Bernardo Nipoti

Associate Professor of Statistics

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Academic positions

Current

Since Oct 2019: Associate Professor of Statistics, DEMS, University of Milano-Bicocca, Italy

Past

2018-2020: Visiting Research Fellow, TILDA, Trinity College Dublin, Ireland
2016-2019: Assistant Professor of Statistics, SCSS, Trinity College Dublin, Ireland
2012-2020: Research Affiliate, "de Castro" Statistics Initiative, Collegio Carlo Alberto, Torino, Italy
2015-2016: Postdoctoral Fellow, ESOMAS Department, University of Torino, Italy
2012-2015: Postdoctoral Fellow, Collegio Carlo Alberto, Torino, Italy
2012:   Postdoctoral Researcher, MD Anderson Cancer Center, Houston, TX, US (6 months)
2010-2011: Research Assistant, Collegio Carlo Alberto, Torino, Italy

Education

2011: PhD in Mathematics and Statistics, University of Pavia, Italy
2007: Master Degree in Mathematics (110/110 cum laude), University of Milano-Bicocca, Italy
2004: Bachelor Degree in Mathematics (110/110), University of Milano-Bicocca, Italy

Honors and awards

Feb 2019: Recipient (jointly with J. Arbel) of *Ulysses 2018* award, for French-Irish collaborations,
           Irish Research Council and French Ministry of Foreign Affairs
Jan 2019: Recipient of the *Visiting Scientist 2019* award, University of Padova, Italy
Aug 2013: Honorable Mention, *Savage Award 2012*, PhD theses in Bayesian econometrics and statistics,
           American Statistical Association and International Society of Bayesian Analysis
Jul 2012: *Best 2011 PhD thesis in Statistics* award, Italian Statistical Society

Professional service

Academic roles

Since 2021: Member of Academic Board, PhD in Economics and Statistics, University of Milano-Bicocca
Since 2020: Coordinator of the Internship program, BA in Statistics, University of Milano-Bicocca
2017-2019: Data Science Strand Director, MSc in Computer Science, Trinity College Dublin, Ireland

Editorial activity

- Associate Editor for Computational Statistics & Data Analysis (May 2018-now)
- Reviewer for Math. Reviews/MathSciNet (2015-2018), zbMATH (2015-2018), CRC Press (Jan 2019)
- Referee for: Applied Probability Trust, Bayesian Analysis, Bernoulli, Biometrics, Computational Statistics & Data Analysis, Digital Signal Processing, Electronic Journal of Statistics, Engineering Applications of Artificial Intelligence, Environmental and Ecological Statistics, European Journal of Law and Economics, International Journal of Approximate Reasoning, Journal of Computational and Graphical Statistics, Journal of Multivariate Analysis, Journal of Nonparametric Statistics, Journal of the Royal Statistical Society - Series C, Journal of Statistical Planning and Inference, Longitudinal and Lifecourse Studies, Mathematical Geosciences, Metrika, Metron, Sankhya, Scandinavian Journal of Statistics, Statistical Analysis and Data Mining, Statistical Methods and Applications, Statistics & Computing, Statistics and Probability Letters, Test.

Project reviewer

- ANVUR - VQR 2015-2019 - Italian Ministry of Education, University and Research (Sep 2021)
- ALECS fellowship programme by Lero - the Irish Software Research Centre, European Commission (Marie Sklodowska-Curie programme) and Science Foundation Ireland (Feb 2020)
- FONDECYT Initiation into Research 2019, Chilean National Science and Technology (Jun 2019)

Examination committees

- Internal examiner, PhD in Statistics, Trinity College Dublin (2018 and 2019)
- Referee, PhD in Statistics, University of Padova (2018).
- Internal examiner, PhD in Mathematics, Trinity College Dublin (2016)
- Internal examiner, MSc in Statistics, Trinity College Dublin (2016)

Organization of scientific events

- Member of the Scientific Programme Committee of CFE-CMStatistics 2022, London (17-19 Dec 2022)
- Member of the Scientific Programme Committee of CFE-CMStatistics 2019, London (14-16 Dec 2019)
- Member of the organising committee of CASI 2019, Trinity College Dublin (15-17 May 2019)
- Member of the organising committee of Stats50@Tcd Workshop, Trinity College Dublin (14 Nov 2017)

