# Silvia Bianconcini

Department of Statistical Sciences - University of Bologna
Via Belle Arti, 41. Bologna 40126, Italy
Phone: 0039-051-2098183
Skype: silviabi2
email: silvia.bianconcini@unibo.it

## Positions

Oct 2024 - *Full Professor of Statistics*, University of Bologna, Department of Statistical Sciences.

2017 National Full Professor qualification in Statistics [Abilitazione Scientifica Nazionale ai sensi dell'art. 16 della legge 240/2010. Settore 13/D1 - I Fascia. March 31, 2017] .

Dec 2014 - Sept 2024 *Associate Professor of Statistics*, University of Bologna, Department of Statistical Sciences.

Nov 2008 - Nov 2014 *Assistant Professor of Statistics*, University of Bologna, Department of Statistical Sciences.

2006-2008 Research fellowship, Department of Statistical Sciences, University of Bologna. Research project: *Item response theory models for the measurement of cognitive abilities: methodological for multidimensional and sequential adaptive computer testing.* Supervisor: Prof.ssa Paola Monari.

## Education

March 2006 Ph.D. in Statistical Methodology for Scientific Research, Department of Statistical Sciences, University of Bologna. Thesis: *Trend-Cycle Estimation in Reproducing Kernel Hilbert Spaces.* Supervisor: Prof.ssa Estela Bee Dagum. External supervisor: Prof. Hamparsum Bozdogan.

March 2002 Master degree (Laurea) in Statistics and Economics, Faculty of Statistical Sciences, University of Bologna. Thesis: *Approssimazione Lineare di Filtri per la Stima del Trend-Ciclo.* Advisor: Prof.ssa Estela Bee Dagum. Mark: 110/110 cum laude.

## Career Breaks

2017 Maternity leave (5 months).

## Visiting Positions

2009 Visiting researcher, Time Series Research and Analysis Centre, Business Survey Methodology Division, Statistics Canada.

2004-2005 Visiting scholar, Department of Statistics, University of Tennesee, Knoxville, US. Supervisor: Prof. Hamparsum Bozdogan.

## Areas of specialization

Time series and longitudinal data analysis. Statistical inference in latent variable models for mixed data. More specifically, the main topics are: · seasonal adjustment methods; · nonparametric methods for the estimation of unobserved components: signal extraction and real-time trend estimation; · nonlinear latent growth models, and their multivariate extensions; · numerical techniques for approximate likelihood inference in latent variable models.

## Publications

### Books

2016 Bee Dagum E. and Bianconcini S. (2016). *Seasonal adjustment methods and real time trend-cycle estimation*. Statistics for Social and Behavioral Sciences. Springer International Publishing. (E-book ISBN: 978-3-319-31822-6. Hardcover ISBN: 978-3-319-31820-2).

2016 Ziegel Prize winner: http://dx.doi.org/10.1080/00401706.2017.1369780

### Papers in scientific journals

2025 Bianconcini S. and Bollen K.A. (2025).Implications of alternative parameterizations in structural equation models for longitudinal categorical variables. *Psychometrika*. 1 - 34. https://doi.org/10.1017/psy.2024.23

2023 Marchi A., Bertaccini A., Fan W., Zuffi G., Sacchetti S., Nanetti M., Lee C., Agostini A., Lucchini D., Bianconcini S., Zaccanti F., Goffredo S. and Caroselli E. (2023). Refinement of the NISECI ecological index reference conditions for Italian freshwater fish communities in the eastern Emilia-Romagna region. *Ecological Indicators*. 155, 111070.

Bee Dagum E. and Bianconcini S. (2023). Monitoring the direction of the short-term trend of economic indicators. *Econometric Reviews*. 42(5), pp. 421-440.

Bianconcini S., Mignani S. and Mingozzi J. (2023). Assessing maths learning gaps using Italian longitudinal data. *Statistical Methods & Applications*. 32, pp. 911-930.

2022 Bianconcini S. and Cagnone S. (2022). The dimension-wise quadrature estimation of dynamic latent variable models for count data. *Computational Statistics and*

*Data Analysis*. 177,107585.

2021 Bianconcini S. and Cagnone S. (2021). Dynamic latent variable models for the analysis of cognitive abilities in the elderly population. *Statistics in Medicine*. 40, 4410 - 4429.

Mura M., Longo M., Toschi L., Zanni S., Visani F. and Bianconcini S. (2021). The role of geographical scales in sustainability transitions: an empirical investigation of the European industrial context. *Ecological Economics*. 183, 106968 (1-15).

Mura M., Longo M., Toschi L., Zanni S., Visani F. and Bianconcini S. (2021). Industrial carbon emission intensity: a comprehensive dataset of European regions. *Data in Brief*. 36, 107046 (1-4).

