CURRICULUM – Paolo Vidoni

General information

Present position
Professor of Statistics at the Department of Economics and Statistics of the University of Udine, Italy.

Education
- Degree in Statistics and Actuarial Sciences, University of Trieste, Italy (March 21, 1991).
- PhD in Statistics, University of Padova, Italy (October 23, 1995), PhD thesis titled "Model selection: a predictive approach" (supervisor: Professor Giancarlo Diana).

Academic positions
- Researcher in Probability and Mathematical Statistics at the Faculty of Mathematics, Physics and Natural Sciences of the University of Udine (1995-2000).
- Associate professor of Statistics at the same Faculty (2000-2006).
- Professor of Statistics at the Department of Economics and Statistics of the University of Udine (2006-present).
- Head of the Department of Statistics of the University of Udine (2007-2010).

Teaching activity

Courses
- Courses of Probability and Mathematical Statistics, Probability, Applied Statistics, Statistics, Biostatistics and Geostatistics at the Faculty of Mathematics, Physics and Natural Sciences of the University of Udine.

Advanced teaching
- Research seminars for the PhD program at the University of Roma "La Sapienza" in 2002.
- Academic board of the PhD program in Mathematics and Physics of the University of Udine (2001-2011).
- Referee for a PhD Thesis at La Trobe University, Victoria, Australia in 2008.

Research activity

Research interests
- Model selection.
- Predictive densities and prediction limits.
- State-space models and stochastic filtering in discrete time.
- Likelihood- and composite likelihood-based inference.
- Non-linear time series.

Refereeing and editorial activity
- Associate editor of the journal "Statistical Methods and Applications" (2008-2011).
- Refereeing activity for "Biometrika", "Bernoulli", "Scandinavian Journal of Statistics", "The Annals of the Institute of Statistical Mathematics", "Statistical Methods and Applications", "Statistica Applicata", "Journal of the Royal Statistical Society ser. B", "Journal of Agricultural, Biological and Environmental Statistics" and "Metron".

Research visits
- Visiting researcher at the Department of Theoretical Statistics, University of Aarhus, Denmark (April-May 1995, June 1996, May 1997), invited by prof. O.E. Barndorff-Nielsen.

Research grants
- Involved in various research programs supported by CNR, MIUR and UE.
- Local coordinator of the research unit of Udine in the research program "Model construction and selection" (Principal investigator: professor Walter Racugno) PRIN 2001.
- Supervisor, in the PRIN 2001 research program, of the research grant "Model selection: theoretical and computational aspects" (dr. Cristiano Varin).
- Local coordinator of the research unit of Udine in the research program "Parametric and non-parametric inference and prediction for time series" (Principal investigator: professor Estela Bee Dagum) PRIN 2004.
- Principal investigator of the research program "New likelihood-based inferential methods for complex statistical models" PRIN 2006.
- Principal investigator of the research program "Approximate likelihood methods for high-dimensional dependencies" PRIN 2008.

Workshop organization
- Organizing committee of the conference "Verso i censimenti del 2000", Udine, 7-9 June 1999.
- Organization of the session titled "Likelihood-based inference for complex statistical models" in the workshop "Complex Data Modeling and Computationally Intensive Statistical Methods for Estimation and Prediction" (S.Co.2007), Venice, 6-8 September 2007.
- Organization of the intermediate workshop of the research program "New likelihood-based inferential methods for complex statistical models", Udine, 9-10 June 2008.

Invited talks at international conferences
- Conference on *Complex Data Modeling and Computationally Intensive Statistical Methods for Estimation and Prediction (S.Co.2009),* Milano, Italy, September 2009.
- Conference on *Complex Data Modeling and Computationally Intensive Statistical Methods for Estimation and Prediction* (S.Co.2011), Padova, Italy, September 2011.
- BIRS workshop on *Composite likelihood methods,* Banff, Canada, April 2012.

Publications

Papers published in international journals

Vidoni, P. (1995). A simple predictive density based on the p^* formula. *Biometrika* **82**, 855-863.

Vidoni, P. (1998). A note on modified estimative prediction limits and distributions. *Biometrika* **85**, 949-953.

