Curriculum Vitae

Valeria Vitelli

Personal Data:

Name: Valeria
Surname: Vitelli
Gender: Female
Date of birth: December 22^{nd}, 1984
Place of birth: Lodi, Italy
Citizenship: Italian & Norwegian

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Visiting Address: University of Oslo (Norway)
Biostatistics Department, Domus Medica
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Research group: https://www.med.uio.no/imb/english/research/groups/statistics-high-dimensional-data

Positions

Sept2018–present **Associate Professor** at the Biostatistics Department, Oslo Centre for Biostatistics and Epidemiology (OCBE), University of Oslo, Norway.

Jun2013–Sept2018 **Post-doctoral Researcher** at the Biostatistics Department, Oslo Centre for Biostatistics and Epidemiology (OCBE), University of Oslo, Norway.

Feb2012–May2013 **Post-doctoral Researcher** within the Chair on Systems Science and the Energetic challenge (SSEC Chair), European Foundation for New Energy – Électricité de France, École Centrale Paris and Supélec, France.

2009–2011 **PhD candidate**, Politecnico di Milano, Italy.

Education

May 2012 **PhD in Statistics**, Politecnico di Milano, Italy.
Thesis: *Classification of Functional Data in the presence of Spatial Dependence. Methods, Algorithms and Case Studies.* Supervisor: Prof. Piercesare Secchi.

Jun 2010 **M.S. in Mathematical Engineering**, cum laude, Politecnico di Torino, Italy. Double degree within the ASP program (see the section Awards).

Dec 2008 **M.S. in Mathematical Engineering**, cum laude, Politecnico di Milano, Italy.

Jul 2006 **B.S. in Mathematical Engineering**, cum laude, Politecnico di Milano, Italy.

Leave of Absence Periods

Jan2021–Nov2021 Maternity leave, third child

Sep2017–Jun2018 Maternity leave, second child

Jan2016–Sep2016 Maternity leave, first child

List of Publications

[* indicates joint first authorship, ** indicates that the authors are in alphabetical order]

Papers resulting from own research in statistics

P1 **V. Vitelli** (2024). A novel framework for joint sparse clustering and alignment of functional data. *Journal of Nonparametric Statistics,* **36**(1), 182–211, DOI:10.1080/10485252.2023.2206499.

P2 **V. Vitelli***, T. Fleischer*, J. Ankill, E. Arjas, A. Frigessi, V. N. Kristensen, and M. Zucknick (2023). Transcriptomic pan-cancer analysis using rank-based Bayesian inference. *Molecular Oncology,* **17**(4), 548–563.

P3 E. Eliseussen, T. Fleischer, and **V. Vitelli** (2022). Rank-based Bayesian variable selection for genome-wide transcriptomic analyses. *Statistics in Medicine*, **41**(23), 4532-4553.

P4 G.A. Chernyakov, **V. Vitelli**, M.Y. Alexandrin, A.M. Grachev, V.N. Mikhalenko, A.V. Kozachek, [...] and V.V. Matskovsky (2020). Dynamics Of Seasonal Patterns In Geochemical, Isotopic, And Meteorological Records Of The Elbrus Region Derived From Functional Data Clustering. *Geography, Environment, Sustainability*, **13**(3), 110–116.

P5 Ø. Sørensen, M. Crispino, Q. Liu, and **V. Vitelli** (2020): BayesMallows: An R Package for the Bayesian Mallows Model. *The R Journal*, **12**(1), 324–342.

P6 M. Crispino, E. Arjas, **V. Vitelli**, N. Barrett and A. Frigessi (2019): A Bayesian Mallows approach to non-transitive pair comparison data: how human are sounds? *Annals of Applied Statistics*, **13**(1), 492–519.

P7 Q. Liu, M. Crispino, I. Scheel, **V. Vitelli** and A. Frigessi (2019): Model-based learning from preference data. *Annual Review of Statistics and Its Application*, **6**, 329–354.

P8 **V. Vitelli***, Ø. Sørensen*, M. Crispino, A. Frigessi and E. Arjas (2018): Probabilistic preference learning with the Mallows rank model. *Journal of Machine Learning Research*, **18**(158), 1–49.

P9 R. Ak, Y. Li, **V. Vitelli** and E. Zio (2018): Adequacy assessment of a wind-integrated system using neural network-based interval predictions of wind power generation and load. *International Journal of Electrical Power & Energy Systems*, **95**, 213–226.

P10 D. Floriello and **V. Vitelli** (2017): Sparse Clustering of Functional Data. *Journal of Multivariate Analysis*, **154**, 1–18.

P11 D. Asfaw, **V. Vitelli**, Ø. Sørensen, E. Arjas and A. Frigessi (2017): Time Varying Rankings with the Bayesian Mallows Model. *Stats*, **6**(1), 14–30.

P12 ** K. Abramowicz, P. Arnqvist, S. Sjöstedt de Luna, P. Secchi, S. Vantini, **V. Vitelli** (2016): Clustering misaligned dependent curves - applied to varved lake sediment for climate reconstruction. *Stochastic Environmental Research and Risk Assessment*, **1**(31), 71–85.

