

CATERINA LIBERATI

ADDRESS

University of Milano-Bicocca
Department of Economics
Management and Statistics (DEMS)
p.zza Ateneo Nuovo 1, 20126 Milano, Italy.

CONTACTS

Tel. (+39)0264483229
email: caterina.liberati@unimib.it

RESEARCH TOPICS

Supervised Learning, Unsupervised Classification, SMEs, Unconventional Data Sources, Digital Economy.

CURRENT POSITIONS

- 2024- Director of the WebSight Observatory (<https://websight.unimib.it>)
- 2019- Associate Professor in Statistics for Economics

FORMER POSITIONS

- 2019-2023 Council Member of the International Society for Business and Industrial Statistics (ISBIS)
- 2010-2019 Assistant Professor in Statistics for Economics at the University of Milano-Bicocca
- 2006-2010 Post Doc Fellow in Statistics at University of Bologna.
- 2001-2003 Consultant at Simbologica srl

EDUCATION

- 2002-2006 Ph.D. in Statistics at University of Bologna.
- 2001 Laurea (MSc eq.) in Statistics for Economics at University of Bologna

VISITING

- 2018 Visiting Fellow at the Business School of the University of Edinburgh (2 weeks funded by the International Exchange Program Bilateral: Accademia dei Lincei-The Royal Society of Edinburgh)
- 2015 Visiting Fellow at the Business School of the University of Edinburgh (3 months funded by DEMS Department University of Milano-Bicocca)
- 2007-2008 Visiting Fellow at the Statistical Department, College of Business Administration, University of Tennessee (6 months funded by Marco Polo grant)
- 2004-2005 Visiting Ph.D. at the Statistical Department, College of Business Administration, University of Tennessee (6 months funded by Marco Polo grant).

AFFILIATIONS

Member of the following Scientific Societies:

- 2021- International Statistical Institute (ISI)
- 2016- Italian Statistical Society (SIS)
- 2016- European Network for Business and Industrial Statistics (ENBIS)
- 2013- International Society for Business and Industrial Statistics (ISBIS)

Member of the following Research Centers:

- 2020- Center for European Studies (CefES-DEMS)
- 2012- Bicocca-Applied Statistic Center (B-ASC)

PUBLICATIONS

Scientific Journals:

Crosato, L., Domenech, J., Liberati, C. (2024). Websites' data: a new asset for enhancing credit risk modeling. *Annals of Operations Research*, 342(3), 1671-1686.

Bottai, C., Crosato, L., Domenech, J., Guerzoni, M., Liberati, C. (2024). Scraping innovative-ness from corporate websites: Empirical evidence on Italian manufacturing SMEs. *Technological Forecasting and Social Change*, 207, 123597.

Crosato, L., Liberati, C., Repetto, M. (2023). Lost in a black-box? Interpretable machine learning for assessing Italian SMEs default. *Applied Stochastic Models in Business and Industry* (39), 829-846.

Crosato, L., Domenech, J., Liberati, C. (2021) Predicting SME's default: are their websites informative? *Economics Letters*, 204, 109888.

Depperu, D., Magnani, G., Crosato, L., Liberati, C. (2021) Growth of Firms in a Fragmented Cultural Industry: Italian Commercial Art Galleries' Competitive Strategies. *Sustainability*, 13(9) 5057.

Arrigo, E., Liberati, C., Mariani, P. (2021) Social Media Data and Users' Preferences: a Statistical Analysis to support Marketing Communication. *Big Data Research* 24(15), 100189.

Liberati, C., Longaretti, R., Michelangeli, A. (2021) Measuring Tolerant Behavior. *Jahrbücher für Nationalökonomie und Statistik*, 241(2), 149-171.

Decataldo, A., Liberati, C., Michelangeli, A., Tognetti, M. (2019). Millennials e religione : divergenza o continuità rispetto alla generazione dei genitori? *Religioni e Società*, XXXIV(93), 21-28.

Liberati, C., Camillo, F. (2018) Personal Values and Credit Scoring: new insights in the financial prediction. *Journal of the Operational Research Society* 69(12): 1994-2005.

Liberati, C., Mariani, P. (2018) Dynamic profiling through repeated surveys: a customer satisfaction study. *Electronic Journal of Applied Statistical Analysis*, 11(1): 1-20.

