

Hedibert Freitas Lopes

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1 Employment and education history

Current and former positions

1. Associate Professor of Econometrics and Statistics, Chicago Booth - September 2007 to present.
2. Assistant Professor of Econometrics and Statistics, Chicago Booth - September 2003 to August 2007.
3. Assistant Professor of Statistics, Federal University of Rio de Janeiro - June 2000 to August 2003.
4. Lecturer of Statistics, Federal University of Rio de Janeiro - May 1996 to May 2000.
5. Lecturer of Statistics, Fluminense Federal University - April 1992 to April 1996.
6. Research Associate, Brazilian Research Institute for Applied Economics - March 1991 to July 1996.

Education

1. Ph.D. in Statistics, Institute of Statistics and Decision Sciences, Duke University, April 2000.
Thesis: *Bayesian Analysis in Latent Factor and Longitudinal Models*. Advisors: Mike West and Peter Müller.
2. MSc. in Statistics, Institute of Statistics and Decision Sciences, Duke University, May 1998.
Thesis: *Model Uncertainty in Factor Models*. Advisors: Mike West and Peter Müller.
3. MSc. in Statistics, Institute of Mathematics, Federal University of Rio de Janeiro, November 1994.
Thesis: *Applications of Bayesian Vector Autoregression Models*. Advisor: Hélio Migon.
4. BSc. in Statistics, Institute of Mathematics, Federal University of Rio de Janeiro, September 1991.
Thesis: *A Software for Statistical Quality Control*. Advisor: Paulo Bravo.

2 Research

Scientific papers

1. **Lopes** and Polson. Bayesian instrumental variables: likelihoods and priors. *Econometric Reviews* (to appear).
2. Heckman, **Lopes** and Piatek. Treatment effects: a Bayesian perspective. *Econometric Reviews* (to appear).
3. Nascimento, Gamerman and **Lopes**. Temporal dependence in extremes with dynamic models. *Journal of Time Series Analysis* (to appear).
4. **Lopes** and Carvalho. Online Bayesian learning in dynamic models: An illustrative introduction to particle methods. In West, M., Damien, P., Dellaportas, P., Polson, N. G. and Stephens, D. A., *Bayesian Dynamic Modelling Bayesian Inference and Markov Chain Monte Carlo: In Honour of Adrian Smith*. Clarendon: Oxford University Press (to appear).
5. Rios and **Lopes**. The Extended Liu and West Filter: Parameter Learning in Markov Switching Stochastic Volatility Models. In Zeng, Y. and Wu, S., editors, *State-Space Models and Applications in Economics and Finance* (to appear).
6. Prado and **Lopes** (2013) Sequential parameter learning and filtering in structured AR models. *Statistics and Computing*, **23**, 43-57.
7. Dukic, **Lopes** and Polson (2012) Tracking epidemics with Google Flu Trends data and a state-space SEIR Model. *Journal of the American Statistical Association*, **107**, 1410-1426.

8. **Lopes**, Schmidt, Salazar, Gómez and Achkar (2012) Measuring vulnerability via spatially hierarchical factor models. *Annals of Applied Statistics*, **6**, 284-303.
9. Nascimento, Gamerman and **Lopes** (2012) A semiparametric Bayesian approach to extreme values. *Statistics and Computing*, **22**, 661-675.
10. **Lopes**, Polson and Carvalho (2012) Bayesian statistics with a smile: a resampling-sampling perspective. *Brazilian Journal of Probability and Statistics*, **26**, 358-371.
11. Vibranovski, Zhang, Kemkemer, VanKuren, **Lopes**, Karr and Long (2012) Segmental dataset and whole body expression data do not support the hypothesis that non-random movement is an intrinsic property of *Drosophila* retrogenes (2012) *BMC Evolutionary Biology*, **12**, 169.
12. Vibranovski, Zhang, Kemkemer, **Lopes**, Karr and Long (2012) Re-analysis of the larval testis data on meiotic sex chromosome inactivation revealed evidence for tissue-specific gene expression related to the *Drosophila* X Chromosome. *BMC Biology*, **10**, 49.
13. **Lopes**, Carvalho, Polson, Johannes (2011) Particle learning for sequential Bayesian computation (with discussion). In Bernardo, J. M., Bayarri, M. J., Berger, J. O., Dawid, A. P., Heckerman, D., Smith, A. F. M and West, M., editors, *Bayesian Statistics 9*, 317-360.
14. **Lopes** and Tsay (2011) Particle filters and Bayesian inference in financial econometrics. *Journal of Forecasting*, **30**, 168-209.
15. **Lopes**, Salazar and Gamerman (2011) Generalized spatial dynamic factor models. *Computational Statistics and Data Analysis*, **55**, 1319-1330.
16. **Lopes** and Tobias (2011) Confronting prior convictions: On issues of prior and likelihood sensitivity in Bayesian analysis, *Annual Review of Economics*, **3**, 107-131.
17. Nascimento, Gamerman and **Lopes** (2011) Regression models for exceedance data via the full likelihood. *Environmental and Ecological Statistics*, **18**, 495-512.
18. Carvalho, **Lopes** and Aguilar (2011) Dynamic stock selection strategies: A structured factor model approach (with discussion). In Bernardo, J. M., Bayarri, M. J., Berger, J. O., Dawid, A. P., Heckerman, D., Smith, A. F. M and West, M., editors, *Bayesian Statistics 9*, 69-90.
19. **Lopes** and Dias (2011) Bayesian mixture of parametric and nonparametric density estimation: A misspecification Problem. *Brazilian Review of Econometrics*, **31**, 19-44.
20. Zambaldi, Aranha, **Lopes** and Politi (2011) Credit granting to small firms: a Brazilian case, *Journal of Business Research*, **64**, 309-315.
21. Carvalho, Johannes, **Lopes** and Polson (2010). Particle learning and smoothing. *Statistical Science*, **25**, 88-106.
22. Carvalho, **Lopes**, Polson and Taddy (2010) Particle learning for general mixtures. *Bayesian Analysis*, **5**, 709-740.
23. **Lopes** and Polson (2010) Extracting SP500 and NASDAQ volatility: The credit crisis of 2007-2008. In O'Hagan, A. and West, M., editors, *Handbook of Applied Bayesian Analysis*, 319-42.
24. **Lopes** and Polson (2010) Bayesian inference for stochastic volatility modeling. In Böcker, K., editor, *Rethinking Risk Measurement, Management and Reporting*, 515-51.
25. Ausin and **Lopes** (2010) Bayesian prediction of risk measurements using copulas. In Böcker, K., editor, *Rethinking Risk Measurement, Management and Reporting*, 553-78.
26. Hore, Johannes, **Lopes**, McCulloch and Polson (2010) Bayesian computation in finance. In Chen, M.-H., Dey, D., Müller, P., Sun, D. and Ye, K., editors, *Frontiers of Statistical Decision Making and Bayesian Analysis — In Honor of James O. Berger*, 383-96.
27. Ausin and **Lopes** (2010) Time-varying joint distributions through copulas, *Computational Statistics and Data Analysis*, **54**, 2383-99.
28. Abanto, Migon and **Lopes** (2010) Bayesian modeling of financial returns: a relationship between volatility and trading volume, *Applied Stochastic Models in Business and Industry*, **26**, 172-93.
29. Vibranovski, Chalopin, **Lopes**, Long and Karr (2010) Direct evidence for postmeiotic transcription during *Drosophila melanogaster* spermatogenesis. *Genetics*, **186**, 431-33.
30. Vibranovski, **Lopes**, Karr, Long (2009) Stage-specific expression of *Drosophila* spermatogenesis suggests that meiotic sex chromosome inactivation drives the genomic relocation of testis-expressed genes, *PLoS Genetics*, **5**, e1000731.
31. **Lopes**, Salazar and Gamerman (2008) Spatial dynamic factor analysis, *Bayesian Analysis*, **3**, 759-92.
32. Silva and **Lopes** (2008) Copula, marginal distributions and model selection: A Bayesian note, *Statistics and Computing*, **18**, 313-20.
33. Ausin and **Lopes** (2007) Bayesian estimation of ruin probabilities with heterogeneous and heavy-tailed insurance claim size distribution, *Australian & New Zealand Journal of Statistics*, **49**, 415-34.

