CURRICULUM VITÆ

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Date of Birth	November 12, 1981
Citizenship	French

Education

2021 – Current	PhD Candidate in Statistics at Toulouse School of Economics, Université Toulouse Capitole, France. Supervised by Christine Thomas-Agnan and Abdelaati Daouia
2004	Master 2 Statistics and Econometrics, University Paul Sabatier & Université Toulouse Capitole

Current Position

2019 –	Research Engineer (Ingénieur de Recherche) at CNRS (Centre National de la Recherche Scientifique), Toulouse School of Economics, Department of Mathematics and Statistics

Previous Position

2008 – 2019	Research Engineer (Ingénieur d'Etudes) at CNRS (Centre National de la Recherche Scientifique), GREMAQ (becomes Toulouse School of Economics in 2016)

Fellowships and Awards

2023 – 2026	French National Research Agency via Belmont Forum (Co-PI: T.Laurent and P.Margaretic) - Future Earth Integrated Approaches to Human Migration/Mobility in an Era of Rapid Global Change. France-Chile-Tanzania.
2019 – 2023	French National Research Agency. Member of the ANR ExtremReg "Extremal Regression with Applications to Econometrics, Environment and Finance" (PI: A. Daouia), TSE.
2011 – 2016	French National Research Agency (ANR-11-BSH1-0005/ModuLand project). Leader of the part "Spatial exploratory data analysis" (PI: C. Thomas-Agnan), TSE.

Supervision of Graduate Students

2020 – 2023	5 Master Students (M. Canovas, M1, 2023, S. Pan, M1, 2022, I. R. Barreiro, M1, 2021, C. Mondon, M1 ENS Ulm, 2021, G. Watkinson, A2 ENSAE, 2020) .

Teaching Activities

2010 – Current	Master in Statistics and Econometrics (with ANITI label): Statistical Software (R advanced), Spatial Econometrics, Statistical Consulting (collaboration with Airbus, BVA, CNES, Thalès) in second year, Introduction to Parallel Computing in first year.

Organisation of Scientific Meetings

2023	Member of the Organization Committee of ICORS 2023 Conference, Toulouse School of Economics
2022	Member of the Organization Committee of CoDaWork 2022 Conference, Toulouse School of Economics
2019	Member of the Scientific Committee and Organization Committee of the useR! 2019 conference, Toulouse School of Economics
2016	Co-chair of the "6e Rencontre R" conference, Toulouse School of Economics
2013	Member of the Organization Committee of "45e Journées de Statistique", Toulouse Business School
2011	Member of the Organization Committee of "Spatial Econometrics World Conference", Toulouse School of Economics

Institutional Responsabilities

2021	Expert member of the recruiting committee of a statistician engineer at CNRS
2018 & 2019	External member of the recruiting committee of a statistician engineer at Université of Toulouse (PROGEDO)
2016 – 2020	Elected member of the "Conseil de laboratoire", UMR TSE-R
2013 – 2014	Co-organizer of the MAD-Stat (Decision Mathematics/Statistics) Seminar, Toulouse School of Economics

Reviewing Activities

2022 – Current	Reviewer in Advances in Data Analysis and Classification
2016 – 2021	Reviewer in Case Studies In Business, Industry And Government Statistic

Memberships of Scientific Societies

2022 – Current	Member of the Scientific Committee of the "Réseau Interdisciplainaire autour de la Statistique" (MITI CNRS)
2017 – 2021	Member of the Scientific Committee of the "Réseau Interdisciplainaire autour de la Statistique" (RTP CNRS INEE)

Invited conference talks

2022	Conference in honor of Christine Thomas-Agnan, Toulouse (France) : *"An Evaluation of The Joint Congressional Resolution for Providing Admission of Texas to the Union in 1845: Would Texan Citizens Benefit from a Split of Texas Into Five States ?"*
2017	Journée d'étude PROGEDO, Toulouse (France) : *"Quelques exemples d'utilisation de donnees libres en sciences sociales et économiques"*
2016	4e Rencontres R, Grenoble (France): *"Statistique spatiale avec R"*

