

CURRICULUM VITAE
DI SILVIA FIGINI



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Da Ottobre 2021 **Direttore del Dipartimento di Scienze Politiche e Sociali** dell'Università degli Studi di Pavia.

Da Ottobre 2020 **Presidente del Centro di Orientamento Universitario**.

Da Ottobre 2019 **Delegato del Rettore all'Orientamento in Ingresso**.

Da Gennaio 2024 **Membro del Consiglio di Amministrazione del Collegio Ghislieri**.

Dal 2018 **Professore Ordinario di Statistica Economica** presso il Dipartimento di Scienze Politiche e Sociali dell'Università degli studi di Pavia.

Componente della commissione nazionale per il conferimento delle idoneità di prima e seconda fascia ASN 2018-2020 per il settore 13/D2 – STATISTICA ECONOMICA.

Dal 2018 **Vice Coordinatore Phd internazionale** in *Computational Mathematics, Learning, and Data Science* (<http://compmat.unipv.it/>) – in collaborazione con l'Università della Svizzera Italiana, il Dipartimento di Matematica, il Dipartimento di Fisica dell'Università degli studi di Pavia.

Dal 2018 **Responsabile Scientifico BioData Science Unit**, presso IRCCS Istituto Neurologico Nazionale Mondino per lo sviluppo di modelli matematici, di machine learning e deep learning applicati alla medicina.

Membro della **Società Italiana di Statistica**

Membro dell'**Istituto Nazionale di Fisica Nucleare**

Titoli

2006 PHD IN STATISTICS, Università Luigi Bocconi di Milano – Tesi: “Bayesian variable and model selection for Customer Lifetime Value”, (in collaborazione con Prof. Steve Brooks, *Department of Pure Mathematics and Mathematical Statistics*, University of Cambridge).

A.A. 2000-2001 Laurea in Economia presso l’Università degli Studi di Pavia, indirizzo di Metodi Quantitativi per l’Economia e la Finanza. – Tesi: “Analisi Statistiche delle corrispondenze per la classificazione e l’ e-CRM”, Relatore Prof. Paolo Giudici.

Interessi di ricerca

Machine learning; Metodi statistici e matematici predittivi; Statistica Bayesiana; Algoritmi di data science.

Posizioni Accademiche ricoperte

2013 - 2018 Professore Associato per il settore 13/D1 (SECS-S/01 - Statistica) – Dipartimento di Scienze Politiche e Sociali, Università degli Studi di Pavia (con idoneità nazionale anche per il settore 13/D2 - SECS-S/03 – Statistica Economica).

2011 - 2013 Ricercatore per il settore 13/D1 (SECS-S/01 - Statistica) - Dipartimento di Scienze Politiche e Sociali, Università degli Studi di Pavia.

2008 – 2010 Ricercatore a tempo determinato (RTD tipo A) per il settore 13D2 (SECS- S/03 – Statistica Economica), Dipartimento di Scienze Politiche e Sociali Università degli Studi di Pavia.

Posizioni Lavorative

2001 – 2003 Analista presso Centro Competenza Data Mining, SAS Institute.

Interventi presso sedi istituzionali

Marzo 2015: “Data science and social network analysis for anti money laundering” audizione presso il *Ministero dell’Economia e delle Finanze*.

Aprile 2015: “Reti sociali e antiriciclaggio: Metodologia ed evidenze empiriche su dati bancari” audizione presso *Unità di Informazione Finanziaria – Banca d’Italia* (Workshop “Metodi quantitativi e contrasto alla criminalità economica”).

Giugno 2017: “Data science models to predict terrorist events” Dipartimento delle informazioni per la sicurezza (DIS) - *Presidenza del Consiglio dei Ministri*.

Incarichi istituzionali precedenti

(2012 – 2015) Membro della Giunta del Dipartimento di Scienze Politiche e Sociali per lo scorso del triennio 2012/2015.

(2015 – 2017) Membro del Nucleo di Valutazione dell’Università degli Studi di Pavia.

(2016-2018) Membro del Nucleo di Valutazione dell’Istituto di Studi Superiori Universitari IUSS

Pavia.

Dal 2016 Membro commissione paritetica Dipartimento Scienze Politiche e Sociali.

Dal 2017 Membro commissione ricerca Dipartimento Scienze Politiche e Sociali.

Soggiorni di ricerca all'estero

University of Cambridge, Department of Pure Mathematics and Mathematical Statistics; **University of Umea**, Department of Statistics and Business School of Economics; **University of Aalto**, Department of Statistics and Computer Science; **Dublin City University**, Department of Statistics; **University of Edinburgh**, Credit Research Centre; **Université Paris 1 Panthéon-Sorbonne**, Maison des sciences Economiques.

Attività di referaggio per prestigiose riviste internazionali (es. *Annals of Applied Statistics*, *European Journal of Operational Research*; *Applied Stochastic Models in Business and Industry*; *Methodology and Computing in Applied Probability*; *Journal of Quality Technology and Quantitative Management*; *Statistical Methods and its applications*; *Journal of the Operational Research Society* etc.).

Partecipazione a progetti di ricerca europei

BIOMEGA 2020-2023 (Progetto Europeo): “A multidisciplinary approach to the identification of BIOmarkers of MIGraine: a proof of concept study based on the stratification of responders CGRP monoclonal Antibodies” – ERA-NET call for Joint Transnational Research Project.

