

Teaching Experience - Graduate Level

2006–2019	Bayesian Data Analysis and Computation	University of Padova
2014–2019	Statistical Inference	Sapienza University of Rome
2018	Basic Text-mining	Sapienza University of Rome
2018	Monte Carlo Methods	Sapienza University of Rome
2017	Extreme Value Inference	Sapienza University of Rome
2007	Extreme Value Inference	University of Roma 3
2004–2006	Probability and Statistics	Sapienza University of Rome

Professional activities, Society memberships, Awards and Honors

2013–2014	Member of the Research Commission, Sapienza University of Rome
2018–today	Member of the Committee of the Economics Faculty (Giunta di Facoltà), Sapienza University of Rome
2017–2019	Member of the Committee of the Department of Methods and Models for Economics, Territory and Finance (Giunta di Dipartimento), Sapienza University of Rome
2013–2015 2020–today	Member of the Research Commission of the Department of Methods and Models for Economics, Territory and Finance, Sapienza University of Rome
2011–today	Member of the Academic Board of the PhD Program <i>Methods and Models for Economics and Finance</i> , Sapienza University of Rome.
2016–2019	Supervisor of the PhD Thesis <i>MCMC for continuous time multi-state models and high dimensional copula models</i> by Rosario Barone, Cycle XXXII
2014–2018	Member of the PhD final examination commissions for the following programs: - <i>Statistical Methods for Economics and Business</i> . Cycles XXV and XXVI. University of Roma 3 - <i>Methodological Statistics</i> . Cycle XXVII. Sapienza University of Rome - <i>Statistical Science</i> . Cycle XXX, University of Padova
2007–2017	Member of the local organizing committee for the following conferences: <i>SIS BAYES 2017</i> , <i>ABC in Rome 2013</i> , <i>SIS 2012</i> , <i>ASMDA 2011</i> , <i>OBAYES6 2007</i>
2011–today	Member of the Institute of Mathematical Statistics (IMS)
2010	Winner of the Sapienza research prize for Law Economics and Social Sciences (in collaboration with B.Liseo)
2001–today	Referee for <i>Bayesian Analysis</i> , <i>Biometrical Journal</i> , <i>BMC Medical Research Methodology</i> , <i>Computational Statistics and Data Analysis</i> , <i>Communications in Statistics Theory and Methods</i> , <i>Computer Methods and Program in Biomedicine</i> , <i>Electronic Journal of Statistics</i> , <i>Health Economics</i> , <i>Journal of Business and Economic Statistics</i> , <i>Journal of Computational and Graphical Statistics</i> , <i>Journal of Health Economics</i> , <i>Journal of Multivariate Analysis</i> , <i>Journal of Official Statistics</i> , <i>Journal of Statistical Computation and Simulation</i> , <i>Journal of the American Statistical Association</i> , <i>Journal of the Royal Statistical Society Series A</i> , <i>Journal of the Royal Statistical Society Series B</i> , <i>Rivista di Statistica Ufficiale</i> , <i>Statistical Methods and Applications</i> , <i>TEST</i> , <i>Value in Health</i> .

Funding Information

2018–2019	<i>Accounting for de-duplication uncertainty in population size estimation and small area models</i> Project supported by Sapienza University of Rome	34800 Euro
2015–2016	<i>Approximate Bayesian Inference for continuous time Markov processes and applications of the Lotka-Volterra model in economics</i> Project supported by Sapienza University of Rome	4215 Euro
2012–2013	<i>Bayesian Inference for Markovian and semi-Markovian model with applications in health economics.</i> Project supported by Sapienza University of Rome	3500 Euro
2010–2011	<i>Accounting for matching uncertainty in statistical inference with multiple unlabeled data sets.</i> Project supported by Sapienza University of Rome	10000 Euro
2009–2010	<i>Cost analysis and efficiency evaluation in health economics.</i> Project supported by Sapienza University of Rome	2000 Euro
2008–2010	<i>Stochastic frontier models: theoretical generalizations and Bayesian applications.</i> Project supported by Sapienza University of Rome	2000 Euro
2007–2009	<i>The record linkage problem: Bayesian modeling and computational issues.</i> Project supported by Sapienza University of Rome	1500 Euro