Contributed talks

2022	CoDaWork 2022, Toulouse: *"Mapping Spatio-compositional Data"*
2022	EcoSta 2022, London: *"Heavy-tailed extremile regression in risky seismic areas"*
2021	JdS (SFdS) 2021, Nice: *"Covariates impacts in spatial autoregressive models for compositional data"*
2021	SEW 2021, Nantes: *"Impacts calculation and visualization in spatial flows modeling, application to remittances"*
2018	useR! 2018, Brisbane (Australia): *"npbr: A Package for Nonparametric Boundary Regression"*
2018	Social Choice and Welfare conference, Seoul, South Korea: *"Exploring the effects of national and regional popular vote Interstate compact on a toy symmetric version of the Electoral College: an electoral engineering perspective"*

Invited seminars

2019	Séminaire OMP, CNRS Toulouse
2018	Séminaire ODR, INRA Toulouse

R packages

- **caschrono** in collaboration with Yves Aragon
  `https://cran.r-project.org/web/packages/caschrono/index.html`
- **GeoXp** in collaboration with Anne Ruiz-Gazen and Christine Thomas-Agnan
  `https://github.com/cran/GeoXp`
- **npbr** in collaboration with Abdelaati Daouia and Hohsuk Noh
  `https://cran.r-project.org/web/packages/npbr/index.html`
- **frontiles** in collaboration with Abdelaati Daouia
  `https://cran.rstudio.com/web/packages/frontiles/index.html`

Research visits abroad

- Université Catholique de Louvain, collaboration with Abdelaati Daouia, March 2013

List of Publications

[1] Ruiz-Gazen A., Thomas-Agnan C., Laurent T. and C. Mondon (2023), Detecting Outliers in Compositional Data Using Invariant Coordinate Selection. In M. Yi and Nordhausen K. (Eds.), Robust and Multivariate Statistical Methods, Festschrift in Honor of David E. Tyler.

[2] Laurent T., Margaretic P. and Thomas-Agnan C. (2023), Generalizing Impact Computations for the Autoregressive Spatial Interaction Model, *Geographical Analysis*, https://doi.org/10.1111/gean.12358.

[3] Laurent T., Margaretic P. and Thomas-Agnan C. (2022),Neighbouring countries and bilateral remittances: a global study, *Spatial Economic Analysis*, **17**(4), 557–584.

[4] Nguyen T.H.A, Laurent T., Thomas-Agnan C. and A. Ruiz-Gazen (2022). Analyzing the impacts of socio-economic factors on French departmental elections with CoDa methods. *Journal of Applied Statistics*, **49** (5).

[5] Do V. H., Laurent T. and A. Vanhems (2021), Guidelines on Areal Interpolation Methods. In A. Daouia and Ruiz-Gazen A., Advances in Contemporary Statistics and Econometrics: Festschrift in Honor of Christine Thomas-Agnan.

[6] De Mouzon O., Laurent T. and M. Le Breton (2021), 'One Man, One Vote" Part 2: Measurement of Malapportionment and Disproportionality and the Lorenz Curve - A: Introduction and Measurement Tools. In A. Daouia and Ruiz-Gazen A., Advances in Contemporary Statistics and Econometrics: Festschrift in Honor of Christine Thomas-Agnan.

[7] De Mouzon O., Laurent T. and M. Le Breton (2021), 'One Man, One Vote" Part 2: Measurement of Malapportionment and Disproportionality and the Lorenz Curve - B: Applications. In A. Daouia and Ruiz-Gazen A., Advances in Contemporary Statistics and Econometrics: Festschrift in Honor of Christine Thomas-Agnan.

[8] Laurent T. and P. Margaretic (2021), Predictions in Spatial Econometric Models: Application to Unemployment Data. In A. Daouia and Ruiz-Gazen A., Advances in Contemporary Statistics and Econometrics: Festschrift in Honor of Christine Thomas-Agnan.

[9] Thomas-Agnan C., Laurent T., Ruiz-Gazen A., Nguyen T.H.A., Chakir R. and A. Lungarska (2021), Spatial simultaneous autoregressive models for compositional data: Application to land use. In P. Filzmoser, K. Hron, J. A. Martín-Fernández, J. Palarea-Albaladejo (Eds), Advances in Compositional Data Analysis: Festschrift in Honour of Vera Pawlowsky-Glahn.