SYRTO 2013-2016 (Progetto Europeo): “Risk models for finance” – Partner coinvolti: Centre National De La Recherche Scientifique (CNRS) – Centre d'Economie de la Sorbonne – Axe Finance (CES-Finance) ; MIT Massachusetts Institute of Technology Department of Operation Research Boston College; Athens University of Economics and Business – Research Center (AUEB-RC); VU University Amsterdam; Banca Centrale Europea; Università Cà Foscari di Venezia; Università di Pavia.

MUSING 2006-2010 (Progetto Europeo): “Multy Industry semantic based next generation business intelligence” – Partner coinvolti oltre unipv: Università di Pisa, Università di Innsbruck, Università di Sheffield, DFKI, MPS, Consorzio Nazionale Ricerche di Pisa, Credit Reform (Monaco), KPI (Israele), Università di Pavia.

Partecipazione a progetti di ricerca nazionali

1. **P.R.I.N. 2024 - 2026** PNRR on “A Unitary Mathematical Framework for Modelling Muscular Dystrophies”, Membro unità capofila
2. **P.R.I.N. 2021 - 2024** on: “Integrated Mathematical Approaches to Socio-Epidemiological Dynamics”, Membro Unità Locale.
3. **P.R.I.N. 2013 - 2016** on “Multivariate Models for Risk Assessment”
4. **P.R.I.N. 2009 - 2010** on “Multivariate Methods for the evaluation of the quality and of the risks in academic context”
5. **P.R.I.N. 2007 - 2008** on “Multivariate statistical methods for the evaluation of public services”
6. **F.I.R.B. 2006 - 2009** on “Data mining methods for small and medium enterprises”.

Phd Supervision

- **Marta Galvani**, Dottorato in Matematica, Università di Pavia
- **Paritosh Navinchandra Jha**, PhD in Applied Economics and Management
- **Elena Ballante**, Phd in Computational Mathematics and Decision Sciences
- **Chiara Bardelli**, Phd in Computational Mathematics and Decision Sciences
- **Mishel Qyrana**, Phd in Computational Mathematics and Decision Sciences
- **Giulia Colelli**, Phd in Computational Mathematics and Decision Sciences
- **Raffaella Cabini**, Phd in Computational Mathematics and Decision Sciences
- **Leonardo Barzaghi**, Phd in Computational Mathematics and Decision Sciences
- **Naz Farah**, Phd in Computational Mathematics and Decision Sciences
- **Chiara Carrara**, Phd in Computational Mathematics and Decision Sciences
- **Federico Quetti**, Phd in Computational Mathematics, Learning and Data Science
- **Andrea Bonomo**, Phd in Computational Mathematics, Learning and Data Science
- **Syed Mujtaba Haider**, Phd in Computational Mathematics, Learning and Data Science
- **Luca Morgantino**, Phd in Scienze e Pratiche della Comunicazione
- **Alessandro Napoli**, Phd in Scienze e Pratiche della Comunicazione
- **Lidia Coral**, Phd in Scienze e Pratiche della Comunicazione

Elenco delle Pubblicazioni

Sezione 1: Articoli su riviste internazionali

1. (2023) Ballante E., Bellanger L., Drouin P., Figini S., Stamm A., Smoothing Method for Unit Quaternion Time Series in a Classification Problem: An application to motion data, *Scientific Reports*, Vol 13, 9366. <https://doi.org/10.1038/s41598-023-36480-y>
2. (2023) F. Naz, S. Gerzeli, E. Ballante, S. Figini, Learning in Lockdowns : A Five-Year Analysis of COVID-19's Influence on University Students' Academic Experiences, *Advances and Applications in Statistics*, Vol 9, n 1, pp 59-75 (2023). <https://doi.org/10.17654/0972361724005>
3. (2023) E. Ballante, F. Naz, S. Figini, S. Gerzeli, Customized Learning to predict student dropout, accepted in *Advances and Applications in Mathematical Sciences*
4. (2023) Scapicchio C., Chincarini A., Ballante E., Berta L., Bicci E., Bortolotto C., Brero F., Cabini R.F., Cristofalo G., Fanni S.C., Fantacci M.E., Figini S., Galia M., Gemma P., Grassedonio E., Lascialfari A., Lenardi C., Lionetti A., Lizzi F., Marrale M., Midiri M., Nardi C., Oliva P., Perillo N., Postuma I., Preda L., Rastrelli V., Rizzetto F., Spina N., Talamonti C., Torresin A., Vanzulli A., Volpi F., Neri E., Retico A., A multicenter evaluation of a deep learning software (LungQuant) for lung parenchyma characterization in COVID-19 pneumonia. *European Radiology Experimental*, vol 7(18) (2023). <https://doi.org/10.1186/s41747-023-00334-z>
5. (2023) Colelli G., Barzaghi L., Paoletti M., Monforte M., Bergsland N., Manco G., Deligianni X., Santini F., Ricci E., Tasca G., Mira A., Figini S. and Pichieccchio A. ‘Texture analysis and machine learning applied to STIR sequence for prediction of quantitative parameters in facioscapulohumeral disease’ *Frontiers in Neurology* vol. 14 doi: 10.3389/fneur.2023.1105276
6. (2022) Medaglia A., Colelli G., Farina L., Bacila A., Bini P., Marchioni E., Figini S., Pichieccchio A., Zanella M., Uncertainty quantification and control of kinetic models of tumour growth under clinical uncertainties. *International Journal of Non-Linear Mechanics*, Vol. 141 doi: 141:103933.
7. (2022) Cabini R.F., Brero F., Lancia A., Stelitano C., Oneta O., Ballante E., Puppo E., Mariani M., Ali E., Bartolomeo V., Montesano M., Merizzoli E., Aluia D., Agustoni F., Stella G.M., Sun R., Bianchini L., Deutsch E., Figini S., Bortolotto C., Preda L., Lascialfari A. and Filippi A.R., Preliminary report on harmonization of features extraction process using the ComBat tool in the multi-center “Blue Sky Radiomics” study on stage III unresectable NSCLC, *Insights into imaging*, vol 13, n 1, doi: 10.1186/s13244-022-01171-1.
8. (2022) Signorini S., Luparia A., Cappagli G., Perotto E., Antonini M., Morelli F., Aprile G., Ballante E., Figini S., Borgatti R. VFS Study Group, Visual Function Score: A New Clinical Tool to Assess Visual Function and Detect Visual Disorders in Children, *Frontiers in Pediatrics* Vol. 10 <https://doi.org/10.3389/fped.2022.868974>.
9. (2022) Cabini R.F., Pichieccchio A., Lascialfari A., Figini S., Zanella M., A kinetic approach to consensus-based segmentation of biomedical images *arXiv* doi: arXiv:2211.05226 (Preprint arXiv)