P13 ** P. Secchi, S. Vantini, **V. Vitelli** (2015): Analysis of spatio-temporal mobile phone data: a case study in the metropolitan area of Milan, with discussion. *Statistical Methods and Applications*, **24**, 279–300.

P14 R. Ak, **V. Vitelli** and E. Zio (2015): An Interval-Valued Neural Network Approach for Uncertainty Quantification in Short-Term Wind Speed Prediction. *IEEE Transactions on Neural Networks and Learning Systems*, **26**, 2787–2800.

P15 J. Liu, **V. Vitelli**, E. Zio and R. Seraoui (2015): A Dynamic Weighted RBF-Based Ensemble for Prognostics of Nuclear Components. *International Journal of Prognostics and Health Management*, **6**, 1–9.

P16 J. Liu, **V. Vitelli**, E. Zio and R. Seraoui (2015): A Novel Dynamic-Weighted Probabilistic Support Vector Regression-Based Ensemble for Prognostics of Time Series Data. *IEEE Transactions on Reliability*, **64**, 1203–1213.

P17 ** S. Baraldo, F.Ieva, A.M.Paganoni, **V.Vitelli** (2013): Outcome Prediction for Heart Failure Telemonitoring Via Generalized Linear Models with Functional Covariates. *Scandinavian Journal of Statistics*. **40**, 3, pp. 403-416.

P18 ** P. Secchi, S. Vantini, **V. Vitelli** (2013): Bagging Voronoi classifiers for clustering spatial functional data. *International Journal of Applied Earth Observation and Geoinformation*, **22**, pp. 53–64.

P19 J. Liu, R. Seraoui, **V. Vitelli** and E. Zio (2013): Nuclear Power Plant Components Condition Monitoring by Probabilistic Support Vector Machine. *Annals of Nuclear Energy*, **56**, pp. 23–33.

P20 ** F. Ieva, A.M. Paganoni, D. Pigoli, **V. Vitelli** (2013): Multivariate functional clustering for the morphological analysis of electrocardiograph curves. *Journal of the Royal Statistical Society, Series C*. **62**, 3, pp. 401-418.

P21 R. Ak, Y. Li, **V. Vitelli** and E. Zio (2013): NSGA-II-Trained Neural Network Approach to the Estimation of Prediction Intervals of Scale Deposition Rate in Oil & Gas Equipment. *Expert Systems With Applications*, **40**, 4, pp. 1205–1212.

P22 ** L. M. Sangalli, P. Secchi, S. Vantini, **V. Vitelli** (2010): Functional Clustering and Alignment Methods with Applications, *Communications in Applied and Industrial Mathematics*, **1**, 1, pp. 205–224.

P23 ** L. M. Sangalli, P. Secchi, S. Vantini, **V. Vitelli** (2010): K-means alignment for curve clustering, *Computational Statistics and Data Analysis*, **54**, pp. 1219–1233.

Working Papers and Submitted Manuscripts

WP1 F. Kızılaslan, D.M. Swanson, and **V. Vitelli** (2024). A Weibull Mixture Cure Frailty Model for High-dimensional Covariates. *arXiv preprint*, arXiv:2401.06575.

WP2 E. Eliseussen, A. Frigessi, and **V. Vitelli** (2023). Rank-based Bayesian clustering via covariate-informed Mallows mixtures. *arXiv preprint*, arXiv:2312.12966.

WP3 Q. Liu, **V. Vitelli**, C. Mannino, A. Frigessi, and I. Scheel (2022). Pseudo-Mallows for Efficient Probabilistic Preference Learning. *arXiv preprint*, arXiv:2205.13911.

WP4 F. Asgari, M.H. Alamatsaz, **V. Vitelli**, and S. Hayati (2020). Latent function-on-scalar regression models for observed sequences of binary data: a restricted likelihood approach. *arXiv preprint*, arXiv:2012.02635.

Papers resulting from the activity of statistical advising

AP1 C. Cappelletti, A. Eriksson, I.S. Brorson, I. S. Leikfoss, O. Kråbøl, E.A. Høgestøl, **V. Vitelli**, ... T. Berge (2022). Quantitative proteomics reveals protein dysregulation during T cell activation in multiple sclerosis patients compared to healthy controls. *Clinical Proteomics*, **19**(1), 1-17.

AP2 M. Brunetti, I. Panagopoulos, **V. Vitelli**, K. Andersen, T.S. Hveem, B.Davidson, A.G. Eriksson, P.K. Bjerre Trent, S. Heim, and F. Micci (2022). Endometrial Carcinoma: Molecular Cytogenetics and Transcriptomic Profile. *Cancers*, 14, 3536.

AP3 J. Ankill, M.R. Aure, S. Bjørklund, S. Langberg, V.N. Kristensen, **V. Vitelli**, X. Tekpli and T. Fleischer (2022). Epigenetic alterations at distal enhancers are linked to proliferation in human breast cancer. *NAR Cancer*, **4**(1).

AP4 P. Salvanos, H.D. Björnsson, **V. Vitelli**, R. Bragadottir, M.C. Moe, and T.P. Utheim (2022). Autofluorescence Imaging in the Long-Term Follow-Up of Scleral Buckling Surgery for Retinal Detachment. *Journal of ophthalmology*, to appear.

