Gustavo Didier

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Research Interests

Wavelet methods in Probability and Statistics, Time Series analysis and stochastic processes with emphasis on long range dependence, Multivariate methods, Applications in simulation (of processes), Internet traffic and Finance.

Education

2002 -	University of North Carolina at Chapel Hill, NC, USA. Ph.D. candidate (expected graduation in 2007) and M.S. in Statistics (2006). Advisor: Prof. Vladas Pipiras.
2000 - 2002	Institute for Pure and Applied Mathematics, Rio de Janeiro, Brazil. M.S. in Mathematics. Main fields: Probability Theory, Mathematical Economics. Advisor: Prof. Aloisio Araujo.
1994 - 2000	Federal University of Rio de Janeiro, Rio de Janeiro, Brazil. B.A. and M.S. in Economics. Main fields: International Economics, Quantitative Methods. Advisor: Prof. Jorge C. Batista.

Honors and Awards

2006	IMS Laha travel award for the paper "Gaussian stationary processes: discrete approximations, adaptive wavelet decompositions and their convergence", with V. Pipiras.
2006	NSF Travel Funding for the 69^{th} Annual Meeting of the IMS.
2005	30^{th} Conference on Stochastic Processes and Their Applications travel award.
1998/3 - 2000/2	CAPES (Brazilian federal funding agency) M.S. Fellowship.
1997	Honors Degree, B.A. in Economics.

Submitted Papers and Publications

[1] "On the Behrens-Fisher problem: a globally convergent algorithm and a finite sample study of the Wald, LR and LM Tests", with A. Belloni. Preprint. Available at `http://www.unc.edu/~gdidier`

[2] "Adaptive wavelet decompositions of stationary time series", with V. Pipiras. Preprint. Available at `http://www.unc.edu/~gdidier`

[3] "Gaussian stationary processes: discrete approximations, adaptive wavelet decompositions and their convergence", with V. Pipiras. Preprint. Available at `http://www.unc.edu/~gdidier`

[4] "Real and effective exchange rates with double-weighing scheme for Brazilian manufactured products", with J. C. Batista. Boletim de Conjuntura, v. 20, n. 3, p. 59 - 66. Rio de Janeiro, Brazil (2001).

[5] "The geography of Brazilian competition patterns and the effects of changes in relative prices on Brazilian exports". M.S. thesis, Federal University of Rio de Janeiro. Advisor: J. C. Batista. Rio de Janeiro, Brazil (2000).

Work in Preparation

[6] "Operator fractional Brownian motions", with V. Pipiras.

[7] "On multivariate long memory", with V. Pipiras.

[8] "Multivariate adaptive wavelet decompositions", with V. Pipiras.

Presentations

2006/8	"Adaptive wavelet decompositions of stationary time series", with V. Pipiras. The 69^{th} Annual Meeting of the Institute of Mathematical Statistics. Rio de Janeiro, Brazil [talk].
2006/6	"Adaptive wavelet decompositions of stationary (Gaussian) processes", with V. Pipiras. Graybill Conference, 2006. Fort Collins, Colorado, USA [poster].
2005/6	"Gaussian stationary processes: discrete approximations, special wavelet decompositions and simulation", with V. Pipiras. 30^{th} Conference on Stochastic Processes and their Applications, 2005. Santa Barbara, USA [talk].
2001/8	"Relative prices and Brazilian exporting performance", with J. C. Batista. 9^{th} Brazilian School of Time Series and Econometrics, 2001. Belo Horizonte, Brazil [poster].

Research Experience

2004/9 -	Research assistant (with Prof. V. Pipiras). Wavelet methods, Time series analysis and stochastic processes with emphasis on long range dependence, applications. University of North Carolina at Chapel Hill.
2004/6 - 2005/5	Research assistant (with Dr. Robert Rodriguez). SAS-IML coding of various statistical techniques. SAS Institute Inc., Cary, NC.
2004/1 - 2004/5	Research assistant (with Prof. Harry L. Hurd). Time series analysis for periodically correlated sequences. University of North Carolina at Chapel Hill.
1997/10 - 1998/3	Research assistant (with Prof. J. C. Batista). International Economics. Federal University of Rio de Janeiro.

Teaching Experience

University of North Carolina at Chapel Hill: Instructor for *Basic Statistics* (undergraduate, Fall 2005, Spring 2006, Fall 2006), Teaching Assistant for *Introduction to Statistics* (undergraduate, Fall 2002 - Fall 2003). Federal University of Rio de Janeiro: Instructor for *Advanced Calculus* (undergraduate, 2002), Teaching Assistant for several courses (undergraduate and graduate), Member of Economics B.A. Final Project Committee (2001).

Computer Skills

SAS (including IML), Matlab and R.

Professional Affiliations

American Statistical Association, Institute of Mathematical Statistics.

Languages

Portuguese (native), English, French.

Recommenders

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