Salvatore Daniele Tomarchio

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Università degli Studi di Catania,
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Attuale posizione e Responsabilità Istituzionali

Ricercatore a tempo determinato (Rtd-B) in Statistica (SECS-S/01) — *Catania*
Università degli Studi di Catania, Dipartimento di Economia e Impresa — *01 Nov 2023 – Oggi*

Membro del Gruppo di Assicurazione della Qualità per il Corso di Laurea in "Management delle Imprese per l'Economia Sostenibile" — *Ragusa*
Università degli Studi di Catania, Dipartimento di Economia e Impresa — *Dic 2024 – Oggi*

Posizione precedente

Assegnista di Ricerca in Statistica (SECS-S/01) — *Catania*
Università degli Studi di Catania, Dipartimento di Economia e Impresa — *02 Gen 2021 – 31 Oct 2023*

Abilitazioni

Abilitazione Scientifica Nazionale alle funzioni di professore universitario di II fascia — *01/02/2023 – Oggi*
Settore Concorsuale 13/D1 – STATISTICA

Istruzione e formazione

Dottorato di Ricerca in "Economics, Management and Statistics" — *Messina*
Università degli studi di Messina, Dipartimento di Economia — *Dic 2020*

- Curriculum: Statistics
- Voto finale : Ottimo con lode
- Tutor: Prof. Antonio Punzo
- Tesi: Advances in finite mixture models: new methodologies and applications

Laurea Magistrale in "Finanza Aziendale" — *Catania*
Università degli studi di Catania, Dipartimento di Economia e Impresa — *Mag 2017*

- Voto finale : 110/110 e lode
- Tutor: Prof. Antonio Punzo
- Tesi: Contaminated unimodal distributions for insurance losses

Laurea Triennale in "Economia" — *Catania*
Università degli studi di Catania, Dipartimento di Economia e Impresa — *Nov 2014*

Partecipazione a scuole e corsi

Scuola estiva in "Data Science" — *Hamilton (ON), Canada*
McMaster University, Department of Mathematics and Statistics — *Mag 2019*

Scuola estiva in "Clustering, Data Analysis and Visualization of Complex Data" — *Catania*
Università degli studi di Catania, Dipartimento di Economia e Impresa — *Mag 2018*

Attività Didattica

Attività per Corsi di Laurea

Docente di "Statistical Learning: Supervised" — *Catania*
Corso di Laurea in "Data Science" — *Mar 2026 – Oggi*
Università degli Studi di Catania, Dipartimento di Economia e Impresa

Docente di "Statistica per l'Economia e l'Impresa: Statistica" — *Ragusa (sede distaccata)*
Corso di Laurea in "Management delle imprese per l'economia sostenibile" — *Ott 2023 – Oggi*
Università degli Studi di Catania, Dipartimento di Economia e Impresa

Docente di "Statistica" — *Priolo (sede distaccata)*
Corso di Laurea in "Scienze Politiche, Amministrazione e Servizi" — *Ott 2021 – Nov 2022*
Università degli Studi di Messina, Dipartimento di Scienze Politiche e Giuridiche

Attività per Dottorati di Ricerca

Docente di "Cluster analysis with R" — *Catania*
Dottorato di Ricerca in "Economics, Management and Decision Making" — *Gen 2024 – Oggi*
Università degli Studi di Catania, Dipartimento di Economia e Impresa

Docente di "Advances in Statistics-Clustering" — *Messina*
Dottorato di Ricerca in "Economics, Management and Statistics" — *Giu 2022 – Oggi*
Università degli Studi di Messina, Dipartimento di Economia

Docente di "Clustering & Mixture Models" — *Catania*
Dottorato di Ricerca in "Informatica" — *Mar 2023 – Mag 2025*
Università degli Studi di Catania, Dipartimento di Matematica e Informatica

Docente di "An introduction to time series analysis with R" — *Catania*
Dottorato di Ricerca in "Economics, Management and Decision Making" — *Gen 2022 – Feb 2023*
Università degli Studi di Catania, Dipartimento di Economia e Impresa

Attività per Master Universitari

Docente di "Data Analysis and Statistical Learning" — *Cosenza*
Master Universitario di II livello in "Data Science & Artificial Intelligence" — *Feb 2024 – Oggi*
Università della Calabria, Dipartimento di Economia, Statistica e Finanza