AP5 K. Jeppestøl, **V. Vitelli**, M. Kirkevold and L.K. Bragstad (2022). Factors Associated With Care Trajectory Following Acute Functional Decline in Older Home Nursing Care Patients: A Prospective Observational Study. *Home Health Care Management & Practice*, **34**(1), 42-51.

AP6 I. S. Brorson, A. M. Eriksson, E. Høgestøl, I. S. Leikfoss, H.F. Harbo, T. Berge, **V. Vitelli**, and S.D. Bos (2022). Global DNA methylation changes in treated and untreated MS patients measured over time. *Journal of Neuroimmunology*, **364**, 577808.

AP7 K.E. Wickstrøm*, **V. Vitelli***, E. Carr, A.R. Holten, R. Bendayan, A.H. Reiner, [...] and E.K. Amundsen (2021). Regional performance variation in external validation of four prediction models for severity of COVID-19 at hospital admission: An observational multi-centre cohort study. *PloS one*, **16**(8), e0255748.

AP8 F. Fineide, X. Chen, T. Bjellaas, **V. Vitelli**, T.P. Utheim, J.L. Jensen, and H.K. Galtung (2021). Characterization of Lipids in Saliva, Tears and Minor Salivary Glands of Sjgren's Syndrome Patients Using an HPLC/MS-Based Approach. *International Journal of Molecular Sciences*, **22**(16), 8997.

AP9 M. Yazdani, J. Fiskådal, X. Chen, Ø.A. Utheim, S. Ræder, **V. Vitelli**, and T.P. Utheim (2021). Tear Film Break-Up Time and Dry Eye Disease Severity in a Large Norwegian Cohort. *Journal of Clinical Medicine*, **10**(4), 884.

AP10 I. S. Brorson, A. M. Eriksson, I. S. Leikfoss, **V. Vitelli**, E. G. Celius, T. Luders, [...] and S.D. Bos (2020). CD8+ T cell gene expression analysis identifies differentially expressed genes between multiple sclerosis patients and healthy controls. *Multiple Sclerosis Journal*, **6**(4), 1–9.

AP11 S. Engebretsen, S.T. Bogstrand, D. Jacobsen, **V. Vitelli** and R. Rimstad (2020). NEWS2 versus a single-parameter system to identify critically ill medical patients in the emergency department. *Resuscitation Plus*, **3**, 100020.

AP12 B. Tashbayev, T. Paaske Utheim, Ø. Aass Utheim, S. Ræder, J. Liaaen Jensen, M. Yazdani, N. Lagali, **V. Vitelli**, D.A. Dartt, and X. Chen (2020). Utility of tear osmolarity Measurement in Diagnosis of Dry eye Disease. *Scientific Reports*, 10(1), 1-7.

AP13 A.V. Pladsen, G. Nilsen, O.M. Rueda, M.R. Aure, Ø. Borgan, K. Liestøl, **V. Vitelli**, [...] and O.C. Lingjærde (2020). DNA copy number motifs are strong and independent predictors of survival in breast cancer. *Communications biology*, 3(1), 1–9.

AP14 M. Ragle Aure*, **V. Vitelli***, E.U. Due, S. Jernstöm, M. Krohn, T. Husby Haukaas, H.K. Moen Vollan, S. Kumar, L.R. Euceda, T. Lüders, T. Frost Bathen, Oslo Breast Cancer Research Consortium (OSBREAC), and K.K. Sahlberg (2017): Integrative clustering reveals a novel split in the luminal A subtype of breast cancer. *Breast Cancer Research*, **19**(1), 44.

AP15 M.K. Brix, E. Westman, A. Simmons, K. Wagner-Larsen, C. Page, **V. Vitelli**, M.K. Beyer and AddNeuroMed consortium (2017): The Evans' Index revisited: New cut-off levels for use in radiological assessment of ventricular enlargement in the elderly. *European Journal of Radiology.* **95**, 28–32.

AP16 R. Lesurf, M. Ragle Aure, H. Håberg Mørk, **V. Vitelli**, Oslo Breast Cancer Research Consortium (OSBREAC), S. Lundgren, A.-L. Børresen-Dale, V. Kristensen, F. Wärnbergh, M. Hallett and T. Sørlie (2016): Molecular features of subtype-specific progression from ductal carcinoma in situ to invasive breast cancer. *Cell Reports*, **16**(4), 1166–1179.

AP17 V. Bruun Wyller, **V. Vitelli**, D. Sulheim, E. Fagermoen, A. Winger, K. Godang and J. Bollerslev (2016): Altered neuroendocrine control and association to clinical symptoms in adolescent chronic fatigue syndrome: a cross-sectional study. *Journal of Translational Medicine*, **14**(121).

AP18 L. Pihlstrøm, K.R. Morset, E. Grimstad, **V. Vitelli** and M. Toft (2016): A cumulative genetic risk score predicts progression in Parkinson's disease. *Movement Disorders*, **31**(4), 487–490.