[10] Nguyen T.H.A, Thomas-Agnan C., Laurent T. and A. Ruiz-Gazen (2021). A simultaneous spatial autoregressive model for compositional data. *Spatial Economic Analysis*, **16** (2), pp. 161 – 175.

[11] Laurent T., Le Breton M., de Mouzon and Issofa Moyouwou (2021). "One Man One Vote". Part 1: Electoral Justice in the U.S. Electoral College: Banzhaf and Shapley/Shubik versus May. In D. Mostapha and Merlin V. (Eds.) Evaluating Voting Systems with Probability Models: Essays by and in Honor of William Gehrlein and Dominique Lepelley.

[12] Laurent T., Le Breton M., Lepelley D. and O. de Mouzon (2020). The Theoretical Shapley-Shubik Probability of an Election Inversion in a Toy Symmetric Version of the U.S. Presidential Electoral System. *Social Choice and Welfare*, **54**, 363–395.

[13] Nguyen T.H.A, Ruiz-Gazen A., Thomas-Agnan C. and T. Laurent, (2019). Multivariate Student versus Multivariate Gaussian Regression Models with Application to Finance. *Journal of Risk and Financial Management*, **12** (1).

[14] Laurent T., Le Breton M., Lepelley D. and O. de Mouzon (2019). Exploring the Effects on the Electoral College of National and Regional Popular Vote Interstate Compact: An Electoral Engineering Perspective. *Public Choice*, **179** (1).

[15] Chakir R., Laurent T., Ruiz-Gazen A., Thomas-Agnan C. and C. Vignes (2018). Exploring land use prediction errors from area frame survey data. *Case Studies in Business, Industry and Government Statistics*, 7(1), 33–48.

[16] Daouia A., Laurent T. and H. Noh (2017). npbr: A Package for Nonparametric Boundary Regression in R. *Journal of Statistical Software*, 16(4), 1039–1063.

[17] Goulard M., Laurent T. and C. Thomas-Agnan (2017). About predictions in spatial autoregressive models : Optimal and almost optimal strategies. *Spatial Economic Analysis*, 12, 304–325.

[18] Chakir R. Laurent T., Ruiz-Gazen A., Thomas-Agnan C. and C. Vignes (2017). Prédiction de l'usage des sols sur un zonage régulier à différentes résolutions et à partir de covariables facilement accessibles: Land use predictions on a regular grid at different scales and with easily accessible covariates. *Revue Économique*, 68, 435–469.

[19] Chakir R. Laurent T., Ruiz-Gazen A., Thomas-Agnan C. and C. Vignes (2016). Spatial scale in land use models: application to the Teruti-Lucas survey. *Spatial Statistics*, 18, 246–262.

[20] Laurent T. and I. Moussa (2015). Indirect and feedback effects as measure of knowledge spillovers in French regions. *Applied Economics Letters*, 22(7), 511–514.

[21] Cherel P., Gamot A., Laurent T., Liaubet L., San Cristobal M. and N. Villa-Vialaneix (2013). The Structure of a Gene Co-Expression Network Reveals Biological Functions Underlying eQTLs. *Plos One*, 8(4).

[22] Laurent T., Ruiz-Gazen, A. and C. Thomas-Agnan (2012). GeoXp: an R package for interactive exploratory spatial data analysis. *Journal of Statistical Software*, 47(2).

[23] Laurent T. and N. Villa-Vialaneix (2011). Using spatial indexes for labeled network analysis. *Revue I3*, 11(1).

[24] Bonnal L., Favard P., Laurent T. and A. Ruiz-Gazen (2011). Pourquoi le coût de l'éducation est-il plus élevé en zone rurale ? Le cas de la région Midi-Pyrénées. *Revue d'Économie Régionale et Urbaine*, 5, 867–910.

Work in Progress

[1] Laurent T., and Panova E. Clustering in communication networks with different-minded participants, TSE Working Paper.

[2] Laurent T., Margaretic P. and Thomas-Agnan C. An open source software tool for spatial flow data analysis, TSE Working Paper.

[3] Laurent T., Ruiz-Gazen A. and Thomas-Agnan C. Covariates impacts in spatial autoregressive models for compositional data, TSE Working Paper.

[4] Laurent T., Ruiz-Gazen A. and Thomas-Agnan C. Mapping Spatio-compositional Data, Mimeo.

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