Mura M., Longo M., Toschi L., Zanni S., Visani F. and Bianconcini S. (2021). Multilevel-growth modeling for the study of sustainability transitions. *MethodX*. 8, 101359 (1-8).

2019 Lombardini H. and Bianconcini S. (2019). Corpus and dictionary: A statistical representation - Corpus léxico y diccionario: La estricta representatividad estadística. *Orillas*. 8, pp. 675-693.

2018 Bianconcini S. and Bollen K.A. (2018). The Latent Variable - Autoregressive Latent Trajectory (LV-ALT) model: a general framework for longitudinal data analysis. *Structural Equation Modeling: A Multidisciplinary Journal*. 25(5), 791-808.

2017 Bianconcini S., Cagnone S. and Rizopoulos D. (2017). Approximate likelihood inference in generalized linear latent variable models based on dimension-wise quadrature. *Electronic Journal of Statistics*. 11(2), 4404-4423.

2015 Bee Dagum E. and Bianconcini S. (2015). A new set of asymmetric filters for tracking the short-term trend in real-time. *The Annals of Applied Statistics*. 9(3), 1433-1458.

2014 Bianconcini S. (2014). Comments on "Latent Markov models: a review of a general framework for the analysis of longitudinal data with covariates". *TEST*. 23(3), 466-468.

Bianconcini S. (2014). Asymptotic properties of adaptive maximum likelihood estimators in latent variable models. *Bernoulli*. 20(3), 1507-1531.

Bianconcini S. and Cagnone S. (2014). The role of posterior densities in latent variable models for ordinal data. *Communications in Statistics - Theory and Methods*. 43(4), 681-692.

2013 Bee Dagum E. and Bianconcini S. (2013). A unified probabilistic view of nonparametric predictors via reproducing kernel Hilbert spaces. *Econometric Reviews*. 32(7), 848-867.

2012 Bianconcini S. and Cagnone S. (2012). Multivariate latent growth models for mixed data with covariate effects. *Communications in Statistics - Theory and Methods*. 41(16-17), 3079-3093.

Bianconcini S. and Cagnone S. (2012). Estimation of generalized linear latent variable models via fully exponential Laplace approximation. *Journal of Multivariate Analysis*. 112, 183-193.

Bianconcini S. and Cagnone S. (2012). A general multivariate latent growth model with applications to student achievement. *Journal of Educational and Behavioral Statistics*. 37(2), 339-364.

Alexandrov T., Bianconcini S., Bee Dagum E., Maass P. and McElroy T. (2012). A review of some modern approaches to the problem of trend extraction. *Econometric Reviews*. 31(6), 593-624.

Bianconcini S. (2012). Nonlinear and quasi-simplex patterns in latent growth models. *Multivariate Behavioral Research*. 47(1), 88-114.

2010 Bianconcini S. and Quenneville B. (2010). Real-time analysis based on reproducing kernel Henderson filters. *Estudios de Economia Aplicada*. 28-3, 1-22.

2008 Bee Dagum E. and Bianconcini S. (2008). The Henderson smoother in reproducing kernel Hilbert space. *Journal of Business and Economic Statistics*. 26(4), 536-545.

2007 Bianconcini S., Cagnone S., Mignani, S. and Monari, P. (2007). A latent curve analysis of unobserved heterogeneity in University student achievements. *Statistica*. 1, 40-56.

Mignani S., Monari P., Bianconcini S. and Cagnone S. (2007). La riuscita del percorso universitario: un'analisi longitudinale sugli studenti dell'Ateneo di Bologna. *Rivista di Economia e Statistica del Territorio*. 3, 25-38.

### Papers on volumes

2021 Bianconcini S. and Cagnone S. (2021). A multilevel latent variable model for multidimensional longitudinal data. In *Data Analysis and Classification: from the exploratory to the confirmatory approach*. Marie Wiberg, Dylan Molenaar, Jorge González, Ulf Böckenholt, and Jee-Seon Kim. *Quantitative Psychology*. Springer Proceedings in Mathematics and Statistics. 353, 9 - 21.

2010 Bianconcini S. and Cagnone S. (2010). A multilevel latent variable model for multidimensional longitudinal data. In *Data Analysis and Classification: from the exploratory to the confirmatory approach*. Carlo Lauro, Francesco Palumbo, Michael Greenacre Eds.. Studies in Classification, Data Analysis, and Knowledge Organization. Springer-Verlag: Berlin Heidelberg. 329-336.

2009 Bee Dagum E., Bianconcini S. and Monari P. (2009). Nonlinearity in the analysis of longitudinal data. In *Statistical methods for the evaluation of educational services and quality of products*. Paola Monari, Matilde Bini, Domenico Piccolo, Luigi Salmaso Eds.. Physica-Verlag: Berlin, 47-60.