Book Chapters

C1 **V. Vitelli**, F. Passamonti, S. Vantini and P. Secchi (2019): A non parametric algorithm for spatially dependent functional data: Bagging Voronoi for clustering, dimensional reduction and regression, in *Geostatistical Functional Data Analysis: Theory and Methods* (J. Mateu and R. Giraldo editors), Springer Physica-Verlag.

C2 ** F. Manfredini, P. Pucci, P. Secchi, P. Tagliolato, S. Vantini, **V. Vitelli** (2015): Treelet decomposition of mobile phone data for deriving city usage and mobility pattern in the Milan urban region, in *Advances in Complex Data Modeling and Computational Methods in Statistics*, Springer Physica-Verlag, pp. 133–147.

C3 ** K. Abramowicz, P. Arnqvist, S. Sjostedt de Luna, P. Secchi, S. Vantini, **V. Vitelli** (2014): Was it snowing on lake Kassjon in January 4486 BC? Functional data analysis of sediment data, in *Contributions in infinite-dimensional statistics and related topics*, Springer Physica-Verlag, pp. 7–12.

C4 ** L. M. Sangalli, P. Secchi, S. Vantini, **V. Vitelli** (2012): Joint Clustering and Alignment of Functional Data: an Application to Vascular Geometries, in *Advanced Statistical Methods for the Analysis of Large Data-Sets*, Springer Physica-Verlag, pp. 33–43.

C5 ** P. Secchi, S. Vantini, **V. Vitelli** (2011): Spatial Clustering of Functional Data, in *Recent Advances in Functional Data Analysis and Related Topics*, Springer Physica-Verlag, pp. 283–290.

Books

B1 ** F. Ieva, A. M. Paganoni, **V. Vitelli** (2011): *Laboratorio di statistica con R*, Pearson, ISBN 978-88-7192-762-6, pp. 144.

Refereed Conference Proceedings

CP1 J. Liu, **V. Vitelli**, R. Seraoui, F. Di Maio and E. Zio (2013): Short-Term Prediction for Nuclear Power Plant Failure Scenarios Using an Ensemble-based Approach, *Proceedings of ESREL 2013: Safety, Reliability and Risk Analysis Conference*, Amsterdam (The Netherlands), September 29–October 2, 2013; pp. 1801–1806.

CP2 R. Ak, **V. Vitelli** and E. Zio (2013): Uncertainty Modeling in Wind Power Generation Prediction by Neural Networks and Bootstrapping, *Proceedings of ESREL 2013: Safety, Reliability and Risk Analysis Conference*, Amsterdam (The Netherlands), September 29–October 2, 2013. Published in Safety, Reliability and Risk Analysis: Beyond the Horizon, 2014 Taylor & Francis Group, London, UK, ISBN: 978-1-138-00123-7, pp. 3191–3196.

CP3 **V. Vitelli**, R. Seraoui and E. Zio (2013): Approximate Gaussian Process Regression with Sparse Functional Learning of Inducing Points for Components Condition Monitoring, *Chemical Engineering Transaction*, Vol. 33, *Proceedings of the Prognostics and System Health Management Conference*, Milano (Italy), September 8–11, 2013.

CP4 R. Ak, Y. Li, **V. Vitelli** and E. Zio (2013): A Genetic Algorithm and Neural Network Technique for Predicting Wind Power under Uncertainty, *Chemical Engineering Transaction*, Vol. 33, *Proceedings of the Prognostics and System Health Management Conference*, Milano (Italy), September 8–11, 2013.

CP5 J. Liu, R. Seraoui, **V. Vitelli** and E. Zio (2013): A Modified Probabilistic Support Vector Regression Approach for Short-Term Prediction Intervals Estimation, *Chemical Engineering Transaction*, Vol. 33, *Proceedings of the Prognostics and System Health Management Conference*, Milano (Italy), September 8–11, 2013.

CP6 ** S. Vantini, **V. Vitelli**, P. Zanini (2012): Treelet Analysis and Independent Component Analysis of Milan Mobile-Network Data: Investigating Population Mobility and Behavior, *CLADAG 2012 Conference Proceedings*, (ISBN 978-88-6129-916-0), Anacapri (Italy), September 3–4, 2012.

CP7 R. Ak, Y. Li, **V. Vitelli** and E. Zio (2012): Estimation of wind speed prediction intervals by multi-objective genetic algorithms and neural networks, *Acts XLVI Scientific Meeting of the Italian Statistical Society*, Rome (Italy), June 20–22, 2012.

CP8 ** P. Secchi, S. Vantini, **V. Vitelli** (2012): Bagging Voronoi-classifiers for clustering spatial functional data, *Geostats 2012 Conference Proceedings*, Oslo (Norway), June 11–15, 2012.

CP9 ** F. Ieva, A. M. Paganoni, D. Pigoli, **V. Vitelli** (2011): ECG signal reconstruction, landmark registration and functional classification, *S.Co. 2011, Seventh Conference Proceedings*, Padova (Italy), September 19–21, 2011.

CP10 ** P. Secchi, S. Vantini, **V. Vitelli** (2011): Clustering spatially dependent functional data, *CLADAG 2011 Conference Proceedings*, (ISBN 978-88-906639), Pavia (Italy), September 7–9, 2011.

