: **Erfoud (Morocco), January 1th 1963**

Citizenship: **French**

Office: **Department of Statistics**
Institute of Mathematics of Marseille
Avenue de Luminy - Case 907
13288 MARSEILLE Cedex 9
France

Phone : **+33 6 66 59 59 74**

E-mail : **mohammed.boutahar@univ-amu.fr**

Web: **http://boutaharf.free.fr/**

• Present Position

- **Associate Professor of Statistics, Aix-Marseille University, France**
- **Researcher at the Institute of Mathematics of Marseille, UMR 7373 of National Centre for Scientific Research, CNRS, France**

• Education

- **Qualified, by the National Council of Universities (CNU), to be full professor of Applied Mathematics, February 2012.**
- **Habilitation to supervise scientific research in Applied Mathematics, November 2006, Aix-Marseille University, France**
- **Ph. D. in Applied Mathematics, September 1991, Aix-Marseille University, France**
- **Master degree in Applied Mathematics, June 1987, Aix-Marseille University, France**

• Research Interests

- **Time series Analysis**
- **Long memory, nonlinear and non-stationary processes (Estimation, Tests , Forecasting)**
- **Multivariate extreme value theory**
- **Econometrics**

• Membership of professional organizations

- **The Institute of Mathematics of Marseille**
- **The French Statistical Society**
- **The International Centre for Pure and Applied Mathematics**

• Academic activities

- **Head of the Master of Mathematical Engineering and Actuarial Statistics, Aix-Marseille University, since 2012.**

• Scientific activities

- Supervising of Ph. D.

Former Ph. D. Students

1. Ahamada Ibrahim (2002) " Spectral Analysis of non-stationary data : Application to non- stationary tests ". Supervised jointly with Marcel Aloy.
   Current position: assistant professor, University of Paris 1, France

2. Jouini Jamel (2004) "Regime switching models". Supervised jointly with Claude Deniau.
   Current position: assistant professor, King Saud University, Riyadh, Kingdom of Saudi Arabia.

3. Nouira Leila (2006) "Non stationary long memory: Estimation and Application ". Supervised jointly with Velayadoum Marimoutou.
   Current position: assistant professor, University of Sousse, Tunisia.

4. Ajmi Ahdi Noomen (2008) "Long memory and nonlinear models : Applications" . Supervised jointly with Abedlwahed Trabelsi.
   Current position : assistant professor, ESSECT, Tunisia.

5. Mootamri Imène (2009) " Modeling nonlinear long memory process: some contributions". Supervised jointly with Anne Peguin.
   Current position: assistant professor, University of Tunis, Tunisia.

6. Ben Nasr Adnen (2009) "Long Memory, Nonlinearity and Structural Change in Economic and Financial Time Series". Supervised jointly with Abedlwahed Trabelsi. **Current position: assistant professor, ISCCB, Tunisia.**

7. Belkhouja Mustapha(2010) “Modelling nonlinearities in long-memory time series : simulation and empirical studies”.
   Current position: assistant professor, Grenoble Ecole of Management, University of Sousse, Tunisia.

8. Gbaguidi David. (201 1) "Econometric models for inflation".
   Current position: assistant professor, African School of Economics, MOBIS, Neoma Business School.

9. Tebra Mokadem Faradji (2013) "Development of a model to predict short-term changes in the activity postal mail". Supervised jointly with Anne Peguin.

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10. Khalfaoui Rabeh (2013) " Long memory and Wavelets ".
    Current position: assistant professor, King Abdulaziz University, Jeddah, Kingdom of Saudi Arabia.

Current Ph. D. Students

1. Ayari, S. "Multivariate Extreme Value distributions and Applications ". Beginning of the Ph. D.: September 2012.

2. Kchaou, I. "Estimation of the dependence function for mixing data". Beginning of the Ph. D.: September 2013.

3. Abdo , S. "Estimation of tail index with Bayesian approach ". Supervised jointly with Denys Pommeret. Beginning of the Ph. D.: January 2014.