34. **Lopes**, Müller and Ravishanker (2007) Bayesian computational methods in biomedical research. In Khattree, R. and Naik, D. N., editors, *Computational Methods in Biomedical Research*, 211-59.
35. **Lopes** and Carvalho (2007) Factor stochastic volatility with time varying loadings and Markov switching regimes, *Journal of Statistical Planning and Inference*, **137**, 3082-91.
36. Carvalho and **Lopes** (2007) Simulation-based sequential analysis of Markov switching stochastic volatility models, *Computational Statistics and Data Analysis*, **51**, 4526-42.
37. **Lopes** and Salazar (2006) Bayesian model uncertainty in smooth transition autoregressions, *Journal of Time Series Analysis*, **27**, 99-117.
38. **Lopes** and Salazar (2006) Time series mean level and stochastic volatility modeling by smooth transition autoregressions: a Bayesian approach, In Fomby, T. B., editors, *Advances in Econometrics: Econometric Analysis of Economic and Financial Time Series: Part B*, 229-42.
39. Silva, **Lopes** and Migon (2006) The extended generalized inverse Gaussian distribution for log-linear and stochastic volatility models, *Brazilian Journal of Probability and Statistics*, **20**, 67-91.
40. Migon, Gamerman, **Lopes** and Ferreira (2005) Dynamic models, In Dey, D. and Rao, C.R., editors, *Handbook of Statistics*, 553-88.
41. Nobre, Schmidt and **Lopes** (2005) Spatio-temporal models for mapping the incidence of malaria in Pará, *Environmetrics*, **16**, 291-304.
42. **Lopes** (2005) Factor stochastic volatility with time-varying loadings, *Estadística*, **57**, 75-91.
43. **Lopes** and West (2004) Bayesian model assessment in factor analysis, *Statistica Sinica*, **14**, 41-67.
44. Behrens, **Lopes** and Gamerman (2004) Bayesian analysis of extreme events with threshold estimation, *Statistical Modelling*, **4**, 227-44.
45. Mendes and **Lopes** (2004) Data driven estimates for mixtures, *Computational Statistics and Data Analysis*, **47**, 583-98.
46. **Lopes**, Muller and Rosner (2003) Bayesian meta-analysis for longitudinal data models using multivariate mixture priors, *Biometrics*, **59**, 66-75.
47. **Lopes** (2003) Expected posterior priors in factor analysis, *Brazilian Journal of Probability and Statistics*, **17**, 91-105.
48. **Lopes** and Migon (2002) Comovements and contagion in emergent markets: stock indexes volatilities. In Gatsonis, C., Kass, R. E., Carriquiry, A., Gelman, A., Higdon, D., Pauler, D. K. and Verdinelli, I., editors, *Case Studies in Bayesian Statistics, Volume VI*, 285-300.
49. Huerta and **Lopes** (2001) Bayesian forecasting and inference in latent structure for the Brazilian industrial production index, *Brazilian Review of Econometrics*, **20**, 1-26.
50. **Lopes**, Moreira and Schmidt (1999) Hyperparameter estimation in forecasting models, *Computational Statistics and Data Analysis*, **29**, 387-410.
51. Moreira, Fiorencio and **Lopes** (1997) Um model para a previsão conjunta do PIB, inflação e liquidez, *Revista de Econometria*, **17**, 67-111.
52. Moreira, Fiorencio and **Lopes** (1996) Identificação das tendências comuns do PIB, inflação e meios de pagamento, *A Economia Brasileira em Perspectiva*, Volume 1, Chapter 6, 129-139.
53. Lima, **Lopes**, Moreira and Pereira (1995) Tendência estocástica do produto no Brasil: efeitos das flutuações da taxa de crescimento da produtividade e da taxa de juro real, *Pesquisa e Planejamento Econômico*, **25**, 249-78.
54. Migon, Lima and **Lopes** (1993) Efeitos dinâmicos dos choques de oferta e demanda agregada sobre o nível de atividade econômica do Brasil, *Revista Brasileira de Economia*, **47**, 177-204.

Discussion papers

55. **Lopes**, McCulloch, and Tsay. Cholesky stochastic volatility models for high-dimensional time series.
56. **Lopes** and Polson. Particle learning for fat-tailed distributions.
57. Frühwirth-Schnatter and **Lopes**. Parsimonious Bayesian factor analysis when the number of factors is unknown.
58. Hore, **Lopes**, McCulloch. Put option implied risk-premia in general equilibrium under recursive preferences.
59. Liechty, Liechty, **Lopes**. Bayesian grouped factor models and industry/debt classification schemes.
60. Chen, Petralia and **Lopes**. Sequential Monte Carlo estimation of DSGE models.
61. Conti, Heckman, **Lopes** and Piatek (2011) Constructing economically justified aggregates: an application of the early origins of health.
62. **Lopes** (2002) Bayesian model selection. Technical report, Department of Statistical Methods, Federal University of Rio de Janeiro.

63. **Lopes** (2002) Sequential analysis of stochastic volatility models: some econometric applications. Technical report, Department of Statistical Methods, Federal University of Rio de Janeiro.
64. **Lopes**, Aguiar and West (2000) Time-varying covariance structures in currency markets. *Proceedings of the XXII Brazilian Meeting of Econometrics*.
65. **Lopes** and Ehlers (1997) Bayesian forecasting of log-transformed vector auto-regressions. Technical report, Department of Statistical Methods, Federal University of Rio de Janeiro.
66. Issler, Moreira and **Lopes** (1994) Common cycles in structural identification of multivariate systems. *Proceedings of the XVI Brazilian Meeting of Econometrics*.
67. **Lopes** and Migon (1994) Impulse response functions in generalized Bayesian autoregressive models. Technical report, Department of Statistical Methods, Federal University of Rio de Janeiro.

Books & monographs

68. **Lopes** and McCulloch (2013) *Bayesian Econometrics: A First Course*. Wiley (under preparation).
69. Carvalho, **Lopes** and McCulloch (2013) *Bayesian Inference in Factor Asset Pricing Models*. Chapman & Hall/CRC (under preparation).
70. Parmigiani and Inoue (with contributions by **Lopes**) (2009) *Decision Theory: Principles and Approaches*. Wiley.
71. **Lopes** (2008) *Modern Bayesian Econometrics*, ISBrA, São Paulo, Brazil.
72. Gamerman and **Lopes** (2006) *Markov Chain Monte Carlo: Stochastic Simulation for Bayesian Inference (2nd Edition)*. Chapman & Hall/CRC.
73. Migon and **Lopes** (2002) *Análise Bayesiana de Decisões: Aspectos Práticos*, ABE, São Paulo, Brazil.
74. Migon and **Lopes** (2002) *Análise Bayesiana de Decisões*, SBM, Rio de Janeiro, Brazil.
75. **Lopes** and Lima (1995) *Co-integração: Enfoques Clássico e Bayesiano*, ABE, São Paulo, Brazil.