Liberati, C., Camillo, F., Saporta, G. (2017) Advances in Credit Scoring: combining performance and interpretation in Kernel Discriminant. *Advances in Data Analysis and Classification*, 11(1): 121-138.

Masserini, L., Liberati, C., Mariani, P. (2017) Quality service in banking: a longitudinal approach. *Quality & Quantity* 51(2): 509-523.

Falotico, R., Liberati, C., Zappa, P. (2015). Identifying oncological patient information needs to improve e-health communication, *Quality and Reliability Engineering International*, 31(7): 1115-1126.

Liberati, C., Marzo, M., Zagaglia, P., Zappa, P. (2015) Drivers on demand and supply in the Euro market: the role of "key players" during the recent turmoil. *Financial Markets and Portfolio Management*, 29(3): 207-250.

Liberati, C., Camillo, F. (2015) Discovering hidden concepts in predictive models for texts' polarization. *International Journal of Data Warehousing and Mining*, 11(4): 29-48

Biselli, M., Dall'Agata, M., Gramenzi, A., Gitto, S., Liberati, C., Ravaioli, M., Gambato, M., Montalti, R., Pinna, A.D., Burra, P., Gerunda, G.E., Erroi, V., Cillo, U., Andreone, P., Bernardi, M. (2015) A new prognostic model to predict drop-out from the waiting list in cirrhotic candidates for liver transplantation with MELD score < 18. *Liver International*, 35(1): 184-191.

Liberati, C., Mariani, P. (2012). Banking Customer Satisfaction Evaluation: a Three-way Factor Perspective. *Advances in Data Analysis and Classification*, 6(4): 323-336.

Lacangellera, M., Liberati, C., Mariani, P. (2011). Banking Services Evaluation: a Dynamic Analysis. *Journal of Applied Quantitative Methods*, 6(4): 3-13.

D'Attoma, I., Liberati, C. (2011). An Optimal Cluster-Based Approach for Subgroup Analysis Using Information Complexity Criterion. *International Journal of Business Intelligence and Data Mining*, 6(4): 402-425.

Liberati, C., Howe, A.J., Bozdogan, H. (2009). Data Adaptive Simultaneous Parameter and Kernel Selection in Kernel Discriminant Analysis (KDA) Using Information Complexity. *Journal of Pattern Recognition Research*, 4(1): 119-132.

Book Chapters:

Bianchi, F., L. Crosato, and C. Liberati (2024) La previsione della sofferenza finanziaria dei comuni italiani: un approccio data-driven. *VII Rapporto Ca'Foscari sui comuni. 2024-I comuni nella nuova governance europea della finanza pubblica*. Castelveccchi, 2024. 303-321.

Bongini, P., Iwanicz-Drozowska, M., Liberati, C. (2023). Business continuity planning and management. *COVID-19 and European Banking Performance: Resilience, Recovery and Sustainability*, Wachtel P., Miklaszewska E. (Eds) Routledge, pp.64-86.

Bottai, C., Crosato, L., Domenech, J., Guerzoni, M., Liberati, C. (2022). Unconventional data for policy: Using Big Data for detecting Italian innovative SMEs. In *Proceedings of the 2022 ACM Conference on Information Technology for Social Good*. Association for Computing Machinery, NY. pp. 338-344.

Liberati, C., Mariani P. (2018). Big Data Meet Pharmaceutical Industry: An Application on Social Media Data, in *Classification, (Big) Data Analysis and Statistical Learning*, Mola F., Conversano C., Vichi M. (Eds), Springer, 23-30.

Liberati, C., Mariani, P., Masserini, L. (2015) A latent growth curve analysis in banking customer satisfaction, in *Advances in Latent Variables, Studies in Theoretical and Applied Statistics*, Carpita M., Brentari E., Qannari E.M. (Eds.), Springer, 151-158.

Liberati, C., Mariani, P. (2014) Dynamic customer satisfaction and measure of trajectories: a banking case, in *Analysis and Modeling of Complex Data in Behavioral and Social Sciences*, Studies in Classification, Data Analysis, and Knowledge Organization, Vicari D., Okada A., Ragozini G., Weihs C. (Eds.), Springer-Verlag, 183-190

Liberati, C., Camillo, F. (2014) Subjective Business Polarization: Sentiment Analysis meets Predictive Modeling, in *New Trends in Database and Information Systems*, Studies in Advances in Intelligent Systems and Computing, Catania B. et al. (Eds.), Springer-Verlag, 329-338.