CP11 ** P. Secchi, S. Vantini, **V. Vitelli** (2011): A clustering algorithm for spatially dependent functional data, *Proceedings of the 1st Conference on Spatial Statistics 2011, Mapping Global Change*, Enschede (The Netherlands), March 23–25, 2011.

CP12 ** S. Baraldo, F. Ieva, A.M. Paganoni, **V. Vitelli** (2010): Statistical models for hazard functions: a case study of hospitalizations in health failure telemonitoring, *Acts XLV Scientific Meeting of the Italian Statistical Society*, Padova (Italy), June 16–18, 2010.

CP13 ** L. M. Sangalli, P. Secchi, S. Vantini, **V. Vitelli** (2010): Functional clustering and alignment, *Acts XLV Scientific Meeting of the Italian Statistical Society*, Padova (Italy), June 16–18, 2010.

CP14 ** L. M. Sangalli, P. Secchi, S. Vantini, **V. Vitelli** (2009): Curve Clustering for Misaligned Data: the k-mean alignment algorithm, *S.Co. 2009, Sixth Conference Proceedings*, Milano (Italy), September 14–16, 2009.

Honors and Awards

2017 *Awarded the "Abilitazione Scientifica Nazionale"*, i.e., qualified to serve as Associate Professor in Italy (Settore Concorsuale 13/D1 - STATISTICA).

2014 *Qualified as Associate Professor in Norway.* The evaluations and conclusions are based on "Rules for Appointments to Professor and Associate Professor", approved by the Rector of the University of Oslo per procurationem on 10 March 2005 (modified 1 August 2005, 11 May 2006, 11 January 2008 and 20 January 2011).

2007–2008 Awarded the High Education *ASP (Alta Scuola Politecnica)* program, Politecnico di Milano and Politecnico di Torino, Italy.

Experience in Dissemination of Research

Invited Conference Talks

Aug 28–30, 2024 "Bayesian clustering & variable selection in the presence of ultra-high-dimensional pools of items" *invited plenary talk. Workshop on Model-based Learning for Clustering and Classification*, University of Catania (Italy).

Aug 12–16, 2024 "Rank-based Bayesian joint variable selection and clustering" *invited session.* 11^{th} *IMS World Congress in Probability and Statistics*, University of Bochum (Germany).

Aug 21–23, 2023 "Rank-based Bayesian joint variable selection and clustering of genome-wide transcriptomic data", *invited talk. International Conference on Computational Statistics (COMPSTAT2023),* Birbeck University of London (UK).

Jun 19–22, 2023 "Joint Sparse Clustering and Alignment of Functional Data", *invited talk. NordStat Conference,* Chalmers University of Technology, Gøteborg (Sweden).

Dec 13–16, 2022 "A Variational Bayes Pseudo-Mallows approach for Efficient Probabilistic Preference Learning", *invited talk. IMS International Conference on Statistics and Data Science,* Firenze (Italy).

Jun 20–24, 2022 "Variational Bayes Pseudo-Mallows approach for Efficient Probabilistic Preference Learning", *invited talk. International Symposium on Nonparametric Statistics,* Paphos (Cyprus).

Jun 21–25, 2021 "Lower-dimensional Bayes Mallows model with application to cancer genomics", *invited talk.* 50^{th} *Virtual Meeting of the Italian Statistical Society*, Universities of Pisa and Cagliari (Italy).

Jun 7–9, 2021 "Rank-based Bayesian inference for transcriptomic analyses in cancer", *invited talk.* 8^{th} *Nordic-Baltic Biometrics Virtual Conference*, University of Helsinki (Finland).

Jan 8–10, 2020 "Probabilistic Preference Learning via the Mallows rank model: advances and case studies", *invited plenary talk. STOR-i Annual Conference 2020*, University of Lancaster (UK).

Dec 14–16, 2019 "A unified framework for joint sparse clustering and alignment of functional data", *invited talk* (invited session on *Modelling Functional Data*). *ERCIM 2019*, Senate House University of London (UK).

Sep 11–13, 2019 "Probabilistic Preference Learning via the Mallows rank model: recent advances", *invited talk* (invited session on *Preference Ranking*). *CLADAG 2019*, University of Cassino (Italy).

Jun 11–14, 2019 "Probabilistic Preference Learning via the Mallows rank model: advances and case studies", *invited talk* (invited session on *Advances in Preference Data Analysis*). *AMSDA 2019*, Florence (Italy).

Apr 14–16, 2019 "Joint sparse clustering and alignment of functional data: theory and case studies", *invited talk* (invited session on *Functional/High-dimensional Statistics*). *CRONOS final meeting & MDA workshop 2019*, Limassol (Cyprus).

Dec 14–16, 2018 "A novel approach to joint sparse functional clustering and alignment", *invited talk* (invited session on *Functional data analysis and biological applications*). *ERCIM 2018*, University of Pisa, Pisa (Italy).

Oct 24–26, 2018 "Sparse Clustering and Alignment of Functional Data", *invited plenary talk. Workshop on Advances in Functional Data Analysis: Cluster, Location and Shape*, Université de Rennes 2, Rennes (France).