   - **Reviewer:** Journal of Applied Statistics, Statistics, Computational Statistics and Data Analysis.

• Publications

1. Boubaker, H, Boutahar, M. and Khalfaoui, R.(2014) . Wavelets and estimation of long memory in non stationary models: does anything beat the Exact Local Whittle Estimator? **Communications in Statistics - Simulation and Computation.** Forthcoming.

2. Ayari, S. and Boutahar, M , I. (2014) . Nonparametric Estimation of the Dependence Function for a Multivariate Extreme Value Distribution: an Application to the Air Pollution Data in Tunisia. **Journal of Economics Studies and Research.** Forthcoming.

3. Boutahar, M., Ghattas, B., Pommeret, D. (2013). Nonparametric comparison of several transformations of distribution functions. **Journal of Nonparametric Statistic**, Volume 25, Issue 3, September 2013, pages 619-633.

4. Aloy, M., Boutahar, M., Gente, K. and Péguin-Feissolle, A. (2013). Long-run relationships between international stock prices: further evidence from fractional cointegration tests. **Applied Economics**, Vol. 45, Issue 7, pp. 817-828, March 2013.

5. Boutahar, M. (2012). Testing for Change in Mean of independent multivariate observations with time varying covariance. **Journal of Probability and Statistics.** http://www.hindawi.com/journals/jps/2012/969753/

6. Boutahar, M. and Raggad, B. (2012) . Structural Change in Tail Behavior and the Recent Financial Crises. **International Journal of Monetary Economics and Finance.** Vol. 5, No 3, 277-298.

7. Ahamada, I. and Boutahar, M. (2012). Power of the KPSS test against shift in variance: a further investigation. **Economics Bulletin,** Vol. 32, No.1, 854-865.

8. Boubaker, H. and Boutahar, M. (2011). A Wavelet-based Approach for Modelling Exchange Rates. **Statistical Methods and Applications.** Vol 20, No 2, 201-222.

9. Aloy, M., Boutahar, M., Gente, K. and Péguin-Feissolle, A. (2011). Purchasing power parity and the long memory properties of the real exchange rates: does one size fit all?. **Economic Modelling**. Vol 28, No 3, 1279-1290

10. Boutahar, M. (2010). Behaviour of skewness, kurtosis and normality tests in long memory data. **Statistical Methods and Applications**. Vol 19, No 2, 193-215.

11. Ben Nasr, A. and Boutahar, M. (2010). Fractionally Integrated Time Varying GARCH Model. **Statistical Methods and Applications**. Vol 19, No 3, 399-430.

12. Boutahar, M. and Jouini, J. (2010). The finite-sample properties of bootstrap tests in multiple structural change models. **Economics Bulletin**. Vol. 30, No.1, 55-66.

13. Aloy, M., Boutahar, M., Gente, K. and Péguin-Feissolle, A. (2010). Fractional integration and cointegration in stock prices and exchange rates. **Economics Bulletin**. Vol. 30, No.1, 115-129.

14. Boutahar, M. and Essaadi, E. (2010). A Measure of Variability in Comovement for Economic Variables: a Time-Varying Coherence Function Approach. **Economics Bulletin**. Vol. 30, No.2, 1054-1070.

15. Belkhouja, M. and Boutahar, M. (2010). Modeling volatility with time-varying FIGARCH model. **Economic Modelling**. Vol. 28, No 3,1106-1116.

16. Boutahar, M. (2009). Comparison of non-parametric and semi-parametric tests in detecting long memory. **Journal of Applied Statistics**. Vol 36, Issue 9, 945 – 972.

17. Boutahar, M., Marimoutou, V. and Nouira, L. (2009). On the effect of the Kolmogorov-zurbenko taper. **Statistical papers**. Vol 50, 225-248.