Liberati, C., Mariani, P. (2013). Evolutionary customer evaluation: a dynamic approach to a banking case, in *Statistical Models for Data Analysis*, Studies in Classification, Data Analysis, and Knowledge Organization. Giudici P., Ingrassia S., Vichi M. (Eds.), Springer-Verlag, 191-199.

Liberati, C., Mariani, P. (2013). Dynamic Principal Component Analysis: a banking Customer Satisfaction evaluation, in *Algorithms from \mathcal{E} for Nature and Life*, Studies in Classification, Data Analysis, and Knowledge Organization. Lausen B., van den Poel D., Ultsch A. (Eds.), Springer-Verlag, 397-405.

Bozdogan, H., Howe, J. A., Katragadda, S., Liberati, C. (2013). Misspecification resistant model selection using Information Complexity with applications, in *Classification and Data Mining*, Studies in Classification, Data Analysis, and Knowledge Organization. Giusti, A.; Ritter, G.; Vichi, M.

(Eds.), Springer-Verlag, 165-172.

Liberati, C., Camillo, F. (2006). Kernel Discriminant Analysis and Information Complexity: advanced models for micro-data mining and micro-marketing solutions, in *Data Mining VII: Data, Text and Web Mining and their Business Applications*, Zanasi A., Brebbia C.A., Ebecken N.F.F. (Eds.), WIT press, 115-122.

Bozdogan, H., Camillo, F., Liberati, C. (2006). On the Choice of the Kernel Function in Kernel Discriminant Analysis Using Information Complexity, in *Data Analysis, Classification and the Forward Search*, Studies in Classification, Data Analysis, and Knowledge Organization. Bock H., Gaul W., Vichi M. (Eds.), Springer-Verlag, 11-21

Refereed Conference Proceedings:

Bottai, C., Crosato, L., Liberati, C. (2024). Prediction of SMEs Bankruptcy at the Industry Level with Balance Sheets and Website Indicators. In *Proceedings CARMA 2024 - 6th International Conference on Advanced Research Methods and Analytics*. Editorial Universitat Politècnica de València, pp.235-241

Crosato, L., Bottai, C., Domenech, J., Guerzoni, M., Liberati, C. (2023). Can websites reveal a firm's innovativeness? Empirical evidence on Italian manufacturing SMEs. in *Proceedings of 5th International Conference on Advanced Research Methods and Analytics (CARMA2023)*, Editorial Universitat Politècnica de València, p. 19-26.

Crosato, L., Domenech, J., Liberati, C. (2023). Enhancing SMEs default prediction with web-scraped data. In *IES 2023 - Statistical Methods for Evaluation and Quality: Techniques, Technologies and Trends (T3) Book Of Short Papers*. Il Viandante pp.133-136.

Crosato, L., Domenech, J., Liberati, C. (2022) Non-conventional data and default prediction: the challenge of companies' websites, in *4th International Conference on Advanced Research Methods and Analytics (CARMA2022)*, Universitat Politècnica de València, 253-258.

Crosato, L., Domenech, J., Liberati, C. (2022) Toward an early detection of SME's default with websites' indicators, in *Book of short papers 10th International Conference IES 2022 Innovation and Society 5.0: Statistical and Economic Methodologies for Quality Assessment*, Pke, 57-61.

Borgoni, R., Casamassima, D., Liberati, C., Michelangeli, A. (2021). Inclusive attitudes towards immigrants in Europe: The role of preferences, space and economic outcomes, in *Proceedings 13th World Congress of the RSAI : Smart Regions – Opportunities for sustainable development in the digital era*. RSAI. pp.525-525.

Crosato, L., Liberati, C., Repetto, M. (2021) Linear models vs Neural Network:predicting Italian SMEs default, in *Book of short papers - SIS 2021*, Pearson, 590-595.

Bacino, V., Zoccarato, A., Liberati, C., Borrotti, M. (2021) Statistical learning for credit risk modelling, in *Book of short papers - SIS 2021*, Pearson, 1624-1629.

