1 In a snapshot

I am professor of Mathematical Statistics at the Université Libre de Bruxelles (full professor since 2010) and an Associate Member of the Toulouse School of Economics. I have been visiting professor at the Université Pierre-et-Marie Curie (Paris 6, 2009–2014) and in Toulouse School of Economics (2015, 2016, and 2019–2022). I am a Fellow of the Institute of Mathematical Statistics, a Fellow of the American Statistical Association, and an elected member of the International Statistical Institute. My main research fields are asymptotic statistics, nonparametric inference, high-dimensional statistics. I am the author of 94 published papers (among which 16 contributions to the *Annals of Statistics*, 10 to *Bernoulli*, 5 to the *Journal of the American Statistical Association* and one to *Biometrika*). At the end of 2021, I left the editorial boards of the *Annals of Statistics* and of the *Journal of the American Statistical Association*, to focus on my new role as the Editor-in-Chief of *Bernoulli* (2022–2024). I have acted as supervisor or co-supervisor of 13 Ph.D. theses (12 completed, 1 in progress). I obtained several awards, the most prestigious of them being the triennal *Marie-Jeanne Laurent-Duhamel award* of the Société française de Statistique for the best thesis defended in a French-speaking university and the *Gottfried E. Noether Young Scholar award* of the American Statistical Association. Between 2017 and 2020, I held a Francqui Research Professorship.

2 Personal information

Name: Davy PAINDAVEINE
Born: September 23, 1976, in Haine-Saint-Paul (Belgium)
Citizenship: Belgian
Affiliations: ECARES and Dept of Mathematics (ULB), TSE (Université Toulouse 1 Capitole)
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3 Education

2000–2002: Doctorat en Sciences, orientation statistique (Université Libre de Bruxelles), with *félicitations du Jury* (highest grade). Title of the dissertation: "Optimal invariant signed rank tests for elliptically symmetric location and time series problems", defended September 3, 2002 (advisor: M. Hallin).

1998–2000: DEA en Statistique et Recherche Opérationnelle, spécialisation statistique (Université Libre de Bruxelles): *la plus grande distinction* (highest grade), with *félicitations du Jury*.

1994–1998: Licence en sciences mathématiques (Université Libre de Bruxelles).

- Première candidature (1994-1995): *la plus grande distinction* (highest grade).
- Seconde candidature (1995-1996): *la plus grande distinction* (highest grade).
- Première licence (1996-1997): *la plus grande distinction* (highest grade).
- Seconde licence (1997-1998): *la plus grande distinction* (highest grade).

4   Full-time positions

2010–: Professeur ordinaire (full professor) of Statistics at the Solvay Brussels School of Economics and Management, Université Libre de Bruxelles.

2007–2010: Professeur (associate professor) of Statistics at the Faculté des Sciences sociales et politiques, Solvay Brussels School of Economics and Management, Université Libre de Bruxelles.

2002–2006: Chargé de Cours (tenured junior professor) of Statistics at the Institute of Statistics and Operations Research (ISRO), Université Libre de Bruxelles.

1998–2002: Teaching assistant at the Mathematics Department, Université Libre de Bruxelles.

5   Part-time positions

2019–2022: Professor, Toulouse School of Economics, Université Toulouse 1 Capitole.

2009–2014: Professor, LSTA, Université Pierre-et-Marie-Curie (Paris 6).

6   Visiting positions / capita selecta

2014–2016: Visiting professor, Toulouse School of Economics, Université Toulouse 1 Capitole, "Statistical depth".

2014–2015: Capita selecta, Department of Mathematics, KULeuven, "Multivariate ranks and statistical depth".

2005–2007: Visiting professor, ISUP, Université Pierre-et-Marie-Curie (Paris 6), "Statistique non paramétrique".

1999–2000: Visiting professor, Institut National de Statistique et d'Economie Appliquée, Rabat, "Introduction aux processus stochastiques".

7   Academic service

- Editor-in-Chief of *Bernoulli* (2022–2024).
- Associate editor for the *Annals of Statistics* (2013–2021).
- Associate editor for the *Journal of the American Statistical Association* (2017–2021).
- Associate editor for *ESAIM: Probability and Statistics* (2013–2021).
- Co-Editor-in-Chief for *Statistics and Probability Letters* (2014–2016).
- Associate editor for the *Journal of Statistical Planning and Inference* (2012–2019).
- Associate editor for *Econometrics and Statistics* (2016–2018).
- Associate editor for *Statistica Sinica* (2011–2014).
- Associate editor for *Statistics and Probability Letters* (2010–2013).
- Associate editor for *International Statistical Review* (2011–2015).
- Associate editor for *METRON International Journal of Statistics* (2007–2012).