Docente di "Elementi di Statistica Descrittiva" — *Catania*
Master Universitario di I livello in "Tourism Operation Manager" — *Feb 2024 – Oggi*
Università degli Studi di Catania, Dipartimento di Economia e Impresa

Docente di "Data Analysis and Statistical Learning" — *Cosenza*
Master Universitario di II livello in "Data science" — *Mar 2021 – Feb 2023*
Università della Calabria, Dipartimento di Economia, Statistica e Finanza

Seminario in "Metodi statistici per monitorare impatti ambientali" — *Catania*
Master Universitario di II livello in "Management della Transizione Ecologica di Impresa" — *Mag 2022 – Mag 2022*
Università degli Studi di Catania, Dipartimento di Economia e Impresa

Attività di tutorato

Tutor qualificato di "Statistica" *Catania*
Corsi di Laurea in "Economia" e "Economia Aziendale" *Nov 2020 – Mag 2021*
Università degli Studi di Catania, Dipartimento di Economia e Impresa

Attività di Ricerca

Attività di Ricerca presso Qualificati Atenei Esteri

Visiting Researcher *Hamilton (ON), Canada*
McMaster University, Department of Mathematics and Statistics *Gen 2019 – Giu 2019*
Coordinator of the research activities: Prof. Paul D. McNicholas

Conseguimento di Premi e Riconoscimenti Internazionali

Premio a giovani studiosi e studiose per contributi alle discipline statistiche *Genova, Italia*
Da parte della Società Italiana di Statistica (SIS) *Giu 2025*
Premio assegnato al ricercatore under 40 che con la sua attività scientifica presenta il miglior contributo alle discipline statistiche. – Placca e € 2000.

PhD Student/Young Researcher Paper Award *Salerno, Italia*
Da parte del "Classification and Data Analysis Group (CLADAG) - Società Italiana di Statistica (SIS)" *Set 2023*
Premio assegnato a giovani ricercatori che lavorano nell' area della classificazione, del clustering e dell'analisi dei dati – Certificato e € 500.

Chikio Hayashi Award *Porto, Portogallo*
Da parte dell "International Federation of Classification Societies (IFCS)" *Lug 2022*
Premio biennale assegnato a giovani ricercatori che lavorano nell' area della classificazione e del clustering dei dati (ed argomenti ad essi correlati) – Placca e $ 1000.

Honorable mention
Da parte della "Classification Society" *Mar 2021*
Menzione d'onore nell'ambito della "Distinguished Dissertation Award" per la miglior tesi di dottorato riguardante la classificazione ed il clustering dei dati (ed argomenti ad essi correlati)

Partecipazione alle Attività di Progetti di Rilevante Interesse Nazionale (PRIN)

PRIN 2022
Progetto: "'The SMILE project: Statistical Modelling and Inference to Live the Environment"' *Giu 2023*
Importo Finanziato dal MUR con D.D. n° 764 del 05/06/2023: € 180.429

Affiliazione a Società Scientifiche e Accademie di Riconosciuto Prestigio

(1) - Affiliazione al "Classification and Data Analysis Group" *Apr 2022 – Oggi*
(2) - Affiliazione alla "Società Italiana di Statistica" (SIS) *Feb 2022 – Oggi*

Partecipazione a Comitati Editoriali di Riviste di Riconosciuto Prestigio

Associate Editor
Per la rivista "Journal of Classification" *Feb 2022 – Oggi*

Attività in Qualità di Reviewer per Riviste Scientifiche-Internazionali (in ordine alfabetico)

Advances in Data Analysis and Classification, Austrian Journal of Statistics, Biometrical Journal, Communications in Statistics - Simulation and Computation, Communications in Statistics - Theory and Methods, Computational

Statistics, Computational Statistics & Data Analysis, Environmental and Ecological Statistics, Insurance: Mathematics and Economics, Journal of Classification, Journal of Computational and Graphical Statistics, Journal of Multivariate Analysis, Journal of Statistical Computation and Simulation, Journal of Statistical Theory and Practice, Journal of the Royal Statistical Society: Series C, Metron, Stat, Statistical Methods & Applications, Statistics and Computing, The American Statistician

Attività in Qualità di Reviewer per i Seguenti Enti di Ricerca Internazionali

(1) - South Africa's National Research Foundation (NRF) *Ott 2021*

(2) - Natural Sciences and Engineering Research Council of Canada (NSERC) *Nov 2023, Dec 2025*

Partecipazione a Comitati Organizzatori di Convegni Internazionali

(1) 8th International Workshop: "MBC 2 - Workshop on Models and Learning in Clustering and Classification", Catania, 26 Ago – 28 Ago 2026.