Liberati, C., Longaretti, R., Michelangeli, A. (2018). Measuring the multiple facets of tolerance using survey data, in *Book of short Papers SIS 2018*, Pearson, 1348-1351.

Liberati, C., Crosato, L., Mariani, P., Zavanella, B. (2017) Dynamic profiling of banking customers: a pseudo-panel study, in *SIS 2017 Statistics and Data Science: new challenges, new generations*, Firenze University Press. pp. 601-606.

Crosato, L., Liberati, C., Mariani, P., Zavanella, B. (2017). Industrial Production Index and the Web: an explorative cointegration analysis. in *SIS 2017 Statistics and Data Science: new challenges, new generations*, Firenze University Press

Arrigo, E., Liberati, C., Mariani, P. (2016) A Multivariate Approach to Facebook Data for Marketing Communication, in *Proceedings of 1st International Conference on Advanced Research Methods and Analytics CARMA2016*, Editorial Universitat Politècnica de València, Valencia, Spain. pp. 66-74.

Liberati, C., Mariani, P. (2015). Big data meet Pharmaceutical Industry: an application of social media data, in *Book of abstracts*, Mola, F, Conversano, C. (Eds.) pp 411-415. Cuec Editrice Cagliari. (ISBN 978 88 8467 949 9)

Liberati, C., Zappa, P. (2013) Dynamic patterns analysis meets Social Network Analysis in the modeling of financial market behavior, in *Proceedings 59th ISI World Statistics Congress of the International Statistical Institute 2013*, International Statistical Institute, The Hague, Netherlands. pp. 2447-2452

Liberati, C., Mariani, P., Masserini, L. (2013). A latent growth curve analysis in banking customer satisfaction, in *Advances in Latent Variables*, electronic proceedings of SIS2013, Eds. Brentari E., Carpita M., Vita e Pensiero, Milan, Italy.

Liberati, C., Mariani, P. (2012). Dynamic Customer Satisfaction and Measure of Trajectories: a Banking Case, in *Analysis and Modeling of Complex Data in Behavioural and Social Sciences*. Cleup Padova.

Liberati, C., Camillo, F., Saporta, G. (2012). Kernel Discrimination and Explicative Features: an Operative Approach, in *electronic proceedings of COMPSTAT 2012*, Colubi, A, Fokianos, K., Gonzalez-Rodriguez J, Kontoghiorghes, EJ (Eds.) pp: 507-518. International Statistical Institute (ISI).

Bozdogan, H., Howe, J.A., Katragadda, S., Liberati, C. (2009). Misspecification resistant model selection using Information Complexity with applications. In: *Classification and Data Analysis*. Ingrassia S., Rocci R., (Eds.)Catania, 9-11 Settembre 2009 p. 143-146, PADOVA:CLEUP, ISBN: 978-88-6129-406-6.

Camillo, F., Liberati, C. (2006) The kernel approach in the future of data mining, in *electronic Proceedings of Knowledge Extraction and Modeling*, Esposito-Vinzi V., Lauro C., Braverman A., Kiers H. A., Schimek M. G. (Eds). Capri 4-6 Settembre 2006. (ISBN: 88-89744-01-4)

Camillo, F., Liberati, C., (2006) F. Neri, e-CRM, web semantic propensity models and micro-data mining an application of Kernel Discriminant Analysis to the Glam on web case, in *Proceeding of 8th International Conference on Textual data Statistical Analysis JADT '06*, Presses Universitaires de Franche-Comté, Vol I, pp. 235-243.

Camillo, F., Liberati, C. (2006) Recent issues about textual information analysis in micro-marketing: methodological suggestions and some case studies, in *Proceedings XLIII Meeting of the Italian Statistical Society*, Università di Torino 14-16 giugno, Cleup, vol. Plenary sessions Invited sessions, pp. 93-103.