Research Groups

2015–2018	<i>PRIN 2015, Likelihood-free Methods of Inference</i> National project partially supported by the Italian Ministry of Instruction, University and Research. National coordinator: Prof. Brunero Liseo
2013–2014	<i>Estimation of a DSGE large scale model with Bayesian Methods</i> project supported by the Italian Ministry of Economics and Finance (MEF). Co-ordinator Prof. N. Acocella
2008–2010	<i>PRIN 2008, Nuovi sviluppi nella teoria e nella pratica del campionamento statistico</i> National project partially supported by the Italian Ministry of Instruction, University and Research. National coordinator: Prof. Daniela Cocchi.
2006–2008	<i>PRIN 2006 Classi flessibili di distribuzioni ottenute mediante perturbazione della simmetria: aspetti probabilistici, statistici e applicativi</i> National project partially supported by the Italian Ministry of Instruction, University and Research (MUIR, ex MURST). National coordinator: Prof. Adelchi Azzalini.
2003–2005	<i>PRIN 2003 Metodi statistici per l'integrazione di dati da fonti diverse</i> National project partially supported by the Italian Ministry of Instruction, University and Research (MUIR, ex MURST). National coordinator: Prof. Alberto Zuliani.

Talks as invited speaker

- 2018** A unified framework for deduplication and population size estimation. Workshop on Bayesian for Social Goods. Marseille (France), November 2018
- 2018** New methods for small area estimation with linkage uncertainty. SIS 2018, 49th Meeting of the Italian Statistical Society, Palermo, June 2018
- 2017** A unified framework for deduplication, record linkage and population size estimation. ISI 2017, 61th World Statistics Congress of the International Statistical Institute. Marrakech, Marocco, July 2017.
- 2017** Approximate Bayesian computation (ABC) for continuous time multi state model. SIS 2017 Statistical Conference Statistics and Data Science: new challenges, new generations. Firenze, June 2017
- 2016** Bayesian inference for a finite population total using linked data. SMPS 2016 8th international conference on soft methods in probability and statistics, Roma, September 2016.
- 2016** Bayesian non parametric methods for record linkage. SIS2016, 48th Meeting of the Italian Statistical Society, Salerno, June 2016.
- 2015** Bayesian inference with linked and duplicated data. Joint Statistical Meeting. Seattle USA, August 2015
- 2014** Bayesian inference with linked data. SIS2014, 47th Meeting of the Italian Statistical Society, Cagliari, June 2016
- 2013** Approximate Bayesian Inference for discretely observed continuous-time multi-state models. ERCIM 2013. London UK December 2013
- 2013** Some advances on Bayesian record linkage and inference for linked data. Joint Statistical Meeting. Montreal Canada August 2013
- 2013** Accounting for matching uncertainty in T-stage capture recapture models for population size estimation. ITACOSM13. Third Italian Conference on Survey Methodology. Milano June 2013
- 2011** A hierarchical Bayesian approach for population size estimation and record linkage. 58th World Statistics Congress of the International Statistical Institute. Dublin Ireland August 2011.
- 2011** A hierarchical Bayesian approach for population size estimation and record linkage. Yeditepe International Research Conference on Bayesian Learning. Istanbul Turkey June 2011
- 2010** Capture-recapture models with matching uncertainty. XLV riunione scientifica SIS. Padova June 2010.
- 2009** Bayesian approaches to matching and size population problems: a unified framework. S.Co 2009. Complex Data Modelling and Computationally Intensive Statistical methods for Inference and Prediction. Milano September 2009
- 2009** Discussant for the session *Flexible models*. S.Co 2009. Complex Data Modelling and Computationally Intensive Statistical methods for Inference and Prediction. Milano September 2009.
- 2009** A novel Bayesian approach to matching and size population problems. ITACOSM09. First Italian Conference on Survey Methodology. Siena June 2009
- 2004** Semi-parametric Bayesian inference for extreme values. Bayesian Nonparametrics. Roma June 2004.
- 2003** Semi-parametric estimation of health care technologies by extreme value theory. S.Co 2003 Modelli complessi e metodi computazionali intensivi per la stima e la previsione. Treviso September 2003
- 2003** Accounting for threshold uncertainty in extreme value theory. 1st IMS-ISBA joint Statistical Meeting. San Juan, PuertoRico. July 2003.
- 2002** A Bayesian model for threshold uncertainty in extreme value theory. Dipartimento di economia politica e metodi quantitativi, Università di Pavia.