2006 Bee Dagum E. and Bianconcini S. (2006).Local polynomial trend-cycle predictors in reproducing kernel Hilbert spaces for current economic analysis. *Anales de Economia Aplicada*. Delta publicaciones: Madrid. 1-22.

## Proceedings

2023 Bianconcini S. and Cagnone S. (2023). Estimation issues in multivariate panel data. Rampichini C., La Rocca M., Coretto P., Giordano G., Parrella M.L.. *Cladag 2023 book of abstracts and short papers*. Pearson. 74-77.

2021 Bianconcini S. and Cagnone S. (2021). Comparison between different likelihood-based estimation methods in latent variable models for categorical data. Perna C., Salvati N., Schirripa Spagnolo N. *Book of Short Papers SIS 2021*. Pearson. 151 - 156.

2019 Bee Dagum E. and Bianconcini S. (2019). Trend-cycle filters comparison for real-time macroeconomic data. In *JSM Proceedings*, Business and Economic Statistics Section. Alexandria, VA: American Statistical Association. 1-11.

2017 Bee Dagum E. and Bianconcini S. (2017). A comparison of new developments of the Henderson filters for real-time trend-cycle estimation. In *JSM Proceedings*, Business and Economic Statistics Section. Alexandria, VA: American Statistical Association. 1402-1412.

2016 Bee Dagum E. and Bianconcini S. (2016). TA New Set of Asymmetric Filters For Real-Time Trend-Cycle Estimation. In *JSM Proceedings*, Business and Economic Statistics Section. Alexandria, VA: American Statistical Association. 2616-2626.

2014 Bee Dagum E. and Bianconcini S. (2014). The effects of seasonal adjustment methods in nonparametric trend-cycle prediction. In *JSM Proceedings*, Business and Economic Statistics Section. Alexandria, VA: American Statistical Association. 1049-1059.

2013 Bee Dagum E. and Bianconcini S. (2013). Real-time detection of trend-cycle turning points. In *Seventh International Workshop on Simulation - Book of Abstracts*. Department of Statistical Sciences, University of Bologna. Quaderni di Dipartimento - Serie Ricerche 2013, n. 3. 120-121.

2012 Bee Dagum E. and Bianconcini S. (2012). Reducing revisions in real-time trend-cycle estimation. In *JSM Proceedings*, Section on Government Statistics. Alexandria, VA: American Statistical Association. 1830-1841.

Bianconcini S., Cagnone S., Rizopoulos D. (2012). A Dimension Reduction Method for Approximating Integrals in Latent Variable Models for Binary Data. *Proceedings of the XLVI Italian Statistical Society Scientific Meeting*. Padova: Cleup. 1-4.

Bianconcini S. (2012). Asymptotic properties of adaptive Gauss-Hermite-based estimators in latent variable models. *Quaderni di Statistica - Special issue for International conference on "Methods and Models for Latent Variables"*. 14, 41-44.

Bianconcini S., Cagnone S. and Rizopoulos D. (2012). Approximate likelihood inference in latent variable models for categorical data. *Quaderni di Statistica - Special issue for International conference on "Methods and Models for Latent Variables"*. 14, 45-49.

2011 Bianconcini S. and Cagnone S. (2011). Likelihood inference in latent variable models

for ordinal data based on different approximation methods. *SCo 2011 Proceedings*. 1-6.

2010 Bianconcini S., Cagnone S. and Monari P. (2010). Covariate effects in multivariate latent growth models for the analysis of undergraduate student performances. *Joint meeting GfKI 2013 CLADAG 2010. Book of abstracts*. 337-339.

Bianconcini S., Cagnone S. and Monari, P. (2010). Multivariate latent growth models for mixed data with covariate effects on the manifest and latent variables. *XLV meeting of the Italian Statistical Society, Satellite conference on "Statistics for complex problems: the multivariate permutation approach and related topics". Volume of abstracts*. Cleup. 80-82.

2009 Bee Dagum E. and Bianconcini S. (2009). Equivalent reproducing kernels for smoothing spline predictors. In *JSM Proceedings*, Business and Economic Statistics Section. Alexandria, VA: American Statistical Association. 537-545.

Bee Dagum E. and Bianconcini S. (2009). Recent developments in short-term trend prediction for real-time analysis. In *JSM Proceedings*, Business and Economic Statistics Section. Alexandria, VA: American Statistical Association. 78-92.

Bianconcini S. and Mignani S. (2009). Relating nonlinearity to nonstationarity in latent growth models. *Proceedings of the 6th St. Petersburg workshop on simulation*. 482-487.

2008 Bianconcini S. and Mignani S. (2008). Latent variable models for longitudinal data in educational studies. *Atti della XLIV riunione scientifica della Società Italiana di Statistica*. CLEUP ed. 225 -232.