18. Boutahar, M., Mootamri, I. and Péguin-Feissolle, A. (2009). A fractionally integrated exponential STAR model applied to the US real effective exchange rate. **Economic Modelling**. Vol 26, Issue 2, 333-341.

19. Boutahar, M. and Gbaguidi, D. (2009). Which Econometric Specification to Characterize the U.S. Inflation Rate Process? **Computational Economics**.Vol. 34, N.2, 145-172.

20. Belkhouja, M. and Boutahar, M. (2009). Structural change and long memory in the dynamic of US inflation process. **Computational Economics**. Vol. 34, N. 2, 195-216.

21. Boutahar, M. (2008). Identification of Persistent Cycles in Non-Gaussian Long Memory Time Series. **Journal of Time Series Analysis**. Vol. 29, Issue 4, 653-672.

22. Boutahar, M., Dufrénot, G. and Péguin-Feissolle, A. (2008). A Simple Fractionally Integrated Model with a Time varying Long Memory Parameter d_t. **Computational Economics**. Vol. 31, No 3, 225-231.

23. Ajmi, A.N., Ben Nasr, A. and Boutahar, M. (2008). Seasonal Nonlinear Long Memory Model for the US Inflation Rates. **Computational Economics**. Vol 31, No 3, 243-254.

24. Ajmi, A.N. and Boutahar, M. (2008). Chroniques démographiques des naissances: longue mémoire ou changement de régime. **Mathématiques et Sciences Humaines**. No 181,1, 81-105.

25. Boutahar, M. (2007). Optimal prediction for nonstationary ARFIMA model. **Journal of Forecasting**. Vol 26, 95-111.

26. Boutahar, M., Marimoutou, V. and Nouira, L. (2007). Estimation methods of the long memory parameter: Monte Carlo analysis and application. **Journal of Applied Statistics**. Vol 34, Issue 3, 261-301.

27. Boutahar, M and Jouini, J. (2007). Wrong estimation of the number of shifts in structural break models: Theoretical and Numerical Evidence. **Economics Bulletin**. Vol 3, No. 3, 1-10.

28. Boutahar, M. and Jouini, J. (2007). Spuriousness of information criteria when selecting the number of breaks in stationary AR(p) process. **Economics Bulletin**. Vol. 3, No. 38, 1-11.

29. Jouini, J. and M. Boutahar (2005). Evidence on Structural Change in U.S. Time Series. **Economic Modelling**. Vol 22, issue 3, 391-422.

30. Ahamada, I., Boutahar, M. and Jouini, J. (2004). Detecting Multiple Breaks in time series covariance structure: A nonparametric approach based on the evolutionary spectral density. **Applied Economics**. Vol 36, 1095-1101.

31. Ben Aïssa, M.S., Boutahar, M. and Jouini, J. (2004). The Bai and Perron's and spectral density methods for structural change detection in the US inflation process. **Applied Economics Letters**. Vol 11, Number 2, 109-115.

32. Jouini, J. and Boutahar, M. (2003). Structural Breaks in the US inflation process: A further investigation. **Applied Economics Letters**. Vol 10, Issue 13, 985-988.

33. Boutahar, M. (2002). General autoregressive models with long-memory noise. **Statistical Inference for Stochastic Processes**. Vol 5, 321-333.

34. Ahamada, I. and Boutahar, M. (2002). Tests for covariance stationarity and white noise, with application to Euro/US Dollar exchange rate. **Economics Letters**. 77, 177-186.

35. Boutahar, M. (2000). Modèles Autorégressifs explosifs avec bruit longue mémoire. **Comptes rendus de l'Académie des Sciences**. Tome 330 Série I, 889-892.

36. Boutahar, M. and Deniau, CL. (1996). Least Squares Estimator for regression Model with some Deterministic Time Varying Parameters. **Metrika**. Vol. 43, 57-67.

37. Boutahar, M. and Deniau, CL. (1995). A Proof of Asymptotic Normality for some VARX Models. **Metrika**. Vol. 42, 331-339.