(2) 7th International Workshop: "MBC 2 - Workshop on Models and Learning in Clustering and Classification", Catania, 28 Ago – 30 Ago 2024.

(3) 6th International Workshop: "MBC 2 - Workshop on Models and Learning in Clustering and Classification", Catania, 31 Ago – 2 Set 2022.

(4) 5th International Workshop: "MBC 2 - Workshop on Models and Learning in Clustering and Classification", Catania, 2, 4, 11, 18, 25 Set 2020.

(5) 4th International Workshop: "MBC 2 - Workshop on Model-Based Clustering and Classification", Catania, 5–7 Set 2018.

Organizzatore di Sessioni per Congressi e Riunioni Scientifiche

(1) *Advances in hidden Markov models*, "19th conference of the International Federation of Classification Societies", Milano, 14–16 Lug 2026.

(2) *Advances in latent/hidden Markov models*, "The 52nd Scientific Meeting of the Italian Statistical Society", Bari, 17–20 Giu 2024.

Partecipazione in Qualità di Relatore a Congressi e Convegni

In Sessioni Invitate

(1) *Revisiting the Dirichlet distribution for model-based clustering*, "The 52nd Scientific Meeting of the Italian Statistical Society", Bari, 17–20 Giu 2024.

(2) *A new look at the Dirichlet distribution with applications in model-based clustering*, "16th International Conference of the ERCIM (European Research Consortium for Informatics and Mathematics)", Berlino, Germania, 16–18 Dic 2023.

(3) *Mixture models for heavy-tailed tensor-variate data*, "25th International Conference on Computational Statistics", Londra, Regno Unito, 22–25 Ago 2023.

(4) *Model-based clustering for tensor-variate data*, "6th International Conference on Econometrics and Statistics", Tokyo, Giappone, 01–03 Ago 2023.

(5) *On Parsimonious Modelling via Matrix-variate t Mixtures*, "17th Conference of the International Federation of Classification Societies", Porto, Portogallo, 19–23 Lug 2022.

(6) *Hidden markov models for four–way data*, "51th Scientific Meeting of the Italian Statistical Society", Caserta, 22–24 Giu 2022.

(7) *Clustering via new parsimonious mixtures of heavy tailed distributions*, "13th Scientific Meeting of the Classification and Data Analysis Group", Firenze, 09–11 Set 2021.

(8) *Model based-clustering via mixtures of two new matrix-variate distributions*, "13th International Conference of the ERCIM WG on Computational and Methodological Statistics", Londra, Regno Unito, 19–21 Dic 2020.

(9) *Finite mixtures of matrix-variate regressions with random covariates*, "16th Conference of the International Federation of Classification Societies", Thessaloniki, Grecia, 26–29 Ago 2019.

In Sessioni Spontanee

(1) *Heavy-Tailed Hidden Markov Models for Matrix-Variate Longitudinal Data*, "SIS 2025 - Statistics for Innovation", Genova, 16–18 Giu 2025.

(2) *Matrix-variate hidden Markov regressions*, "14-th Scientific Meeting of the Classification and Data Analysis Group", Salerno, 11–13 Set 2023.

(3) *Robust matrix-variate mixtures of regressions*, "SIS 2023 - Statistical Learning, Sustainability and Impact Evaluation", Ancona, 21–23 Giu 2023.

(4) *Finite mixtures of skew shifted exponential normal distributions with an application to cryptocurrency log-returns*, "Conference of European Statistics Stakeholders", Roma, 20–21 Ott 2022.

(5) *Finite mixtures of regressions with random covariates using multivariate skewed distributions*, "50th Scientific Meeting of the Italian Statistical Society", Pisa, 21–25 Giu 2021.

(6) *Parsimonious matrix normal mixtures: an application to university students indicators*, "Third international conference on Data Science & Social Research", Bari, 10–11 Dic 2020.

(7) *Clustering three-way data with a new mixture of Gaussian scale mixtures*, "5th International Workshop: MBC^2 - Workshop on Model-Based Clustering and Classification", Catania, 2, 4, 11, 18, 25 Set 2020.