Bianconcini S. and Cagnone S. (2008). Multivariate latent growth models for continuous repeated measures. *Book of short papers, SFC-CLADAG 2008*. Edizioni Scientifiche Italiane. 181 - 184.

2007 Bianconcini S., Cagnone S., Mignani S. and Monari P. (2007). Student mobility and academic achievement: a temporal analysis for Bologna University. *Atti del Convegno "Valutazione e Customer Satisfaction per la Qualità dei Servizi*. Università Tor Vergata. pp. 39-42.

Bianconcini S., Cagnone S., Mignani S. and Monari P. (2007). A latent curve analysis for evaluating student achievement in the University of Bologna. *Proceedings of the 56th session of the ISI*. 1-4.

Bianconcini S. and Cagnone S. (2007). A multilevel latent variable model for multidimensional and longitudinal data. *Book of short papers, CLADAG 2007*. Eum 2013 Edizioni Università di Macerata. 483 - 486.

### Working papers and other

2008 Bee Dagum E. and Bianconcini S. (2008). *A Unified Probabilistic View of Nonparametric Predictors via Reproducing Kernel Hilber Spaces*. Quaderni di Dipartimento di Scienze Statistiche "Paolo Fortunati". Serie Ricerche 2008. 6. 1-26..

Alexandrov T., Bianconcini S., Bee Dagum E., Maass P. and McElroy T. (2008). *A review of some modern approaches to the problem of trend extraction.* SRD Research Report No. RRS2008-3,U.S. Census Bureau.

Bianconcini S. (2008). *A reproducing kernel perspective of smoothing spline estimators.* Dipartimento di Scienze Statistiche "Paolo Fortunati". Serie Ricerche 2008. 3. 1-43.

2006 Bee Dagum E. and Bianconcini S. (2006). *A theoretical comparison between classical and reproducing kernel Hilbert space Hederson predictors.* Euroindicators Working Paper. Catalogue number: KS-DT-06-003-EN-N. Eurostat. Luxembourg.

Bianconcini S. (2006). *Trend-cycle estimation in reproducing kernel Hilbert spaces.* Ph.D. Thesis. Department of Statistics "Paolo Fortunati", University of Bologna. 1-147.

## Editorial and reviewer activities

2022-2028 Elected Member of the Editorial Council of *Psychometrika*.

Reviewer for Mathematical Reviews.

Referee for the following journals: Advances in Data Analysis and Classification, Bernoulli, Biometrika, British Journal of Mathematical and Statistical Psychology, Communications in Statistics - Theory and Methods, Computational Statistics, Computational Statistics and Data Analysis, Econometric Reviews, Economics Bulletin, Empirical Economics, Environmetrics, Journal of the American Statistical Association, Journal of Agricultural, Biological, and Environmental Statistics, Journal of Business and Economic Statistics, Journal of Multivariate Analysis, Journal of Official Statistics, Journal of Statistical Software, Metron, Psychometrika, Statistica, Statistical Methods and Applications, Statistical Methods in Medical Research, Statistical Modeling, Statistics and Computing, Structural Equation Modeling: a Multidisciplinary Journal.

2022 External Reviewer for the New Frontiers in Research Fund – Exploration 2022 competition (NFRFE 2022), Canada.

Reviewer panel member of the VQR 2015-2019, Italy.

2021 External Reviewer for the New Frontiers in Research Fund – Exploration 2021 competition (NFRFE 2021), Canada.

## Other activities

### Participation to international societies

2015- Member of the ERCIM working group on Computational and Methodological Statistics.

2013 Member of the Bernoulli Society.

2008- Member of the Italian Statistical Society.

2008- Member of the Psychometric Society.

2006- Member of the American Statistical Association.

2006- Member of the Royal Statistical Society.

### Research grants and awards

2017 Beneficiary of the Fund for Research-Based Activities (FFABR) assigned by the National Evaluation Agency of the University system and the Research (ANVUR), 2017.

2016 2016 Ziegel Award promoted by the American Statistical Association for the best-reviewed book by *Technometrics* assigned to the book "Seasonal Adjustment Methods and Trend-Cycle Estimation" (http://dx.doi.org/10.1080/00401706.2017.1369780).

Member of the research group on the following FIRB (Futuro in Ricerca) research group:

2012-2016 "Mixture and latent variable models for causal inference and analysis of socio-economic data". National coordinator: prof. Francesco Bartolucci. Local coordinator: dott. Silvia Cagnone.:

Member of the research group on the following European project:

2011-2012 "EATWELL. Interventions to promote healthy eating habits: evaluation and recommendations". UNIBO team leader: prof. Mario Mazzocchi.
Sito web: http://www.eatwellproject.eu/en/.