CONFERENCES

Organizer:

Member of the Steering Committee of the International Conference on Advanced Research Methods and Analytics (CARMA) since 2022

Scientific Board Member of the *7th International Conference on Advanced Research Methods and Analytics (CARMA 2025)* Università Roma 3, Rome, July 2-4, 2025

Scientific Board Member of the *Innovation & Society: Statistics and Data Science for Evaluation and Quality (IES2025)* University of Padua, Bressanone June 25-27, 2025

Scientific Board Member of the *6th International Conference on Advanced Research Methods and*

Analytics (CARMA 2024) Universitat Politècnica de València, Valencia June 26-28, 2023

Scientific Board Member of the *5th International Conference on Advanced Research Methods and Analytics (CARMA 2023)* University of Seville, Seville June 28-30, 2023

Scientific Board Member of the *4th International Conference on Advanced Research Methods and Analytics (CARMA 2022)* Universitat Politècnica de València, Valencia June 29-1 July, 2022

Scientific Board Member of the *51th Scientific Meeting of the Italian Statistical Society (SIS 2022)*, University of Campania "Luigi Vanvitelli", Caserta, June 23-26, 2022

Scientific Board Member of the *3rd International Conference on Advanced Research Methods and Analytics (CARMA 2020)* Universitat Politècnica de València, Valencia July 8-9, 2020

Scientific Board Member of the *Young Business and Industrial Statisticians (y-BIS 2019) Workshop on Recent Advances in Data Science and Business Analytics*, Mimar Sinan Fine Arts University, Istanbul September 25-28 2019.

Scientific Board Member of the *2nd International Conference on Advanced Research Methods and Analytics (CARMA 2018)* Universitat Politècnica de València, Valencia, July 12-13 2018.

Scientific Board Member of the *International Conference on Information Complexity and Statistical Modeling in High Dimensions with Applications (IC-SMHD-2016)*, Kayseri, Cappadocia, Turkey. May 18-21 2016.

Chair of the session: Statistical approaches to interpret real-world contexts, *Innovation & Society: Statistics and Data Science for Evaluation and Quality (IES2025)* University of Padua, Bressanone (joint with M. Bini)

Chair of the session: Advances in Credit Risk Modeling, *Meeting of the Classification and Data Analysis Group of the the Italian Statistical Society (CLADAG 2017)*, University of Milano-Bicocca (joint with G. Andreeva)

Organizing Committee Member of *7th International Conference on Advanced Research Methods and Analytics (CARMA 2025)*, Università Roma 3, Rome, July 2-4, 2025

Local Committee Member of the *1st Italian Conference on Economic Statistics*, University of Milano-Bicocca, Milan February 17th 2023

Local Committee Member of the *International Conference on Data Science and Social Research (DSSR 2019)*, University of Milano-Bicocca, Milan February 4, 2019

Local Committee Member of the *Innovation and Society, Statistical Methods for the Evaluation (IES 2013)*, University of Milano-Bicocca, Milan December 9-10, 2013.

Speaker (not complete):

Liberati,C, Bottai,C, Crosato, L, Domenech,J, Guerzoni, M: Firms innovation capabilities and corporate websites: Evidence on Italian SMEs. *Web Intelligence Network Conference. From Web to Data*, Statistics Poland, Gdansk, February 04-05 2025.

Bottai,C, Crosato, L, Liberati,C: Prediction of SMEs Bankruptcy at the Industry Level with Balance

Sheets and Website Indicators *6th International Conference on Advanced Research Methods and Analytics (CARMA2024)*, Universitat Politècnica de València, Valencia, June 26-28 2024.

Liberati, C., Bottai, C., Crosato, L., Domenech, J., Guerzoni, M.: Unconventional data and Innovation: are innovative SMEs' web pages different? *52nd Scientific Meeting of the Italian Statistical Society (SIS 2024)*, University of Bari, June 17-20 2024 (specialized session ENBIS-ISBIS).

Crosato, L., Domenech, J., Liberati, C.: Enhancing SMEs default prediction with web-scraped data. *11th Scientific Meeting of the SIS Group Statistics for the Evaluation and Quality in Services (IES2023)*, University 'G. d'Annunzio' of Chieti-Pescara, Pescara, Aug 30- Sep 1, 2023. (solicited)

Crosato, L., Domenech, J., Liberati, C.: Improving SMEs default prediction: combining conventional and unconventional data. *7th workshop on Games and Decisions in Reliability and Risk (GDRR7)*, Real Academia de Ciencias Exactas, Física y Naturales de España, Madrid, May 24- 26, 2023

Bottai, C., Crosato L., Domenech, J., Guerzoni, M., Liberati, C. Unconventional data and Innovation Policy: are innovative SMEs' web-pages different?. *Economic Statistics Centre of Excellence Conference on Economic Measurement 2023* King's College, London May 17-19, 2023

Crosato, L., Domenech, J., Liberati, C.: Websites' data: a new asset for enhancing credit risk modeling. *4th International Conference on Advanced Research Methods and Analytics (CARMA2022)*, Universitat Politècnica de València, Valencia, July 29- July 1, 2022

Crosato, L., Domenech, J., Liberati, C.: Websites' data: a new asset for enhancing credit risk modeling. *Statistics and Data Science in Business and Industry (ISBIS 2022)*, University of Federico II, Naples, June 20-22, 2022.