10. (2022) Lizzi F., Agosti A., Brero F., Cabini R.F., Fantacci M.E., Figini S., Lascialfari A., Laruina F., Oliva P., Piffer S., Postuma I., Rinaldi L., Talamonti C., Retico A. Quantification of pulmonary involvement in COVID-19 pneumonia by means of a cascade of two U-nets: training and assessment on multiple datasets using different annotation criteria. *International journal of computer assisted radiology and surgery* 17.2 229-237 doi: <https://dx.doi.org/10.1007/s11548-021-02501-2>
11. (2022) Medaglia A., Colelli G., Farina L., Bacila A., Bini P., Marchioni E., Figini S., Pichieccchio A. Uncertainty quantification and control of kinetic models of tumour growth under clinical uncertainties. *International Journal of Non-Linear Mechanics*, Vol. 141 DOI: 10.1016/j.ijnonlinmec.2022.103933.
12. (2021) Zanella M., Bardelli C., Dimarco G., Deandrea S., Perotti P., Azzi M., Figini S., Toscani G. A data-driven epidemic model with social structure for understanding the COVID-19 infection on a heavily affected Italian Province *Mathematical Models and Methods in Applied Sciences*, 31(12):2533-2570. (Preprint [arXiv](#))
13. (2021) Zanella M., Bardelli C., Azzi M., Deandrea S., Perotti P., Silva S., Cadum E., Figini S., & Toscani G. Social contacts, epidemic spreading and health system. Mathematical modeling and applications to COVID-19 infection. *Mathematical Biosciences and Engineering*, 18(4), 3384-3403 DOI: 10.3934/mbe.2021169.
14. (2021) Figini S., Ballante E., Galvani M. and Uberti P. Polarized Classification Tree Models: theory and computational aspects, to appear in *Journal of Classification* 38, 481-499 <https://doi.org/10.1007/s00357-021-09383-8>.
15. (2021) Ballante E., Figini S., Uberti P., A new approach in model selection for ordinal target variables, *Computational Statistics* 37, 43-56.
16. (2021) Paoletti M., Diamanti L., Muzic S.I., Ballante E., Solazzo F., Foppoli L., Deligianni X., Santini F., Figini S., Bergsland N., Pichieccchio A. Longitudinal quantitative MRI evaluation of muscle involvement in amyotrophic lateral sclerosis, *Frontiers in Neurology* 12, doi: 10.3389/fneur.2021.749736.
17. (2021) Felisaz P.F., Colelli G., Ballante E., Solazzo F., Paoletti M., Germani G., Santini F., Deligianni X., Bergslandg N., Monforte M., Tasca G., Ricci E., Bastianello S., Figini S. and Pichieccchio A. *Texture analysis and machine learning to predict water T2 and fat fraction from non-quantitative MRI of thigh muscles in Facioscapulohumeral muscular dystrophy*, *European Journal of Radiology* 134, doi: 10.1016/j.ejrad.2020.109460.
18. (2020) Figini S., Ballante E., Bardelli C., Zanella M. and Toscani G. Economic Segregation Under the Action of Trading Uncertainties, *Symmetry* 12, 1390.
19. (2020) Figini S., Galvani M., Bardelli C. and Muliere P. A Bayesian nonparametric learning approach to ensemble models using the proper Bayesian Bootstrap, to appear in *Algorithms* 14(1), 11.
20. (2020) Figini S., Bonelli F. and Grossi A. Ensemble churn risk analytics, in *Advances and Applications in Statistics*.
21. (2020) Figini S., Bardelli C., Rondinelli A., Vecchio R. Automatic electronic invoice classification using machine learning, in *Machine Learning and Knowledge Extraction* 2(4), 617-629; doi: <https://doi.org/10.3390/make2040033>.
22. (2020) Figini S. and Qyrana M. *Multicollinearity Detection via random matrix theory*,

Advances and Applications in Statistics.