2009 Marco Polo scholarship for a period of visiting research at Statistics Canada. Ottawa, Canada.

Member of following PRIN research groups (Progetti di Ricerca di Interesse Nazionale, financed by the Italian Ministry of Education):

2008-2010 "Latent structure analysis: new boundaries in statistical methods and models". National and local coordinator: prof. Paola Monari.

2006-2008 "Statistical methods and models for the evaluation of educational processes". National and local coordinator: prof. Paola Monari.

2004-2006 "Parametric and nonparametric estimation and forecasting of time series conditional moment dynamics". National and local coordinator: prof. Estela Bee Dagum.

2002-2004 "Statistical inference on the stochastic and deterministic dynamic of observed time series". National and local coordinator: prof. Estela Bee Dagum.

2004 Marco Polo scholarship for a period of visiting research at the University of Knoxville - Department of Statistics. Tennessee, US.

## Conferences, invited relations, seminar

### Organization

15-18 July 2025 Annual Meeting of the *Psychometric Society*. Minneapolis, Minnesota, US (Scientific Committee).

11-15 July 2022 Annual Meeting of the *Psychometric Society*. Bologna, Italy (Scientific and Organizing Committee).

9-11 Sept 2021 (Virtual) Scientific Meeting of the *Classification and Data Analysis Group*. Firenze, Italy (Scientific Committee) .

21-23 July 2021 (Virtual) Annual Meeting of the *Psychometric Society*. College Park, Maryland, US (Scientific Committee).

9-13 July 2018 Organized Symposium on *Recent Advances in the Analysis of Complex Data Structures*. Annual Meeting of the Psychometric Society, IMPS 2018. New York, US.

06-08 July 2015 Conference of the *International Federation of Classification Societies*. Bologna, Italy (Organizing Committee).

12-14 Sept 2012 International workshop on *Structural equation modeling and latent variable models*. Bologna, Italy (Organizing Committee).

17-19 May 2012 Final conference PRIN 2008 on *Methods and models for latent variables*. Naples, Italy (Organizing Committee).

25-29 May 2009 Final workshop PRIN 2006 on *Statistical methods and models for the evaluation of the educational processes*. Rimini, Italy (Executive Committee).

14-16 June 2007 Final workshop PRIN 2004 on *Parametric and Nonparametric Estimation and Forecasting of Conditional Moment Dynamics*. Villa Mondragone, Roma, Italy (Executive Committee).

9-11 June 2005 Final workshop COFIN 2002 on *Inferenza statistica sulla dinamica stocastica e deterministica di serie storiche osservate*. Bressanone, Italy (Executive Committee).

### Invited seminars

2013 Bianconcini S. and Cagnone S. Approximate likelihood inference in generalized linear latent variable models. Erasmus University Rotterdam, Center for Quantitative Methods. 27 september 2013.

2011 Bianconcini S. and Cagnone S. Multivariate latent growth models for mixed and longitudinal data. Faculty of Political Sciences. The University of Naples "Federico II". 23 june 2011.

2009 Bianconcini S. Trend-cycle predictors in reproducing kernel Hilbert spaces (Part I). Time Series Research and Analysis Centre. Business Survey Methodology Division. Statistics Canada. 18 june 2009.

Bianconcini S. Trend-cycle predictors in reproducing kernel Hilbert spaces (Part II). Time Series Research and Analysis Centre. Business Survey Methodology Division. Statistics Canada. 24 june 2009.

### Communications

2024 Bianconcini S. and Bollen K.A. (2024). Implications of alternative parameterizations in structural equation models for longitudinal categorical variables. Annual meeting of the Psychometric Society. Prague,16-19 july 2024.

Bianconcini S. and Bollen K.A. (2024). Implications of alternative parameterizations in structural equation models for longitudinal categorical variables. Workshop on latent variable models for complex data. Udine, 4 june 2024.

2023 Bianconcini S. and Cagnone S. (2023). Estimation issues in multivariate panel data, CLADAG 2023. Salerno, 11-13 september 2023.

2022 Bianconcini S. and Cagnone S. (2022). Approximate likelihood estimation of dynamic latent variable models for count data. 24th International Conference on Computational Statistics (COMPSTAT 2022). Bologna, 23-26 august 2022.

2021 Bianconcini S. and Cagnone S. (2021). Comparison between different estimation methods in dynamic latent variable models for categorical data. (Virtual) Meeting of the Psychometric Society. 19-23 july 2021.

Bianconcini S. and Cagnone S. (2021). Comparison between different likelihood-based estimation methods in latent variable models for categorical data. (Virtual) Meeting of the Italian Statistical Society. 21-25 june 2021.

2020 Bianconcini S. and Cagnone S. (2020). Comparison between different estimation methods of factor models for longitudinal ordinal data. (Virtual) International

Meeting of the Psychometric Society. 13-17 july 2020.

2019 Bianconcini S. and Cagnone S. (2019). Dimension-wise likelihood estimation of latent vector autoregressive models. CFE-CMStatistics 2019. London, UK. 14-16 december 2019.

Bee Dagum E. and Bianconcini S. (2019). Trend-cycle filters comparison for real-time macroeconomic data. Joint Statistical Meeting of the American Statistical Association. Denver, CO. July 27 - august 1, 2019.

2018 Bianconcini S. and Cagnone S. (2018). Approximate inference in latent variable models based on dimension-wise quadrature. CFE-CMStatistics 2018. Pisa, Italy. 14-16 december 2018.

Bianconcini S. and Cagnone S. (2018). Inference based on dimension-wise quadrature for the analysis of multidimensional longitudinal data. IMPS 2018, International Meeting of the Psychometric Society. New York, US. 9-13 july 2018..

2017 Bee Dagum E. and Bianconcini S. (2017). A comparison of new developments of the Henderson filters for real-time trend-cycle estimation. Joint Statistical Meeting of the American Statistical Association. Baltimore, MD. July 29 - august 3, 2017.

Bianconcini S. and Cagnone S. (2017). Latent variable models for the analysis of cognitive functioning over time. IMPS 2017, International Meeting of the Psychometric Society. Zurich, Switzerland. 17-21 july 2017.

2016 Bianconcini S., Cagnone S., and Rizopoulos D. (2016). Approximate likelihood inference via dimension reduction in latent variable models for categorical data. 22nd International Conference on Computational Statistics (COMPSTAT 2016). Oviedo, Spain. 23-26 august 2016.

Bee Dagum E. and Bianconcini S. (2016). A new set of asymmetric filters for real-time trend-cycle estimation. Joint Statistical Meeting of the American Statistical Association. Chicago, IL. July 30 - august 4, 2016.

2015 Bianconcini S., Cagnone S., and Rizopoulos D. (2015). Approximate likelihood inference in generalized linear latent variable models based on integral dimension reduction. 8th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2015). London, UK. 12-14 december 2015.

Bianconcini S. and Bollen K.A. (2015). The latent variable ALT model: a general framework for longitudinal data. IMPS 2015, International Meeting of the Psychometric Society. Bejing, China. 12-16 july 2015.

2014 Bianconcini S., Cagnone S., and Rizopoulos D. (2014). Approximate likelihood inference via dimension reduction in latent variable models. Joint Statistical Meeting of the American Statistical Association. Boston, MA. 2-7 august 2014.

Bee Dagum E. and Bianconcini S. (2014). The effects of seasonal adjustment methods in nonparametric trend-cycle prediction. Joint Statistical Meeting of the American Statistical Association. Boston, MA. 2-7 august 2014.

Bianconcini S., Cagnone S., and Rizopoulos D. (2014). Approximate likelihood inference in latent variable models with application to the Health and Retirement Study. PLS2014 8th International Conference on Partial Least Squares and Related Methods. Paris, France. 26- 28 may 2014.

2013 Bee Dagum E. and Bianconcini S. (2013). Real-time trend-cycle prediction via linear filters that minimize revisions and turning point detection. The 7th International Conference on Computational and Financial Econometrics (CFE 2013). University of London. London, UK. 14-16 december 2013.

Bee Dagum E. and Bianconcini S. (2013). Real-time trend-cycle prediction via linear filters that minimize revisions and turning point detection. Statistiche Woche. Freie Universitat Berlin. Berlin, Germany. 17-20 september 2013.

Bee Dagum E. and Bianconcini S. (2013). Real-time detection of trend-cycle turning points. Joint Statistical Meeting of the American Statistical Association. Montréal, Canada. 3-8 august 2013.

Bianconcini S., Cagnone S., and Rizopoulos D. (2013). Approximate likelihood inference via dimension reduction for multidimensional binary panel data. SIS 2013 Statistical Conference - Advances in Latent Variables: Methods, Models and Applications. Brescia, Italy. 19- 21 june 2013.

Bee Dagum E. and Bianconcini S. (2013). Real-time detection of trend-cycle turning points. Seventh International Workshop on Simulation. Rimini, Italy. 21-25 may 2013.

2012 Bee Dagum E. and Bianconcini S. (2012). Reducing Revisions in Real-Time Trend-Cycle Estimation. Joint Statistical Meeting of the American Statistical Association. San Diego - CA, 28 july - 1 august, 2012.

Bianconcini S., Cagnone S. and Rizopoulos D. (2012). Approximate likelihood inference in generalized linear latent variable models. The 77th annual meeting of the Psychometric Society. Lincoln - NE, 10-12 july 2012.

Bianconcini S., Cagnone S. and Rizopoulos D. (2012). A dimension reduction method for approximating integrals in latent variable models for binary data. XLVI meeting of the Italian Statistical Society. Rome, 20-22 june 2012.

Bianconcini S. (2012). Asymptotic properties of adaptive Gauss-Hermite-based estimators in latent variable models. International conference on "Methods and Models for Latent Variables". Naples, 17-19 may 2012.

Bianconcini S., Cagnone S. and Rizopoulos D. (2012). Approximate likelihood inference in latent variable models for categorical data. International conference on '"Methods and Models for Latent Variables". Naples, 17-19 may 2012.

2011 Bianconcini S. and Cagnone S. (2011). Likelihood inference in latent variable models for ordinal data based on different approximation methods. [Invited paper]. SCO 2011. Padua, 19-21 september 2011.

2010 Bianconcini S. and Cagnone S. (2010). Approximate maximum likelihood inference in latent variable models for ordinal data. ERCIM10 and CFE10 Conference. London, 10-12 december 2010.

Bianconcini S., Cagnone S. and Monari, P. (2010). Covariate effects in multivariate latent growth models for the analysis of undergraduate student performances. Joint meeting GfKI - CLADAG 2010. Florence, 8-10 september 2010.

Bianconcini S., Cagnone S. and Monari, P. (2010). Multivariate latent growth models for mixed data with covariate effects on the manifest and latent variables. XLV meeting of the Italian Statistical Society, Satellite conference on "Statistics for complex problems: the multivariate permutation approach and related topics". Padua, 14-15 June 2010.

2009 Bee Dagum E. and Bianconcini S. (2009). Equivalent reproducing kernels for smoothing spline predictors. Joint Statistical Meeting of the American Statistical Association. Washington D.C., 1-6 August 2009.

Bee Dagum E. and Bianconcini S. (2009). Recent developments in short-term trend prediction for real-time analysis. [Invited paper]. Joint Statistical Meeting of the American Statistical Association. Washington D.C., 1-6 August 2009.

Bianconcini S. and Cagnone S. (2009). A general multivariate growth models with application in student achievements. IMPS Psychometric meeting 2009. Cambridge, UK, 21-24 July 2009.

Bianconcini S. and Mignani S. (2009). Relating nonlinearity to nonstationarity in latent growth models. 6th workshop on simulation. St. Petersburg, 27 June -3 July 2009.

2008 Bee Dagum E., Bianconcini S. and Monari P. (2008). A longitudinal analysis for the ranking of university performances. Statistical Modeling for University Evaluation: an International Overview. Baia delle Zagare, Italy, 5-6 September 2008.

Bianconcini S. and Mignani S. (2008). Latent variable models for longitudinal data in educational studies. [Invited paper]. XLIV meeting of the Italian Statistical Society. Arcavata di Rende, Italy, 25-27 June 2008.

Bianconcini S. and Cagnone S. (2008). Multivariate latent growth models for continuous repeated measures. First Joint Meeting of the Societe Francophone de Classification and the CLAssification and Data Analysis Group of the Italian Statistical Society. Caserta, Italy, 11-13 June 2008.

2007 Bianconcini S. and Cagnone S. (2007). A multilevel latent variable model for multidimensional longitudinal data. Sixth Scientific Meeting of the CLAssification and Data Analysis Group of the Italian Statistical Society. Universita di Macerata, 12-14 September 2007.

Bianconcini S., Cagnone S., Mignani S. and Monari P. (2007). A latent curve analysis for evaluating student achievement in the University of Bologna. 56th Session of the ISI 2013 International Statistical Institute. Lisbona, 22-29 August 2007.

Bee Dagum E. and Bianconcini S. (2007). A unified probabilistic view of linear trend-cycle predictors via reproducing kernel Hilbert spaces. Final Workshop on "Parametric and Nonparametric Estimation and Forecasting of Conditional Moment Dynamics." Villa Mondragone, Roma, 14-16 June 2007.

Bee Dagum E. and Bianconcini S. (2007). Local polynomial trend-Cycle predictors for current economic analysis. International Workshop on "Computational and Financial Econometrics." Geneve, 20-22 April 2007.

Bianconcini S., Cagnone, S., Mignani S. and Monari P. (2007). Student mobility and academic achievement: a temporal analysis for Bologna University. Convegno su "Valutazione e Customer Satisfaction per la Qualita dei Servizi". Universita Tor Vergata, Roma, 12-13 April 2007.

Bianconcini S., Cagnone S., Mignani S. and Monari P. (2007). The mobility effect on the academic performance of University students. Workshop on Statistical Models for Student Evaluation in the University Educational Processes. Bologna, 6 February 2007.

Bianconcini S. (2007). LOESS asymmetric filters for real-time economic analysis. Second Italian Congress of Econometrics and Empirical Economics. Rimini, 25-26 January 2007.