Organization of conference sessions

- Co-organiser of invited two-track session, CFE-CMStatistics 2022, London (17-19 Dec 2022)
- Co-organiser of invited two-track session, CFE-CMStatistics 2021, London (18-20 Dec 2021)
- Co-organiser of invited two-track session, CFE-CMStatistics 2020, virtual conference (19-21 Dec 2020)
- Co-organiser of invited three-track session, CFE-CMStatistics 2019, London (14-16 Dec 2019)
- Organiser of invited session, CRoNoS & MDA 2019, Limassol, Cyprus (14-16 Apr 2019)
- Organiser of invited session, CFE-CMStatistics 2018, Pisa, Italy (14-16 Dec 2018)
- Organiser of specialised session, 48th SIS Scientific Meeting, Salerno, Italy (8-10 Jun 2016)
- Organiser of invited session (BNP & j-ISBA), ISBA World Meeting, Cancún, Mexico (14-18 Jul 2014)

Conferences, seminars and visiting

Invited talks (18)

- CFE-CMStatistics 2020, virtual conference (19-21 Dec 2020)
- BNP4CD workshop, Bayesian Nonparametrics for complex data, Padova, Italy (24 Jan 2020)
- CFE-CMStatistics 2019, London, UK (14-16 Dec 2019)
- 45th Meeting of Chilean Society of Statistics, Puerto Varas, Chile (21-25 Oct 2019) **keynote speaker**
- CFE-CMStatistics 2018, Pisa, Italy (14-16 Dec 2018)
- IFSS 2018, 2nd Italian-French Statistics Seminar, Grenoble (6-7 Sep 2018)
- MPS 2018, the Mathematics of Subjective Probability, Milan, Italy (3-5 Sep 2018)
- CFE-CMStatisics 2017, London, UK (16-18 Dec 2017)
- EcoSta 2017, 1st International Conference on Econometrics and Statistics, Hong Kong (15-17 Jun 2017)
- SISBAYES 2017 Meeting, Rome, Italy (7-8 Feb 2017)
- ISBA 2016 World Meeting, Santa Margherita di Pula, Italy (13-17 Jun 2016)
- 6th ISM-ISBA Joint Meeting Bayes Comp at MCMSki V, Lenzerheide, Svizzera, (4-7 Jan 2016)
- CLADAG 2015, Santa Margherita di Pula, Italy (8-10 Oct 2015)
- 10th Conference on Bayesian Nonparametrics, Raleigh, USA, (22-26 Jun 2015)
- 6th ERCIM International Conference on Computing and Statistics, London, UK (14-16 Dec 2013)
- 2013 Joint Statistical Meetings, Montreal, Canada, Data (3-8 Aug 2013)
- 46th Scientific Meeting of the Italian Statistical Society, Rome, Italy (20-22 Jun 2012)
- 3rd ERCIM International Conference on Computing and Statistics, London, UK (10-12 Dec 2010)

Seminars (11)

- Webinar for PhD students in Statistics, University of California, Irvine, USA (5 May 2020)
- INRIA, Grenoble - Rhône-Alpes, France (4 Feb 2019)
- DEMS, University of Milan-Biococca, Italy (20 Sep 2018)
- John Von Neumann Institute, Ho Chi Minh City, Vietnam (30 Mar 2018)
- Department of Statistics, University of California, Irvine, USA (27 Feb 2018)
- Mercer's Institute for Successful Ageing, St. James's Hospital, Dublin, Ireland (13 Feb 2018)
- John Von Neumann Institute, Ho Chi Minh City, Vietnam (12 Jun 2017)
- School of Mathematics and Statistics, University College Dublin, Ireland (18 Apr 2016)
- School of Computer Science and Statistics, Trinity College Dublin, Ireland (2 Oct 2015)
- Department of Statistics, University of Padova, Italy, (10 Jun 2015)
- Department of Mathematics, University of Pavia, Italy (31 Mar 2015)

Research visits

- Department of Statistics, University of Padova, Italy (Jun and Sep 2019, *Visiting Scientist 2019* grant)
- INRIA, Grenoble - Rhône-Alpes, France (Feb 2019, *Ulysses 2018* grant)
- Department of Statistics, University of California, Irvine, USA (Feb 2018)
- John Von Neumann Institute, Ho Chi Minh City, Vietnam (Jun 2017, Mar 2018)
- Department of Mathematics and Statistics, PUC, Santiago, Chile (Aug 2016, Jan 2017, Mar 2018)
- Department of Biostatistics, MD Anderson Cancer Center, Houston, USA (Jun 2013)