23. (2020) Mensi, M., Balottin, L., Rogantini, C., Orlandi, M., Galvani, M., Figini, S., Chiappedi, M., Balottin, U. Focus on family functioning in anorexia nervosa: new perspectives using the Lausanne Trilogue Play, *Psychiatry Research*, vol. 288 DOI: 10.1016/j.psychres.2020.112968.
24. (2019) Figini S., Uberti P. and Torrente L. Model of models: a new perspective to deal with model uncertainty, to appear in *Far East Journal of Theoretical Statistics* vol. 57, 143-170, DOI: <https://dx.doi.org/10.17654/TS057020143>.
25. (2019) Figini S. and Uberti P. Uncertainty interval to assess performances of risk models, to appear in *Advances and Applications in Statistics* 57(2):121-133 DOI: 10.17654/AS057020121.
26. (2019) Figini S., Uberti P. and Maggi A. The market rank indicator to detect financial distress, in *Econometrics and Statistics* vol. 14, issue C, 63-73 DOI: 10.1016/j.ecosta.2017.12.001.
27. (2019) Galvani M., Bardelli C., Bottiroli S. and Figini S. A two stage modeling approach for chronic migraine data, to appear in *Journal of Biostatistics*.
28. (2019) Figini S. and Galvani M. Machine learning techniques to understand the dynamics of terrorist events, *Advances and Applications in Statistics*, Volume 56, Number 1, 2019, Pages 53-76.
29. (2019) Milanese C., Payán-Gómez C., Galvani M., González N.M., Tresini M., Abdellah S.N., van Roon-Mom W.M.C., Figini S., Marinus J., van Hilten J.J., Mastroberardino P.G. Peripheral mitochondrial function correlates with clinical severity in idiopathic Parkinson's disease – in *Journal of Movement Disorders* 34(8):1192-1202. doi: 10.1002/mds.27723.
30. (2018) Figini S., Maggi M. and Uberti P. The market rank indicator to detect financial distress, *Econometrics and Statistics*, <https://doi.org/10.1016/j.ecosta.2017.12.001>
31. (2017) Figini S., Bonelli F., Giovannini E. Solvency prediction for Small and Medium Enterprises in banking, *Decision Support Systems*, vol. 102, pp. 91-97.
32. (2017) Figini S. and Giudici P. Credit risk assessment with Bayesian model averaging, in *Communications in Statistics - Theory and Methods*, vol. 46, pp. 9507-9517.
33. (2016) Figini S., Savona R., Vezzoli M. Corporate Default Prediction Model Averaging: A Normative Linear Pooling Approach, in *Intelligent Systems in Accounting Finance and Management*, Vol. 23, Issue 1, pp. 6–20.
34. (2015) Figini S. Gao L. and Giudici P. Bayesian Operational Risk Models, *Journal of Operational Risk*, vol. 10, pp. 45-60.
35. (2014) Gigliarano C., Figini S., Muliere P. Making Classifier Performance Comparisons when ROC Curves intersect, *Computational Statistics and data analysis*, vol. 77, pp. 300-312.
36. (2013) Figini S., Giudici P. Measuring risk with ordinal variables, *Journal of the Operational Risk*, vol. 8(2), pp. 35-43.
37. (2013) Figini S., Uberti P. Concentration measures in risk management, *Journal of the Operational Research Society*, vol. 64, pp. 718-723.

38. (2012) Cutillo L., Carissimo A.M. and Figini S. Network Selection: A Method for Ranked Lists Selection, *PLOSOne*, vol. 7(8).
39. (2011) Dridi A., Figini S., Giudici P. and Limam M. A financial Stress Index for the analysis of XBRL data, *Journal of Financial Transformation*, pp. 219-223.
40. (2011) Figini S. and Giudici P. Statistical Merging of Rating Models, *Journal of the Operational Research Society*, vol. 62, 1067-1074.
41. (2010) Figini S., Kenett, R. and Salini S. Optimal scaling for risk assessment: merging of operational and financial data, *Quality and Reliability Engineering International*, vol. 26(8), pp. 887-897.
42. (2010) Figini S. and Giudici P. Statistical Local Models for Customer Lifetime Value, *Advances and Applications in Statistics*, vol. 18(1), pp. 41 – 55.
43. (2010) Figini S. e Uberti P. Model assessment for predictive classification models, *Communications in Statistics Theory and methods*, vol. 39(18), pp. 3238-3244.
44. (2010) Figini S. Penalised models to estimate customer survival, *Statistical methods and applications*, vol. 19, issue 1, 141-150.
45. (2010) Figini S. Statistical local models for customer satisfaction data, in *Journal of quality technology and quantitative management*, Vol. 7, N.1, pp. 69-82.
46. (2010) Uberti P. and Figini S. How to measure single-name credit risk concentrations, to appear in *European Journal of Operational Research*, vol. 202(1), 232-238.
47. (2010) Figini S., Giudici P., e Uberti P. A threshold based approach to merge data in financial risk management, *Journal of Applied Statistics*, vol. 37(11), pp. 1815-1824.
48. (2009) Figini S., De Quarti E. and Giudici P. Churn risk mitigation models for student's behaviour, in *Electronic Journal of Applied Statistical Analysis*, Vol. 2, N.1, pp. 37 – 57.
49. (2009) Figini S. and Giudici P. String analysis for interaction detection, *Journal of Applied Statistics*, vol. 21, pp.281-288.
50. (2009) Figini S. e Giudici P. Bayesian Churn Models, in *Advances and Applications in Statistical Sciences*, Vol. 1, N. 2, pp. 285-310.
51. (2009) Figini S., De Giuli E., Giudici P. and Fantazzini, D. Enhanced Credit Default Models for Heterogeneous SME Segments, in *Journal of Financial Transformation* Vol. 25 N.1, pp. 31-39.
52. (2009) Figini S. e Giudici P. Statistical models for e-learning data, in *Statistical methods and applications*, vol. 18, pp. 293-304.
53. (2009) Fantazzini D. and Figini S. Random Survival Forest models for SME Credit Risk Measurement, in *Methodology and computing in applied probability*, vol. 11, pp. 29-45.
54. (2009) Fantazzini D. and Figini S. Default Forecasting for Small-Medium Enterprises: Does

Heterogeneity Matter? in ***International Journal of Risk Assessment and Management*** Vol. 11, No.1(2) pp. 138-163.