- European Regional Committee (ERC) of the Bernoulli Society (2016–2020).
- IMS Committee on New Researchers (2011–2013).
- Elected member of the board of the Belgian Statistical Society (2011–2013)
- Elected member of the Conseil de la Société Française de Statistique, SFdS (2006–2009).
- Representative of the SFdS in the Conseil de la Société Mathématique de France (2006–2009).

- Co-director of the ECARES research centre (2006-2012).
- Member of the ECORE (ECARES + CORE) executive committee (2006–2012).

- President of the Jury for the Master in Statistics, ULB (2009–2014, 2021–).
- Secretary of the Jury for the Master in Statistics, ULB (2005–2009).
- Secretary of the Jury for the Specialized Master in Big Data, data science, ULB (2018–).
- Secretary of the Jury for the Bachelor in Business Engeneering, ULB (2011–).
- President of the FNRS graduate school in Statistics and Actuarial Sciences (2009–2011).
- Vice-President of the FNRS graduate school in Statistics and Actuarial Sciences (2005–2009).

8   Research grants

2022: Fonds Thelam, Fondation Roi Baudouin.

2018–2023: Advanced A.R.C. (Action de Recherche Concertée avancée) of the Communauté Française de Belgique. Project coordinator.

2017–2020: Francqui Research Professorship, from the Francqui foundation.

2016–2017: Crédit aux chercheurs F.N.R.S.

2016: National Bank of Belgium.

2012–2017: I.A.P. (Interuniversity attraction poles) of the Belgian Science Policy Office. Scientist in charge for the Université libre de Bruxelles.

2010–2015: A.R.C. (Action de Recherche Concertée) of the Communauté Française de Belgique Project coordinator.

2010: National Bank of Belgium.

2007–2009: Mandat d'impulsion scientifique du F.N.R.S.

2003–2006: Crédit aux chercheurs F.N.R.S.

9 Prizes and awards

2019: **Fellow of the American Statistical Association**.

2018: **Fellow of the Institute of Mathematical Statistics**.

2017–2020: **Francqui Research Professorship**, from the Francqui foundation.

2017: **Godeaux lecture**, Annual meeting of the Belgian Mathematical Society, Brussels.

2012: **Gumbel lecture**, Annual meeting of the German Statistical Association (Statistische Woche, Vienna).

2007: **Prix Adolphe Wetrems de la Classe des Sciences de l'Académie Royale de Belgique**. This price, created in 1926, is granted every year to a Belgian scientist rewarding "the most useful discovery or invention in physics, mathematics or the natural sciences," made during the previous year.

2007: **Gottfried E. Noether Young Scholar Award**, for research accomplishments in nonparametric statistics, American Statistical Association.

2005: **Prix du Concours annuel de la Classe des Sciences de l'Académie Royale de Belgique** for a dissertation entitled "Sur l'Efficacité Asymptotique Uniforme des Procédures de Rangs Signés Multivariées".

2005: **Elected member of the International Statistical Institute**.

2003: **Prix Marie-Jeanne Laurent-Duhamel**, which is awarded every third year by the Société Française de Statistique to the best Ph.D. in Statistics defended in a French-speaking university in the previous three years.

1998: **Médaille de l'Université Libre de Bruxelles**, promotion 1997-1998.

1997: **Sterpenich Prize**: annual prize for the best undergraduate student in Mathematics.

10   Publications

[94] On UMPS hypothesis testing. *Annals of the Institute of Statistical Mathematics*, to appear.

[93] Spatial quantiles on the hypersphere (coauthor: D. Konen). *Annals of Statistics* 51, 2221–2245 (2023).

[92] On the distribution-freeness of a test of angular symmetry based on halfspace depth (coauthor: A. Dürre). *Econometrics and Statistics*, to appear.

[91] Revisiting the name variant of the two-children problem (coauthor: Ph. Spindel). *The American Statistician* 77, 401–405 (2023).