Crosato, L., Domenech, J., Liberati, C.: Toward an early detection of SME's default with websites' indicators *Innovation and Society 5.0 (IES2022)*, University of Campania "Luigi Vanvitelli", Capua (CE), January, 27-28, 2022 (online)

Crosato, L., Domenech, J., Liberati, C.: Predicting SME's default: some old facts and a new idea. *3rd International Conference on Advanced Research Methods and Analytics (CARMA2020)*, Universitat Politècnica de València, Valencia, July 8-9, 2020 (online).

Blazquez, D., Crosato, L., Domenech, J., Liberati, C.: Predicting Business Survival From Their Websites. *Young Business and Industrial Statisticians (y-BIS 2019)*, Mimar Sinan Fine Arts University, Istanbul, September 25-28 2019.

Liberati C., Andreeva G.: Behavioural attitudes and financial performance: New ideas for segmenting bank customers. *12th International Conference on Computational and Financial Econometrics (CFE 2018)*, University of Pisa, December 14-16, 2018. (solicited)

Liberati C., Andreeva G.: Psychographic Segmentation of Italian Bank Customers. *29th European Conference on Operational Research (EURO2018)*, Universitat Politècnica de València, Valencia, July 8-11, 2018. (solicited)

Liberati, C., Longaretti, R., Michelangeli, A.: Measuring the multiple facets of tolerance using survey data. *49th Scientific Meeting of the Italian Statistical Society (SIS 2018)*, University of Palermo, June 22-24 2018.

Liberati C., Crosato L., Mariani P., Zavanella B.: Dynamic profiling of banking customers: a pseudo-panel study. *Statistics and Data Science: new challenges, new generations (SIS 2017)*, University of Florence, June 28-30, 2017.

Liberati C., Camillo F.: Insolvency as opportunity: a marketing perspective on time-dependent credit risk. *The 17th Conference of the Applied Stochastic Models and Data Analysis International*

Society (ASMDA2017), De Morgan House of the London Mathematical Society, London, June 6-9, 2017.

Liberati C., Arrigo E., Mariani P.: A Multivariate Approach to Facebook Data for Marketing Communication, *1st International Conference on Advanced Research Methods and Analytics (CAR-MA2016)*, Universitat Politècnica de València, Valencia, Spain, July 6-7 2016.

Liberati C., Mariani M.: Visualization and Measuring of Dynamic Customer Satisfaction: a Banking Case. *International Symposium on Business and Industrial Statistics (ISBIS 2014)*, Durham, NC, U.S., June, 9-11 2014 (solicited)

Liberati C., Camillo F.: Satisfaction, Human Values and other Intangible Dimensions as Drivers of New Credit Scoring Models, *6th International Conference of the ERCIM WG on Computational and Methodological Statistics (ERCIM 2013)*, Senate House, University of London, December, 14-16 2013 (solicited)

Liberati C., Zappa P.: Dynamic Patterns Analysis meets Social Network Analysis in the Modeling of Financial Market Behavior. *59th World Statistics Conference (ISI 2013)*, Hong Kong, August, 25 - 30 2013 (solicited)

Liberati C., Camillo F., Saporta G.: Kernel Discrimination and Explicative Features: an Operative Approach, *20th International Conference on Computational Statistics (COMPSTAT 2012)*, Lymassol, Cyprus, August, 27-31 2012 (solicited)

Liberati C., Mariani, P.: Evolutionary Customer Evaluation: a Dynamic Approach to a Banking Case, *Meeting of the Classification and Data Analysis Group of the Italian Statistical Society (CLADAG 2011)*, University of Pavia, September 7-9 2011.