55. (2007) Figini S., Giudici P., Uberti P. and Sanyal A. A statistical method to optimize the combination of internal and external data in operational risk measurement, in ***Journal of Operational Risk***, Vol 2(4), pp. 69-78.
56. (2006) Baldini P., Figini S. and Giudici P. Nonparametric Approaches for e- Learning Data in ***Lecture Notes in Computer Science***, 4065, pp. 548 – 560.
57. (2005) Figini S. e Giudici P. Link Analysis for fraud detection, ***Italian Journal of Applied Statistics***, Vol. 17 – Fascicolo 3 – pp. 389 – 397.

Sezione 2: Contributi su monografie di ricerca internazionali

1. (2009) Figini S., Salini S. *Bayesian merging and calibration for OpR*, to appear in “*Operational risk management a practical approach to intelligent data analysis*”, Wiley London.
2. (2009) Figini S. *Credit risk estimation for SME*, to appear in *Handbook of Research on Data Mining in Public and Private Sectors: Organizational and Government Applications* (book edited by Prof. Antti Syvärvi and Prof.. Jari Stenvall, University of Lapland, Finland and University of Tampere, Finland).
3. (2008) Figini S. *Data Mining for Lifetime Value estimation*, to appear in *Encyclopedia of Data Warehousing and Mining - 2nd Edition* Editor: John Wang.
4. (2008) Figini S. *Predictive dynamics models for SMEs*, in “*Data Analysis and Classification: from the exploratory to the confirmatory approach*”, Springer (series on Studies in Classification, Data Analysis and Knowledge organisation).
5. (2007) Cerchiello P., Figini S. and Giudici P. *Data mining, for business and industry* (editors: Dave Stewardson Douglas C. Montgomery Tony Greenfield and Shirley Coleman), in *Statistical Practice in Business and Industry*, Wiley London, pp. 163-184
6. (2005) Figini S., Giudici P., Polla D., and Galliano C. *Survival Analysis Models to Estimate Customer Lifetime Value*, Fifth IEEE International Conference on Data Mining (ICDM-2005), IEEE Computer Society Press, pp.114-124

Sezione 3: Comunicazioni su atti di convegno internazionali

1. (2023) Cabini R.F., Barzaghi L., Cicolari D., Pichieccio A., Figini S., Filibian M., Gazzano A., Peviani M., Pichieccio A., Lascialfari A., Magnetic Resonance Fingerprinting for spinal cord T1 and T2 mapping, In **Proceedings of the European Magnetic Resonance Congress** (EUROMAR)
2. (2023) Barzaghi L., Cabini R.F., Cicolari D., Pichieccio A., Figini S., Filibian M., Gazzano A., Peviani M., Pichieccio A., Lascialfari A. Fast Deep Learning techniques for Magnetic Resonance Fingerprinting. In **Proceedings of the European Magnetic Resonance Congress** (EUROMAR)
3. (2023) Postuma I., Lizzi F., Agosti A., Brero F., Cabini R.F., Fantacci M.E., Figini S., Lascialfari A., Laruina F., Oliva P., Piffer S., Scapicchio C., Talamonti C., Retico A. The LungQuant system: a software tool for the quantification of pulmonary involvement in Covid-19, In **Proceedings of Congresso Nazionale Associazione Italiana Fisica Medica** (AIFM)
4. (2023) Scapicchio C., Chincarini A., Ballante E., Berta L., Bicci E., Bortolotto C., Brero F., Cabini R.F., Cristofalo G., Fanni S.C., Fantacci M.E., Figini S., Galia M., Gemma P., Grassedonio E., Lascialfari A., Lenardi C., Lionetti A., Lizzi F., Marrale M., Midiri M., Nardi C., Oliva P., Perillo N., Postuma I., Preda L., Rastrelli V., Rizzetto F., Spina N., Talamonti C., Torresin A., Vanzulli A., Volpi F., Neri E., Retico A. Covid-19 severity prediction based on radiomic features extracted from lung CT scans using the LungQuant segmentation software, In **Proceedings of Congresso Nazionale Associazione Italiana Fisica Medica** (AIFM)
5. (2023) Brero F., Cabini R.F., Villa I., Lancia A., Oneta O., Bortolotto C., Ballante E., Puppo E., Bianchini L., Stelitano C., Alì E., Bartolomeo V., Montesano M., Merizzoli E., Agostoni F., Stella G.M., Sun R., Preda L., Figini S., Deutsch E., Filippi A.R., Lascialfari A., Blue Sky study: radiomics features as predictive markers of progression-free-survival in stage III, PD-L1 positive NSCLC, In **Proceedings of Congresso Nazionale Associazione Italiana Fisica Medica** (AIFM) 2023.
6. (2023) Scapicchio C., Ballante E., Brero F., Cabini R., Chincarini A., Fantacci M., Figini S., Lascialfari A., Lizzi F., Postuma I. and Retico A., A Deep Learning-based module for the quantification of imaging features to support the filling in of a radiological structured report, short paper **BIOSTEC2023** (16th International Joint Conference on Biomedical Engineering Systems and Technologies, 16-18 Feb)
7. (2023) Cabini R.F., Figini S., Pichieccio A., Lascialfari A., Zanella M. Application of Mean Field Interaction Algorithm to medical image Segmentation. In **Proceedings of Congresso Nazionale Associazione Italiana Fisica Medica** (AIFM) 2023.
8. (2023) Cabini R.F., Barzaghi L., Cicolari D., Pichieccio A., Figini S., Arosio P., Peviani M., Filibian M., Carrazza S., Lascialfari A. Fast Deep Learning models for Magnetic Resonance Fingerprinting, In **Proceedings of Joint Annual Meeting ISMRM-ESMRMB & ISMRT** 32nd Annual Meeting, 03-08 June 2023, Toronto, ON, Canada (online participation).
9. (2023) Scapicchio C., Ballante E., Brero F., Cabini R.F., Chincarini A., Fantacci M.E., Figini S., Lascialfari A., Lizzi F., Postuma I., Retico A. Integration of a Deep Learning-Based Module for the Quantification of Imaging Features into the Filling-in Process of the Radiological Structured Report, In **Proceedings of Cognitive Computing for Healthcare**.
10. (2022) Cabini R.F., Barzaghi L., Cicolari D., Pichieccio A., Figini S., Arosio P., Filibian M., Carrazza S., Lascialfari A. Fast Deep Learning reconstruction techniques for magnetic