Paper/book reviews, interviews and others

76. **Lopes** (2012) Review of book “Handbook of Markov Chain Monte Carlo” by Brooks, Gelman, Jones and Meng. *Biometrics* (to appear).
77. **Lopes** (2011) Review of book “Introducing Monte Carlo Methods with R” by Robert and Casella. *Journal of the American Statistical Association*, **106**(493), 177.
78. **Lopes** (2011) Discussion of “Separable covariance arrays via the Tucker product, with applications to multivariate relational data” by Hoff. *Bayesian Analysis*, **6**, 203-204.
79. **Lopes** (2008) Brazilian Bayesians. *ISBA Bulletin*, **15**(4), 7-8.
80. **Lopes** (2007) Invited discussion of “Sequential Monte Carlo for Bayesian computation” by Del Moral, Doucet and Jasra. *Bayesian Statistics 8*. Oxford University Press, 139-140.
81. **Lopes** (2003) Factor models, *ISBA Bulletin*, **10**(3), 7-10.
82. **Lopes** (2003) Interview with Helio Migon (in Portuguese), *ISBrA Bulletin*, **1**(1), 2-6.
83. **Lopes** (2001) Sailing the Bayesian boat in a hostile sea, *ISBA Bulletin*, **8**(2), 12-13.

3 Scientific presentations

Conference talks

1. *TBA*. ISI 2013, Hong Kong, August 2013.
2. *TBA*. ISI Young Statisticians’ Meeting, The Department of Statistics and Actuarial Science of The University of Hong Kong, August 2013.
3. *TBA*. IASC Satellite Conference of ISI 2013, Seoul, August 2013.
4. *On the long run volatility of stocks*. VI Brazilian Conference on Statistical Modeling in Insurance and Finance, Maresias, March 2013.
5. *Particle Learning for Fat-tailed Distributions*. VI Brazilian Conference on Statistical Modeling in Insurance and Finance, Maresias, March 2013.
6. *Modeling of complex stochastic systems via latent factors*. Workshop on Probabilistic and Statistical Methods, ICMC-USP, São Carlos, January 2013.
7. *Parsimonious Bayesian Factor Analysis When the Number of Factors is Unknown*. 25th Anniversary Celebration of the Department of Statistical Science, Duke University, October 2012.

8. *Modeling of complex stochastic systems via latent factors*. Colóquio Interinstitucional CBPF/ IMPA/UFRJ/ UFRJ - Modelos Estocásticos e Aplicações, UFF, September 2012.
9. *Cholesky Stochastic Volatility Models for High-Dimensional Time Series*. XX Brazilian Symposium of Probability and Statistics, João Pessoa, Paraíba, August 2012.
10. *On the Long Run Volatility of Stocks*. ISBA 2012 World Meeting, Kyoto, June 2012.
11. *Stochastic volatility models via particle methods*. VIII International Purdue Symposium on Statistics, Lafayette, June 2012.
12. *Cholesky Stochastic Volatility*. 2011 Meetings of the Midwest Econometrics Group, Chicago, October 2011.
13. *On the Long Run Volatility of Stocks: Time-Varying Predictive Systems*. Fourth Annual Society for Financial Econometrics Conference, Chicago, June 2011.
14. *Particle Learning for Fat-tailed Distributions*. Workshop on Bayesian Modeling in Finance, HEC Paris, June 2011.
15. *On the Long Run Volatility of Stocks: Time-Varying Predictive Systems*. Yeditepe International Research Conference on Bayesian Learning, Istanbul, Turkey, June 2011.
16. *Particle Learning for Fat-tailed Distributions*. 2011 Seminar on Bayesian Inference in Econometrics and Statistics, St. Louis, April 2011.
17. *Parsimonious Bayesian Factor Analysis When the Number of Factors is Unknown*. XXXII Brazilian Meeting of Econometrics, Salvador - Bahia, Dezember 2010.
18. *Parsimonious Bayesian Factor Analysis When the Number of Factors is Unknown*. The Seventh Regional Meeting on Probability and Mathematical Statistics, Santa Fe, Argentina, December 2010.
19. *Particle Learning and Smoothing*. 2010 NBER/NSF Time Series Conference, Duke University, Durham, October 2010.
20. *Constructing Economically Justified Aggregates: An Application of the Early Origins of Health*. 2010 Annual Health Econometrics Workshop, University of Michigan, Ann Arbor, October 2010.
21. *Particle learning for sequential Bayesian computation*. First Conference on Computational Interdisciplinary Sciences, INPE, Sao Jose dos Campos, Brazil, August 2010.
22. *Dynamic stock selection strategies: A structured factor model framework*. 2010 Joint Statistical Meetings, Vancouver, Canada, August 2010.
23. *Parsimonious Bayesian factor analysis when the number of factors is unknown*. 2010 Institute on Computational Economics, University of Chicago, July 2010.
24. *Particle learning for sequential Bayesian computation*. IX Valencia International Meeting on Bayesian Statistics, Valencia, Spain, June 2010.
25. *Parsimonious Bayesian Factor Analysis When the Number of Factors is Unknown*. Seminar on Bayesian Inference in Econometrics and Statistics, Austin, April 2010.
26. *Spatial Dynamic Factor Models*, 2009-10 Program on Space-time Analysis, SAMSI, North Carolina, January 2010.
27. *Recent advances in particle learning*, Sequential Monte Carlo Program, Transition Workshop , SAMSI, North Carolina, November 2009.
28. *Particle Learning and Smoothing*, III Astrostatistics, São José dos Campos, Brazil, September 2009.
29. *Particle Learning and Smoothing*, Joint Statistical Meetings, Washington D.C., August 2009.
30. *Fully Hierarchical Spatial Factor Analysis*, LIV Annual Meeting of the Brazilian Chapter of the International Biometry Society, São Carlos, Brazil, July 2009.
31. *Grouped Factor Analysis*. XXVII Brazilian Colloquium of Mathematics, Rio de Janeiro, July 2009.
32. *Particle Learning*, X Brazilian School of Time Series and Econometrics, São Carlos, Brazil, July 2009.
33. *Particle Learning and Smoothing*, Celebrating 75 Years of Statistics at Iowa State, June 2009.
34. *Particle Learning*, R/Finance 2009: Applied Finance with R, Chicago, April 2009.
35. *Particle Learning for General Mixtures*, Adaptive Design, Sequential Monte Carlo and Computer Modeling Workshop, SAMSI, April 2009.
36. *Particle Learning: Six Months Later*, 2008-09 Program on Sequential Monte Carlo Methods, SMC Mid-Program Workshop, SAMSI, February 2009.
37. *Cholesky Stochastic Volatility*, Talk presented at the Oxford-Man Institute Conference on “Financial Econometrics & Vast Data”, University of Oxford, September 2008.
38. *Tutorial on Sequential Monte Carlo Methods*, Invited talk at the 2008-09 Program on Sequential Monte Carlo Methods, Kickoff Tutorials & Workshop, September 2008.