Other talks

- 2019** MCMC inference for discretely observed continuous time multi state models. IWSM2019, Guimaraes Portogallo, July 2019.
- 2013** Prediction of patient reported outcome measures via multivariate ordered probit models. ERCIM 2013. London UK December 2013
- 2010** Capture recapture models with matching uncertainty. International Statistical Ecology Conference. University of Kent. Canterbury, UK July 2010
- 2008** A hierarchical Bayesian model for record linkage with application to population size. Workshop on Sample Surveys and Bayesian Statistics, Southampton (U.K.) August 2008

Research Interests

Bayesian Inference and Computation	Publications [1-7, 9-26, 28-31]
Biostatistics	Publications [2,6,8-9,13,15,20,24, 32-40]
Extreme value theory	Publications [13-15]
Health Economics	Publications [6,9,13,15,25,29,41]
Record linkage	Publications [1,3-5,7,10-11,16-19,21-23,26-28,30]

Summary of Scientific Achievements

Total number of papers on Area 13 Class A Journals in the last 15 years	10
Total number of papers on Area 13 Scientific Journals and other publications with ISBN in the last 10 years	23
Total number of books in the last 15 years	1 (translated)
Total number of publications	41 (21 statistical and biomedical journals, 7 book chapters, 12 proceedings with ISBN, 1 Editorial articles).
Total number of citations	Google Scholar 811, Scopus 466.
H-index:	Google Scholar 13, Scopus 9

1. **Tancredi A.**, Steorts R., Liseo B. (2020) A unified framework for data deduplication and population size estimation. *Bayesian Analysis, to appear with discussion* Area 13, Class A Journal
2. **Tancredi A.** (2019) Approximate Bayesian Inference for continuous time discretely observed multi-state models. *Biometrics* **75** 966-977 Area 13, Class A Journal
3. Steorts R., **Tancredi A.**, Liseo B. (2018) Generalized Bayesian record linkage and regression with exact error propagation In *Privacy in Statistical Databases, UNESCO Chair in Data Privacy, International Conference, PSD 2018, Valencia, Spain, September 26–28, 2018, Proceedings* (Editors: Josep Domingo-Ferrer Francisco Montes) Springer 297–313. ISBN 978-3-319-99770-4
4. Briscolini D., Di Consiglio L., Liseo B., **Tancredi A.**, Tuoto T. (2018) New Methods for Small Area Estimation with Linkage Uncertainty. *International Journal of Approximate Reasoning* **94** 30-42. Area 13, Class A Journal
5. **Tancredi A** Liseo B. (2015) Regression analysis with linked data *Statistica* **75**, 19-35. Area 13, Scientific Journal
6. Conigliani C. Manca A. **Tancredi A.** (2015) Prediction of health related quality of life measures via multivariate ordered probit models *Journal of the Royal Statistical Society, Series A* **178** 567-591. Area 13, Class A Journal
7. **Tancredi A.**, Auger-Methe M., Marcoux M., Liseo B. (2013) Accounting for matching uncertainty in two stage capture-recapture experiments using photographic measurements of natural marks. *Environmental and Ecological Statistics* **20**, 647-665. Area 13, Class A Journal
8. Giordano C, Iommarini I, Giordano L, Maresca A, Pisano A, Valentino ML, Caporali L, Liguori R, Deceglie S, Roberti M, Fanelli F, Fracasso F, Ross-Cisneros F, D’Adamo P, Hudson H, Pyle A, Yu-Wai-Man P, Chinnery PF, Zeviani M, Salomao S, Berezovsky A, Belfort R, Ventura D, Moraes M, Moraes Filho M, Barboni P, Sadun F, De Negri A, Sadun A, **Tancredi A**, Mancini M, d’Amati G, Polosa P, Cantatore P, Carelli V. (2013) Efficient mitochondrial biogenesis drives incomplete penetrance in Leber’s hereditary optic neuropathy. *Brain* **137** 335-353. Area 13, Class A Journal
9. Conigliani C., Manca A., **Tancredi A.** (2012) Statistical methods for health care economic evaluation. In *Statistics in Healthcare Practice* (Editors: Faltin F, Kenett R, Ruggeri F.) Wiley. 365-385. ISBN: 978-0-470-67015-6
10. Liseo B., **Tancredi A.** (2011) Bayesian estimation of population size via linkage of multivariate Normal data sets. *Journal of Official Statistics.* **27**, 491-505. Area 13, Scientific Journal
11. **Tancredi A.**, Liseo B. (2011) A hierarchical Bayesian approach to record linkage and size population problems. *Annals of Applied Statistics.* **5**, 1553-1585. Area 13, Class A Journal
12. Liseo B., **Tancredi A.**, Barbieri M. (2010) Approximate reference priors in the presence of latent structure. In *Frontiers of Statistical Decision Making and Bayesian Analysis: In Honor of James O. Berger* (Editors: M. H. Chen , P. Muller, D. Sun, K. Ye, D. K. Dey.) Springer New York. 44-55. ISBN: 978-1-4419-6943-9
13. Conigliani C. **Tancredi A.** (2009) A Bayesian model averaging approach for cost-effectiveness analyses in health economics. *Health Economics*, **18**, 807-821. Area 13, Class A Journal
14. **Tancredi A.**, Andreson C., O’Hagan A. (2006) Accounting for threshold uncertainty in extreme value estimation. *Extremes* , **9**, 87-106. Area 13, Class A Journal
15. Conigliani C., **Tancredi A.** (2005) Semi-parametric modelling for costs of health care technologies. *Statistics in Medicine* **24** 3171-3174. Area 13, Class A Journal