resonance Fingerprinting, **XIII Congresso Associazione Italiana Risonanza Magnetica in Medicina**, Pisa, 23-25 November 2022.

11. (2022) Cabini R.F., Barzaghi L., Cicolari D., Pichieccio A., Figini S., Arosio P., Filibian M., Carrazza S., Lascialfari A. Fast Deep Learning reconstruction techniques for magnetic resonance Fingerprinting, **Italian-French International Conference on Magnetic Resonance**, Milano, 27-30 September 2022.
12. (2022) Cabini R.F., Barzaghi L., Cicolari D., Pichieccio A., Figini S., Arosio P., Peviani M., Filibian M., Lascialfari A., Carrazza S. Application of Deep Learning techniques to Magnetic Resonance Fingerprinting. Joint Annual Meeting ISMRM-ESMRMB, ISMRT 31st Annual Meeting, 07-12 May 2022, London, UK - **Proc. Intl. Soc. Mag. Reson. Med** vol. 30.
13. (2022) Colelli G., Barzaghi L., Paoletti M., Monforte M., Bergsland N., Ballante E., Manco G., Solazzo F., Germani G., Figini S., Deligianni X., Santini F., Bastianello S., Lascialfari A., Ricci E., Tasca G. and Pichieccio A. Applicazione di nuove features di Radiomic per la predizione di marker quantitativi nelle malattie neuromuscolari: un pilot study, **AINR** 8-11 June 2022, Rome, Italy
14. (2022) Cabini R.F., Brero F., Villa I., Lancia A., Oneta O., Bortolotto C., Ballante E., Puppo E., Bianchini L., Stelitano C., Alì E., Bartolomeo V., Montesano M., Merizzoli E., Agustoni F., Stella G.M., Sun R., Preda L., Figini S., Deutsch E., Filippi A.R., Lascialfari A. Harmonization of features extraction process using the ComBat tool in a multicenter study on stage III unresectable Non-Small-Cell Lung Cancer. In **Proceedings of 108° Congresso Società Italiana di Fisica**.
15. (2022) Cabini R.F., Figini S., Pichieccio A., Lascialfari A., Zanella M. Application of Mean Field Interaction Algorithm to medical image Segmentation. **CompMat2022**, Spring Workshop 2022, University of Pavia, 16-17 March.
16. (2022) Ballante E., Bellanger L., Drouin P., Figini S., Stamm A. Smoothing Method for Unit Quaternion Time Series, **IBC2022**, 10-15 Luglio 2022
17. (2021) Brero F., Lancia A., Oneta O., Bortolotto C., Ballante E., Cabini R.F., Puppo E., Stelitano C., Alì E., Bartolomeo V., Montesano M., Merizzoli E., Agustoni F., Stella G.M., Sun R., Preda L., Figini S., Lascialfari A., Deutsch E., Filippi A.R. Radiomics features extraction harmonization process in the Blue Sky study on stage 3 NSCLC patients undergoing chemoradiation and immunotherapy, (poster), **BiGART2021**, 6 Ottobre 2021.
18. (2021) Lizzi F., Agosti A., Brero F., Cabini R.F., Fantacci M.E., Figini S., Lascialfari A., Laruina F., Oliva P., Piffer S., Postuma I., Rinaldi L., Talamonti C., Retico A. The role of AI in COVID-19 management: quantification of lung involvement using CT scans. In **Proceedings of: CoViD-19: Inflammation and Molecular Imaging**.
19. (2021) Lancia A., Brero F., Oneta O., Bortolotto C., Ballante E., Cabini R.F., Puppo E., Mariani M., Stelitano C., Alì E., Bartolomeo V., Montesano M., Merizzoli E., Agustoni F., Stella G.M., Sun R., Preda L., Bianchini L., Figini S., Lascialfari A., Deutsch E., Filippi A.R. Radiomics features extraction harmonization process in the Blue Sky study on stage III NSCLC patients undergoing chemoradiation and immunotherapy. **Biology-Guided Adaptive Radiotherapy - Acta Oncologica Conference Virtual Symposia**.