(8) *The matrix-variate Gaussian Cluster-Weighted Model*, "2019 Classification Society Annual Meeting", MacEwan University, Edmonton, Canada, 19–22 Giu 2019.

(9) *Modeling insurance losses via contaminated unimodal distributions*, "49th Scientific Meeting of the Italian Statistical Society", Palermo, 20–22 Giu, 2018.

In Sessioni Dedicate ai Poster

(1) *The multivariate skew shifted exponential normal distribution and its use in finite mixture modeling*, "6th International Workshop on Models and Learning in Clustering and Classification", Catania, 31 Ago – 2 Set 2022

(2) *Zero-and-one inflated mixtures for loss given default*, "4th International Workshop on Model-Based Clustering and Classification (MBC^2)", Catania, 5–7 Set 2018.

Elenco Pubblicazioni

Articoli su Rivista

(1) **Tomarchio S.D.** (2026) Matrix-variate cluster-weighted bilinear factor analyzers. *Statistics and Computing*, **36**(3): 125. **(Classe A)**
DOI: https://doi.org/10.1007/s11222-026-10883-z

(2) Otto A.F., Punzo A., Ferreira J.T., Bekker A., **Tomarchio S.D.**, Tortora C. (2026) Modeling Bounded Count Environmental Data Using a Contaminated Beta-Binomial Regression Model. *Environmetrics*, **37**(1): e70067. **(Classe A)**
DOI: https://doi.org/10.1002/env.70067

(3) **Tomarchio S.D.** (2025) Heavy-tailed matrix-variate hidden Markov models. *Computational Statistics & Data Analysis*, **211**: 108198. **(Classe A)**
DOI: https://doi.org/10.1016/j.csda.2025.108198

(4) **Tomarchio S.D.**, Bagnato L., Punzo A. (2025) Finite mixtures of multivariate skew tail-inflated normal distributions. *Journal of Statistical Computation and Simulation*, **95**(9): 2010–2029. **(Classe A)**
DOI: https://doi.org/10.1080/00949655.2025.2479063

(5) Lachos V.H., **Tomarchio S.D.**, Punzo A., Ingrassia S. (2025) An EM algorithm for fitting matrix-variate normal distributions on interval-censored and missing data. *Statistics and Computing*, **35**: 39. **(Classe A)**
DOI: https://doi.org/10.1007/s11222-025-10575-0

(6) Otto A.F., Ferreira J.T., **Tomarchio S.D.**, Bekker A., Punzo A. (2025) A contaminated regression model for count health data. *Statistical Methods in Medical Research*, **34**(2): 369–389. **(Classe A)**
DOI: https://doi.org/10.1177/09622802241307613

(7) **Tomarchio S.D.**, Punzo A. (2025) On the Number of Components for Matrix-Variate Mixtures: A Comparison Among Information Criteria. *International Statistical Review*, 1–24. **(Classe A)**
DOI: https://doi.org/10.1111/insr.12607

(8) Otto A.F., Ferreira J.T., Bekker A., Punzo A., **Tomarchio S.D.** (2025) A refreshing take on the inverted Dirichlet via a mode parameterization with some statistical illustrations. *Journal of the Korean Statistical Society*, **54**: 314–341.
DOI: https://doi.org/10.1007/s42952-024-00296-x

(9) **Tomarchio S.D.**, Punzo A., Ferreira J.T., Bekker A. (2025) A new look at the Dirichlet distribution: robustness, clustering, and both together. *Journal of Classification*, **42**(1): 31–53. **(Classe A)**
DOI: https://doi.org/10.1007/s00357-024-09480-4

(10) Bekker A., Otto A.F., Punzo A., **Tomarchio S.D.**, Ferreira J.T., (2025) Discrete mode-mixtures of unimodal positive distributions with an application to solar energy in South Africa. *Afrika Matematika*, **36**: 115.
DOI: https://doi.org/10.1007/s13370-025-01329-2

(11) **Tomarchio S.D.**, Punzo A., Ferreira J.T., Bekker A. (2024) Mode mixture of unimodal distributions for insurance loss data. *Annals of Operations Research*, 1–19. **(Classe A)**
DOI: https://doi.org/10.1007/s10479-024-06063-9

(12) **Tomarchio S.D.**, Gallaugher M.P.B. (2024) Mixtures of regressions using matrix-variate heavy-tailed distributions. *Advances in Data Analysis and Classification*, 1–28. **(Classe A)**
DOI: https://doi.org/10.1007/s11634-024-00585-7

