Anna Simoni

Curriculum Vitae – September 2020

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Current Positions

- October 2020 – : CNRS (French National Research Institute) Senior Researcher *(Directeur de recherche CNRS - DR2)*- UMR9194 (Section 37 - Economics).
- September 2016 –: Professeur Chargé de Cours (temps incomplet) École Polytechnique.
- September 2014 –: Professor of Econometrics and Statistics at ENSAE - ParisTech.
- September 2014 – : Member of CREST (Center for Research in Economics and Statistics).

Past Positions

- October 2016 – September 2020: CNRS (French National Research Institute) Researcher *(Chargé de recherche CNRS - CR1)*- UMR9194 (Section 37 - Economics).
- October 2012 – 2016: CNRS (French National Research Institute) Researcher *(Chargé de recherche CNRS - CR2)*- UMR9194 (Section 37 - Economics).
- October 2012 – August 2014: Researcher affiliated to THEMA - Université de Cergy-Pontoise.
- September 2009 – September 2012: Assistant Professor of Statistics, Department of Decision Sciences, BOCCONI University.
- September 2009 – September 2012: Researcher affiliated to IGIER.

Research Interests

High-Dimensional Econometrics, Semi- and Non-parametric estimation, Forecasting and Nowcasting, Google search data, Inverse Problems, Partial Identification, Asymptotic Theory, Financial Econometrics, Factor Models, Bayesian nonparametric statistics, Microeconometrics, Statistics and Econometrics Methods.

Education

- *Habilitation à Diriger des Recherches - HDR (Accreditation to supervise PhD - thesis)* , **Toulouse School of Economics**, Université Toulouse 1 Capitole, May 2017. Jury: Jean-Pierre Florens, Yuichi Kitamura (referee), Thierry Magnac, Enno Mammen, Valentin Patilea (referee), Jean-Marc Robin, Olivier Scaillet (referee).
- *PhD in Economics*, **Toulouse School of Economics**, Université Toulouse 1 Capitole, May 2009.

  Major: Theoretical Econometrics

  Thesis Title: "Bayesian Analysis of Linear Inverse Problems with Applications in Economics and Finance"

  Advisor: Jean-Pierre Florens

  Distinction: *Très honorable avec les félicitations du jury* (highest honors)

  Thesis Committee: Prof. Laurent Cavalier, Prof. Jean-Pierre Florens, Prof. Joel Horowitz (referee), Prof. Enno Mammen (referee), Prof. Nour Meddahi, Prof. Sébastien Van Bellegem.

- *M.Phil. - Diplôme Européen d'Economie Quantitative Approfondie (DEEQA)* - Master in Advanced Economics, **Toulouse School of Economics**, 2006.
- *M.Sc. - Diplôme d'Etude Approfondie (DEA)* - Economic Theory and Econometrics, **Toulouse School of Economics**, 2005.
- *Doctorate in Economics*, **University of Bologna**, 2005 - 2009. Advisor: Sergio Pastorello.
- *Degree in Economics* (B.Sc.), **University of Bologna**, *Summa cum Laude*, 1999 - 2003. Major: Financial Econometrics.

Teaching Fields

Primary Fields: Econometrics, Statistics, Bayesian Statistics, Financial Econometrics
Secondary Fields: Mathematics for economics

Teaching Experience

ENSAE: (Instructor)

- Bayesian methods in Marketing. 2017 – (3rd year course - in English)
- Bayesian Statistics. 2016 – (3rd year course - in French)
- Mathematics for Economics. 2014 – 2018 (Master - in French)
- Recent developments in semi and nonparametric econometrics. 2013 – (3rd year course - in English)

École Polytechnique:

- ECO680 - Big Data and Machine Learning in Econometrics. 2018 – (Instructor - Master, in English).
- ECO562 - Econometrics II. 2017 – 2018 (Instructor - 2nd year Master in Economics - in English)
- ECO203 - Econometrics. 2019 – (Instructor - 2nd year Bachelor programme - in English).
- ECO552 - Econometrics I. 2016 (PC - 1st year Master in Economics - in English)
- ECO433 - Introduction à l'Économétrie. 2016 (PC - 2nd year course Master - in French)