2006 Bee Dagum E. and Bianconcini S (2006). A theoretical comparison between classical and reproducing kernel Hilbert space Henderson predictors. [Invited paper]. Conference on Seasonality, Seasonal Adjustment and Their Implications for Short-Term Analysis and Forecasting. Eurostat, Luxembourg, 10-12 May 2006.

## Institutional responsabilities (selected)

2022 - Director. Board of Directors. UNA Europa alliance.

2021 - Delegate for UNA Europa. Vice-Rectorship for International Relations. University of Bologna.

2019 - Member of the advisory board of the Ph.D. program in *Future Earth, Climate Change and Societal Changes*. Interdepartmental Ph.D. program. University of Bologna.

2021 Coordinator of the "Progetto Lauree Scientifiche - PLS" - Statistics. Department of Statistical Sciences. University of Bologna.

2015 - 2021 Delegate at the Guidance (intake, in itinere, outgoing). Department of Statistical Sciences. University of Bologna.

2015-2018 Member of the Teaching Committee. Department of Statistical Sciences. University of Bologna.

2012-2015 Member of the Guidance Committee. Department of Statistical Sciences. University of Bologna.

## Teaching

### PhD courses

2021-2022
2020-2021 Statistical methods for climate change analysis (24 hrs, with Prof. M. Chiogna). Ph.D. in *Future Earth, Climate Change and Societal Changes*. Interdepartmental Ph.D. course. University of Bologna.

2019-2020 Elements of statistical learning (24 hrs, with Prof. M. Chiogna). Ph.D. in *Future Earth, Climate Change and Societal Changes*. Interdepartmental Ph.D. course. University of Bologna.

2018-2019 Computational statistics (15 hrs). Ph.D. in *Computer Science and Engineering*. Department of Computer Science and Engineering. University of Bologna.

### Bachelor's and Master's degree courses

2019 - Time series analysis. Department of Statistical Sciences, University of Bologna.
Longitudinal data analysis. Department of Statistical Sciences, University of Bologna.
Statistics. Political Sciences School. University of Bologna (sede di Forli).

2018-2019 Computational statistics. Department of Statistical Sciences, University of Bologna.
2017-2018 Time series analysis. Department of Statistical Sciences, University of Bologna.
2016-2017 Longitudinal data analysis. Department of Statistical Sciences, University of Bologna.
Statistics (M-Z). Political Sciences School. University of Bologna (sede di Forli).

2015-2016 Computational statistics. Department of Statistical Sciences, University of Bologna.
Time series analysis. Department of Statistical Sciences, University of Bologna.
Statistics (A-L 2). Political Sciences School. University of Bologna.

2014-2015 Computational statistics. Department of Statistical Sciences, University of Bologna.
Time series analysis. Department of Statistical Sciences, University of Bologna.
Statistics (A-L). Political Sciences School. University of Bologna (sede di Forli).

2013-2014 Computational statistics. Department of Statistical Sciences, University of Bologna.
2012-2013 Time series analysis. Department of Statistical Sciences, University of Bologna.

2011-2012 Computational statistics. Faculty of Statistics, University of Bologna.
Time series analysis. Faculty of Statistics, University of Bologna.
Statistical methods for data analysis. Faculty of Economics. University of Bologna (sede di Forli).

2010-2011 Statistical and Financial Lab. Faculty of Statistics, University of Bologna. (sede di Rimini).
Computational statistics. Faculty of Statistics, University of Bologna.
Statistical methods for data analysis. Faculty of Economics. University of Bologna (sede di Forli).

200-2010 Statistical and Financial Lab. Faculty of Statistics, University of Bologna. (sede di Rimini).

2008-2009 Statistics and Probability. Tutorial, Faculty of Statistics, University of Bologna.
2007-2008 (sede di Rimini).
Statistical Inference. Tutorial, Faculty of Statistics, University of Bologna.

2006-2007 Time Series - Advanced Course. Tutorial, Faculty of Statistics, University di Bologna.
Time Series Analysis. Tutorial, Faculty of Statistics, University di Bologna. (sede di Rimini).
Statistics. Tutorial, Faculty of Statistics, University di Bologna. (sede di Rimini).
E-learning materials for the courses of "Statistica", "Analisi delle Serie Storiche", "Analisi Statistica Multivariata". Faculty of Statistics, University di Bologna. (sede di Rimini).

2005-2006 Statistical Methods for Business and Economics. Tutorial, Faculty of Economics, University of Bologna (polo didattico di Forli).
Statistics. Tutorial, Faculty of Economics, University of Bologna (polo didattico di Forli).
Multidimensional Data and Time Series Analysis. Tutorial, Faculty of Statistics, University of Bologna.

2004-2005 Multidimensional Data and Time Series Analysis. Tutorial, Faculty of Statistics,
2003-2004 University di Bologna.