Ferrante, M. & Vidoni, P. (1998). Finite dimensional filters for nonlinear stochastic difference equations with multiplicative noise. *Stochastic Processes and their Applications* **77**, 69-81.

Ferrante, M. & Vidoni, P. (1999). A Gaussian-generalized inverse Gaussian finite dimensional filter. *Stochastic Processes and their Applications* **84**, 165-176.

Vidoni, P. (1999). Exponential family state space models based on a conjugate latent process. *Journal of the Royal Statistical Society Ser. B* **61**, 213-221.

Vidoni, P. (1999). On predictive densities and prediction limits for scale and location models. *Journal of the Italian Statistical Society* **8**/2-3, 205-211.

Vidoni, P. (2000). Model selection using the estimative and the approximate p^* predictive densities. *Annals of the Institute of Statistical Mathematics* **52**, 57-70.

Vidoni, P. (2001). Proper dispersion state space models for stochastic volatility. *Scandinavian Journal of Statistics* **28**, 271-281.

Vidoni, P. (2001). Improved prediction limits for continuous and discrete observations in generalized linear models. *Biometrika* **88**, 881-887.

Ferrante, M., Fonseca, G. & Vidoni, P. (2003). Geometric ergodicity, regularity of the invariant distribution and inference for a threshold bilinear Markov process. *Statistica Sinica* **13**, 367-384.

Vidoni, P. (2003). Prediction and calibration in generalized linear models. *Annals of the Institute of Statistical Mathematics* **55**, 169-185.

Vidoni, P. (2004) Constructing non-linear Gaussian time series by means of a simplified state space representation. *Studies in Nonlinear Dynamics and Econometrics* **8** (2) art.9 (http://www.bepress.com/snde/vol8/iss2/art9/).

Vidoni, P. (2004). Improved prediction intervals for stochastic process models. *Journal of Time Series Analysis* **25**, 137-154.

Varin, C. & Vidoni, P. (2005). A note on composite likelihood inference and model selection. *Biometrika* **92**, 519-528.

Vidoni, P. (2006). Response prediction in mixed effects models. *Journal of Statistical Planning and Inference* **136**, 3948-3966.

Varin, C. & Vidoni, P. (2006). Pairwise likelihood inference for ordinal categorical time series. *Computational Statistics and Data Analysis* **51**, 2365-2373.

Vidoni, P. (2008). Improved predictive model selection. *Journal of Statistical Planning and Inference* **138**, 3713-3721.

Varin, C. & Vidoni, P. (2009). Pairwise likelihood inference for general state space models *Econometric Reviews* **28**, 170-185.

Vidoni, P. (2009). Improved prediction intervals and distribution functions. *Scandinavian Journal of Statistics* **36**, 735-748.

Vidoni, P. (2009). A simple procedure for computing improved prediction intervals for autoregressive models. *Journal of Time Series Analysis* **30**, 577-590.

Giummolè, F. & Vidoni, P. (2010). Improved prediction limits for a general class of Gaussian models. *Journal of Time Series Analysis* **31**, 483-493.

Fonseca G., Giummolè F. & Vidoni P. (2012). A note about calibrated prediction regions and distributions. *Journal of Statistical Planning and Inference* **142**, 2726-2734.

Fonseca G., Giummolè F. & Vidoni P. (2013). Calibrating predictive distributions. *Journal of Statistical Computation and Simulation* (to appear).

International conference proceedings

Vidoni, P. (1999). Prediction intervals for generalized linear models. *Proceedings of the 14th International Workshop on Statistical Modelling* (Eds. H. Friedl, A. Berghold & G. Kauermann), Graz, July 1999, 703-706.

Fonseca, G. & Vidoni, P. (2001). Improved prediction limits for a simple threshold bilinear model. *Proceedings of the 16th International Workshop on Statistical Modelling* (Eds. B. Klein & L. Korsholm), Odense, July 2001, 445-448.

Vidoni, P. (2004). Improved redictive model selection criteria for logistic regression. *Proceedings of the 19th International Workshop on Statistical Modelling* (Eds. A. Biggeri, E. Dreassi, C. Lagazio & M. Marchi), Firenze, July 2004, 499-503.

Vidoni, P. (2010). Predictive densities and prediction limits based on predictive likelihoods. In *Complex Data Modeling and Computationally Intensive Statistical Methods* (Eds P. Mantovan, P. Secchi), Springer, 123-136.