Other Publications: Book Chapters

16. Briscolini D., Liseo B., **Tancredi A.** (2016) Bayesian Inference for a Finite Population Total Using Linked Data. In *Advance in Intelligent Systems and Computing, Vol. 456: Soft Methods for Data Science*, (Editors: Ferraro, Giordani, Vantaggi, Gagolewski, Gil, Grzegorzewski, Hryniewicz) 79–86, Springer International Publishing. ISBN: 978-3-319-42971-7
17. Liseo B., **Tancredi A.** (2009) Model based record linkage: a Bayesian perspective. In *Insights on Data Integration, Methodologies and working papers* (Editors: M. Scanu, A. Haslinger, F. Hernandez Jimenez, J. Kraus, E. Nordholt). Eurostat, Luxemburg. 24-36. ISBN: 978-92-79-12306-1.
18. **Tancredi A.** (2006) Il problema del broken sample: aspetti computazionali bayesiani. *Metodi statistici per l'integrazione di dati da fonti diverse*. (A cura di Liseo, B., Montanari, G., Torelli, N.) Ed. Franco Angeli. 211-221. ISBN: 978-8-8464-6990-8
19. **Tancredi A.**, Guagnano G., Liseo B. (2005) Inferenza statistica su dati prodotti mediante procedure di record linkage. *Integrazione di dati di fonti diverse: tecniche e applicazioni del Record Linkage e metodi di stima basati sull'uso congiunto di fonti statistiche e amministrative*. (A cura di P.D. Falorsi, A. Pallara e A. Russo) Ed. Franco Angeli. 41-61. ISBN: 978-8-8464-7269-4