Liberati C., Mariani P.: Dynamic Principal Component Analysis: a banking Customer Satisfaction evaluation, *Joint Conference of the German Classification Society and the German Association for Pattern Recognition (GFKL 2011)*, Goethe University Frankfurt, Frankfurt, August 31-September 2 2011

Liberati C., Masotti M., Bozdogan H.: Probabilistic Discriminant Analysis in the Feature Space using Information Complexity. *International Conference on Multivariate Statistical Modelling & High Dimensional Data Mining (HDM 2008)*, Kayseri, Turkey, June 19-23 2008 (solicited)

Camillo F., Liberati C.: A micro-data mining approach for qualitative-emotional marketing using neuro-information, *Meeting of the Classification and Data Analysis Group of the the Italian Statistical Society (CLADAG 2007)*, University of Macerata, Italy, September, 12-14 2007 (solicited).

Camillo F., Liberati C.: Profiling a customer base through a sample survey: a data mining approach for business solution, *Annual Midwest Business Administration Association International Conference (MBAA 2007)*, Chicago, March 28-30 2007.

Camillo F., Liberati C.: The kernel approach in the future of data mining: many subjective choices in a complex landscape, *IACS-INTERFACE-IFCS workshop Knowledge Extraction and Modeling (KNEMO)*, Capri, Italy, September 4-6 2006 (solicited).

Liberati C., Camillo F.: Kernel Discriminant Analysis and Information Complexity: advanced models for micro data-mining and marketing solutions, *7th International Conference on Data, Text and Web Mining and their Business Applications and Management Information Engineering Data mining and Information Engineering*, Prague, July 11-13 2006.

Camillo F., Liberati C.: Recent issues about textual information analysis in micro-marketing: methodological suggestions and some case studies, *XLIII meeting della Società Italiana di Statistica*, University of Turin, June 14-16 2006 (solicited).

Camillo F., Liberati C.: e-CRM, web semantic propensity models and micro-data-mining: an application of Kernel Discriminant Analysis to the Glam on Web case, 8th *International Conference on the Statistical Analysis of Textual Data (JADT 2006)*, Besançon, France, April 19- 21 2006.

Liberati C.: e-CRM, web propensity models and micro-data-mining: the Glam on Web case and new statistical methodologies, *Meeting of the Classification and Data Analysis Group of the the Italian Statistical Society (CLADAG 2005)*, University of Parma, Italy, June 6-8 2005. (solicited)

FUNDS

- 2024-2027 Member of the research team of the project entitled *Leveraging the Digital Footprint for Sustainable Futures (MADFoot)*, funded by: Agencia Estatal de Investigación (PID2023-152106OB-I00). PI: Josep Domenech. Amount: 56.250 €
- 2024-2027 Member of the research team of the project entitled *Digital footprint of SMEs in the sustainability transition*, funded by: Generalitat Valenciana (CIAICO/2023/272). PI: Josep Domenech and Ana Debón. Amount: 90.000 €
- 2023-2025 Member of the research team of the grant PRIN2022 entitled *Data Driven Innovation: Measuring its effects on Industries, Firms and Business Models*, funded by: Italian Ministry of University and Research. (2022JHZZL37). PI: Roberto Fontana. Amount: 217.271 €
- 2019-2022 External Expert of the project entitled *Digital footprint, competitiveness and business demography*. Funded by: Spanish National Research Agency (AEI). (PID2019-107765RB-I00). PI: Josep Domenech. Amount: 18.000 €
- 2017 Principal Investigator of the National project entitled *Fondo per il finanziamento per le attività base di ricerca' (FABBR)*. funded by Italian Ministry of Education and Reserach. (id: 9482) Amount: 3.000 €
- 2013-2016 Member of the research team of the grant FP7 project entitled *RASTANEWS-Macro-Risk Assessment and Stabilization Policies with New Early Warning Signals*, funded European Commission. PI Patrizio Tirelli. Amount: 2.39M €
- 2011-2014 Member of the research team of the grant Ricerca Finalizzata 2009 for the project entitled *Interaction framework between patient advocacy groups and cancer centers on sarcomas, as a model for rare cancers*, funded by Italian Health Ministry (RF-2009-1551083). PI: Paolo Casali. PI Unimib Unit: Caterina Liberati (year 2014). Amount: 280.500 €