June 25–29, 2018 "Bayesian Preference Learning: from genomics to recommendation systems", *invited talk* (contributed member session on *Bayesian Approaches to Ranking Models*).
ISBA 2018, Edinburgh (UK).

May 16–19, 2018 "The Bayesian Mallows model for analysing ranks and preference data: from genomics to recommendation systems", *invited talk* (invited session on *New directions in rank data aggregation and modeling*).
2018 ASA Symposium on Data Science and Statistics (SDSS 2018), Hyatt Regency Reston – Virginia (USA).

Dec 16–18, 2017 "Joint sparse curves clustering and alignment", *invited talk* (invited session on *Functional data analysis, methods and applications*).
10^{th} International Conference of the ERCIM Working Group on Computational and Methodological Statistics (ERCIM 2017), Senate House – University of London, London (UK).

Jul 26–31, 2015 "Probabilistic preference aggregation and learning with the Mallows rank model", *invited talk* (special topic session on *Preference Learning and Aggregation*).
60^{th} World Statistics Congress 2015, Riocentro, Rio de Janeiro (Brasil).

Jul 22–24, 2015 "Failure Prognostics with Probabilistic Support Vector Regression under Stationary/Nonstationary Environmental and Operational Conditions", *invited talk* (invited session on *Probabilistic Models for Quality in the Energy Sector*).
International Society for Business and Industrial Statistics (ISBIS) Satellite Conference 2015, with Focus on Quality Control and Improvement, IMECC, University of Campinas, Campinas (Brasil).

Invited Seminars

Oct 31^{st}, 2023 "Rank-based covariate-informed clustering of high-dimensional data with variable selection". Invited seminar at the Department of Mathematics, University of Oslo, Norway.

Apr 6^{th}, 2023 "Sparse Clustering (and Alignment) of Functional Data". Invited seminar at the Department of Mathematics, University of Trento, Trento, Italy.

Oct 28^{th}, 2022 "The Bayesian Mallows model and its recent developments – from preference learning to rank-based transcriptomic analyses". Invited seminar at the Trondheim Symposium in Statistics, Department of Mathematical Sciences, NTNU (Norwegian University of Science and Technology), Trondheim, Norway.

Apr 12^{th}, 2022 "The Bayesian Mallows model and its recent developments - from preference learning to rank-based transcriptomic analyses". Invited seminar in Statistics at the Department of Economics and Statistics (DISES), University of Naples Federico II, Italy.

Mar 18^{th}, 2021 "The Bayesian Mallows model from preference learning to rank-based genomic data integration, with some recent advances". Invited webinar at within the Statistics Seminar series at the Department of Mathematics, King's College London, UK.

Nov 5^{th}, 2020 "Bayesian rank-based models for genomic data integration: some recent advances". Invited webinar at the CeFH Biostatistical Meetings, Norwegian Publich Health Institute (FHI), Norway.

Feb 2^{nd}, 2020 "A Novel Probabilistic Vision for Combining Genomic Data". Invited seminar at the Symposium on Data and Society, within the Oslo Life Science Conference, University of Oslo, Norway.

Sep 26^{th}, 2019 "A Novel Probabilistic Vision for Combining Genomic Data". Invited seminar at the Systems Medicine Conference – From data to clinical application, The Research Council of Norway, Oslo (Norway).

Jun 5^{th}, 2019 "Bayesian methods for rank and preference data: from recommender systems to cancer genomics". Invited seminar at the Nordic Probabilistic AI School, NTNU, Trondheim (Norway).

Mar 18^{th}, 2019 "Bayesian methods for rank and preference data from recommender systems to cancer genomics". Invited seminar at the R Ladies Meetup, Teknologihuset, Oslo (Norway).

Oct 10^{th}, 2018 "Bayesian recommender systems in health: the beauty and power of statistical modeling". Invited seminar at the University of Oslo Data Science Day 2018, UiO Realfagsbiblioteket, Oslo (Norway).

Jul 13^{th}, 2018 "Bayesian Preference Learning: from genomics to recommendation systems". Invited seminar at the Department of Statistics, University of Padova, Italy.

Oct 21^{st}, 2015 "Treelet Analysis and Independent Component Analysis of Milan Mobile-Network Data: Investigating Population Mobility and Behavior". Invited BigInsight lunch seminar at the Norwegian Computing Center, Oslo, Norway.

Sep 1^{st}, 2015 "Probabilistic preference learning with the Mallows rank model". Invited seminar at the Department of Mathematics, University of Oslo, Norway.

Dec 12^{th}, 2013 "Sparse Clustering of Functional Data". Invited seminar at the Department of Biostatistics, University of Oslo, Norway.

Nov 6^{th}, 2013 "Bagging Voronoi Strategy for Spatial Functional Data". Invited seminar at the Department of Mathematics and Mathematical Statistics, University of Umeå, Sweden.