Teaching

- *Mathematical Statistics* (eng), (co-instructor) Artificial Intelligence (BA), Bocconi, Milan (2021)
- *Bayesian Statistics* (eng), Economics and Statistics (PhD), University of Milan-Bicocca (2021)
- *Modelli Statistici* (ita), Statistics (BA), University of Milano-Bicocca (2020-2022)
- *Inferential Statistics* (eng), International Economics (MA), University of Milano-Bicocca (2020-2022)
- *Advanced Statistics* (eng), Global Management (MA), University of Milano-Bicocca (2019-2021)
- *ST3456: Modern Statistical Methods II* (eng), Mathematics (BA), Trinity College Dublin (2017, 2019)
- *ST2004: Applied Probability I* (eng), MSISS (BA), Trinity College Dublin (2016, 2017, 2018)
- *ST3457: Statistical Inference I* (eng), Mathematics (BA), Trinity College Dublin (2018)
- *Time Series Analytics and Forecasting* (eng), JVN Institute, Ho Chi Minh City, Vietnam (2017, 2018)
- *Measure Theory* (eng), Economics, Finance and Statistics (PhD), University of Torino (2014, 2015)
- *Introductory Statistics* (eng), Allievi Honors Program, Collegio Carlo Alberto (2012, 2013, 2014, 2015)
- *Statistical Methods for Finance* (eng), Finance and Insurance (MSc), University of Torino (2015)
- *Mathematics for Finance* (eng), Finance and Insurance (MSc), University of Torino (2015)

Publications

The order of the authors is alphabetical (exception made for publications 3, 6, 21, 24)

Publications in refereed journals

1) Canale, A., Lijoi A., Nipoti, B. & Pruenster, I. (2022). Inner spike and slab Bayesian nonparametric models *Econometrics and Statistics (Part B: Statistics)*, to appear.

2) Corradin, R., Nieto-Barajas, L.E. & Nipoti, B. (2022). Optimal stratification of survival data via Bayesian nonparametric mixtures, *Econometrics and Statistics (Part B: Statistics)*, 22, 17–39.

3) Corradin, R., Canale, A. & Nipoti, B. (2021). BNPmix: an R package for Bayesian nonparametric modelling via Pitman-Yor mixtures, *Journal of Statistical Software*, 100(15), 1–33.

4) Arbel, J., Corradin, R. & Nipoti, B. (2021). Dirichlet process mixtures under affine transformations of the data, *Computational Statistics*, 36(1), 577–601.

5) Arbel, J., Marchal, O. & Nipoti, B. (2020). On the Hurwitz zeta function with an application to the beta-exponential distribution *Journal of Inequalities and Applications*, 89.

6) Nipoti, B., Jara, A. & Guindani, M. (2018). A Bayesian semiparametric partially PH model for clustered time-to-event data, *Scandinavian Journal of Statistics*, 45, 1016–1035.

7) Nipoti, B & Shen, W. (2018). Contributed comment on Wade and Ghahramani's article, *Bayesian Analysis*, 13(2), 613–615.

8) Canale, A., Lijoi, A., Nipoti, B. & Pruenster, I. (2017). On the Pitman–Yor process with spike and slab base measure, *Biometrika*, 104(3), 681–697.

9) Arbel, J., Favaro, S., Nipoti, B. & Teh, Y.W. (2017). Bayesian nonparametric inference for discovery probabilities: credible intervals and large sample asymptotics, *Statistica Sinica*, 27(2), 839–858.

10) Favaro, S., Lijoi, A., Nava, C., Nipoti, B., Pruenster, I. & Teh, Y.W. (2016). On the stick-breaking representation for homogeneous NRMIs, *Bayesian Analysis*, 11(3), 697–724.

11) Favaro, S., Nipoti, B. & Teh, Y.W. (2016). Rediscovery of Good–Turing estimators via Bayesian nonparametrics, *Biometrics*, 72, 136–145.

12) Arbel, J., Lijoi, A. & Nipoti, B. (2016). Full Bayesian inference with hazard mixture models, *Computational Statistics & Data Analysis*, 93, 359–372.

13) Favaro, S. Nipoti, B. & Teh, Y.W. (2015). Random variate generation for Laguerre-type exponentially tilted α-stable distributions, *Electronic Journal of Statistics*, 9, 1230–1242.

14) Favaro, S., Lomeli, M., Nipoti, B. & Teh, Y.W. (2014). On the stick-breaking representation of σ-stable Poisson–Kingman models, *Electronic Journal of Statistics*, 8, 1063–1085.

15) Favaro, S. & Nipoti, B. (2014). Discussion of "On simulation and properties of the stable law" by L. Devroy and L. James", *Statistical Methods & Applications*, 23(3), 365–369.

16) Cesari, O., Favaro, S. & Nipoti, B. (2014). Posterior analysis of rare variants in Gibbs-type species sampling models, *Journal of Multivariate Analysis*, 231, 79–98.

17) Lijoi, A. & Nipoti, B. (2014). A class of hazard rate mixtures for combining survival data from different experiments, *Journal of the American Statistical Association*, 109, 802–814.