Boston College: (Instructor)

- Econometrics. Spring 2014 (undergraduate course - in English)

Université de Cergy-Pontoise: (Instructor)

- Econometrics. Fall 2013 (undergraduate course - in French)
- Statistics. Winter 2013 (undergraduate course - in French)
- Panel Data Econometrics. Fall 2012, Fall 2013 (graduate course - in French)

Bocconi University: (Instructor)

- Statistics. Fall 2010 - Fall 2011 (undergraduate course - in English).
- Advanced Statistics. Fall 2010 - Fall 2011 (undergraduate course - in English).
- Statistics for Econometrics. Fall 2010 - Fall 2011 (PhD in Economics - in English)

Toulouse School of Economics:

- Statistics: Teaching Assistant for Professor Sandrine Casanova, Winter 2006 (undergraduate course - in French)

- Macroeconomics: Teaching Assistant for Professor Yolande Hiriart, Winter 2006 (undergraduate course - in French)
- Econometrics: Teaching Assistant for Professor Thierry Magnac, Fall 2006 (undergraduate course - in French)
- Econometrics I: Teaching Assistant for Professor Jean-Pierre Florens, 2007 - 2008 (graduate course - in English)
- Econometrics II - Time Series: Teaching Assistant for Professor Christian Bontemps, 2006 - 2009 (graduate course - in English)
- Algebra: Teaching Assistant for Professor Adrien Blanchet, Fall 2008 (graduate course - in English)
- Analysis: Teaching Assistant for Professor Adrien Blanchet, Fall 2008 (graduate course - in English)

Grants

- MSH Paris-Saclay Research Grant (2017-2019), "Exploiting the Informational Content of Large Data sets in Economics: Causal inference and Nowcasting", principal investigator.
- ANR Research Grant (2013-2017), "Inverse problems and parsimony for econometric modeling and applications".
- LabeX Ecodec Research Grant (2016), "High Dimensional Factor Models and Moment Selection", principal investigator.
- LabeX Ecodec Research Grant (2015), "Linear Inverse Problems in Econometrics and Set Inference", principal investigator.
- Labex MME-DII (2013) Grant for organizing the conference *Recent developments in Networks models: statistic and economic modelling*.

Honors and Awards

- Fernand Braudel Fellowship 2020 - European University Institute.
- CNRS Bronze Medal 2019 - Médaille de Bronze CNRS.
- Qualifié aux fonctions de Professeur des Universités - Section: 5 - Economics, February 2019.
- CNRS "Prime d'encadrement doctoral et de recherche" 2017 – 2020.
- Fondation Banque de France Visiting Program 2016. Project: "Forecasting and Nowcasting with Big and High Frequency Data".
- Member of Collaborative Research Center SFB 884, Mannheim (October 2014 – July 2015).
- Member of the German-Swiss Research Group FOR916 (June 2012 – March 2014).
- "Prix d'Economie" awarded by *Académie de Sciences Inscriptions et Belles-Lettres de Toulouse*, 2010.
- Qualifié aux fonctions de maîtres de conférences (Sections: 26 - Applied Mathematics and 5 - Economics), February 2010.
- Econometric Society scholarship to present at the World Congress of the Econometric Society, Shanghai - 2010.
- Econometric Society scholarship to present at the European Winter Meeting of the Econometric Society, Cambridge - 2008.
- Junior Lecturer in Mathematics, Université Toulouse 1 Capitole, 2008- 2009.
- Allocation de Recherche, French Ministry of Education, 2005 - 2008.
- University of Toulouse fellowship for teaching assistantship (Moniteur), 2005 - 2008.

Publications

13. Mogliani, M. and A., Simoni, (2020), *Bayesian MIDAS Penalized Regressions: Estimation, Selection, and Prediction.* arXiv:1903.08025. Accepted at ***Journal of Econometrics***.

12. Breunig, C., Mammen, E. and A., Simoni, (2020), *Ill-posed Estimation in High-Dimensional Models with Instrumental Variables.* arXiv:1806.00666. Accepted at ***Journal of Econometrics***.

11. Johannes, J., Simoni, A. and R., Schenk (2020), *Adaptive Bayesian estimation in indirect Gaussian sequence space models.* arXiv:1502.00184v1. ***Annals of Economics and Statistics***, 137, 83-116.