39. *Male germline X inactivation and the evolution of male genes in Drosophila*, Workshop on the Interface of Medicine and Statistics, Celebrating 200 years of the Federal University of Rio de Janeiro Medicine School, August 2008.
40. *General Equilibrium Option Pricing Under Counter-Cyclical Growth and Long-Run Risk*, VIII Brazilian Meeting of Finance, Rio de Janeiro, Brazil, August 2008.
41. *Time-varying variances through copulas*, Talk ministered at Forecasting in Rio, EPGE-FGV, Rio de Janeiro, Brazil, July 2008.
42. *Generalized dynamic spatial factor models*, Annual Meeting of the International Indian Statistical Association, Connecticut, May 2008.
43. *Time-varying variances through copulas*, Bayesian Inference Workshop, UFRJ, Rio de Janeiro, Brazil, February 2008.
44. *Cholesky stochastic volatility*, XXVI Brazilian Colloquium of Mathematics, Rio de Janeiro, July 2007.
45. *Dynamic spatial factor models*, 2007 International Meeting of the Psychometric Society, Tokyo, Japan, July 2007.
46. *Cholesky time-varying volatility models*, V Workshop on Bayesian Inference in Stochastic Processes, Valencia, Spain, June 2007.
47. *Time-varying joint distributions through copulas*, Seminar on Bayesian Inference in Econometrics and Statistics, Washington University in St. Louis, Missouri, May 2007.
48. *Dynamic spatial factor models*, 32th Spring Lecture Series, University of Arkansas Spatial and Spatio-Temporal Statistics, Fayetteville, April 2007.
49. *Dynamic spatial factor models*, Workshop on Stochastic Processes and Spatial Statistics, University of São Paulo, São Paulo, October 2006.
50. *Dynamic Factor Model with Space-time Varying Loadings*, 2006 Joint Statistical Meeting, Seattle, August 2006.
51. *Factor stochastic volatility time-varying loadings and switching regime*, VI Brazilian Meeting of Finance, Espírito Santo, Brazil, July 2006.
52. *Dynamic Factor Model with Space-time Varying Loadings*, XVII Brazilian Symposium of Probability and Statistics, Caxambu, Minas Gerais, July 2006.
53. *Time-varying variances through copulas*, XVII Brazilian Symposium of Probability and Statistics (SINAPE), Caxambu, Minas Gerais, July 2006.
54. Discussion of the paper *Sequential Monte Carlo for Bayesian Computation*, by Del Moral, Doucet and Jasra, VIII Bayesian world meeting, Valencia, June 2006.
55. *Time-varying covariances: a Cholesky decomposition approach*. Seminar on Bayesian Inference in Econometrics and Statistics Iowa City, April 2006.
56. *Time-varying covariances: a Cholesky decomposition approach*, 2005 Joint Statistical Meeting, Minneapolis, August 2005.
57. *Time-varying covariances: a Cholesky decomposition approach*, XI School of Time Series and Econometrics, Espírito Santo, Brazil, August 2005.
58. *Factor Stochastic Volatility Time-varying loadings and switching regime*, XI School of Time Series and Econometrics, Espírito Santo, Brazil, August 2005.
59. *Factor Stochastic Volatility Time-varying loadings and switching regime*, IV Workshop on Bayesian Inference in Stochastic Processes, Italy, June 2005.
60. *Time series mean level and stochastic volatility modeling by smooth transition autoregressions: a Bayesian approach*, II Congreso Bayesiano de América Latina, Los Cabos in San José del Cabo, Baja California, Mexico, February 2005.
61. *Stock return and trading volume: a bivariate Bayesian Markov switching stochastic volatility analysis by MCMC and SMC*, International Workshop on Bayesian Statistics and its Applications, Varanasi, India, January 6-8, 2005.
62. *Time series mean level and stochastic volatility modeling by smooth transition autoregressions: a Bayesian approach*, the 3rd Annual Advances in Econometrics Conference, Louisiana State University, November 5-7, 2004.
63. *Bayesian Inference and Model Assessment for the Analysis of Smooth Transition Autoregressive Time Series Models*, 82th Symposium of the Behaviormetric Society of Japan on Recent Developments in Latent Variables Modelling, Tokyo University, August 2004.
64. *Bayesian analysis of extreme events with threshold estimation*, XVI Brazilian Symposium of Probability and Statistics, Caxambu, Minas Gerais, July 2004.

65. *Bayesian Model Assessment in Factor Analysis*, ISBA 2004 World Meeting, Hotel Marina Del Rey, Viña Del Mar, Chile, May 2004.
66. *Factor Stochastic Volatility through Smooth Transition autoregressions*, VII Brazilian Meeting of Bayesian Statistics, São Carlos, Brazil, February 2004.
67. *Model Assessment in Factor Analysis*, Statistical Analysis of the Structure with the Latent Variable Model, Kobe University, Japan, December 2003.
68. Discussion of the paper *Compound Markov Mixture Models with Applications in Finance* by John Geweke and Giovanni Amisano. 2003 NBER/NSF Time Series Conference. In Honor of George Tiao's Retirement, September 19-20, 2003, Chicago.
69. *Simulation-based sequential analysis of Markov switching stochastic volatility models*, X Brazilian School of Time Series and Econometrics, São Pedro, Brazil, August 2003.
70. *Bayesian Inference and Selection in Smooth Transition Autoregressive Models*, XLVIII Annual Meeting of the Brazilian Chapter of the International Biometry Society, Universidade Federal de Lavras, July 2003.
71. *Univariate Stochastic Volatility through WinBugs*, Workshop on Volatility, Graduate School of Economics, Fundação Getúlio Vargas, Rio de Janeiro, May 2003.
72. *Factor Stochastic Volatility: Portfolio Allocation, Financial Contagion and Regime Switch*, Stochastic Computation Meeting, SAMSI, Research Triangle Park, USA, October 2002.
73. *Bayesian Meta-analysis for longitudinal data models using multivariate mixture priors*, XV Brazilian Symposium of Probability and Statistics, São Paulo, July 2002.
74. *Factor Stochastic Volatility Models: Contagion and Switching Regimes in Latin American Markets*. I Latin American Meeting of Bayesian Statistics, São Paulo, Brazil, February 2002.
75. *Comovements and Contagion in Emergent Markets: Stock Indexes Volatilities*, XXIII Brazilian Meeting of Econometrics, Bahia, Brazil, December 2001.
76. *Comovements and Contagion in Emergent Markets: Stock Indexes Volatilities*, Poster, VI Case Studies in Bayesian Statistics, Pittsburgh, September 2001.
77. *Simulation-based Sequential Analysis of Hidden Markov Dynamic Models*, IX Brazilian School of Time Series and Econometrics, Belo Horizonte, Brazil, August 2001.
78. *Factor Stochastic Volatility Models: Measuring Contagion in Latin American Stock Markets*, Poster presentation, NSF/NBER Time Series Annual Meeting, Raleigh, USA, September 2001.
79. *Bayesian Inference and Forecast in Univariate and Multivariate Latent Structure Models*, VII School of Regression Models, São Carlos, Fevereiro 2001.
80. *Time-varying Covariance Structures in Currency Markets*, XXII Brazilian Meeting of Econometrics, São Paulo, December 2000.
81. *Recent developments in Bayesian Factor Analysis*, XIV Brazilian Symposium of Probability and Statistics, Caxambú, Brazil, July 2000.
82. *Meta-analysis for longitudinal data models using multivariate mixture priors*, XLV Meeting of the Brazilian Chapter of the Biometry International Society, São Carlos, July 2000.
83. *Meta-analysis for longitudinal data models using multivariate mixture priors*, Poster presentation, 6th World Meeting of the International Society for Bayesian Analysis, Crete, Greece, May 2000.
84. *Meta-analysis for longitudinal data models using multivariate mixture priors*, Poster presentation, 5th Workshop on Case Studies in Bayesian Statistics, Pittsburgh, September 1999.
85. *Multivariate mixture model in meta analysis for hematology data*, Poster presentation, Second European Conference on Highly Structured Stochastic Systems (HSSS), Pavia, Italy, September 1999.
86. *Factor models: time-varying loadings and stochastic volatility*, Workshop on Inference and Prediction in Financial Risk Management - Tirano, Italy, September 1999.
87. *Some developments in Bayesian Factor Models*, XXIII Brazilian Colloquium of Mathematics, Rio de Janeiro, July 1999.
88. *Model Uncertainty in Factor Models*, Highly Structured Stochastic Systems (HSSS) Workshop on Structural Learning in Graphical Models, Tirano, September 1998.
89. *Model Uncertainty in Factor Models*, Poster presentation, Sixth Valencia International Meeting on Bayesian Statistics, Valencia, Spain, June 1998.
90. *A Multivariate Model to forecast GNP, inflation and liquidity*, Latin American Meeting of the Econometric Society, Rio de Janeiro, Brazil, August 1996.
91. *Predictive performance in classical and Bayesian integrated, co-integrated and co-cyclical models*, IV Brazilian School of Regression Models, Aguas de Sao Pedro, Brazil, February 1995.