Jan 23^{rd}, 2013 "Nonlinear regression methods for prognostics: prediction of functional patterns". Invited by Georges Servière, Advisor to the CEO of Électricité de France and Director of the Fondation Européenne pour les Énergies de Demain – FEED (European Foundation for Tomorrow Energies), in the context of the "Journée des Chaires FEED" ("FEED Chairs Day"), Institut de France, Paris, France.

Jan 18^{th}, 2012 "Classification of Functional Data in the presence of Spatial Dependence". Invited seminar at the Department of Industrial Engineering, École Centrale Paris, France.

Jun 2^{nd}, 2009 "k-mean alignment for curve clustering". Invited seminar at the Department of Mathematical Sciences, NTNU (Norwegian University of Science and Technology), Trondheim, Norway.

Other Academic Activities

2023 – Co-Organizer of the Biostatistics Seminars at the Oslo Centre for Biostatistics and Epidemiology, `https://www.med.uio.no/imb/english/research/centres/ocbe/events/biostat-seminar/`.

Feb 16^{th}, 2023 Acting dean at the PhD Defence of Teferi Mekonnen Yitayew, defending the thesis titled "Socioeconomic inequalities in weight-related outcomes and dietary behaviours among youth with a focus on mediators" for the degree of PhD (Philosophiae Doctor) at the Faculty of Medicine, University of Oslo, Norway.

Jan 21^{st}, 2022 Second Opponent at the PhD Defence of Pål Vegard Johnsen, defending the thesis titled "Explainability and validity of statistical methods for genome-wide association studies: Extending Shapley-based explanation methods and adapting saddlepoint approximations" for the degree of PhD (Philosophiae Doctor) at the Department of Mathematical Sciences, NTNU (Norwegian University of Science and Technology), Trondheim, Norway.

Sep 16^{th}, 2020 Acting dean at the PhD Defence of Laure Piechaczyk, defending the thesis titled "Identifying new avenues for leukemia treatment using genomewide CRISPR/Cas9 and ex vivo drug sensitivity screens" for the degree of PhD (Philosophiae Doctor) at the Faculty of Medicine, University of Oslo, Norway.

Mar 16^{th}, 2020 Chair of the adjudication committee appointed for evaluation of the thesis by Aurélié Nguéa, titled "Nutrient stress responses in the budding yeast. Saccharomyces cerevisiae", for the Dr. Philos. degree at the Faculty of Medicine, University of Oslo, Norway.

Nov 1^{st}, 2019 — Acting dean at the PhD Defence of Sameer Bhargava, defending the thesis titled "Mammographic screening among immigrant women in Norway; disparities in attendance and selected screening outcomes" for the degree of PhD (Philosophiae Doctor) at the Faculty of Medicine, University of Oslo, Norway.

2019 – — External PhD thesis evaluator (Politecnico di Milano, Italy; University of Salerno, Italy; University of Cagliari, Italy).

Other Relevant Professional Experiences

Conference and Workshops Organization

2023-2024 — Member of the Scientific Program Committee of the 11^{th} World Congress in Probability and Statistics, jointly sponsored by the Bernoulli Society and the Institute of Mathematical Statistics, IMS-BS WC 2024.

2023 — Member of the Program Committee for the 2023 Symposium of the Norwegian AI Society, NAIS2023, `https://aisociety.no/nais2023/`.

2022-2023 — Member of the Scientific Committee of the 29^{th} Nordic Conference in Mathematical statistics, NordStat 2023, `https://nordstat2023.org/`.

2022 — Member of the Program Committee of the 2022 IMS International Conference on Statistics and Data Science (ICSDS), `https://sites.google.com/view/icsds2022`.

2014 — Member of the Local Organizing Committee of the *2014 Abel Symposium*, May 5–9 2014, Lofoten, Norway. Webpage at `http://www.abelsymposium.no/`.

2013 — Member of the Scientific Secretariat of the *2013 Prognostics and System Health Management Conference (PHM 2013)*, September 8–11 2013, Politecnico di Milano, Italy. Webpage at `http://www.aidic.it/phm/`.

Feb 2012 — Co-responsible in the organization of the *Journée IMdR, "Jeunes Ingénieurs et Jeunes Chercheurs"* (*IMdR day, "Young Engineers and Researchers"*), at École Centrale Paris, February 12, 2013. The workshop was funded by the *Fondation Européenne pour les Energies de Demain* (*European Foundation for the Energies of Tomorrow*) of Électricité de France, together with École Centrale Paris and Supélec.

Work in Evaluations and Expert Committees

2020 — Member of the expert committee for the recruitment of an Associate Professor in Applied Artificial Intelligence at the Oslo Metropolitan University (OsloMet), Norway.

2019 & 2020 — Member of the external reviewer panel for Project Proposals submitted to the Swiss National Science Foundation, Switzerland.

2018 Member of the Data and Safety Monitoring Board for the To-Be trial (evaluation of the studies on digital breast tomosynthesis in Bergen), University of Bergen and the Cancer Registry of Norway, Norway.

Large Research Projects

Sep2022–present PI in the Centre of Excellence "Integreat" (`https://www.integreat.no/`), funded by the Research Council of Norway. Directors: prof. Arnoldo Frigessi & prof. Ingrid Glad.