(13) **Tomarchio S.D.** (2024) Matrix-variate normal mean-variance Birnbaum-Saunders distributions and related mixture models. *Computational Statistics*, **39**(2): 405–432. **(Classe A)**
DOI: https://doi.org/10.1007/s00180-022-01290-9

(14) **Tomarchio S.D.**, Bagnato L., Punzo A. (2024) Model-based clustering using a new multivariate skew distribution. *Advances in Data Analysis and Classification*, **18**(1): 61–83. **(Classe A)**
DOI: https://doi.org/10.1007/s11634-023-00552-8

(15) **Tomarchio S.D.**, Punzo A., Maruotti A. (2024) Matrix-Variate Hidden Markov Regression Models: Fixed and Random Covariates. *Journal of Classification*, **41**(3): 429–454. **(Classe A)**
DOI: https://doi.org/10.1007/s00357-023-09438-y

(16) **Tomarchio S.D.**, Punzo A., Bagnato L. (2023) Parsimonious mixtures for the analysis of tensor-variate data. *Statistics and Computing*, **33**(6): 123. **(Classe A)**
DOI: https://doi.org/10.1007/s11222-023-10291-7

(17) **Tomarchio S.D.**, Punzo A., Maruotti A. (2022) Parsimonious hidden Markov models for matrix-variate longitudinal data. *Statistics and Computing*, **32**(3): 53. **(Classe A)**
DOI: https://doi.org/10.1007/s11222-022-10107-0

(18) **Tomarchio S.D.**, Gallaugher M.P.B., Punzo A., McNicholas P.D. (2022) Mixtures of Matrix-Variate Contaminated Normal Distributions. *Journal of Computational and Graphical Statistics*, **31**(2): 413–421. **(Classe A)**
DOI: https://doi.org/10.1080/10618600.2021.1999825

(19) Gallaugher M.P.B., **Tomarchio S.D.**, McNicholas P.D., Punzo A. (2022) Multivariate cluster weighted models using skewed distributions. *Advances in Data Analysis and Classification*, **16**(1): 93–124. **(Classe A)**
DOI: https://doi.org/10.1007/s11634-021-00480-5

(20) **Tomarchio S.D.**, Bagnato L., Punzo A. (2022) Model-based clustering via new parsimonious mixtures of heavy-tailed distributions. *AStA Advances in Statistical Analysis*, **106**(2): 315–347. **(Classe A)**
DOI: https://doi.org/10.1007/s10182-021-00430-8

(21) Gallaugher M.P.B., **Tomarchio S.D.**, McNicholas P.D., Punzo A. (2022) Model-based clustering via skewed matrix-variate cluster-weighted models. *Journal of Statistical Computation and Simulation*, **92**(13): 2645–2666. **(Classe A)**
DOI: https://doi.org/10.1080/00949655.2022.2084093

(22) **Tomarchio S.D.**, Ingrassia S., Melnykov V. (2022) Modeling students' career indicators via mixtures of parsimonious matrix-normal distributions. *Australian & New Zealand Journal of Statistics*, **64**(2): 117–132.
DOI: https://doi.org/10.1111/anzs.12351

(23) **Tomarchio S.D.**, McNicholas P.D., Punzo A. (2021) Matrix Normal Cluster-Weighted Models. *Journal of Classification*, **38**(3): 556–575. **(Classe A)**
DOI: https://doi.org/10.1007/s00357-021-09389-2

(24) **Tomarchio S.D.**, Punzo A., Bagnato L. (2020) Two new matrix-variate distributions with application in model-based clustering. *Computational Statistics & Data Analysis*, **152**: 107050. **(Classe A)**
DOI: `https://doi.org/10.1016/j.csda.2020.107050`

(25) **Tomarchio S.D.**, Punzo A. (2020) Dichotomous unimodal compound models: Application to the distribution of insurance losses. *Journal of Applied Statistics*, **47**(13-15): 2328–2353.
DOI: `https://doi.org/10.1080/02664763.2020.1789076`

(26) **Tomarchio S.D.**, Punzo A. (2019) Modelling the loss given default distribution via a family of zero-and-one inflated mixture models. *Journal of the Royal Statistical Society: Series A*, **182**(4): 1247–1266. **(Classe A)**
DOI: `https://doi.org/10.1111/rssa.12466`