20. (2020) Figini S. e Bardelli C. Machine learning prediction for accounting system, *Proceedings of the Italian statistical society*.
21. (2020) Figini S., Ballante E., Molteni S. and Mensi M. At risk mental status analysis: a comparison of model selection methods for ordinal target variable, *Proceedings of the Italian statistical society*.
22. (2019) Paoletti M., Monforte M., Bergsland N., Ballante E., Solazzo F., Vitale R., Belatti E., Savini G., Felisaz P., Germani G., Figini S., Tasca G., Deligianni X., Santini F., Bastianello S., Ricci E. and Pichieccchio A. Assessment of muscular involvemebt in facio-scapulo-humeral dystrophy (FSHD) by quantitative muscle MRI, *Imaging in Neuromuscular diseases* – Berlin 17-19 November 2019
23. (2019) Paoletti M., Diamanti L., Solazzo F., Ballante E., Vitale R., Belatti E., Savini G., Felisaz P., Faggioli A., Figini S., Deligianni X., Santini F., Bergsland N. and Pichieccchio A. Muscular involvement in amyotrophic lateral sclerosis (ALS) assessed by quantitative MRI, *Imaging in Neuromuscular diseases* Berlin 17-19 November 2019.
24. (2019) Figini S. e Ballante E. A new methodological perspective for classification model selection, *International Conference on Optimization and Decision Science*.
25. (2019) Signorini S., Luparia A., Cappagli G., Perotto E., Antonini M., Morelli F., Ballante E., Figini S. Visual Function Score: a new assessment tool for visual disorders, *The Child Vision Society's 2019 Biannual Meeting*, Pisa 15/17 June 2019
26. (2019) Paoletti M., Diamanti L., Solazzo F., Ballante E., Vitale R., Belatti E., Savini G., Felisaz P., Faggioli A., Figini S., Deligianni X., Santini F., Bergsland N. and Pichieccchio A. Muscular involvement in amyotrophic lateral sclerosis (ALS) assessed by quantitative MRI, *Imaging in Neuromuscular diseases* – Berlin.
27. (2019) Galavani M., Ballante E., Figini S. and Uberti P. A new polarization measure for decision tree models, *International Conference on Optimization and Decision Science*.
28. (2019) Galvani M., Bardelli C., Figini S., Muliere Generalized Bayesian Ensemble modeling: methodological and computational aspects, *European Meeting of Statisticians*.
29. (2019) Figini S. e Ballante E. Polarized Classification Tree Models, *International workshop on Computational Mathematics, Statistics and Machine Learning*.

30. (2019) Figini S., Bardelli M. and Galvani M. A New Ensemble Tree Model based on Bayesian Bootstrap, *International Conference on Optimization and Decision Science*.
31. (2018) Figini S. and Galvani M. Optimal model selection in credit risk modeling, 29th *European Conference on Operational Research*, Valencia.
32. (2017) Figini S. Optimal model selection in binary predictive data science models. In: Proceeding of the 11th *International Conference on Computational and Financial Econometrics* (CFE 2017).
33. (2017) Figini S., Maggi M., Uberti P. New indicators in systemic risk analytics: Theory and applications. In: CFE-CME 2017 P ROGRAMME AND A BSTRACTS 11th *International Conference on Computational and Financial Econometrics* (CFE 2017). ISBN: 978-9963-2227-4-2, Londra (UK), 16-18 dicembre, 2017.
34. (2014) Figini S., Gigliarano C. and Muliere P. Assessment and comparison of survival models using concentration indices, *Computational Financial Econometrics* 2014.
35. (2013) Figini S. and Vezzoli M. Ensemble models: theory and applications, International Conference of the *Royal Statistical Society* (selected paper), New Castle.
36. (2013) Figini S. and Vehtari A. Gaussian Process Classification And Duration Models For Credit Risk, *International Federation of Classification Societies*, Tilburg.
37. (2013) Figini S. and Vezzoli M. Model Averaging For Credit Risk Modelling, *International Federation of Classification Societies*, Tilburg.
38. (2013) Figini S. and Madormo F. Risk estimation and assessment using survival models for credit risk data, International Conference on *Computational and Financial Econometrics*, London.
39. (2012) Figini S. and Giudici P. Improving model averaging in credit risk analysis, *International Conference on Computational Statistics*, Cyprus.
40. (2012) Figini S. Bayesian model averaging for financial evaluation. Proceedings of the *Italian statistical society*.