Nov2015–Dec2022 PI in the Research Innovation Centre "BigInsight" (`https://www.biginsight.no/`), funded by the Research Council of Norway. Director: prof. Arnoldo Frigessi.

Educational Qualification

Clinical Advising Experience (Projects)

[UiO = University of Oslo, OUH = Oslo University Hospital, AUH = Akershus University Hospital]

Apr2022–present "Predicting and subgrouping sepsis by machine learning, biomarkers and metabolomics" (Erik Amundsen, OUH).

Aug2021–present "Molecular investigation and characterization of the subtypes of endometrial carcinoma" (Francesca Micci, OUH). See publication AP2.

May2020–Apr2022 "Exploration of the first comprehensive Norwegian cohort of Covid-19 patients" (Erik Amundsen, OUH). See publication AP7.

Feb2020–Jul2021 "Acute/sub-acute functional decline in elderly home care recipients in Eastern Agder" (Line Kildal Bragstad, UiO). See publication AP5.

Mar2019–Dec2021 "CD8+ T cell -omics analyses for characterization of Multiple Sclerosis patients" (Steffan Daniel Bos-Haugen, UiO). See publications AP1, AP6 and AP10.

Sep2019–Jul2020 "NEWS2 versus a single-parameter system to identify critically ill medical patients in the Emergency Department" (Stine Engebretsen, UiO & OUH). See publication AP11.

Mar2017–Dec2020 "In Vivo Confocal Microscopy (IVCM) findings in Dry Eye Patients" (Tor Paaske Utheim, UiO). See publications AP4, AP8, AP9 and AP12.

Jun2013–Dec2018 "Integrative analyses of the OSLO2 breast cancer cohort" (Vessela Kristensen & Arnoldo Frigessi, UiO & OUH). See publications AP3, AP13, AP14 and AP16.

Aug2015–Dec2015 "Estimating Brain Volume using image summaring data" (Maiken Brix, UiB & Christian Page, UiO). See publication AP15.

Feb2015–Dec2015 "Endocrine findings in NorCAPITAL project" (Vegard Bruun Wyller, UiO & AUH). See publication AP17.

Feb2015–Jun2015 "Predicting the severity/symptom progression of Parkinson's disease via genetic markers" (Lasse Pihlstrøm, OUH). See publication AP18.

Supervising Experience

2024– *PhD main supervisor:* Christoffer Lingjærde, Lorenzo Zuccato (University of Oslo, Norway).

2021–2024 *Postdoc main supervisor:* Fatih Kizilaslan (University of Oslo, Norway), Fatemeh Asgari (University of Oslo, Norway).

2019–2023 *PhD main supervisor:* Emilie Eliseussen Ødegaard (University of Oslo, Norway).

2012–2017 PhD Co-supervisor: Derbachew Asfaw (University of Hawassa, Ethiopia), Jie Liu (École Centrale Paris, France), and Ronay Ak (École Centrale Paris and Supélec, France).

2010–2011 Master Thesis Co-supervisor: Davide Floriello, Paolo Zanini, and Alessia Pini (Politecnico di Milano, Italy).

Teaching Experience (as lecturer)

Nov–Dec 2024 University of Milano Bicocca, Italy. Probabilistic Preference Learning, PhD in Statistics (course on demand, 15 hours).

Sept 2024 PrefStat: First summer school in Advanced Statistical Learning for Preference, Ranking, and Ordinal Data (head of the scientific committee, lecturer, and co-organizer; `https://sites.unica.it/prefstat/`).

Apr 2024 University of Palermo, Italy. Introduction to Functional Data Analysis, PhD in Statistics (course on demand, 15 hours; `https://valeriavitelli.github.io/PhDcourse_FDA/`).

Jan 2020–present University of Oslo, Norway. Introduction to Statistics, PhD in Medicine (8 credits, course leader, twice every Spring).

Jan 2020–present University of Oslo, Norway. Statistical Genomics, degree in Medicine (2 credits, course leader, every Spring).

Nov 2022–present University of Oslo, Norway. Molecular Medicine (national course), PhD in Medicine (10 credits, lecturer for half day out of a 2 weeks program, every fall).

Oct 2022 University of Trento, Italy. Probabilistic Preference Learning with distance-based ranking models, master in Data Science (intensive course, 2 half days).

Aug 2019–2022 University of Oslo, Norway. Introduction to Statistics, master in Nutrition (5 credits, every Autumn).

Mar 2015 & 2014 University of Hawassa, Ethiopia. Linear Regression with R, MASTMO program (intensive course, 1 week).

Sep 2012	École Centrale Paris, France. Probabilistic Models of Failure Processes & Statistical Estimation of Failure Parameters, master in Nuclear Energy (intensive course, 2 half days).
Jun 2011	Politecnico di Milano, Italy. Spatial Data Analysis, master in Mathematical Engineering (intensive course, 2 half days).

Other Skills and Abilities

Languages

Italian: Native

English/Norwegian: Fluent speaking, writing and understanding

French: Some speaking and understanding, no writing

Computers

Programming: LaTeX, R, Python, C++.

Statistical Software: STATA, Minitab, WinBUGS, SPSS.

Oslo, November 14, 2024.