Articoli su Volumi Collettanei

(27) **Tomarchio S.D.**, Punzo A., Maruotti A. (2026) Using Matrix-Variate Hidden Markov Regressions for Analyzing Crime Data. In: Chelli, F.M., Crocetta, C., Ingrassia, S., Recchioni, M.C. (Eds.), *Statistical Learning, Sustainability and Impact Evaluation . SEAS IN 2023.*, Springer Proceedings in Mathematics & Statistics: 159–168, Springer, Cham.
ISBN: 978-3-032-10630-8

(28) **Tomarchio S.D.**, Punzo A., Maruotti A. (2025) Analyzing Italian Crime Data Using Matrix-Variate Hidden Markov Models. In: Giordano G., La Rocca M., Niglio M., Restaino M., Vichi M. (Eds.), *Statistical Models and Learning Methods for Complex Data*, Studies in Classification, Data Analysis, and Knowledge Organization: 181–189, Springer, Cham.
ISBN: 978-3-031-84702-8

(29) **Tomarchio S.D.** (2025) Heavy-Tailed Hidden Markov Models for Matrix-Variate Longitudinal Data. In: Di Bella E., Gioia V., Lagazio C., Zaccarin S. (Eds.), *Statistics for Innovation IV*, Italian Statistical Society Series on Advances in Statistics: 425–431, Springer, Cham.
ISBN: 978-3-031-96033-8

(30) **Tomarchio S.D.**, Punzo A., Ferreira J.T., Bekker A. (2025) Revisiting the Dirichlet Distribution for Model-Based Clustering. In: Pollice A., Mariani P. (Eds.), *Methodological and Applied Statistics and Demography II*, Italian Statistical Society Series on Advances in Statistics: 90–95, Springer, Cham.
ISBN: 978-3-031-64350-7

(31) **Tomarchio S.D.** (2024) A Family of Parsimonious Matrix-Variate Mixture Models for Heavy-Tailed Data. In: Mingione, M., Vichi, M., Zaccaria, G. (Eds), *High-quality and Timely Statistics. CESS 2022.*, Studies in Theoretical and Applied Statistics: 259–271, Springer, Cham.
ISBN: 978-3-031-63630-1

(32) **Tomarchio S.D.**, Punzo A., Maruotti A. (2024) Matrix-Variate Hidden Markov Models: An Application to Employment Data. In: Bini, M., Balzanella, A., Masserini, L., Verde, R. (Eds), *Advanced Methods in Statistics, Data Science and Related Applications. SIS 2022.*, Springer Proceedings in Mathematics & Statistics: 113–123, Springer, Cham.
ISBN: 978-3-031-65699-6

(33) **Tomarchio S.D.** (2023) On Parsimonious Modelling via Matrix-variate t Mixtures. In: Brito P., Dias J.G., Lausen B., Montanari A. and Nugent R. (Eds.), *Classification and Data Science in the Digital Age*, Studies in Classification, Data Analysis, and Knowledge Organization: 393–401, Springer, Cham.
ISBN: 978-3-031-09033-2

(34) **Tomarchio S.D.**, Bagnato L., Punzo A. (2023) Parsimonious Mixtures of Matrix-Variate Shifted Exponential Normal Distributions. In: Grilli L., Lupparelli M., Rampichini C., Rocco E. and Vichi M. (Eds.), *Statistical Models and Methods for Data Science*, Studies in Classification, Data Analysis, and Knowledge Organization: 177–186, Springer, Cham.
ISBN: 978-3-031-30164-3

(35) **Tomarchio S.D.**, Punzo A., Bagnato L. (2023) On the Use of the Matrix-Variate Tail-Inflated Normal Distribution for Parsimonious Mixture Modeling. In: Salvati, N., Perna, C., Marchetti, S., Chambers, R. (Eds.), *Studies in Theoretical and Applied Statistics. SIS 2021.*, Springer Proceedings in Mathematics & Statistics, (46): 407–423, Springer, Cham.
ISBN: 978-3-031-16608-2

(36) Punzo A., **Tomarchio S.D.** (2022) Parsimonious finite mixtures of matrix-variate regressions. In: Bekker A., Ferreira J.T., Arashi M., Chen D.G. (Eds.), *Innovations in Multivariate Statistical Modeling: Navigating Theoretical and Multidisciplinary Domains*, Emerging Topics in Statistics and Biostatistics: 385–398, Springer, Cham.
ISBN: 978-3-031-13971-0