92. *Impulse response in Bayesian VAR models: an exercise with Brazilian data*, IV Brazilian School of Regression Models, Aguas de Sao Pedro, Brazil, February 1995.
93. *Using common cycles in structural identification of multivariate systems*, XVI Brazilian Meeting of Econometrics, Belo Horizonte, Brazil, December 1994.
94. *GDP stochastic trends: Fluctuation effects in productivity and real interest rate*, XI Brazilian Symposium of Probability and Statistics, Belo Horizonte, Brazil, July 1994.
95. *Using common cycles in structural identification of multivariate systems*, XI Brazilian Symposium of Probability and Statistics, Belo Horizonte, Brazil, July 1994.
96. *Applications of Bayesian vector autoregressions*, XI Brazilian Symposium of Probability and Statistics, Belo Horizonte, Brazil, July 1994.
97. *Bayesian cointegration: a review*, II Brazilian Meeting for Bayesian Statistics, Rio de Janeiro, November 1993.
98. *Bayesian analysis in VAR models*, II Brazilian Meeting for Bayesian Statistics, Rio de Janeiro, November 1993.
99. *Stochastic trends and Economic fluctuations in Brazil*, V Brazilian Meeting of Time Series and Econometrics, Sao Paulo, July 1993.
100. *Credibility intervals for impulse response functions in Bayesian vector autoregressions*, X Brazilian Symposium of Probability and Statistics, Rio de Janeiro, Brazil, August 1992.
101. *A Software for Statistical Quality Control*, X Brazilian Symposium of Probability and Statistics, Rio de Janeiro, Brazil, August 1992.

University/Institute talks

102. *Modeling of complex stochastic systems via latent factors*, Insper, São Paulo, February 2013.
103. *Modeling of complex stochastic systems via latent factors*, Departamento de Ciências Exatas, ESALQ, Piracicaba, January 2013.
104. *Modern Bayesian Econometrics*, Research and Development Group, Bank Itaú-Unibanco, São Paulo, December 2012.
105. *Modeling of complex stochastic systems via latent factors*, Departamento de Matemática e Computação, Unesp/Presidente Prudente, November 2012.
106. *Cholesky Stochastic Volatility Models for High-Dimensional Time Series*, Department of Applied Mathematics and Statistics, ICMC-USP, São Carlos, November 2012.
107. *Modeling of complex stochastic systems via latent factors*, Department of Decision Sciences, The George Washington University School of Business, October 2012.
108. *Modeling of complex stochastic systems via latent factors*, Sheldon Lubar School of Business, University of Wisconsin-Milwaukee, October 2012.
109. *Bayesian instrumental variables: priors and likelihoods*, Department of Statistics, University of Campinas, September 2012.
110. *Particle filters: state and parameter learning*, Department of Statistics, University of Brasilia, June 2012.
111. *Bayesian instrumental variables: likelihoods and priors*, Central Bank of Brazil, Brasilia, June 2012.
112. *Examining the Effect of Early-Life Conditions and Education on Health via Parsimonious Bayesian Factor Analysis when Number of Factors is Unknown*, Pennsylvania State University, May 2012.
113. *Parsimonious Bayesian Factor Analysis when the Number of Factors is Unknown*, Department of Statistics and Biostatistics, Rutgers, April 2012.
114. *Cholesky Stochastic Volatility Models for High-Dimensional Time Series*, Department of Management Science and Information Systems, Rutgers Business School, April 2012.
115. *Cholesky Stochastic Volatility Models for High-Dimensional Time Series*, Department of Mathematics and Statistics, University of New Mexico, March 2012.
116. *Cholesky Stochastic Volatility Models for High-Dimensional Time Series*, Department of Statistics, Columbia University, February 2012.
117. *Examining the Effect of Early-Life Conditions and Education on Health via Parsimonious Bayesian Factor Analysis when Number of Factors is Unknown*, The University of Texas at Austin, February 2012.
118. *Stochastic volatility models via particle methods*, Department of Statistics, Brigham Young University, February 2012.
119. *Cholesky stochastic volatility*, Department of Statistics, University of South Carolina, January 2012.
120. *Cholesky stochastic volatility*, Department of Statistics and Actuarial Science, University of Waterloo, Canada, January 2012.

121. *Bayesian instrumental variables: likelihoods and priors*, Department of Economics, Pretoria University, South Africa, December 2011.
122. *Cholesky stochastic volatility*. Department of Statistics, University of Washington, November 2011.
123. *Cholesky stochastic volatility*. Department of Finance, Accounting and Statistics, Vienna University of Economics and Business, November 2011.
124. *Bayesian instrumental variables: likelihoods and priors*. Applied Econometrics and Empirical Economics Seminar, The Institute for Advanced Studies, November 2011.
125. *Bayesian instrumental variables: likelihoods and priors*. Econometrics Seminar Series, Tinbergen Institute in Amsterdam, November 2011.
126. *Particle filtering methods for stochastic volatility models*. Department of Economics, University of Toronto, September 2011.
127. *Cholesky Stochastic Volatility*. Department of Applied Mathematics , University of Colorado-Boulder, September 2011.
128. *Parsimonious Bayesian Factor Analysis When the Number of Factors is Unknown*. Institut Henri Poincaré, Paris, France, June 9th 2011.
129. *Particle Learning for Fat-tailed Distributions*. Department of Economics, Purdue University, April 2011.
130. *Particle Learning for Fat-tailed Distributions*. Department of Decision Sciences, The George Washington University, DC, April 2011.
131. *Particle Learning and Smoothing*. Kellogg School of Management, Northwestern University, March 2011.
132. *Parsimonious Bayesian Factor Analysis When the Number of Factors is Unknown*. Division of Statistics and Scientific Computation, The University of Texas at Austin, March 2011.
133. *Parsimonious Bayesian Factor Analysis When the Number of Factors is Unknown*. São Paulo School of Economics, FGV, February 2011.
134. *Parsimonious Bayesian Factor Analysis When the Number of Factors is Unknown*. Department of Statistics, University of California at Irvine, January 2011.
135. *Parsimonious Bayesian Factor Analysis When the Number of Factors is Unknown*. Department of Statistical Methods, Federal University of Rio de Janeiro, December 2010.
136. *Particle Learning for Fat-tailed Distributions*. Itaú-Unibanco Bank, São Paulo, December 2010.
137. *Parsimonious Bayesian factor analysis when the number of factors is unknown*. Federal Reserve Bank of Atlanta, Atlanta, September 2010.
138. *Particle Methods for General Mixtures*, Dipartimento di Scienze delle Decisioni, Istituto di Metodi Quantitativi, Università L. Bocconi, Milan, November 2009.
139. *Particle Methods for General Mixtures*, Department of Statistics, University of Illinois, Chicago, October 2009.
140. *Particle Learning for Generalized Dynamic Conditionally Linear Models*, Institute for Applied Economic Research, Rio de Janeiro, July 2009.
141. *Generalized Spatial Dynamic Factor Models*, Departament d'Estadística, University of Valencia, July 2009.
142. *Generalized Spatial Dynamic Factor Models*, Departament d'Estadística i Investigació Operativa, Universitat Politècnica de Catalunya, June 2009.
143. *Particle Learning and Smoothing*, Econometrics and Statistics Colloquium, The University of Chicago Booth School of Business, April 2009.
144. *Sequential Monte Carlo methods*, Econometrics Workshop, Economics Department, University of Chicago, February 2009.
145. *Particle learning and smoothing*, Institute of Mathematics and Statistics, University of São Paulo, December 2008.
146. *Particle learning and smoothing*, Bayesian Statistics Working Group, Department of Statistics at North Carolina State University, November 2008.
147. *Particle learning and smoothing*, Department of Biostatistics, University of Michigan, October 2008.
148. *Spatial dynamic factor model*, Department of Statistical Sciences, Duke University, September 2008.
149. *On mixture of Kalman filtering and learning*, Department of Statistical Methods, Federal University of Rio de Janeiro, August 2008.
150. *Sequential Monte Carlo methods*, invited tutorial, Department of Statistical Methods, Federal University of Rio de Janeiro, August 2008.
151. *Spatial dynamic factor model*, Department of Statistics, University of Missouri, February 2008.
152. *Cholesky stochastic volatility*, Department of Statistics, University of Missouri, February 2008.
153. *Factor stochastic volatility*, 2007 Macro Seminar Series, Research Department, Federal Reserve Bank of Atlanta, November 2007.