10. Florens, J.P. and A., Simoni, (2019), *Gaussian Processes and Bayesian Moment Estimation.* CREST, 2015-09, arXiv1607.07343v1. Accepted at ***Journal of Business & Economic Statistics***.

9. Liao, Y. and A., Simoni (2019), *Bayesian Inference for Partially Identified Smooth Convex Models.* ***Journal of Econometrics***, **211**, 338-360.

8. Chib, S., Shin, M. and A. Simoni (2018), *Bayesian Empirical Likelihood Estimation and Comparison of Moment Condition Models.* ***Journal of the American Statistical Association***, **113**, 1656-1668. arXiv1606.02931v1.

7. Breunig, C., Mammen, E. and A., Simoni (2018), *Nonparametric estimation in case of endogenous selection.* ***Journal of Econometrics***, **202**, 268-185. SFB 649 Discussion Paper 2015-050.

6. Hoderlein, S., Nesheim L. and A., Simoni (2017), *Semiparametric Estimation of Random Coefficients in Structural Economic Models*, ***Econometric Theory***, **33**, 1265-1305.

5. Florens, J.P. and A., Simoni (2017), *Introduction to the Special Issue on Inverse Problems in Econometrics*, ***Annals of Economics and Statistics***, **128**, 1-3.

4. Florens, J.P. and A., Simoni (2016), *Regularizing Priors for Linear Inverse Problems*, ***Econometric Theory***, **32**, No. 1, 71-121.

3. Schenk, R., Johannes, J. and A., Simoni (2014), *Adaptive Bayesian Estimation in Gaussian Sequence Space Models*, in E.G. Bongiorno, A. Goia, E. Salinelli and P. Vieu, editors, ***Contributions in infinite-dimensional statistics and related topics***, pp. 167-172, Società Editrice Esculapio.

2. Florens, J.P. and A., Simoni (2012), *Nonparametric Estimation of an Instrumental Regression: a Quasi-Bayesian Approach Based on Regularized Posterior*, ***Journal of Econometrics***, **170**, No. 2, 458-475.

1. Florens, J.P. and A., Simoni (2012), *Regularized Posteriors in Linear Ill-posed Inverse Problems*, ***Scandinavian Journal of Statistics***, **39**, No. 2, 214-235.

Research Papers

Submitted papers or under revision

4. Ferrara, L. and A., Simoni, (2020), *When are Google data useful to nowcast GDP? An approach via pre-selection and shrinkage.* Non-technical summary and previous version Banque de France WP n.717.

3. Chib, S., Shin, M. and A. Simoni (2019), *Bayesian Estimation and Comparison of Conditional Moment Models.* Oberwolfach Report 12/2019. Federal Reserve Bank of Philadelphia WP 19-51. Rej & Resubmit at ***Journal of the Royal Statistical Society, Series B***.

2. Chib, S., Greenberg, E. and A., Simoni, (2019), *Nonparametric Bayes Analysis of the Sharp and Fuzzy Regression Discontinuity Designs.* Rej & Resubmitted at ***Econometric Theory***.

1. Florens, J.P. and A., Simoni, (2019), *Bayesian Identification and Partial Identification.*

Selected work in progress

Chib, S., Shin, M. and A. Simoni (2019), *Prediction from Moments.*

Hoderlein, S., Nesheim L. and A., Simoni, (2014), *Heterogeneous Euler Equations: a semiparametric structural approach.*

Simoni, A., (2009), *Bayesian Nonparametric Estimation of asset pricing functionals.*

Professional Activities

Presentations at Conferences:

2019 *ASSA-meeting*, January 4-6, Atlanta - USA; *Data Day @HEC*, January 22 - HEC Paris; *Oberwolfach Workshop: Uncertainty Quantification*, March 10-16, Oberwolfach - Germany; *Using Alternative Datasets for Macro Analysis and Monetary Policy*, October 17-18, Bocconi University - Milan.