38. Boutahar, M. and Deniau, CL. (1992). Almost Sure Convergence of Least Squares Estimates for Regular Multivariate ARX Systems. **Systems and Control Letters**. Vol 19,157-163.

39. Boutahar, M. and Deniau, CL. (1992). Distribution limite de l'Estimateur des Moindres Carrés dans un Modèle Autorégressif vectoriel Stable avec Signal Exogène déterministe. **Comptes rendus de l'Académie des Sciences** .Tome 314 Série I, 301-304.

40. Boutahar, M. (1992). Strong Consistency of least squares estimates in general ARX_d(p,s) system. **Stochastics and Stochastics Reports**. Vol. 38, 175-183.

41. Boutahar, M. (1991). Convergence en loi de l'Estimateur des Moindres Carrés dans un Modèle ARX_d(p,s) explosif. **Comptes rendus de l'Académie des Sciences**. Tome 313 Série I, 619-622.

42. Boutahar, M. (1991). Distribution asymptotique de l'Estimateur des Moindres Carrés.Cas des Modèles ARX(p,s) Instables. **Stochastics and Stochastics Reports**. Vol. 37, 105-126.

• Submitted papers

1. Ayari, S. and Boutahar, M. (2014). Comparison of some nonparametric estimators of the dependence function for a multivariate extreme value distribution. **Journal of applied statistics.**

2. Boutahar, M. and Pommeret, D. (2014). Testing for equality between two transformations of random variables. **Journal of Mathematics and Statistics**.

• Preprints

1. Boutahar, M. (2014). Testing change in time series.
2. Boutahar, M, Kengne, W. and L. Reboul (2014). A nonparametric change-point smooth test for dependent sequences.

• Seminars

• University of Montpellier II, Department of the Mathematical Modelling. January 2015.

• University of Paris 1, Department of Applied Statistics and Stochastic Modelling, October 2009.

• University of Liverpool University, Department of Probability and Statistics, April 2008.

• The Institute of Mathematics of Luminy, Department of Applied Statistics, January 2008.

• University of Aix-Marseille, Research Group in Quantitative Economics of Aix-Marseille, March 2007.

• University of Sidi Mohamed Ben Abdelallah, Department of Statistics and Operational Research, October 2007.

• University of Montpellier II, Department of the Mathematical Modelling, December 2001.

• Communications

• November 2014- Fourth Scientific Meeting of Modeling and Scientific Computing, Faculty of Science and Technology, Fez, Morocco.

• June 2014-Avignon-Marseille Meeting of Statistics, Aix-Marseille Université, France.

• January 2013- Workshop on Non Stationarity in Statistics and Risk Management, CIRM, Marseille, France.

• November 2011- Workshop on Non Stationarity and Some Applications. University of Cergy-Pontoise, Paris, France.

• May 2010-The 42-th conference of French Statistical Society, Marseille, France

• November 2009- The 8-th Econometric Meeting, Recent Developments in Applied Econometrics in Finance, Nanterre, France.

• June 2007- Conference on Forecasting Financial Markets, Aix-en-Provence, France.

• June 2003- The 36-th conference of French Statistical Society, Lyon, France.

• May 2000- The 32-th conference of French Statistical Society, Fez, Morocco.

• Visiting research periods

• University of Liverpool, United Kingdom, April 2008 (Professor Rajendra J. Bhansali)

• Faculty of Science and Technology, Fez, Morocco, October 2007 (Professor Fatima Ezzaki).

• Organization of conferences

• May 2016 – Organizer of the international conference on statistical processes. CIRM, Marseille, France.

• June 2013-Avignon-Marseille Meeting of Statistics, Aix-Marseille University, France.

• May 2010- Member of organizing Committee of the 42-th conference of French Statistical Society, Marseille, France.

• May 2010- Chairman of the session « Long memory » in the 42-th conference of French Statistical Society, Marseille, France.