154. *Sex chromosome evolution and gene expression in Drosophila spermatogenesis*, Department of Statistical Methods, Federal University of Rio de Janeiro, November 2007.
155. *Spatial dynamic factor model*, Facultad de Ciencias Económicas y Empresariales, University of Zaragoza, June 2007.
156. *Time-varying covariances: a Cholesky decomposition approach*, Department of Probability and Statistics, Universidad Autónoma de México (UNAM), March 2007.
157. *Spatial dynamic factor model*, Department of Statistics, University of Connecticut, November 2006.
158. *Factor stochastic volatility with time varying loadings and Markov switching regimes*, Instituto de Pesquisa Econômica Aplicada (IPEA) do Ministério do Planejamento do Brasil, September 2006.
159. *Spatial dynamic factor model*, Institute of Advanced Studies, Vienna, March 2006.
160. *Spatial dynamic factor analysis*, Department of Applied Mathematics and Statistics, University of California at Santa Cruz, November 2005.
161. *Time-varying covariances: A Cholesky decomposition approach*, Department of Statistics, Pennsylvania State University, November 2005.
162. *Spatial dynamic factor analysis*, Department of Statistics, University of Chicago, October 2005.
163. *Bayesian Analysis of Extreme Events with Threshold Estimation*, Department of Statistics, University of New Mexico, April 2005.
164. *Bayesian Analysis of Extreme Events with Threshold Estimation*, Department of Mathematics, Statistics and Computer Sciences, University of Illinois at Chicago, Chicago, Oct 2004.
165. *Análise Bayesiana de Eventos Extremos com Estimção do Limiar*, EPGE-FGV, Rio de Janeiro, August 2004.
166. *Multivariate Stochastic Volatility: factor analysis and alternatives*, Institute of Mathematics, Federal University of Rio de Janeiro, August 2004.
167. *Bayesian Inference and Model Assessment for the Analysis of Smooth Transition Autoregressive Time Series Models*, Department of Economics, Pontifícia Universidade Católica (PUC), Rio de Janeiro, August 2004.
168. *Bayesian Inference and Model Assessment for the Analysis of Smooth Transition Autoregressive Time Series Models*, Department of Statistics, Federal University of Paraná, August 2004.
169. *Univariate and multivariate Bayesian analysis for smooth transition autoregressive model*, Department of Statistics, Northern Illinois University, March 19th 2004.
170. *Longitudinal models applied to pharmacokinetics*, Federal University of Rio de Janeiro, Rio de Janeiro, May 2003.
171. *Measuring Financial Contagion through Multivariate Stochastic Volatility Models*, Federal Reserve Bank of Atlanta, Atlanta, February 2003.
172. *Model Uncertainty in Factor Analysis*, Graduate School of Business, University of Chicago, February 2003.
173. *Measuring Contagion through Factor Stochastic Volatility Models*, Seminar Series, Department of Economics, Pontifícia Universidade Católica (PUC), Rio de Janeiro, October 2002.
174. *Meta-analysis for longitudinal data models using multivariate mixture priors*, Department of Statistics, UNICAMP, Campinas, May 2002.
175. *Factor Models and Stochastic Volatility: Emergent Markets Contagion*, Brazilian Institute of Capital Markets, São Paulo, November 2001.
176. *Factor Stochastic Volatility: Simulation-based Filtering and smoothing*, EPGE-FGV, Rio de Janeiro, November 2001.
177. *Simulation-based Smoothing and Filtering in Factor Stochastic Volatility Models*, Institute of Statistics and Decision Sciences, Universidade de Duke, Outubro 2001.
178. *Comovements and Contagion in Emergent Markets: Stock Indexes Volatilities*, Institute for Applied Economic Research, Brasil, July 2001.
179. *Comovements and Contagion in Emergent Markets: Stock Indexes Volatilities*, Centro de Investigaciones en Matemáticas (CIMAT), Guanajuato, Mexico, July 2001.
180. *Bayesian Forecasting and Inference in Latent Structure for the Brazilian Industrial Production Index*, Institute for Exact Sciences, Federal University of Minas Gerais, Brazil, December 2000.
181. *Meta-analysis for longitudinal data models using multivariate mixture priors*, Núcleo de Estudos de Saúde Coletiva, Federal University of Rio de Janeiro, Rio de Janeiro, September 2000.

Posters

182. *Bayesian Inference in Smooth Transition Autoregressive Models*, Science of Modeling, The 30th Anniversary of the Information Criterion (AIC), Pacifico Yokohama, Japan, December 14-17, 2003.

183. *Malaria and rainfall in the state of Pará: spatio-temporal analysis*, Seventh Workshop on Case Studies in Bayesian Statistics. Carnegie-Mellon University, Pittsburgh, USA, September 2003.
184. *Some Factor Stochastic Volatility Models: Financial Contagion and Portfolio Allocation*, Seventh Valencia International Meeting on Bayesian Statistics. Tenerife, Spain, June 2002.
185. *Meta-analysis for longitudinal data models using multivariate mixture priors*, 6th world meeting of the International Society for Bayesian Analysis (ISBA), Hersonissos-Heraklion, Crete May 28-June 1, 2000.
186. *Meta-analysis for longitudinal data models using multivariate mixture priors*, V Workshop in Case Studies in Bayesian Statistics, Carnegie Mellon University, Pittsburgh, PA, USA. September 24-25, 1999.
187. *Multivariate mixture model in Meta Analysis for Hematology data*, Second European Conference on Highly Structured Stochastic Systems, Pavia, Italy, 14-18 September, 1999.
188. *Bayesian Forecasting and Inference in Latent Structure for the Brazilian Industrial Production*, Eighth Brazilian School of Time Series and Econometrics, Nova Friburgo, Rio de Janeiro, 21-23 July, 1999.
189. *Model Uncertainty in Factor Models*, Sixth Valencia International Meeting on Bayesian Statistics. Valencia, Spain, June 1998.

4 Students

PhD

1. Samir Warty, *Particle learning in high-dimensional financial/econometrical applications*, The University of Chicago Booth School of Business. Expected to graduate in June 2013.
2. Maria Paula Rios, *Essays on Applications of Particle Learning in Financial Econometrics*, April 2012, Ph.D. in Econometrics and Statistics, University of Chicago Booth School of Business.
3. Bruno Lund, *Term structure models with non-affine dynamics and macro-variables*, December 2009, Ph.D. in Economics, Graduate School of Economics, Getulio Vargas Foundation, Rio de Janeiro.
4. Fernando F. Nascimento, *Bayesian nonparametric approach to extreme value analysis*, December 2009, Ph.D. in Statistics, Institute of Mathematics, Federal University of Rio de Janeiro.
5. Esther Salazar, *Spatial dynamic factor models*, February 2008, Ph.D. in Statistics, Institute of Mathematics, Federal University of Rio de Janeiro.
6. Ralph Silva, *Bayesian skewed models*, December 2006, Ph.D. in Statistics, Institute of Mathematics, Federal University of Rio de Janeiro.
7. Carlos Abanto, *Stochastic simulation methods in nonlinear dynamic models: applications in stochastic volatility models*, August 2005, Ph.D. in Statistics, Institute of Mathematics, Federal University of Rio de Janeiro.
8. Cibebe Behrens, *Análise Bayesiana de Eventos Extremos com Estimacão do Limiar*, August 2004, Ph.D. in Operations Research, Coppe-UFRJ.
9. Edison Tito, *Abordagens de Inferência evolucionária em modelos adaptativos*, March 2003, PhD in Electrical Engineer, Department of Electrical Engineering, PUC/RJ.

MSc

10. Seokwoo Lee, *Bayesian stochastic volatility model with non-Gaussian errors*, May 2008, M.Sc. in Statistics, Department of Statistics, University of Chicago.
11. Tao Liang, *Bayesian analysis of extreme events with time-varying parameters*, October 2005, M.Sc. in Statistics, Department of Statistics, University of Chicago.
12. Ou Jin, *Smooth Transitional Autoregressive Stochastic Volatility (STAR-SV) Modeling: Bayesian Inference Through C++ Programming*, November 2004, M.Sc. in Statistics, Department of Statistics, University of Chicago.
13. Na Peng, *Deviance Information Criterion with Stochastic Volatility Models*, July 2004, M.Sc. in Statistics, Department of Statistics, University of Chicago.
14. Esther Salazar, *Bayesian Inference for Mean and Variance Smooth Transition Autoregressive models*, February 2004, M.Sc. in Statistics, Institute of Mathematics, Federal University of Rio de Janeiro.
15. Aline Nobre, *Malaria \times Rain in the State of Pará: Applications of Spatio-Temporal Models*, March 2003, M.Sc. in Statistics, Institute of Mathematics, Federal University of Rio de Janeiro.
16. Gabriela Azevedo, *Dirichlet Process Mixture: A Hierarchical Modeling Approach*, May 2002, M.Sc. in Statistics, Institute of Mathematics, Federal University of Rio de Janeiro.

17. Carlos Carvalho, *Bayesian Analysis of Stochastic Volatility Models with Multiple Regimes*, April 2002, M.Sc. in Statistics, Institute of Mathematics, Federal University of Rio de Janeiro.

BSc

18. Carla Lôbo, *Vulnerability to endemic diseases from social-economical and epidemiological factors*, Institute of Mathematics, UFRJ, 08-12/2003.
19. Oswaldo Junior, *Vulnerability to endemic diseases from social-economical and epidemiological factors*, Institute of Mathematics, UFRJ, 08-12/2003.
20. Luis Brito, *Bayesian stochastic volatility models - an exercise in WinBUGS*, Institute of Mathematics, UFRJ, 08/2002 - 07/2003.
21. Rodrigo Vallim, *Brownian motion and finance*, Institute of Mathematics, UFRJ, 08/2002 - 07/2003.
22. André Souza, *Smooth transition autoregressions - an exercise in WinBUGS*, Institute of Mathematics, UFRJ, 01/2003 - 08/2003.
23. Tarciso Nogueira, *Basic statistics in R*, Institute of Mathematics, UFRJ, 08/2001 - 07/2002.
24. Lilian Migon, *Basic statistics through applets*, Institute of Mathematics, UFRJ, 08/2001 - 07/2002.

5 PhD/MSc committees

PhD defenses

1. Hao Chen, *Structural Estimation Using Sequential Monte Carlo Methods*, Department of Business Administration, Duke University, 09/2011.
2. Ni Xiao, *Bayesian Switching Model for Causal Inference with Constraints and Nonlinear Functions*, Chicago Booth, 06/2011.
3. Ronald Nojosa, *Bayesian inference in multidimensional item response models*, IME/USP, 08/2010.
4. Geraldo Cunha, *Convolution models for spatio-temporal data*, Institute of Mathematics, Federal University of Rio de Janeiro, 07/2009.
5. Elena-Claudia Moise, *Stochastic Volatility and Stock Returns: Evidence from Microstructure Data*, Chicago Booth, 04/2006.
6. Romy Rodríguez, *An efficient sampling scheme for generalized dynamic linear models with applications in transfer function models*, IM/UFRJ, 12/2005.
7. Roberta Costa Dias, *A contribution to Malaria study in Roraima State and its association to rainfall between 1985-1996*, Oswaldo Cruz Foundation/RJ, 07/2003.
8. Alba, *Bivariate Extreme Value: Models and Estimation*, Production Engineering Program (PEP)-COPPE/UFRJ, 09/2002.
9. Katia Carrillo, *Gamma-Gamma State-Space Models: A Rainfall Application*, DEE-PUC/RJ, 06/2002.

PhD proposals

10. Hao Chen, *Structural Estimation Using Sequential Monte Carlo Methods*, Department of Business Administration, Duke University, 08/2011.
11. Ni Xiao, *Bayesian Switching Model for Causal Inference with Constraints and Nonlinear Functions*, Chicago Booth, 11/2010.
12. Rodrigo Pinto, *Evidence of Gene-environment of Schooling and Dopamine Gene Variant on Life-cycle Outcomes*, Department of Economics, University of Chicago, 08/2009.
13. Ronald Targino Nojosa, *Bayesian inference in multidimensional item response models*, IME/USP, 12/2008.
14. Luiz Medrano, *Bayesian analysis in stochastic production frontier: theory and application*, IM/UFRJ, 12/2006.
15. Shang Chiou, *Testing and Dating Financial Contagion*, Chicago Booth, 05/2006.
16. Juan Artigas, *Estimation of Stochastic Diffusion Models with Leverage Effects, Jumps and Time-Varying Drift*, Chicago Booth, 05/2005.
17. Elena-Claudia Moise, *Is market volatility priced?*, Chicago Booth, 01/2005.
18. Romy Rodríguez, *An efficient sampling scheme for generalized dynamic linear models with applications in transfer function models*, IM-UFRJ, 12/2004.
19. Carlos Abanto, Production Engineering Program PEP-COPPE/UFRJ, 08/2004.

20. Sérgio Contreras, *State-Space Models for Bivariate Poisson Time Series: An Application via Durbin-Koopman's Approach*, DEE-PUC/RJ, 12/2002.
21. Luz Santander, *Fractional Cointegration: Estimation and Tests*, PEP-COPPE/UFRJ, 12/2001.
22. Edison Tito, *Genetic Particle Filters on Sequential Learning of Adaptive Models*, DEE-PUC/RJ, 06/2001.

MSc

23. Luiz Medrano, *Fronteira de Produção Estocástica*, IM/UFRJ, 07/2003.
24. Bernardo Mota, *Performance of the estimators of IBOVESPA's volatility*, EPGE-FGV/RJ, 06/2002.
25. Erika Médici, *Bayesian Hierarchical Models for Stochastic Production Frontier*, IM/UFRJ, 12/2000.
26. Lilia Costa, *Hierarchical Models for Mapping Malnutrition in Brazil*, IM/UFRJ, 11/2000.

6 Teaching

PhD courses

1. Bayesian Econometrics: Spring 2009, 2011-2013, Fall 2009, Winter 2007-2008.
2. Applied Econometrics - Spring 2005-2008.
3. Sequential Monte Carlo - Summer 2004.
4. Statistical Inference - Summer 2002-2003.
5. Computational Statistics - Fall 2000-2001.
6. Decision Theory - Fall 2002.
7. Nonlinear Classification/Regression - Fall 2002.
8. Dynamic Modeling - Spring 2001.
9. Bayesian Model Selection - Fall 2000.

MBA courses

10. Business Statistics - Spring 2013 (2), Spring 2012 (2), Spring 2011 (2), Fall 2009 (2), Winter 2009 (3), Spring 2008 (2), Spring 2007 (2), Spring 2006, Fall 2005 (2), Spring (2005), Fall 2004 (2) and Fall 2003 (2).
11. Introduction to Probability - Spring 2003.

Undergraduate courses

12. Computational Statistics - Summer 2003, Fall 2002, Spring 2002, Fall 2001, Summer 2001 and Fall 2000.
13. Exploratory Data Analysis - Spring 2002 and Spring 2001.
14. Statistical Laboratory - Spring 2003.