2018 *CIREQ Econometrics Conference: Recent Advances in the Method of Moments*, 27-28 April, Montreal - Canada (invited); *SBIES 2018*, 25-26 May, Stanford University - USA; *Afse 2018*, 14-16 May, Paris - France; *ISBA 2018* - Contributed Session (invited), 25-29 June, Edinburgh (UK); *Econometric Society European Meeting* (ESEM), 25 - 29 August, Cologne - Allemagne; 10^{th} *French Econometric Conference*, 29-30 November 2018, Paris - France.

2017 *Workshop on Inverse Problems and Applications*, May 8-10, Edinburgh - UK (invited); *Bayesian and Nonlinear Inverse Problems*, August 28- September 1, Leiden - Holland.

2016 *Workshop on Inverse Problems and Applications*, March 17, Edinburgh - UK (invited); *1st Banque de France - Norges Bank Workshop in Empirical Macroeconomics*, April 21, Banque de France (discussion); *SBIES 2016*, April 29-30, University of Philadelphia - USA; *ISNPS 2016*, June 11-16, Avignon - France (invited); *Third Annual Conference of the International Association for Applied Econometrics (IAAE)*, June 22-25, Milan - Italy (invited); *Workshop on Inverse Problems*, October 28-29, Heidelberg - Germany (invited); 8^{th} *French econometrics conference*, November 17-18, ESSEC, France; $27^t h$ $(EC)^2$ *Conference on Big Data*, December 16-17, Toulouse School of Economics, France.

2015 *Conference on Inverse Problems in Econometrics*, October 1-2, Northwestern - USA (invited); *Conference on Computational and Financial Econometrics and on Computational and Methodological Statistics*, December 12-14, London - UK (invited); *Financial Econometrics Conference*, May 22-23, Toulouse - France (discussant); *SBIES 2015*, May 8-9, Washington University at St. Louis - USA; *ICEEE- 6th*, January 21-23, Salerno - Italy; *Workshop on Econometrics of Auctions and Contract-Theory Models*, November 24, Paris (discussant - invited); *14ème Journée d'Économétrie Développements Récents de l'Econométrie Appliquée à la Finance*, November 25, Nanterre (discussant - invited).

2014 *ASSA-meeting*, January 2-5, Philadelphia - USA; *Bayesian Modelling and Identification*, May 12, CORE - Louvain-La-Neuve - Belgium (invited); *Econometric Study Group*, July 3-5, University of Bristol - UK; *NSVCM 2014*, July 24-26, University of Paderborn - Germany (invited).

2013 *Econometric study group conference*, July 11-13, Bristol - UK; *29th European Meeting of Statisticians*, July 20-25, Budapest - Ungary; *European Meeting of the Econometric Society*, August 26-30, Gothenburg, Sweden; 5^{th} *French Econometrics Conference*, November 14-15, Toulouse (discussant).

2012 *ADRES*, January 19-20, Marseille - France; *NASM*, June 28-July 1, Northwestern University - USA; *AFSE*, July 2-4, Paris - France; 4^{th} *French Econometrics Conference*, November 22-23, Ensai - Rennes.

2011 *Royal Economic Society*, April 18-20, London - UK; *Nonlinear Financial Econometrics Conference A Tribute To A. Ronald Gallant*, May 19-21, Toulouse - France (discussant - invited); *Inverse Problems and optimal control for PDEs*, May 23-27, Warwick - UK (invited); *2011 Cowles Foundation Annual Econometrics Conference*, June 13-14, Yale - USA (invited); *Econometric Society European Meeting* (ESEM), August 25 - 29, Oslo - Norway; *Congrès AFSE 2011*, September 8-9, University Pairs Ouest Nanterre la Defense.

2010 *Bayesian Inference in Econometrics and Statistics*, April 30 - May 1, Austin - USA; *Fourth Time Series Conference*, May 14-15, Montreal - Canada (poster - invited); *Recent Developments in Nonparametric Instrumental Variable Methods*, June 12, CEMMAP - London (invited); *World Congress of the Econometric Society*, August 17-21, Shanghai - China; *Revealed Preferences and Partial Identification*, September 24-25, Montreal - Canada (invited).