18) Lijoi, A., Nipoti, B. & Pruenster, I. (2014). Bayesian inference with dependent normalized completely random measures, *Bernoulli*, 20(3), 1260–1291.

19) Lijoi, A., Nipoti, B. & Pruenster, I. (2014). Dependent mixture models: clustering and borrowing information, *Computational Statistics & Data Analysis*, 71, 417–433.

20) Arbel, J. & Nipoti, B. (2013). Discussion on Müller and Mitra's "Bayesian Nonparametric Inference - Why and How", *Bayesian Analysis*, 8, 326–328.

21) Ricca, R.L. & Nipoti, B. (2011). Gauss' linking number revisited, *Journal of Knot Theory and Its Ramifications*, 20, 1325–1343.

Books and chapters in books

22) Arbel, J., Lijoi, A. & Nipoti, B. (2015). Bayesian Survival Model based on Moment Characterization, In *Proceedings of Baysm 2014*. Springer proceedings in Mathematics & Statistics, 126, 3-14.

23) Nipoti, B. (2012). *Dependent Completely Random Measures and Statistical Applications*, Best PhD thesis in statistics and applications. CLEUP.

24) Ricca, R.L. & Nipoti, B. (2011). Derivation and Interpretation of the Gauss Linking Number, In *Introductory Lectures on Knot Theory*, 428-501, World Scientific Press.

Conference proceedings and technical reports

25) Corradin, R., Nieto-Barajas, L. & Nipoti, B. (2020). Pitman-Yor mixtures for survival data stratification. *Proceedings of 2020 Conference of the Italian Statistical Society*.

26) Canale, A., Corradin, R., & Nipoti, B. (2019) Galaxy color distribution estimation via dependent nonparametric mixtures *Proceedings of 2019 Conference of the Italian Statistical Society*.

27) Arbel, J., Favaro, S., Nipoti, B. & Teh, Y.W. (2016). On Bayesian nonparametric inference for discovery probabilities, *Proceedings of the 49th Scientific Meeting of the Italian Statistical Society*.

28) Arbel, J., Favaro, S., Nipoti, B. & Teh, Y.W. (2016). Discovery Probabilities when Uncertainty Matters, *48e Journées de la Statistique de la SFdS*.

29) Lijoi, A., Nipoti, B. & Pruenster, I. (2015). A Bayesian nonparametric model for clustering and borrowing information *Proceedings of 10th scientific Meeting of the CLADAG*.

30) Favaro, S., Nipoti, B. & Teh, Y.W. (2015). On a class of smoothed Good-Turing estimators, *Proceedings of the SIS2015 Statistical Conference*.

31) Favaro, S. & Nipoti, B. (2014). Uncertainty quantification for Bayesian nonparametric estimators of rare species variety, *Proceedings of the 47th Scientific Meeting of the Italian Statistical Society*.

32) Lijoi, A., Nipoti, B. & Pruenster, I. (2014). A Bayesian nonparametric model for combining data from different experiments, *Proceedings of the 47th Scientific Meeting of the Italian Statistical Society*.

33) Favaro, S., Lomeli, M., Nipoti, B. & Teh, Y.W. (2013). Stick-breaking representations of 1/2-stable Poisson-Kingman models, *Proceedings S.Co 2013*.

34) Lijoi, A. & Nipoti, B (2012). Two classes of bivariate distributions on the unit square, *Carlo Alberto Notebooks* No. 238.

Submitted manuscripts

- Canale, A., Corradin, R. & Nipoti, B. (2020). Importance Conditional Sampler for Pitman-Yor mixtures, *arXiv:1906.08147*.

- Bissiri, P.G., Cleanthous, G., Emery, X., Nipoti, B. & Porcu, E. (2020). Nonparametric Bayesian Modelling of Longitudinally Integrated Covariance Functions on Spheres, *submitted*.

Selected funded research projects

- Dec 2021: FAQC, *Fondi di Ateneo - Quota competitiva* (Milano-Bicocca), PI of a group of 6
- Jun 2017: EIT (KAVA call 2016), *MicroEcos*, funded supervisor (PI: D. Fernandez, Trinity College)
- Oct 2016: EIT, Label *NEAT Pilot*, funded collaborator (PI: D. Fernandez, Trinity College)
- Jan 2014: Department research projects (University of Torino), co-investigator (PI: M. Ruggiero)
- Jan 2013: Department projects for early stage researchers (U. Torino), joint recipient (with A. Canale)
- Jan 2013: Department research projects (University of Torino), co-investigator (PI: M. Ruggiero)