Other Publications: Proceedings

20. Barone, R., **Tancredi, A.** (2019) MCMC inference for discretely observed continuous time multi-state models. *Proceedings of the 29th International Workshop on Statistical Modelling* Guimarães, Portogallo 8-12 Luglio 2019. ISBN: 9789892095288
21. **Tancredi, A.**, Steorts, R., Liseo, B. (2016). Bayesian Regression Analysis with Linked and Duplicated Data. *CLADAG 2015 10th Scientific meeting of the classification and data analysis group of the italian statistical society. Book of Abstracts* ISBN: 9788884679499, Cagliari, Santa Margherita di Pula
22. **Tancredi A.**, Liseo B. (2016) Bayesian nonparametric methods for record linkage. *Proceedings of the 49th Scientific Meeting of the Italian Statistical Society*. Salerno 8-10 Giugno 2016. ISBN: 978-88-6197-061-8
23. **Tancredi A.**, Liseo B. (2014) Bayesian inference for linked data. *Proceedings of the 47th Scientific Meeting of the Italian Statistical Society*. Cagliari 11-13 Giugno 2012. ISBN: : 978-88-8467-874-4
24. **Tancredi A.** (2013) Approximate bayesian Inference for discretely observed continuous-time multi-state models. *S.Co. 2013: Complex data modelling and Computationally Intensive Statistical Methods for Inference and Prediction*. Milano, 9-11 Settembre 2013. 425-431. ISBN: 97888-6493-019-0
25. Conigliani C., **Tancredi A.** (2012) Predicting EQ-5D responses from SF-12: should we take into account dependence and ordering? *Proceedings of the 46th Scientific Meeting of the Italian Statistical Society*. Roma 20-22 Giugno 2012. ISBN: 978-8-8612-9882-8
26. **Tancredi A.** (2010) Capture-recapture models with matching uncertainty. *Proceedings of the 45th Scientific Meeting of the Italian Statistical Society*. Padova, 16-18 Giugno 2010. ISBN: 978-8-8612-9566-7
27. **Tancredi A.** (2009) Bayesian approaches to matching and size population problems: a unified framework. *S.Co. 2009: Complex data modelling and Computationally Intensive Statistical Methods for Inference and Prediction*. Milano, 14-16 Settembre 2009. 425-431. ISBN: 978-8-8387-4385-6
28. Alleva G. Fortini M. **Tancredi A.** (2007) The Control of Non-Sampling Errors on Linked Data: an Application on Population Census. *Atti del convegno intermedio della SIS*. Venezia 6-8 Giugno 2007. ISBN: 978-8-8612-9093-8
29. Conigliani C., **Tancredi A.** (2006) A Bayesian semi-parametric approach for cost-effectiveness analysis in health economics. *Proceedings of the 43th Scientific Meeting of the Italian Statistical Society*. Torino 14-16 Giugno 2006. 35-38. ISBN: 8871787919
30. Liseo B., **Tancredi A.** (2004) Statistical Inference for data files that are computer linked. *Proceedings of the 19th International Workshop on Statistical Modelling*, Florence 4-8 July 2004, 224-228. ISBN 8884531934

31. Monno L., Petrella L., **Tancredi A.** (2004) Bayesian modelling volatility with mixture of α stable distributions. *Proceedings of the 19th International Workshop on Statistical Modelling*, Florence 4-8 July 2004, 474-478. ISBN 8884531934.