[90] On the asymptotic behavior of the leading eigenvector of Tyler's shape estimator under weak identifiability (coauthor: Th. Verdebout). In: Nordhausen, K., Yi, M. (eds), Robust and Multivariate Statistical Methods. Festschrift in honor of David Tyler. Springer, Cham., 45–64 (2023).

[89] On the consistency of incomplete U-statistics under infinite second-order moments (coauthor: A. Dürre). *Statistics and Probability Letters* 193, 109714 (2023).

[88] Affine-equivariant inference for multivariate location under L_p loss functions (coauthor: A. Dürre). *Annals of Statistics* 50, 2616–2640 (2022).

[87] Preliminary multiple-test estimation, with applications to k-sample covariance estimation (coauthors: J. Rasoafaraniaina and Th. Verdebout). *Journal of the American Statistical Association* 117, 1904–1915 (2022).

[86] Multivariate ρ-quantiles: a spatial approach (co-author: D. Konen). *Bernoulli* 28, 1912–1934 (2022).

[85] On the measure of anchored Gaussian simplices, with applications to multivariate medians. *Bernoulli* 28, 965–996 (2022).

[84] Testing uniformity on high-dimensional spheres: the non-null behaviour of the Bingham test (coauthors: Chr. Cutting and Th. Verdebout). *Annales de l'Institut Henri Poincaré* 58, 567–602 (2022).

[83] On the behavior of extreme d-dimensional spatial quantiles under minimal assumptions (coauthor: J. Virta). In: Daouia, A., Ruiz-Gazen, A. (eds), Advances in Contemporary Statistics and Econometrics. Springer, Cham., 243–259 (2021).

[82] Preliminary test estimation in ULAN models (coauthors: J. Rasoafaraniaina and Th. Verdebout). *Scandinavian Journal of Statistics* 48, 689–707 (2021).

[81] On optimal tests for rotational symmetry against new classes of hyperspherical distributions (coauthors: E. García-Portugués and Th. Verdebout). *Journal of the American Statistical Association* 115, 1873–1887 (2020).

[80] Inference for spherical location under high concentration (coauthor: Th. Verdebout). *Annals of Statistics* 48, 2982–2998 (2020).

[79] Detecting the direction of a signal on high-dimensional spheres: non-null and Le Cam optimality results (coauthor: Th. Verdebout). *Probability Theory and Related Fields* 176, 1165–1216 (2020).

[78] Sign tests for weak principal directions (coauthors: J. Remy and Th. Verdebout). *Bernoulli* 26, 2987–3016 (2020).

[77] On the power of axial tests of uniformity (coauthors: Chr. Cutting and Th. Verdebout). *Electronic Journal of Statistics* 14, 2123-2154 (2020).

[76] Testing for principal component directions under weak identifiability (coauthors: J. Remy and Th. Verdebout). *Annals of Statistics* 48, 324–345 (2020).

[75] Multiple-output quantile regression through optimal quantization (coauthors: I. Charlier and J. Saracco). *Scandinavian Journal of Statistics* 47, 250–278 (2020).

[74] Tyler shape depth (coauthor: G. Van Bever). *Biometrika* 106, 913–927 (2019).

[73] Autoregression depth (coauthor: G. Van Bever). *Annales de l'ISUP*-63, Fascicule 2–3 (2019).

[72] Distance-based depths for directional data (coauthors: G. Pandolfo and G. Porzio). *Canadian Journal of Statistics* 46, 593–609 (2018).

[71] Halfspace depths for scatter, concentration and shape matrices (coauthor: G. Van Bever). *Annals of Statistics* 46, 3276–3307 (2018).

[70] On the maximal halfspace depth of permutation-invariant distributions on the simplex (coauthor: G. Van Bever). *Statistics and Probability Letters* 129, 335–339 (2017).

[69] Testing uniformity on high-dimensional spheres against monotone rotationally symmetric alternatives (coauthors: Chr. Cutting and Th. Verdebout). *Annals of Statistics* 45, 1024–1058 (2017).

[68] Inference on the mode of weak directional signals : a Le Cam perspective on hypothesis testing near singularities (coauthor: Th. Verdebout). *Annals of Statistics* 45, 800–832 (2017).

[67] Preliminary test estimation for multi-sample principal components (coauthors: J. Rasoafaraniaina and Th. Verdebout). *Econometrics & Statistics* 2, 106–116 (2017).

[66] Tests of concentration for low-dimensional and high-dimensional directional data (coauthors: Chr. Cutting and Th. Verdebout). In S. Ejaz Ahmed Ed., *Big and Complex Data Analysis: Methodology and Applications*, Springer, Cham Heidelberg New York, 209–227 (2017).

[65] Probit transformation for nonparametric kernel estimation of the copula density (coauthors: G. Geenens and A. Charpentier). *Bernoulli* 23, 1848–1873 (2017).

[64] Affine-invariant rank tests for multivariate independence in independent component models (coauthor: H. Oja and S. Taskinen). *Electronic Journal of Statistics* 10, 2372–2419 (2016).

[63] On high-dimensional sign tests (coauthor: Th. Verdebout). *Bernoulli* 22, 1745–1769 (2016).

[62] QuantifQuantile: an R package for performing quantile regression through optimal quantization (coauthors: I. Charlier and J. Saracco). *The R Journal* 7, 65-80 (2015).

[61] Depth-based runs tests for bivariate central symmetry (coauthors: R. Dyckerhoff and Chr. Ley). *Annals of the Institute of Statistical Mathematics* 67, 917–941 (2015).

[60] Optimal rank tests for symmetry against Edgeworth-type alternatives (coauthors: D. Cassart and M. Hallin). In K. Nordhausen and S. Taskinen Eds, *Modern Nonparametric, Robust and Multivariate Methods, Festschrift in Honor of Hannu Oja*, Springer, 109-132 (2015).

[59] Discussion of "On families of distributions with shape parameters", by M.C. Jones (coauthor: Chr. Ley). *International Statistical Review* 83, 202-207 (2015).

[58] Discussion of "Multivariate Functional Outlier Detection", by Mia Hubert, Peter Rousseeuw and Pieter Segaert (coauthor: G. Van Bever). *Statistical Methods and Applications* 24, 223-231 (2015).

[57] Conditional quantile estimation based on optimal quantization: from theory to practice (coauthors: I. Charlier and J. Saracco). *Computational Statistics and Data Analysis* 91, 20–39 (2015).

[56] Local constant and local bilinear multiple-output quantile regression (coauthors: M. Hallin, Z. Lu, and M. Šiman). *Bernoulli* 21, 1435–1466 (2015).

[55] High-dimensional tests for spherical location and spiked covariance (coauthors: Chr. Ley and Th. Verdebout). *Journal of Multivariate Analysis* 139, 79–91 (2015).

[54] Nonparametrically consistent depth-based classifiers (coauthor: G. Van Bever). *Bernoulli* 21, 62–82 (2015).

[53] Optimal rank-based tests for the location parameter of a rotationally symmetric distribution on the hypersphere (coauthor: Th. Verdebout). In M. Hallin, D. Mason, D. Pfeifer, and J. Steinebach Eds, *Mathematical Statistics and Limit Theorems: Festschrift in Honor of Paul Deheuvels*. Springer, pp. 249–270 (2015).

[52] Conditional quantile estimation through optimal quantization (coauthors: I. Charlier and J. Saracco). *Journal of Statistical Planning and Inference* 156, 14–30 (2015).

[51] Efficient R-estimation of principal and common principal components (coauthors: M. Hallin and Th. Verdebout). *Journal of the American Statistical Association* 109, 1071-1083 (2014).

[50] Inference on the shape of elliptical distributions based on the MCD (coauthor: G. Van Bever). *Journal of Multivariate Analysis* 129, 125-144 (2014).

[49] Optimal rank-based tests for common principal components (coauthors: M. Hallin and Th. Verdebout). *Bernoulli* 19, 2524–2556 (2013).

[48] From depth to local depth : a focus on centrality (coauthor: G. Van Bever). *Journal of the American Statistical Association* 105, 1105–1119 (2013).

[47] Pseudo-Gaussian and rank-based optimal tests for random individual effects in large n small T panels (coauthors: N. Bennala and M. Hallin). *Journal of Econometrics* 170, 50–67 (2012).

[46] Rank tests for elliptical graphical modeling (coauthor: Th. Verdebout). *Journal de la Société Française de Statistique* 153, 82-100 (2012).

[45] Elliptical symmetry. In *Encyclopedia of Environmetrics*, 2nd edition, A. H. El-Shaarawi and W. Piegorsch (eds). John Wiley & Sons Ltd, Chichester, UK, 802-807 (2012).

[44] Runs tests (coauthor: Chr. Ley). In *Encyclopedia of Environmetrics*, 2nd edition, A. H. El-Shaarawi and W. Piegorsch (eds). John Wiley & Sons Ltd, Chichester, UK, 2474-2481 (2012).

[43] Computing multiple-output regression quantile regions from projectional quantiles (coauthor: M. Šiman). *Computational Statistics* 27, 29-49 (2012).

[42] Computing multiple-output regression quantile regions (coauthor: M. Šiman). *Computational Statistics and Data Analysis* 56, 840-853 (2012).

[41] Semiparametrically efficient inference based on signed ranks in symmetric independent component models (coauthor: P. Ilmonen). *Annals of Statistics* 39, 2448-2476 (2011).

[40] LAN property for lacunar wavelet series multifractal model (coauthor: J.M. Loubes). *ESAIM: Probability and Statistics* 15, 69-82 (2011).

[39] A stochastic analysis of some two-person sports (coauthor: Y. Swan). *Studies in Applied Mathematics* 127, 221-249 (2011).

[38] A class of optimal tests for symmetry based on local Edgeworth approximations (coauthors: D. Cassart and M. Hallin). *Bernoulli* 17, 1063-1094 (2011).

[37] On directional multiple-output quantile regression (coauthor: M. Šiman). *Journal of Multivariate Analysis* 102, 193-212 (2011).

[36] On Fisher information matrices and profile log-likelihood functions in generalized skew-elliptical models (coauthor: Chr. Ley). *METRON International Journal of Statistics* 68, 235-250 (2010).

[35] Testing for common principal components under heterokurticity (coauthors: M. Hallin and Th. Verdebout). *Journal of Nonparametric Statistics* 22, 879-895 (2010).

[34] Multivariate skewing mechanisms: a unified perspective based on the transformation approach (coauthor: Chr. Ley). *Statistics and Probability Letters* 80, 1685-1694 (2010).

[33] On the estimation of cross-information quantities in R-estimation. In J. Antoch, M. Hušková and P.K. Sen, Editors: *Nonparametrics and Robustness in Modern Statistical Inference and Time Series Analysis: A Festschrift in Honor of Professor Jana Jurečková*, I.M.S. Monographs-Lecture Notes, 35-45 (coauthors: D. Cassart and M. Hallin).

[32] Optimal rank-based testing for principal components (coauthors: M. Hallin and Th. Verdebout). *Annals of Statistics* 38, 3245-3299 (2010).

[31] On the singularity of multivariate skew-symmetric models (coauthor: Chr. Ley). *Journal of Multivariate Analysis* 101, 1434-1444 (2010).

[30] Rejoinder: Multivariate quantiles and multiple-output regression quantiles (coauthors: M. Hallin and M. Šiman). *Annals of Statistics* 38, 694-703 (2010).

[29] Multivariate quantiles and multiple-output regression quantiles: From L_1 optimization to halfspace depth (coauthors: M. Hallin and M. Šiman). *Annals of Statistics* (with discussion) 38, 635-669 (2010).

[28] On multivariate runs tests for randomness. *Journal of the American Statistical Association* 104, 1525-1538 (2009).

[27] Le Cam optimal tests for symmetry against Ferreira and Steel's general skewed distributions (coauthor: Chr. Ley). *Journal of Nonparametric Statistics* 21, 943–967 (2009).

[26] Discussion of "Invariant Co-ordinate Selection", by D. E. Tyler, F. Critchley, L. Dümbgen, and H. Oja. *Journal of the Royal Statistical Society, series B* 71, 577-578 (2009).

[25] Signed-rank tests for location in the symmetric independent component model (coauthors: K. Nordhausen and H. Oja). *Journal of Multivariate Analysis* 100, 821–834 (2009).

[24] Optimal tests for homogeneity of covariance, scale, and shape (coauthor: M. Hallin). *Journal of Multivariate Analysis* 100, 422–444 (2009).

[23] A canonical definition of shape. *Statistics and Probability Letters* 78, 2240–2247 (2008).

[22] Pseudo-Gaussian inference in heterokurtic elliptical common principal components models (coauthors: M. Hallin and Th. Verdebout). *Annales de l'ISUP*, LII, 9-24 (2008).

[21] A general method for constructing pseudo-Gaussian tests (coauthor: M. Hallin). *Journal of the Japan Statistical Society* 38, 27–40 (2008).

[20] Optimal detection of Fechner-asymmetry (coauthors: D. Cassart and M. Hallin). *Journal of Statistical Planning and Inference* 138, 2499–2525 (2008).

[19] Optimal rank-based tests for homogeneity of scatter (coauthor: M. Hallin). *Annals of Statistics* 36, 1261–1298 (2008).

[18] Chernoff-Savage and Hodges-Lehmann results for Wilks' test of multivariate independence (coauthor: M. Hallin). In M. Silvapulle, Ed., *Beyond Parametrics in Interdisciplinary Research: Festschrift in Honor of Professor Pranab K. Sen*, I.M.S. Lecture Notes-Monograph Series, 184–196 (2008).

[17] Parametric and semiparametric inference for shape: the role of the scale functional (coauthor: M. Hallin). *Statistics & Decisions* 24, 327–350 (2006).

[16] Semiparametrically efficient rank-based inference for shape. II. Optimal R-estimation of shape (coauthors: M. Hallin and H. Oja). *Annals of Statistics* 34, 2757–2789 (2006).

[15] Semiparametrically efficient rank-based inference for shape. I. Optimal rank-based tests for sphericity (coauthor: M. Hallin). *Annals of Statistics* 34, 2707–2756 (2006).

[14] A Chernoff-Savage result for shape. On the non-admissibility of pseudo-Gaussian methods. *Journal of Multivariate Analysis* 97, 2206–2220 (2006).

[13] Asymptotic linearity of serial and nonserial multivariate signed rank statistics (coauthor: M. Hallin). *Journal of Statistical Planning and Inference* 136, 1–32 (2006).

[12] Optimal signed-rank tests based on hyperplanes (coauthor: H. Oja). *Journal of Statistical Planning and Inference* 135, 300–323 (2005).

[11] Affine-invariant aligned rank tests for the multivariate general linear model with ARMA errors (coauthor: M. Hallin). *Journal of Multivariate Analysis* 93, 122–163 (2005).

[10] Multivariate signed rank tests in vector autoregressive order identification (coauthor: M. Hallin). *Statistical Science* 19, 697–711 (2004).

[9] A unified and elementary proof of serial and nonserial, univariate and multivariate, Chernoff-Savage results. *Statistical Methodology* 1, 81–91 (2004).

[8] Rank-based optimal tests of the adequacy of an elliptic VARMA model (coauthor: M. Hallin). *Annals of Statistics* 32, 2642–2678 (2004).

[7] Procédures optimales fondées sur les rangs multivariés. *Journal de la Société Française de Statistique* 144, 25–66 (2003).

[6] Affine-invariant linear hypotheses for the multivariate general linear model with ARMA error terms (coauthor: M. Hallin). In M. Moore, S. Froda, and Chr. Léger, Eds, *Mathematical Statistics and Applications: Festschrift for Constance van Eeden*, I.M.S. Lecture Notes-Monograph Series, I.M.S., Hayward, California, 417–434 (2003).

[5] Optimal procedures based on interdirections and pseudo-Mahalanobis ranks for testing multivariate elliptic white noise against ARMA dependence (coauthor: M. Hallin). *Bernoulli* 8, 787–815 (2002)

[4] Multivariate signed ranks: Randles' interdirections or Tyler's angles? (coauthor: M. Hallin). In Y. Dodge, Ed., *Statistical data analysis based on the L_1-norm and related methods*, Birkhäuser, Basel, 271–282 (2002).

[3] Optimal tests for multivariate location based on interdirections and pseudo-Mahalanobis ranks (coauthor: M. Hallin). *Annals of Statistics* 30, 1103–1133 (2002).

[2] R-estimation for ARMA models (coauthors: J. Allal and A. Kaaouachi). *Journal of Nonparametric Statistics* 13, 815–831 (2001).

[1] Selecting a sequence of last successes in independent trials (coauthor: F. T. Bruss). *Journal of Applied Probability* 37, 389–399 (2000).

11 Talks

180. Bernoulli-IMS 11th World Congress in Probability and Statistics, Bochum, Germany, August 2024: *Spatial quantiles on the hypersphere* (invited talk).

179. Statistics Seminar, University College London, London, UK, April 2024: *TBA*.

178. Workshop *Eurandom 25 Years!*, Eindhoven University of Technology, Eindhoven, The Netherlands, April 2024: *Inference on location for noisy directional data.*

177. Research Seminar in Econometrics, Erasmus University Rotterdam, The Netherlands, November 2023: *Inference in PCA under weak identifiability.*

176. Seminar of the Working Group on Risk, ESSEC Business School, Paris, France, October 2023: *Recent results on spatial/geometric quantiles and their extensions.*

175. 23rd European Young Statisticians Meeting, Ljubljana, Slovenia, September 2023: *Inference in PCA under weak identifiability* (keynote talk).

174. 1st Joint Workshop on Functional Data Analysis and Nonparametric Statistics, Miraflores de la Sierra, Madrid, Spain, June 2023: L_p *inference for multivariate location based on data-based simplices* (keynote talk).

173. International Conference on Robust Statistics (ICORS), Toulouse, France, May 2023: L_p *inference for multivariate location based on data-based simplices* (invited talk).

172. Seminar series in High Dimensional and Functional Data, @StatScience, University College London, via Zoom, UK, May 2023: *Hypothesis testing on high-dimensional spheres.*

171. Rencontre de l'Association des Actuaires issus de l'Université Libre de Bruxelles (AABr), Bruxelles, Belgium, April 2023: *Quelques paradoxes dans le monde de l'aléatoire.*

170. Rencontre annuelle de l'Association des Mathématiciens diplômés de l'Université de Liège (AMULg), Liège, Belgium, April 2023: *Quelques paradoxes dans le monde de l'aléatoire.*

169. Graz University of Technology, Graz, Austria, March 2023: *Inference in PCA under weak identifiability.*

168. Statistics Seminar, Imperial College, London, UK, February 2023: *Hypothesis testing on high-dimensional spheres: an asymptotic approach.*

167. First IMS International Conference on Statistics and Data Science (ICSDS), Florence, Italy, December 2022: L_p *inference for multivariate location based on data-based simplices* (invited talk).

166. Congrès annuel de la Société Belge des Professeurs de Mathématique d'expression française (SBPMef), Keynote closing talk, Huy, Belgium, August 2022: *Quelques paradoxes dans le monde de l'aléatoire.*

165. International Conference on Robust Statistics (ICORS), Waterloo, Canada, July 2022: *Inference under weak identifiability* (invited talk).

164. Conference in honor of Christine Thomas-Agnan, Toulouse, France, July 2022: *Affine-equivariant multivariate location estimation under L_p loss functions* (invited talk).

163. IMS Annual Meeting in Probability and Statistics, London, United Kingdom, June 2022: *Spatial quantiles on the hypersphere* (invited talk).

162. ADISTA22 International Workshop, Santiago de Compostela, Spain, June 2022: *Spatial quantiles on the hypersphere* (invited talk).

161. Proclamation de l'Olympiades Mathématique Belge, ULB, Bruxelles, May 2022: *Les mathématiques du hasard et quelques-unes de leurs curiosités.*

160. Altaïr, ULB, Bruxelles, May 2022: *Quelques paradoxes dans le monde de l'aléatoire.*

159. 14th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2021), London, UK, December 2021: *Affine-equivariant inference for multivariate location under L_p loss functions.*

158. Statistics Seminar, University of Luxembourg, Luxembourg, December 2021: *Hypothesis testing on high-dimensional spheres: the Le Cam approach.*

157. Statistics Seminar, Weierstrass Institute, Berlin, Germany, December 2021: *Hypothesis testing on high-dimensional spheres: the Le Cam approach.*

156. 28th Annual Meeting of the Belgian Statistical Society, Liège, Belgium, October 2021: *Affine-equivariant estimation of location under L_p loss.*

155. 52èmes Journées de Statistique, annual meeting of the French Statistical Society, Nice, France, June 2021: *Hypothesis testing on high-dimensional spheres: the Le Cam approach* (invited talk).

154. Statistics Seminar, Université Lille 1, Lille, France, October 2020: *High-dimensional sign tests for the direction of a skewed single-spiked distribution.*

153. Statistics Seminar, University of New South Wales, Sidney, Australia, October 2020: *Testing for principal component directions under weak identifiability.*

152. The Joint Statistical Meetings, Philadelphia, USA, August 2020: *Testing for principal component directions under weak identifiability* (invited talk).

151. Statistics Seminar, Toulouse School of Economics, Université Toulouse 1 Capitole, France, February 2020: *Testing for principal component directions under weak identifiability.*

150. 12th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2019), London, UK, December 2019: *From halfspace M-depth to multiple-output expectile regression* (invited talk).

149. Research seminar, Durham University Business School, UK, November 2019: *Testing for principal component directions under weak identifiability.*

148. Joint Statistics Seminar, KULeuven, Belgium, October 2019: *From halfspace M-depth to multiple-output expectile regression.*

147. European Meeting of Statisticians, Palermo, Italy, July 2019: *Inference for spherical location under high concentration* (invited talk).

146. 51èmes Journées de Statistique, annual meeting of the French Statistical Society, Nancy, France, June 2019: *Inference for spherical location under high concentration.*

145. Workshop on "Advances in Contemporary Statistics", Toulouse School of Economics, Université Toulouse 1 Capitole, France, April 2019: *From halfspace M-depth to multiple-output expectile regression* (invited talk).

144. DAGStat 2019 Conference, Munich, Germany, March 2019: *Halfspace depths for scatter matrices* (invited talk).

143. Exposé à l'Académie Royale de Belgique, Classe des Sciences, Brussels, Belgium, March 2019. *La géométrie du Big Data.*

142. Seminar for Statistics, University of Cambridge, UK, February 2019: *High-dimensional sign tests for the direction of a skewed single-spiked distribution.*

141. ICSA Conference on Data Science, XishuangBanNan, Yunnan, China, January 2019: *Testing for principal component directions under weak identifiability* (invited talk).

140. 11th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2018), Pisa, Italy, December 2018: *Testing for principal component directions under weak identifiability* (invited talk).

139. 2018 edition of the Brussels Summer School of Mathematics (BSSM), Brussels, Belgium, September 2018: *Badminton et probabilités.*

138. Congrès annuel de la Société Belge des Professeurs de Mathématique d'expression française (SBPMef), Keynote opening talk, Brussels, Belgium, August 2018: *Badminton et probabilités.*

137. The Joint Statistical Meetings, Vancouver, Canada, August 2018: *High-dimensional sign tests for the direction of a skewed single-spiked distribution* (invited talk).

136. International Conference on Robust Statistics (ICORS), Leuven, Belgium, July 2018: *Halfspace depth for scatter, concentration and shape matrices.*

135. Fourth Conference of the International Society for Nonparametric Statistics, Salerno, Italy, June 2018: *High-dimensional sign tests for the direction of a skewed single-spiked distribution* (invited talk).

134. Seminar for Econometrics and Statistics, Toulouse School of Economics, Université Toulouse 1 Capitole, France, March 2018: *Halfspace depth for scatter, concentration and shape matrices.*

133. Kagawa symposium on "High-Dimensional Statistical Analysis for Time Spatial Processes & Quantile Analysis for Time Series", Tokyo, Japan, February 2018: *On the asymptotic non-null behavior of high-dimensional spherical location tests.*

132. Waseda Symposium on "High-Dimensional Statistical Analysis for Time Spatial Processes & Quantile Analysis for Time Series", Tokyo, Japan, February 2018: *Efficiency in the high-dimensional one-sample location problem.*

131. Statistics seminar, Universidad Carlos III de Madrid, Spain, January 2018: *Halfspace depth for scatter, concentration and shape matrices.*

130. 10th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2017), London, UK, December 2017: *Halfspace depth for scatter, concentration and shape matrices* (invited talk).

129. Probability and Statistics "Petit Déjeuner" seminar, Université de Liège, Mathematics department, Liège, Belgium, November 2017: *BadmintonMeetsProbability$^{\circledR}$.*

128. Mathematics colloquium, Université catholique de Louvain, Louvain-la-Neuve, Belgium, October 2017: *An excursion through statistical depth.*

127. 61st World Statistics Congress, Marrakech, Morocco, July 2017: *Efficiency in the high-dimensional one-sample location problem* (invited talk).

126. ADISTA17 (Workshop on Advances in Directional Statistics), Rome, Italy, June 2017: *On the asymptotic non-null behavior of high-dimensional spherical location tests.*

125. Workshop celebrating Peter Rousseeuw's 60th birthday, KULeuven, