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Laboratoire des Signaux et Systèmes
CentraleSupélec, 3 rue Joliot-Curie
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Education

February 1998: Habilitation à diriger des recherches, Paris-Sud University.

December 1991: Doctorat en sciences, Paris-Sud University.

September 1984 – June 1988: École Normale Supérieure de Cachan.

September 1982 – June 1984: Mathématiques supérieures et spéciales, Paris.

Positions

October 2006 – present: Directeur de recherche CNRS.

October 1992 – September 2006: Chargé de recherche CNRS.

October 1988 – September 1992: Attaché temporaire d'enseignement et de recherche, Paris-Sud University.

Visiting Scholar Positions

March 2016 : Universidade Federal do Espírito Santo, Brazil.

July 2012: Imperial College London, London, UK.

April 2002, January 2003, 2004, 2005, 2006, 2007, 2010: Pontificia Universidad Católica de Chile, Santiago, Chile.

October 2000 – November 2000: Universidade da Coruña, A Coruña, Spain.

January 1997 – July 1997: City University of New York, New York, USA.

November 1996: Universidad de Granada, Granada, Spain.

Editorial Activity

Associate Editor, Chilean Journal of Statistics.

Postdoctoral Fellows Supervised

Wajih Benabdallah, Ph.D. from Sup'Com, Tunisia. 12 months funded from Sondra Laboratory, June 2016 – Mai 2017.

Li Song, Ph.D. from Paris-Sud University. 18 months visit funded from Carnot Institute Centrale Supélec Systems Sciences, January 2011 – June 2012.

Thamás Éltető, Ph.D. from Budapest University of Technology and Economics. 24 months visit funded from Gigiteo Labs, September 2008 – August 2010.

Graduate Students Supervised

Higor Cotta, "Multivariate time series with missing observations : application to data of air quality and morbidity caused by pollution", with Valderio Reisen (UFES, Vitória, Brazil), 2016 – 2019.

Paulo Prezotti, "Periodically correlated count time series with excess of zeros and outliers : application de health data", with Valderio Reisen (UFES, Vitória, Brazil), 2016 – 2019.

Ricardo Cardoso, " Statistical methods to model emergency department care demand and patient's length-of-stay", with Flavio Sanson (UFRGS, Rio Grande do Sul, Brazil), 2016 –2019.

Aymeric Thibault, "Asymmetric generalized Gaussian distributions : theory and application to risk measurement", 2015 – 2018.

Alessandro Sarnaglia,"Estimation of incomplete periodic ARMA time series in the presence of outliers", with Valderio Reisen (UFES, Vitória, Brazil), 2016.

Li Song, "Piecewise models for long memory time series", 2010.

Yacine Chakhchoukh, "Contribution à l'estimation robuste des modèles SARIMA : Application à la prévision à court terme de la consommation d'électricité", 2010.

Qi Cheng, "Contribution à l'estimation d'état dans des modèles non linéaires", 2009.

Natalia Bahamonde, "Estimation de séries chronologiques avec données manquantes", 2007.

Mario Tagle, "Modelamiento estadístico de procesos no gaussianos: distribución Epsilon Skew Normal", with Wilfredo Palma, 2007.

Stéphane Chrétien, "Méthodes de projections successives pour l'optimisation non-convexe", with Odile Macchi, 1996.

Michel Krob, "Identification aveugle de modèles non linéaires à l'aide de statistiques d'ordre supérieur", with Messaoud Benidir, 1994.

Teaching

Time series analysis (Postgraduate students).

Probability theory and Mathematical statistics (Undergraduate students).

Administrative Tasks

January 2017 – present: Deputy director of the Laboratoire des Signaux et Systèmes.

September 2016 – present: Executive member for CentraleSupélec in the scientific council of the STIC department of the University Paris-Saclay.

January 2015 – December 2016: Executive member for CentraleSupélec in Systematic Paris-Saclay.

January 2015 – present: member of the steering committee of the Laboratoire des Signaux et Systèmes.

January 2010 – December 2016: Head of the signals and statistics group of the Laboratoire des Signaux et Systèmes (29 faculties and 30 Ph.D. students).

January 1998 – December 2014: Head of the signal statistical modelling team of the Laboratoire des Signaux et Systèmes.

September 2001 – October 2005: Member of the scientific council of the STIC department of the CNRS.

September 2001 – September 2004: Member of the French national council for scientific research.

Journals

[1] C. Solci, V. A. Reisen, A. J. Q. Sarnaglia, and P. Bondon. Empirical study of robust estimation methods for PAR models with application to the air quality area. *Communications in Statistics – Theory and Methods*, À paraître.

[2] V. A. Reisen, A. M. Sgrancio, C. Lévy-Leduc, P. Bondon, E. Z. Monte, H. Cotta, and F. A. Ziegelmann. Robust factor modeling for high-dimensional time series: an application to air pollution data. *Applied Mathematics and Computation*, 346:842–852, 2019.

[3] V. A. Reisen, E. Z. Monte, G. C. Franco, A. M. Sgrancio, F. A. F. Molinares, P. Bondon, F. A. Ziegelmann, and B. Abraham. Robust estimation of fractional seasonal processes: Modeling and forecasting daily average SO_2 concentrations. *Mathematics and Computers in Simulation*, 146:27–43, 2018.

[4] J. B. de Souza, V. A. Reisen, G. C. Franco, M. Ispány, P. Bondon, and J. M. Santos. Generalized additive model with principal component analysis: An application to time series of respiratory disease and air pollution data. *Journal of the Royal Statistical Society Series C - Applied Statistics*, 67(2):453–480, 2018.

[5] I. V. M. Souza, V. A. Reisen, G. C. Franco, and P. Bondon. The estimation and testing of the cointegration order based on the frequency domain. *Journal of Business & Economic Statistics*, 36(4):695–704, 2018.

[6] P. Haessig, B. Multon, H. Ben Ahmed, S. Lascaud, and P. Bondon. Energy storage sizing for wind power: impact of the autocorrelation of day-ahead forecast errors. *Wind Energy*, 18(1):43–57, 2015.

[7] L. Song and P. Bondon. Structural changes estimation for strongly-dependent processes. *Journal of Statistical Computation and Simulation*, 83(10):1783–1806, 2013.

[8] T. Éltető, N. Hansen, C. Germain-Renaud, and P. Bondon. Scalable structural break detection. *Applied Soft Computing*, 12(11):3408–3420, 2012.

[9] L. Song and P. Bondon. Piecewise FARIMA models for long-memory time series. *Journal of Statistical Computation and Simulation*, 82(9):1367–1382, 2012.

[10] P. Bondon and N. Bahamonde. Least squares estimation of ARCH models with missing observations. *Journal of Time Series Analysis*, 33(6):880–891, 2012.

[11] Q. Cheng and P. Bondon. An efficient two-stage sampling method in particle filter. IEEE Transactions on Aerospace and Electronic Systems, 48(3):2666–2672, 2012.

[12] T. Éltető, C. Germain-Renaud, P. Bondon, and M. Sebag. Towards non-stationary grid models. *Journal of Grid Computing*, 9(4):423–440, 2011.

[13] P. Bondon. Estimation of autoregressive models with epsilon-skew-normal innovations. *Journal of Multivariate Analysis*, 100(8):1761–1776, 2009.

[14] W. Palma, P. Bondon, and J. Tapia. Assessing influence in gaussian long-memory models. *Computational Statistics & Data Analysis*, 52(9):4487–4501, 2008.

[15] P. Bondon and W. Palma. A class of antipersistent processes. *Journal of Time Series Analysis*, 28(2):261–273, 2007.

[16] P. Bondon. Influence of missing values on the prediction of a stationary time series. *Journal of Time Series Analysis*, 26(4):519–525, 2005.

[17] W. Palma and P. Bondon. On the eigenstructure of generalized fractional processes. *Statistics & Probability Letters*, 65(2):93–101, 2003.

[18] P. Bondon. Prediction with incomplete past of a stationary process. *Stochastic Processes and their Applications*, 98(1):67–76, 2002.

[19] P. Bondon. Recursive relations for multistep prediction of a stationary time series. *Journal of Time Series Analysis*, 22(4):399–410, 2001.

[20] P. Bondon. Représentation autorégressive du prédicteur à passé infini incomplet d'une série chronologique stationnaire. *Comptes Rendus de l'Académie des Sciences. Série I. Mathématique*, 330(10):915–920, 2000.

[21] P. L. Combettes and P. Bondon. Hard-constrained inconsistent signal feasibility problems. *IEEE Transactions on Signal Processing*, 47(9):2460–2468, 1999.

[22] P. Bondon. Interpolation of complex stationary processes. *IEEE Transactions on Signal Processing*, 46(8):2259–2262, 1998.

[23] C. Bourin and P. Bondon. Efficiency of higher order moment estimates. *IEEE Transactions on Signal Processing*, 46(1):255–258, 1998.

[24] P. Bondon and C. Bourin. Nonlinear infinite extent interpolation of stationary processes. *IEEE Transactions on Signal Processing*, 45(12):3039–3052, 1997.

[25] B. Picinbono and P. Bondon. Second-order statistics of complex signals. *IEEE Transactions on Signal Processing*, 45(2):411–420, 1997.

[26] S. Chrétien and P. Bondon. Cyclic projection methods on a class of nonconvex sets. *Numerical Functional Analysis and Optimization*, 17(1&2):37–56, 1996.

[27] P. Bondon, P. L. Combettes, and B. Picinbono. Volterra filtering and higher order whiteness. *IEEE Transactions on Signal Processing*, 43(9):2209–2212, 1995.

[28] P. Bondon. Invertibility conditions of a class of moment matrices and applications. *IEEE Transactions on Information Theory*, 41(4):1196–1199, 1995.

[29] P. Bondon and M. Krob. Blind identifiability of a quadratic stochastic system. *IEEE Transactions on Information Theory*, 41(1):245–254, 1995.

[30] P. Bondon. Polynomial estimation of the amplitude of a signal. *IEEE Transactions on Information Theory*, 40(3):960–965, 1994.

[31] P. Bondon, M. Benidir, and B. Picinbono. Polyspectrum modeling using linear or quadratic filters. *IEEE Transactions on Signal Processing*, 41(2):692–702, 1993.

[32] P. Bondon and B. Picinbono. De la blancheur et de ses transformations. *Traitement du Signal*, 7(5):385–395, 1990.

Book Chapters

[1] M. Ispány, V. A. Reisen, G. C. Franco, P. Bondon, H. Cotta, P. Prezotti, and F. Sarquis Serpa. On generalized additive models with dependent time series covariates. In I. Rojas, H. Pomares, and O. Valenzuela, editors, *Time Series Analysis and Forecasting - Selected contributions from ITISE 2017*, Contributions to statistics, pages 289–308. Springer International Publishing, 2018.

Invited conferences

[1] P. Bondon, P. Prezotti, V. A. Reisen, M. Ispány, and F. Sarquis Serpa. A model for count time series with periodic two orders autoregressive structure. In *12th International Conference on Computational and Financial Econometrics*, Pisa, Italy, 2018.

[2] P. Bondon. ARCH modeling in the presence of missing data. In *Asilomar Conference on Signals, Systems, and Computers*, pages 39–43, Pacific Grove, USA, 2013.

[3] P. Bondon. Structural changes estimation for long-memory processes. In *12th Latin American Congress of Probability and Mathematical Statistics*, Viña del Mar, Chile, 2012.

[4] P. Bondon and W. Palma. Some limit results about the prediction of long memory processes. In *Congreso Anual de la Facultad de Matemática de la Pontificia Universidad Católica de Chile*, Santiago, Chile, 2007.

[5] P. Bondon and W. Palma. A central limit theorem for the prediction of long memory time series. In *69th Annual Meeting of the Institute of Mathematical Statistics*, Rio de Janeiro, Brazil, 2006.

[6] P. Bondon. Asymptotic properties of linear predictors of long-memory processes. In *IEEE International Workshop on Robust Methods for Power System State Estimation and Load Forecasting – State of the Art and Prospects*, pages 23–30, Paris, France, 2006.

[7] W. Palma and P. Bondon. Finite linear predictors of long-memory time series. In *22nd International Symposium on Forecasting*, page 108, Dublin, Ireland, 2002.

[8] P. L. Combettes and P. Bondon. Constrained pulse shape synthesis for digital communications. In *European Signal Processing Conference*, pages 573–576, Rhodes Island, Greece, 1998.

Communications with proceedings

[1] V. A. Reisen, I. V. M. Souza, G. C. Franco, and P. Bondon. The estimation and testing of the fractional cointegration order based on the frequency domain : A robust approach. In *12th International Conference on Computational and Financial Econometrics*, Pisa, Italy, 2018.

[2] H. Cotta, V. A. Reisen, P. Bondon, and C. Lévy-Leduc. Robust autocovariance estimation from the frequency domain. In *International Work-Conference on Time Series*, pages 42–53, Granada, Spain, 2018.

[3] H. Cotta, V. A. Reisen, P. Bondon, and C. Lévy-Leduc. A robust alternative for the estimation of autocovariance from the frequency domain for multivariate processes. In *International Work-Conference on Time Series*, pages 1011–1012, Granada, Spain, 2018.

[4] M. Ispány, V. A. Reisen, C. Paraiba, and P. Bondon. On subset integer-valued autoregressions. In *12th International Vilnius Conference on Probability Theory and Mathematical Statistics and 2018 IMS Annual Meeting on Probability and Statistics*, page 332, Vilius, Lithuania, 2018.

[5] A. Thibault and P. Bondon. Forecasting intraday risk measures using multiplicative component GARCH model and multimodal distributions. In *International Work-Conference on Time Series*, pages 249–253, Granada, Spain, 2017.

[6] H. Cotta, V. A. Reisen, and P. Bondon. Robust autocovariance estimation from the frequency domain. In *International Work-Conference on Time Series*, pages 1073–1074, Granada, Spain, 2017.

[7] H. Cotta, V. A. Reisen, P. Bondon, and W. Stummer. Robust estimation of covariance and correlation functions of a stationary multivariate process. In *International Work-Conference on Time Series*, pages 47–58, Granada, Spain, 2017.

[8] M. Ispány, J. B. de Souza, V. A. Reisen, G. C. Franco, P. Bondon, and J. M. Santos. An application of the GAM-PCA-VAR model to respiratory disease and air pollution data. In *International Work-Conference on Time Series*, pages 319–320, Granada, Spain, 2017.

[9] W. Ben Abdallah, J.-P. Ovarlez, and P. Bondon. Radar detection schemes for joint temporal and spatial correlated clutter using vector ARMA models. In *European Signal Processing Conference*, Kos island, Greece, 2017.

[10] A. Thibault and P. Bondon. A multimodal asymmetric exponential power distribution: Application to risk measurement for financial high-frequency data. In *European Signal Processing Conference*, Kos island, Greece, 2017.

[11] A. Thibault and P. Bondon. Backtesting expected shortfall with a skewed exponential power distribution in electricity markets. In *European Signal Processing Conference*, pages 2141–2145, Budapest, Hungary, 2016.

[12] A. Thibault and P. Bondon. A skewed exponential power distribution to measure value at risk in electricity markets. In *IEEE Statistical Signal Processing Workshop*, Palma de Mallorca, Spain, 2016. 5 pages.

[13] A. J. Q. Sarnaglia, V. A. Reisen, P. Bondon, and C. Lévy-Leduc. A robust estimation approach for fitting a PARMA model to real data. In *IEEE Statistical Signal Processing Workshop*, Palma de Mallorca, Spain, 2016. 5 pages.

[14] A. J. Q. Sarnaglia, V. A. Reisen, and P. Bondon. Periodic ARMA models: application to particulate matter concentrations. In *European Signal Processing Conference*, pages 2181–2185, Nice, France, 2015.

[15] P. Bondon. Autoregressive models with Epsilon-Skew-Normal innovations. In *European Signal Processing Conference*, pages 2105–2109, Lisboa, Portugal, 2014.

[16] P. Bondon. ARCH modeling in the presence of missing data. In *Asilomar Conference on Signals, Systems, and Computers*, pages 39–43, Pacific Grove, USA, 2013.

[17] P. Bondon. Estimation d'un modèle autorégressif conditionnellement hétéroscédastique en présence de données manquantes. In *24ème Colloque GRETSI*, Brest, France, 2013. 4 pages.

[18] P. Bondon and L. Song. AR processes with non-gaussian asymmetric innovations. In *European Signal Processing Conference*, Marrakech, Morocco, 2013. 5 pages.

[19] L. Song and P. Bondon. A selection criterion for piecewise stationary long-memory models. In *IEEE Statistical Signal Processing Workshop*, pages 908–911, Ann Arbor, USA, 2012.

[20] L. Song and P. Bondon. Modélisation de données à longue mémoire localement stationnaires. In *44ème Journées de Statistique*, Bruxelles, Belgium, 2012. 6 pages.

[21] L. Song and P. Bondon. Modeling non-stationary long-memory signals with large amounts of data. In *European Signal Processing Conference*, pages 2234–2238, Barcelona, Spain, 2011.

[22] L. Song and P. Bondon. Break detection in nonstationary strongly dependent long time series. In *IEEE Statistical Signal Processing Workshop*, pages 577–580, Nice, France, 2011.

[23] L. Song and P. Bondon. A procedure for modeling non-stationary signals with long range dependence. In *18th World Congress of the International Federation of Automatic Control*, pages 4440–4445, Milano, Italy, 2011.

[24] L. Song and P. Bondon. Piecewise model selection for non-stationary long memory data. In *23ème Colloque GRETSI*, Bordeaux, France, 2011. 4 pages.

[25] T. Éltető, C. Germain Renaud, and P. Bondon. Discovering piecewise linear models of grid workload. In *CCGRID 10th IEEE/ACM International Conference on Cluster, Cloud and Grid Computing*, pages 474–484, Melbourne, Australie, 2010.

[26] L. Song and P. Bondon. Modelling piecewise long memory signals based on MDL. In *IEEE International Conference on Acoustic, Speech and Signal Processing*, pages 3782–3785, Dallas, USA, 2010.

[27] P. Bondon and L. Song. A new method for modeling nonstationary FARIMA signals. In *2nd Sondra Workshop on Electromagnetic Modeling, New Concepts and Signal Processing for Radar Detection and Remote Sensing*, pages 208–211, Cargese, France, 2010.

[28] Y. Chakhchoukh, P. Bondon, and L. Mili. Robust short-term load forecasting using projection statistics. In *Third IEEE International Workshop on Computational Advances in Multi-Sensor Adaptive Processing*, pages 45–48, Aruba, Dutch Antilles, 2009.

[29] Q. Cheng and P. Bondon. A modified bootstrap filter. In *IEEE International Workshop on Robotic and Sensors Environments*, pages 134–138, Lecco, Italy, 2009.

[30] Y. Chakhchoukh, P. Panciatici, and P. Bondon. Robust estimation of SARIMA models: application to short-term load forecasting. In *IEEE Statistical Signal Processing Workshop*, pages 77–80, Cardiff, Wales, UK, 2009.

[31] L. Song and P. Bondon. Structural breaks estimation for long-memory signals. In *IEEE Statistical Signal Processing Workshop*, pages 237–240, Cardiff, Wales, UK, 2009.

[32] Q. Cheng and P. Bondon. A new sampling method in particle filter. In *European Signal Processing Conference*, pages 2312–2316, Glasgow, Scotland, 2009.

[33] L. Song and P. Bondon. A local stationary long-memory model for internet traffic. In *European Signal Processing Conference*, pages 1067–1071, Glasgow, Scotland, 2009.

[34] Y. Chakhchoukh, P. Panciatici, P. Bondon, and L. Mili. A new robust estimation method for ARMA models. In *IEEE International Conference on Acoustic, Speech and Signal Processing*, pages 3321–3324, Taipei, Taiwan, 2009.

[35] L. Song and P. Bondon. Structural break estimation for piecewise FARIMA models. In *22ème Colloque GRETSI*, Dijon, France, 2009. 4 pages.

[36] L. Song and P. Bondon. Un modèle FARIMA localement stationnaire. In *41ème Journées de Statistique*, Bordeaux, France, 2009. 5 pages.

[37] L. Song, P. Bondon, Y. Cao, and Q. Cheng. A time-varying FARIMA model for internet traffic. In *2008 International Congress on Image and Signal Processing (CISP 2008)*, volume 5, pages 83–87, Sania, China, 2008.

[38] Q. Cheng and P. Bondon. A new unscented particle filter. In *IEEE International Conference on Acoustic, Speech and Signal Processing*, pages 3417–3420, Las Vegas, USA, 2008.

[39] P. Bondon and W. Palma. Some asymptotic aspects in the prediction of long memory time series. In *2007 NBER/NSF Time Series Conference*, Iowa City, USA, 2007.

[40] W. Palma and P. Bondon. Modeling long-range dependent time series. In *Jornadas Internacionales de Estadística*, Rosario, Argentina, 2006.

[41] P. Bondon and W. Palma. Asymptotics properties of linear predictors of long-memory time series. In *2005 NBER/NSF Time Series Conference*, Heidelberg, Germany, 2005.

[42] P. Bondon and W. Palma. Asymptotics for linear predictors of strongly dependent time series. In *IEEE Statistical Signal Processing Workshop*, pages 502 1–6, Bordeaux, France, 2005.

[43] P. Bondon and W. Palma. Asymptotics for linear predictors of long-memory processes. In *6th World Congress of the Bernoulli Society and 67th Annual Meeting of the Institute of Mathematical Statistics*, Barcelona, Spain, 2004.

[44] P. Bondon and W. Palma. On the convergence of finite linear predictors of long-memory stationary processes. In *Joint Statistical Meeting*, page 176, New York, USA, 2002.

[45] P. Bondon. Prediction of a stationary process with missing data. In *53rd Session of the International Statistical Institute*, Seoul, Korea, 2001.

[46] P. Bondon. Autoregressive representation of the predictor with incomplete past of a stationary time series. In *20th International Symposium on Forecasting*, page 82, Lisbon, Portugal, 2000.

[47] P. Bondon. Prediction of a stationary signal with missing observations. In *IEEE International Conference on Acoustic, Speech and Signal Processing*, volume 1, pages 332–335, Istanbul, Turkey, 2000.

[48] P. Bondon. Relations récursives pour la prédiction à plusieurs pas d'un série chronologique stationnaire. In *31ème Journées de Statistique*, pages 777–780, Grenoble, France, 1999.

[49] P. L. Combettes and P. Bondon. Constrained pulse shape synthesis for digital communications. In *European Signal Processing Conference*, pages 573–576, Rhodes Island, Greece, 1998.

[50] P. Bondon, D. P. Ruiz, and A. Gallego. Recursive methods for estimating multiple missing values of a multivariate stationary process. In *IEEE International Conference on Acoustic, Speech and Signal Processing*, pages 1361–1364, Seattle, USA, 1998.

[51] C. Bourin and P. Bondon. On the identifiability of bilinear stochastic systems. In *IEEE International Signal Processing Workshop on Higher Order Statistics*, pages 176–180, Alberta, Canada, 1997.

[52] P. L. Combettes and P. Bondon. Hard-constrained signal feasibility problems. In *IEEE International Conference on Acoustic, Speech and Signal Processing*, pages 2569–2572, Munich, Germany, 1997.

[53] C. Bourin and P. Bondon. On a class of infinite extent nonlinear interpolators. In *IEEE International Conference on Acoustic, Speech and Signal Processing*, pages 2956–2959, Atlanta, USA, 1996.

[54] C. Bourin and P. Bondon. Efficiency of high-order moment estimates. In *IEEE International Signal Processing Workshop on Higher Order Statistics*, pages 186–190, Begur, Spain, 1995.

[55] P. Bondon and C. Bourin. Some results on infinite extent polynomial interpolation. In *IEEE International Workshop on Nonlinear Signal and Image Processing*, pages 376–379, Porto Carras, Greece, 1995.

[56] P. L. Combettes and P. Bondon. Adaptive linear filtering with convex constraints. In *IEEE International Conference on Acoustic, Speech and Signal Processing*, pages 1372–1375, Detroit, USA, 1995.

[57] P. Bondon and M. Krob. Identification of a quadratic system using only output cumulants. In *European Signal Processing Conference*, pages 1149–1152, Edinburgh, UK, 1994.

[58] P. Bondon. On the identifiability of a quadratic stochastic system. In *IEEE International Signal Processing Workshop on Higher Order Statistics*, pages 237–240, South Lake Tahoe, USA, 1993.

[59] P. Bondon, P. L. Combettes, and B. Picinbono. Volterra prediction models and higher order whiteness. In *IEEE International Conference on Acoustic, Speech and Signal Processing*, pages 301–304, Minneapolis, USA, 1993.

[60] P. Bondon. Linear-quadratic estimation of a parameter. In *IEEE International Workshop on Nonlinear Digital Signal Processing*, pages 6.3 4.1–4.6, Tampere, Finland, 1993.

[61] P. Bondon, M. Benidir, and B. Picinbono. A nonlinear approach to estimate the amplitude of a signal. In *IEEE International Conference on Acoustic, Speech and Signal Processing*, pages 301–304, San Francisco, USA, 1992.

[62] P. Bondon, M. Benidir, and B. Picinbono. On the bispectrum modelling problem. In *IEEE International Signal Processing Workshop on Higher Order Statistics*, pages 237–240, Chamrousse, France, 1991.

[63] P. Bondon, M. Benidir, and B. Picinbono. Bispectrum modelling using quadratic filters. In *IEEE International Conference on Acoustic, Speech and Signal Processing*, pages 3113–3116, Toronto, Canada, 1991.

[64] P. Bondon, M. Benidir, and B. Picinbono. Sur l'inversibilité de la matrice de corrélation d'un vecteur aléatoire à composantes polynomiales. In *13ème Colloque GRETSI*, pages 13–16, Juan-les-Pins, France, 1991.

Softwares

[1] H. Cotta, V. A. Reisen, P. Bondon, and C. Lévy-Leduc. *tsqn: Applications of the Qn Estimator to Time Series (Univariate and Multivariate)*, 2017. R Package version 1.0.0.