Fonseca, G., Giummolè, F. & Vidoni, P. (2010). Improving estimative prediction regions. *Proceedings of the 25th International Workshop on Statistical Modelling* (Ed A. W. Bowman), Glasgow, July 2010, 201-204.

Fonseca, G., Giummolè, F. & Vidoni, P. (2011). Predictive distributions for non-regular parametric models. Proceedings of the 26th International Workshop on Statistical Modelling ((Eds. Conesa D., Forte A., Lopez-Quilez A., Munoz F.)), Valencia, July 2011, 220-223.

Fonseca, G., Giummolè, F. & Vidoni, P. (2011). Prediction in a multidimensional setting. Cladag, Pavia, September 2011. Electronic Proceedings.

Fonseca, G., Giummolè, F. & Vidoni, P. (2011). Bootstrap calibrated predictive distributions for time series. In: Electronic proceedings of the 7th Conference on Statistical Computation and Complex Systems (S.Co.2011). Padova, September 2011, 19-21 settembre 2011.

National conference proceedings

Vidoni, P. (1998). Funzioni di densità predittive e limiti di previsione per modelli di scala e posizione. *Atti della XXXIX Riunione Scientifica della Società Italiana di Statistica*, 327-333, Sorrento, 14-17 aprile 1998.

Vidoni, P. (2000). Nuovi modelli per la varianza stocastica basati su famiglie di dispersione proprie. *Presentato alla XL Riunione Scientifica della Società Italiana di Statistica*, Firenze, 26-28 aprile 2000.

Vidoni, P. (2001). Improved prediction intervals for stochastic process models. *Atti del Convegno su Modelli Complessi e Metodi Computazionali Intensivi per la Stima e la Previsione*, Bressanone, 24-26 settembre 2001, 481-485.

Working papers

Vidoni, P. (1994). La scelta tra modelli statistici: un'impostazione generale. *Dipartimento di Scienze Economiche, Università di Udine*, Working paper 2.1994.

Vidoni, P. (1996). A note on calculation and properties of prediction limits. *Dipartimento di Scienze Statistiche, Università di Udine*, Note di ricerca 4.1996.

Vidoni, P. (1996). State space models: basic stochastic assumptions and conditions for the existence of finite-dimensional filters. *Dipartimento di Scienze Statistiche, Università di Udine*, Note di ricerca 5.1996.

Diana, G., Ventura, L. & Vidoni P. (1997). A method for assessing asymptotic normality of a general goodness-of-fit test based on graphical representation. *Dipartimento di Scienze Statistiche, Università di Padova*, Working paper 18.1997.

Ronchetti, E. & Vidoni, P. (1998). A robust predictive density based on the saddlepoint approximation for M-estimators. *Département d'Économétrie, Université de Genève (CH)*, Working paper 8.1998.

Vidoni, P. (2001). Simple stochastic variance models based on proper dispersion distributions. *Dipartimento di Scienze Statistiche, Università di Udine*, Note di ricerca 3.2001.

Vidoni, P. (2002) Predictive model selection via likelihood-based cross-validation procedures. *Dipartimento di Scienze Statistiche, Università di Udine*, Note di ricerca 9.2002.

Varin, C. & Vidoni, P. (2003) Composite likelihood model selection. *Dipartimento di Scienze Statistiche, Università di Udine*, Note di ricerca 5.2003.

Vidoni, P. (2009). Predictive densities and prediction limits based on predictive likelihoods. *Dipartimento di Scienze Statistiche, Università di Udine*, Note di ricerca 1.2009.

Giummolè, F. & Vidoni, P. (2009). Improved prediction limits for a general class of Gaussian models. *Dipartimento di Scienze Statistiche, Università di Udine*, Note di ricerca 3.2009.

Fonseca, G.,Giummolè, F. & Vidoni, P. (2010). Calibrating predictive distributions. ©Redazioni Provvisorie n.2/2010, Dipartimento di Statistica, Universita' Ca' Foscari di Venezia.

Fonseca, G.,Giummolè, F. & Vidoni, P. (2011). A note about calibrated prediction regions and distributions. *Preprint*.