Other Publications: Bio-Medical Journals

32. Galati F., Marzocca F., **Tancredi A.**, Collalunga E., Catalano C., Pediconi F. (2018) Pre-operative Staging in Women with Known Breast Cancer: Comparison between Digital Breast Tomosynthesis (DBT) and Magnetic Resonance Imaging (MRI) *Cancer and Clinical Oncology*
33. Esposito M., Sloan J., **Tancredi A.**, Gerardi G., Postiglione P., Fotia F., Napoli E., Mazzone L., Valeri G. and Vicari S. (2017) Using Tablet Applications for Children with Autism to Increase the Cognitive and Social skills. *Journal of Special Education Technology*. **32** 199-209
34. Piemonte S., Romagnoli E., Bratengeir M., Woloszczuk W., **Tancredi A.**, Pepe J., Cipriani C., Minisola S. (2012) Serum sclerostin levels decline in postmenopausal women with osteoporosis following treatment with intermittent PTH. *Journal of Endocrinological Investigation* **11**, 325-332.
35. Cipriani C., Romagnoli E., Carnevale, V., Raso I., Scarpiello A., Angelozzi M., **Tancredi A.**, Russo S., De Lucia F., Pepe J., Minisola S. (2012) Muscle strength and bone in healthy women: effects of age and gonadal status. *Hormones, International Journal of Endocrinology and Metabolism* **11**, 325-332
36. Piemonte S, Romagnoli E, Cipriani C, Fassino V, Del Fiacco R, Carnevale V, Scillitani A, D'Erasmus E, **Tancredi A**, Minisola S.(2009) The effect of recombinant PTH(1-34) and PTH(1-84) on serum ionized calcium, 1,25-Dihydroxyvitamin D, and urinary calcium excretion: a pilot study. *Calcified tissue international*. **85** , 287-292
37. Giordano C., Sebastiani M., De Giorgio R., Travaglini C., Valentino M.L., Bellan M., **Tancredi A.**, Hirano M., d'Amati G., Carelli V. (2008) Gastrointestinal dysmotility in mitochondrial neuro-gastrointestinal encephalomyopathy is caused by mitochondrial DNA depletion. *American Journal of Pathology* **173** 1120-1128
38. Giordano C., Sebastiani M., Plazzi G., Travaglini C. Sale P., Pinti M., **Tancredi A.** Liguori R., Montagna P., Bellan M., Lucia Valentino M., Cossarizza. M., Hirano M., d'Amati G., Carelli V. (2006) Mitochondrial neurogastrointestinal encephalomyopathy: evidence of mitochondrial DNA depletion in the small intestine. *Gastroenterology* **130**:893-901
39. Bagnato, F., Zivadinov, R , Cecchinelli, D , **Tancredi A.** , Grop A , Pierallini A , De Lena C , Prencipe M, Reale G , Zorzom M , Millefiorini E (2004) Beta-2 microglobulin serum level is not a marker of disease activity in multiple sclerosis. *European Journal of Neurology* **11** 455-460
40. Bagnato, F. **Tancredi A.**, Richert, N. Gasparini, C. Bash, C. Frank, A. (2000) Contrast-enhanced magnetic resonance activity in relapsing remitting multiple sclerosis patients: a short term natural history study. *Multiple Sclerosis* **6** 43-49

Other Publications: Editorial articles

41. Conigliani C. **Tancredi A**, Manca A. (2010) The Bayesian method for decisional analysis in health economics. Editorial article. *PharmacoEconomics - Italian Research Articles* **12** 1-4

Other Publications: Books

42. Arezzo M. F. **Tancredi A.** (2005). Statistica di Base. Apogeo. Italian translation of the book *The Basic Practice of Statistics* by D.S. Moore. ISBN: 9788850322534

Working papers, submitted publications and other non referred proceedings

- Barone, R. **Tancredi A.**, (2020) MCMC methods for discretely observed non-homogeneous multi-state models *Submitted*
- Barone, R. **Tancredi A.**, (2020) A Bayesian non-parametric approach for discretely observed multi-state models *Submitted*
- Angeletti C., **Tancredi A.**, Ammassari A. Giannetti A., Girardi E., Antinori A. (2013) Durability and potential savings associated with lopinavir/ritonavir monotherapy when compared to standard triple-drug treatment: a simulation model based on observational data.

- Tancredi A., B. Liseo (2009) A novel Bayesian approach to matching and size population problems. *ITACOSM09. First Italian Conference on Survey Methodology*. Siena 10-12 Giugno 2009. 81-85
- Tancredi A., Liseo B. (2005) Bayesian Inference for linked data. *Atti del Convegno S.Co. 2005: Modelli Complessi e Metodi Computazionali Intensivi per la Stima e la Previsione*. Bressanone, 15-17 Settembre 2005. 203-208
- Conigliani C., Tancredi A. (2005) Un approccio bayesiano semi-parametrico per l'analisi costi efficace. *Atti del III convegno SISMEC. Ipotesi dati evidenze*: Abano 28-30 Settembre 2005, 88-92
- Liseo B., Tancredi A. (2007) Modelli mistura per l'interpretazione dei risultati delle prove scritte degli studenti universitari. In *Statistica e Demografia: un ricordo di Enzo Lombardo tra scienza e cultura*. A cura di A. Grassi. Sapienza Università di Roma. 245-255
- Conigliani C., Tancredi A. Semi-parametric modelling of health care technologies by extreme value theory (2003) *Atti del convegno S.Co. 2003: Modelli Complessi e Metodi Computazionali per la Stima e la Precisione* 158-164
- Tancredi A. (2002) Accounting for heavy tails in stochastic frontier models. *Working paper 2002.16*. Dipartimento di Scienze Statistiche, Università di Padova.

Roma 23-06-2020

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