RESEARCH COLLABORATIONS

- 2022- Member of the Milano-Bicocca team responsible for producing the statistical analyses and economic-financial assessments included in the report *Sustainability of Italian listed companies* of the ESG Observatory of Sole24ore (<https://esg.ilsole24ore.com/s/1>).
- 2022-2023 Member of the Milano-Bicocca Unit that developed and implemented an analytical system for monitoring predictive algorithms. The project, titled *AISP PSD2 Open Banking*, was funded by the Consorzio per la Tutela del Credito.
- 2020-2021 Member of the Milano-Bicocca Unit that developed and implemented predictive algorithms based on transactional data. The project, titled *Progetto Analytics CTC*, was funded by the Consorzio per la Tutela del Credito.

ACADEMIC SERVICES

Refereeing activity (not complete):

Quality & Quantity (ISSN:0033-5177), Statistica Applicata (ISSN:1125-1964), Mathematics (ISSN: 2227-7390), Applied Science (E-ISSN:2076-3417), Information (ISSN:2078-2489), Review of Behavioral Finance (ISSN:1940-5979), Risks (E-ISSN:2227-9091), International Review of Financial Analysis (ISSN:1057-5219), Big Data Research (ISSN:2214-5796), Sustainability (ISSN:2071-1050), Socio-Economic Planning Sciences (ISSN:0038-0121), Economies (E-ISSN:2227-7099), Algo-

rithms (ISSN 1999-489), Bancaria (ISSN:1594-7556), Data (ISSN: 2306-5729), Journal of Cleaner Production (ISSN: 0959-6526)

Supervision:

- 2024-2027 *Monitoring the economic activity of the Small and Medium Enterprises through the analysis of their digital footprints* (Post Doc project: Carlo Bottai)
- 2021-2024 *Look through the website's glasses: using big data for classifying and describing Italian innovative SMEs* (Post Doc project: Carlo Bottai)
- 2020-2022 *Black-box supervised learning and empirical assessment: new perspectives in credit risk modeling*. (Ph.D. thesis Marco Repetto).
- 2014-2015 *Fabbisogni informativi dei pazienti e dei modelli di comunicazione integrata medici-associazioni-pazienti: valutazione di un prototipo nell'ambito dei tumori rari*. (Post-doc Rosa Falotico)

Other Duties

- Member of the Faculty Board of the PhD program Business for Society, University of Milano-Bicocca cycles 37th, 38th, 39th, 40th.
- 2019-2023 University Orientation Delegate for DEMS, University of Milano-Bicocca

TEACHING

Ph.D. Courses

- 2024- Quantitative Research Methods 1, Ph.D. program Business for Society (B4S), University of Milano-Bicocca (4 Hours)
- 2024- Quantitative Research Methods Lab, Ph.D. program Business for Society (B4S), University of Milano-Bicocca (6 Hours)
- 2023- Quantitative & Qualitative Methodologies (in the course Advance Research Methodologies for a New Public Administration), Ph.D. program The New Public Administration: Data and Human Resources, University of Milano-Bicocca (4 hours).
- 2021-2023 Quantitative Data Analysis, Ph.D. program Business for Society (B4S), University of Milano-Bicocca (16 Hours)

Postgraduate Courses (PC)

- 2021- Quantitative Market Analysis, PC in Economic Statistics, School of Economics and Statistics, University of Milano-Bicocca
- 2012-2020 Quantitative Market Analysis, PC in Marketing and Global Markets, School of Economics and Statistics, University of Milano-Bicocca
- 2019-2021 Statistics for Tourism, PC in Economics for Tourism, School of Economics and Statistics, University of Milano-Bicocca
- 2016-2018 Quantitative Market Analysis, PC in Economic Statistics, School of Economics and Statistics, University of Milano-Bicocca

Undergraduate Courses (UC)

- 2020- Quantitative Market Analysis, UC in Marketing and Global Markets, School of Economics and Statistics, University of Milano-Bicocca
- 2017-2020 Statistics for Economics, UC in Science of Legal Services, School of Law, University of Milano-Bicocca
- 2016-2017 Market Analysis, UC in Economic Statistics, School of Economics and Statistics, University of Milano-Bicocca
- 2013-2015 Statistics for Economics, UC in Economics and Business, School of Economics and Statistics, University of Milano-Bicocca

November, 2024