Articoli su Atti di Convegno

(37) **Tomarchio S.D.**, Punzo A., Bagnato L. (2025) Dimension-Wise Kurtosis Control And Parsimony In Model-Based Clustering. In: Local Organizing Committee (Eds.), *BOOK OF ABSTRACTS*: 78, Zaccaria Editore.
ISBN: 9788899594244

(38) Otto A.F., Ferreira J.T., Bekker A., **Tomarchio S.D.** (2024) Robust inference and classification via the mean parameterised negative binomial regression model. In: Ingrassia S., Tomarchio S.D. (Eds.), *MBC2^2 2024 Book of Abstracts*: 7.
ISBN: 979-12-210-6784-2

(39) **Tomarchio S.D.**, Punzo A., Bekker A., Ferreira J.T. (2023) A new look at the Dirichlet distribution with applications in model-based clustering. In: Colubi A., Kontoghiorghes E.J., Deistler M. (Eds.), *Programme and Abstracts*: 208, ECOSTA Econometrics and Statistics.
ISBN: 978-9925-7812-7-0

(40) Ferreira J.T., Bekker A., Otto A., Punzo A.,**Tomarchio S.D.** (2023) The inverted Dirichlet through a mode viewpoint with clustering applications. In: Colubi A., Kontoghiorghes E.J., Deistler M. (Eds.), *Programme and Abstracts*: 92, ECOSTA Econometrics and Statistics.
ISBN: 978-9925-7812-7-0

(41) **Tomarchio S.D.**, Gallaugher M.P.B. (2023) Robust matrix-variate mixtures of regressions. In: Chelli F.M., Ciommi M., Ingrassia S., Mariani F., Recchioni M.C. (Eds.), *Book of the short papers*: 635–640, Pearson.
ISBN: 9788891935618

(42) Punzo A., Bagnato L., **Tomarchio S.D.** (2023) Model-based clustering via parsimonious mixtures of dimension-wise scaled normal mixtures. In: Rampichini C., La Rocca M., Coretto P., Giordano G., Parrella M.L. (Eds.), *CLADAG 2023 BOOK OF ABSTRACTS AND SHORT PAPERS : 14th Scientific Meeting of the Classification and Data Analysis Group, Salerno, September 11-13, 2023*: 263, Pearson Education Resources.
ISBN: 9788891935632

(43) **Tomarchio S.D.**, Punzo A., Maruotti A. (2023) Matrix-variate hidden Markov regressions. In: Rampichini C., La Rocca M., Coretto P., Giordano G., Parrella M.L. (Eds.), *CLADAG 2023 BOOK OF ABSTRACTS AND SHORT PAPERS : 14th Scientific Meeting of the Classification and Data Analysis Group, Salerno, September 11-13, 2023*:

648–651, Pearson Education Resources.
ISBN: 9788891935632

(44) **Tomarchio S.D.**, Punzo A., Bagnato L. (2023) Mixture models for heavy-tailed tensor-variate data. *Programme and Abstracts*: 16, COMPSTAT 2023.
ISBN: 9789073592414

(45) **Tomarchio S.D.**, Punzo A., Bagnato L. (2023) Model-based clustering for tensor-variate data. In: Colubi A., Kontoghiorghes E.J., Deistler M. (Eds.), *Programme and Abstracts*: 128, ECOSTA Econometrics and Statistics.
ISBN: 978-9925-7812-2-5

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Altre attività

Pacchetti R creati

(1) **MatFacReg**
https://github.com/danieletomarchio/Matrix-Variate-Cluster-Weighted-Bilinear-Factor-Analyzers.git

(2) **MatrixHMM**
https://cran.r-project.org/web/packages/MatrixHMM/index.html

(3) **FourWayHMM** (con Punzo A., Maruotti A.)
https://cran.r-project.org/web/packages/FourWayHMM/index.html

(4) **SenTinMixt** (con Bagnato L., Punzo A.)
https://github.com/danieletomarchio/SenTinMixt.git

(5) **MatrixMixtures** (con Gallaugher M.P.B., Punzo A., McNicholas P.D.)
https://cran.r-project.org/web/packages/MatrixMixtures/index.html

Certificazioni linguistiche

IELTS (Academic), CEFR-LEVEL:B2, British Council Rome, 8 Set 2018.

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