2009 *Semiparametric and Nonparametric Methods in Econometrics*, April 5 - 10, Banff - Canada (invited); *6th Workshop on Bayesian Inference in Stochastic Processes*, June 18 - 20, Bressanone - Italy (poster); *Econometric Society European Meeting* (ESEM), August 23 - 27, Barcelona - Spain; *Stats in the Château*, August 31 - September 4, Paris - France; *Rencontres de statistiques mathématiques*, December 14 - 18, C.I.R.M. - Marseille - France.

2008 11^{th} *Meeting of New Researchers in Statistics and Probability*, July 29 - August 2, University of Colorado at Boulder, Colorado; *Joint Statistical Meetings*, August 2 - 7, Denver - Colorado; *Econometric Society European Meeting* (EEA - ESEM), August 27 - 31, Milan - Italy; *European Winter Meeting of the Econometric Society*, October 31 - November 1, Cambridge - UK; *Simposio de Analisis Economico*, December 11 - 13, Zaragoza - Spain.

2007 Workshop on *Construction and Properties of Bayesian Nonparametric Regression Models*, 6 - 10 August, Isaac Newton Institute for Mathematical Sciences, Cambridge (UK); *Deuxièmes Rencontres des Jeunes Statisticiens*, (organised by Société Française de Statistique), 3 - 7 September, Aussois (France); *Rencontres de statistiques mathématiques*, 17 - 21 December, C.I.R.M. - Marseille (France).

Presentations at Seminars:

2020 EDEC Business School, Heidelberg University (Covid-19 canceled), Brunel University.

2019 ESSEC Business School.

2018 University of Bonn. Invited lecture at *Alliance Graduate Summer School 2018 - Research Methods in Sustainable Development*, 28 May - 1 June, 2018 - Paris.

2017 University of Verona, CREST internal seminar.

2016 University of Bologna, Université d'Orléans.

2015 Humboldt University Berlin, Boston College, CREST (LMI), Université de Lausanne - HEC, Heidelberg University (Institut für Angewandte Mathematik).

2014 Brown University, Boston University, Boston College, MIT, U-Penn, CREST (LMI and LS), Louvain-La-Neuve (ISBA).

2013 Bayes in Paris (BIP) - workshop, Nuffield College (Oxford), Université Catholique de Louvain (statistical seminar).

2012 Queen Mary University, Université de Cergy-Pontoise (THEMA), Princeton University, CREST (Seminaire de Statistique), CREST (LMI), THEMA, Mannheim University, Université de Luxembourg.

2011 Mannheim University, UC-San Diego, University College of London, Université Catholique de Louvain (CORE).

2010 Northwestern University, Brown University, Mannheim University, Boston College.

2009 University College London, University of Auckland (video conference presentation), Bocconi University, University of Cambridge, Universidad de Navarra, Banca d'Italia, Duke University.

2008 Toulouse School of Economics, Universidad Carlos III, Durham University (UK).

2007 University of Bologna, Université Paul Sabatier (Toulouse), Toulouse School of Economics, Université de Marseille (GREQAM).

Referee for:

Annals of Statistics, Annals of Economic and Statistics, Brazilian Journal of Probability and Statistics, Computational Statistics and Data Analysis, Econometrica, Econometric Review, Econometric Theory, Electronic Journal of Statistics, Journal of Applied Econometrics, Journal of Applied Statistics, Journal of Business and Economic Statistics, Journal of Business Cycle Research, Journal of Econometrics, Journal of Financial Econometrics, Labor Economics, Journal of Nonparametric Statistics, Quantitative Economics, Review of Economic Studies, Scandinavian Journal of Statistics, Statistics and Computing, ERC - Advanced Grant, ERC - Starting Grant, SSHRC - Insight Grants, ANR (Agence Nationale de la Recherche).

Conference Organization:

- Member of the organizing and selection committee of the workshop *Recent developments in Networks models: statistic and economic modelling* (November 2013).
- *Journées ENSAE-ENSAI*, 8-9 January 2015.
- *Data Lead 2015: Leading the way in Big Data*, ENSAE and University of Berkeley, 5-6 November 2015.
- Co-organizer of the workshop *Meeting in Econometrics*, Toulouse School of Economics (May 2017).
- Member of the organizing and selection committee of the conference *9th French Econometric Conference*, CREST - Ensae (November 2017).
- Member of the organizing and selection committee of the conference *ADRES*, CREST - Ensae (February 2018).