7 Short courses and tutorials

1. *Simulation-based approaches to modern Bayesian econometrics*, IME-USP, São Paulo, September 2012.
2. *Bayesian Methods for Empirical Macroeconomics*, Central Bank of Brazil, Brasília, June 2012.
3. *Bayesian Econometrics*, Department of Economics, Pretoria University, South Africa, December 2011.
4. *Monte Carlo Methods*, First Conference on Computational Interdisciplinary Sciences, INPE, São José dos Campos, Brazil, August 2010.
5. *Monte Carlo Methods and Stochastic Volatility*, Dipartimento di Scienze delle Decisioni, Università Bocconi, Milano, November 2009.
6. *Modern Bayesian Statistics: MCMC and SMC methods*, INPE Advanced Course - III Astrostatistics, São José dos Campos, Brazil, September 2009.
7. *Sequential Monte Carlo Methods*, X Brazilian School of Time Series and Econometrics, São Carlos, Brazil, July 2009.
8. *Sequential Monte Carlo and MCMC Methods for Stochastic Volatility Models*, Departament d'Estadística i Investigació Operativa, Universitat Politècnica de Catalunya, June 2009.
9. *Sequential Monte Carlo Methods*, 2008-09 Program on Sequential Monte Carlo Methods, Kickoff Tutorials and Workshop, September 2008.

10. *Sequential Monte Carlo methods*, Department of Statistical Methods, Federal University of Rio de Janeiro, August 2008.
11. *Modern Bayesian Econometrics*, IX Brazilian Meeting of Bayesian Statistics, São Paulo, February 2008.
12. *MCMC methods for Latent Variable Models*, 2007 International Meeting of the Psychometric Society, Tokyo, Japan, July 2007.
13. *Bayesian Econometrics*, Institute for Advanced Studies, Vienna, February 2006.
14. *Simulated-based sequential dynamic models*, Institute of Mathematics, Federal University of Rio de Janeiro, Rio de Janeiro, August 2004.
15. *Factor Models in Multivariate Financial Econometrics*, Department of Statistics, Federal University of Paraná, Curitiba, Parana, August 2004.
16. *Factor Models in Multivariate Financial Econometrics*, IV Brazilian Meeting of Finance, COPPE-AD, Rio de Janeiro, July 2004.
17. *Computationally Intensive Statistical Methods through WinBugs*, Workshop on Applied Mathematics and Computing in Engineering, COPPE/UFRJ, April 2003.
18. *Bayesian Decision Analysis*, I Biannual Meeting of the Brazilian Mathematical Society, Oct. 2002.
19. *Bayesian Decision Analysis*, XV Brazilian Symposium of Probability and Statistics, July 2002.
20. *Computationally Intensive Statistical Methods through WinBugs*, Workshop on Applied Mathematics and Computing in Engineering, COPPE/UFRJ, April 2002.
21. *Computationally Intensive Statistical Methods*, Workshop on Applied Mathematics and Computing in Engineering, COPPE/UFRJ, April 2001.
22. *Tutorial in MCMC*, Workshop on Computational Methods in Statistics, UFSCar, São Carlos, São Paulo, November 2000.
23. *Vector Autoregressions, Cointegration, Common Trends and Bayesian Dynamic Models*, Research Institute of Applied Economics, July 1996.
24. *VAR Models, Cointegration and the Econometrics of the Unit Root*, V Brazilian School of Time Series and Econometrics, July 1995.
25. *Vector Autoregressions and Cointegration*, Department of Statistics, Federal University of Minas Gerais, June 1994.

8 Editorial, societal and departmental duties

1. Associate Editor, *Journal of Business & Economic Statistics*, since July 2012.
2. Associate Editor, *Bayesian Analysis*, since April 2010.
3. Editor In-Chief, *ISBA Bulletin*, May 2002 to June 2004.
4. Committee member, 2013 Mitchell Award.
5. Committee member, 2012 DeGroot Prize.
6. Committee member, 2007 Savage Award.
7. Committee member, 2006 Savage Award.
8. ISBA Treasurer, January 2011 to July 2011.
9. ISBA Board of Directors, January 2008 to December 2010.
10. ISBA Ad-hoc Membership Committee Chair, January 2009 to December 2009.
11. ISBrA Executive Secretary, January 2000 to December 2002.

9 Scientific meetings committees

1. Scientific committee, XV School of Time Series and Econometrics, Brazil, July 2013.
2. Organizer of the Session on *High dimensional Bayesian time series econometrics*, 6th CSDA International Conference on Computational and Financial Econometrics, Oviedo, Spain, December 2012.
3. Organizer of the Session on *Bayesian Inference for Multivariate Data*, VII Conference on Multivariate Distributions with Applications, São Paulo, August 2010.
4. Chair of Session on *Empirical Finance*, JSM, Vancouver, Canada, August 2010.
5. Co-organizer of the Session on *Bayesian Statistics*, XIX Brazilian Symposium of Probability and Statistics, Brazil, July 2010.
6. Scientific committee, X Brazilian Meeting of Bayesian Statistics, March 2010.
7. Organizer of the Session on Particle Learning, JSM, Washington, D.C., August 2009.
8. Scientific committee, 2008 Latin American Meeting of the Econometric Society, Brazil, November 2008.
9. Scientific committee, XVIII Brazilian Symposium of Probability and Statistics, Brazil, July 2008.
10. Co-organizer, Seminar on Bayesian Inference in Econometrics and Statistics, Chicago-GSB, May 2008.
11. Committee member, Savage Award 2007.
12. Scientific committee, XII School of Time Series and Econometrics, Brazil, July 2007.
13. Scientific committee, VIII Brazilian Meeting of Bayesian Statistics, March 2006.
14. Scientific committee, VIII Brazilian School of Regression, February 2003.
15. Co-organizer, First Latin American Meeting of Bayesian Statistics, February 2002.

10 Ad hoc reviewer

For the last 5 years I review about 6 papers to the Journal of the American Statistical Association, Journal of the Royal Statistical Society (Series B), Annals of Applied Statistics, Statistical Science and Biometrics, about four papers to Bayesian Analysis, Journal of Computational and Graphical Statistics, Journal of Statistical Planning and Inference, Journal of Multivariate Analysis and Computational Statistics and Data Analysis and about 4 papers to the Journal of Econometrics, Journal of Business and Economic Statistics, Journal of Applied Econometrics, Journal of Financial Econometrics and Econometrics Journal. I also review about 4 books and/or grant proposals from Wiley and Sons, Springer-Verlag, Chapman & Hall/CRC, NSF, NIH and NSA Mathematical Sciences.

Other journals are JABES, International Statistical Review, Environmetrics, International Journal of Forecasting, Journal of Forecasting, IEEE Transactions on Signal Processing, Electronic Journal of Statistics, Quantitative Marketing and Economics, Journal of Applied Finance, Statistical Modelling, Psychometrika, Brazilian Journal of Probability and Statistics, Applied Stochastic Models in Business and Industry, International Journal of Statistics and Systems, International Journal of Statistics, British Journal of Mathematical and Statistical Psychology, Journal of Hydrology, Brazilian Review of Econometrics and Brazilian Review of Economics.

11 Awards and educational fellowships

1. Recipient of the 2002 Antonio Luiz Vianna Award for Junior Faculty at the Federal University of Rio de Janeiro.
2. CAPES fellowship to pursue PhD degree in Statistics at Duke University - 08/1996 - 06/2000.
3. CNPq fellowship to pursue MSc degree in Statistics at UFRJ - 03/1991 - 02/1994.
4. IPEA fellowship to be a research associate for the Group of Macroeconometric Modeling - 03/1991 - 07/1996.
5. CNPq fellowship to be an undergraduate research assistant at UFRJ - 03/1990 - 02/1991.

12 Research grants

1. Co-PI, NSF grant with Henry Schultz Distinguished Service Professor of Economics James Heckman, 2010-2015.
2. Co-PI, NIH grant with Edna K. Papazian Distinguished Service Professor of Ecology and Evolution Manyuan Long, 2009-2011.
3. FAPERJ grant for ten desktop computers for the Laboratory of Statistics, UFRJ, Summer 2003.
4. FAPERJ grant to support Professor Gabriel Huerta's UFRJ visit, Summer of 2002.
5. FAPERJ grant to organize the First Latin American Meeting of Bayesian Statistics, February 2002.