41. (2011) Figini S., Cutillo L. and Carissimo A. Outlier detection in credit risk multivariate data via rank aggregation, *Proceedings of the 4th International Conference of the ERCIM WG, London.*
42. (2011) Figini S. A note on additively decomposable inequalities for risk measurement, *Proceedings of the Classification and Data Analysis Group of the Italian Statistical Society.*
43. (2011) Figini S., Gao L. Bayesian efficient capital at risk estimation, *Proceedings of the International conference ENBIS-DEINDE 2011, European Network for Business and Industrial Statistics & DDesign of INDustrial Experiments.*
44. (2011) Figini S. Bayesian Extreme Value Analysis of operational risk data, *Proceedings of the Italian Statistical Society.*
45. (2010) Figini, S. Risk tendency measures for ordinal variables, *Proceedings of the Italian Statistical Society.*
46. (2010) Figini S., Giudici P. and Uberti P. Concentration measures for risk analysis, *Proceedings of the Classification and Data Analysis Group of the Italian Statistical Society.*
47. (2010) Figini S. and Grossi L. Robust estimation and prediction for credit risk models, *Proceedings of the Classification and Data Analysis Group of the Italian Statistical Society.*
48. (2009) Figini S., Kenett R. e Giudici P. Integrating Operational and Financial Risk Assessments, *ENBIS9 meeting*, Gothenburg.
49. (2009) Figini S. and Sayago J.T. Longitudinal models for market reputation and risk, in *Proceedings of the Italian Statistical Society*, pp.263-266.
50. (2009) Figini S. Local statistical models for variables selection, in *Proceedings of the Classification and Data Analysis Group of the Italian Statistical Society*, pp. 489-492.
51. (2009) Figini S. Statistical models for XBRL data, *EURISBIS* 2009.
52. (2009) Figini S. Non linear rating models for SMEs, *EURISBIS* 2009.
53. (2009) Figini S. Predictive rules induction via string analysis, Multivariate methods and models for evaluating public services, Rimini.

54. (2008) Figini S. Model clustering and model averaging, in *Proceedings of the Classification and Data Analysis Group of the Italian Statistical Society*, pp.125-128.
55. (2008) Figini S. e Giudici P. Methodological aspects to measure credit risk for SME, in *Proceedings of the Italian Statistical Society*.
56. (2007) Cerchiello P., Figini S. e Giudici P. Applying data mining methods to business and industry, in *Proceedings of ENBIS Joint Conference 2007*.
57. (2007) Brooks S.P., Figini S. e Giudici P. Bayesian models to estimate customer survival, in *Proceedings of ISBA Valencia*
58. (2007) Figini S., Giudici P. e Fantazzini D. Longitudinal predictive models for SMEs, in *Proceeding of the 2007 intermediate conference – Risk and Prediction – of the Italian Statistical Society*, pp. 551-552.
59. (2007) Figini S. e Fantazzini D. Default forecasting for small medium enterprises, in *Proceeding of S.Co.2007, Venezia*, pp. 219-224.
60. (2007) Figini S., Giudici P. and Fantazzini D. Predictive dynamic models for SMEs, in *Proceedings of the Classification and Data Analysis Group of the Italian Statistical Society, Macerata*, pp. 193-196.
61. (2007) Figini S. e Roccato A. How to improve predictive models for database marketing applications, in *Proceedings of the Classification and Data Analysis Group of the Italian Statistical Society, Macerata*, pp. 281-284.
62. (2006) Figini S. Customer relationship: a survival analysis approach, in: Proceedings of **COMPSTAT 2006**, Roma , pp. 959-966.
63. (2006) Figini S. e Giudici P. Statistical models to analyse customer life cicle in *Proceeding of XLIII Italian statistical society meeting*, pp. 541 - 544 .
64. (2005) Figini S. e Giudici P. Feature selection in genomic predictive mining, in *Proceedings of the Classification and Data Analysis Group of the Italian Statistical Society*, pp. 249-252.
65. (2004) Figini S. e Giudici P. Modelli previsivi per text mining (in italiano), in
a. *Proceedings of the SAS CAMPUS*, pp. 59-66, Firenze.
66. (2001) Figini S. e Giudici P. Correspondence analysis for CRM (in italiano), in *Proceedings of SMDM01, Pavia* .

Sezione 4: Relazioni inviate a convegni internazionali

1. (2017) Figini S. Credit data science risk models for SMEs, International workshop “**Data science in Finance and Insurance**”.
2. (2014) Figini S., Gigliarano C. e Muliere P. Assessment and comparison of survival models using concentration indices, **Computational and Financial Econometrics** Pisa.
3. (2013) Figini S., Gigliarano C. e Muliere P. On discrimination indices for survival models, **Computational and Financial Econometrics** London.
4. (2013) Figini S. e Madormo F. Risk estimation and assessment using survival models for credit risk data, **Computational and Financial Econometrics** London.
5. (2012) Figini S., e Giudici, P. Model uncertainty in credit rating models, **Computational and Financial Econometrics** Oviedo.
6. (2012) Figini S., e Giudici, P. Improving Model averaging in credit risk analysis, **COMPSTAT**, Cipro.
7. (2009) Figini S., e Kenett, R. Integrating Operational and Financial Risk Assessments, **ENBIS9 meeting, Gothenburg**.
8. (2009) Figini S. Statistical models for XBRL data, EURISBIS 2009, **International Society of Business and Industrial Statistics meeting, Cagliari**.
9. (2009) Figini S., e Giudici P. Non linear rating models for SMEs, EURISBIS 2009, **International Society of Business and Industrial Statistics, Cagliari**.
- 10.(2008) Figini S. Model clustering and Model averaging, **Classification and Data Analysis Group of the Italian Statistical Society meeting, Caserta**.
- 11.(2007) Brooks S.P., Figini S. e Giudici P. Bayesian models to estimate customer survival, **ISBA meeting Valencia**.
- 12.(2005) Figini S. and Giudici P. Bayesian Feature selection for the estimation of customer lifetime value, **M2005, Data Mining Conference, Las Vegas**.

Sezione 5: Tesi

1. (2007) Figini S. Bayesian variable and model selection for Customer Lifetime Value, Tesi di dottorato.
2. (2001) Figini S. Analisi Statistiche delle corrispondenze per la classificazione e l' e-CRM, Tesi di laurea.

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