Department Services:

- Deputy in the Board of the project DATAIA, September 2017 – .
- Co-director of the option "Data Science" at ENSAE (for 3^{rd} year students), September 2016 - .
- Coordinator of the *Research Option in Econometrics* for 3^{rd} year students at ENSAE (*Formation Par la Recherche*, September 2014 -).
- LABEX ECODEC (July 2014 -): PI of the group "New challenges for new data".
- Deputy in the Board of Directors of GENES (November 2014 -).
- Member of the Scientific Committee of Labex MME-DII (2013 - 2014), Université de Cergy-Pontoise.
- Member of the Junior Recruiting Committee for Université de Cergy-Pontoise (2013).
- Member of the Junior Recruiting Committee for Bocconi University (2009 - 2010).
- Organizer of the *Econometrics and Statistics seminars* at Bocconi University - Department of Decision Sciences (2010 - 2011).
- Undergraduate Thesis supervision, Bocconi University.

Other:

- Guest Editor of *Annals of Economics and Statistics* for the special issue on *Inverse Problems in Econometrics*, with Jean-Pierre Florens (2015 - 2017).
- External member of the Recruiting Committee for a Maitre de Conference position on "Big Data" at Université Paris-Est Créteil.

Master Thesis supervision: Jean-Marie John-Mathews ("Estimating wage equations using a very large number of instruments", 2015), Thomas Despois ("A Sparse PCA Approach in Dynamic Factor Models", 2016), Martin Monziols (2017), Guillaume Bied (2018), Gabriel Buresi (2020), Jung Hyun Kim (2020).

ENSAE Project supervision: Bertille Picard "Formation par la Recherche" at ENSAE, November 2018 - May 2019, ongoing), Martin Monziols ("Formation par la Recherche" at ENSAE, Septembre-May 2016), Rosuel Alexis ("Python project" at ENSAE, January 2017).

Stage supervision: Vivien Chbicheb (student at Ecole Polytechnique, co-supervision with Laurent Ferrara, Banque de France, 2017), Guillaume Bied (2018), Bertille Picard (2018), Karim Tit (2019), Gabriel Buresi (2020), Jung Hyun Kim (2020).

PhD Thesis supervision: Yannick Guyonvarch (September 2016, ongoing) PhD at CREST - Université Paris Saclay.

Member of the PhD Committee of:

- Songlin Zeng (ESSEC and University of Cergy-Pontoise, October 2013), "Nonlinear Time Series Models with Applications in Macroeconomics and Finance".
- Samuele Centorrino (Università Bicocca, June 2014), "Essays in nonparametric estimation with instrumental variables".
- Odran Bonnet (Sciences Po Paris, Juin 2018), "Individual housing choices and aggregate housing prices".
- Jérémy L'Hour (CREST, 2015 – 2019), member of the PhD committee.
- Bertille Picard (Aix-Marseille Université, 2019 –).
- Martin Mugnier (CREST, IP Paris, 2019 –)

Visiting Periods:

European University Institute (Spring 2020 - Covid-19 cancelled), University of Bologna (July 2018, Juin 2017, February 2016), Max Planck Institute Munich (July 2017), Max Planck Institute Bonn (April 2016), Boston College (January - May 2014), University of Mannheim (July 2010, October 2010, February - July 2011, June - September 2012, August 2013, July - August 2014, February 2015, August 2015), Toulouse School of Economics (October 5 - 9, 2009, November 23 - December 2, 2009, February 15-19, 2010, August 2-6 2010, January 3 - 7 2011, August 2011, July 2013, June 2015, Mai 2016).

Short period visits: Université Catholique de Louvain (ISBA), Boston College, Brown University, Northwestern University, S.G.A.M. (Société Generale Asset Management).

Consulting Experience:

Prometeia srl, Bologna - Italy, March - September, 2004
Division: Financial Intermediaries. Position: Economist.

Languages Proficiency

Italian (mother tongue), French and English (fluently read, spoken and written).

Personal Information

Year of birth: 1980.
Citizenships: French, Italian.
Married (1 child).
Maternity leave: October 2017 - January 2018.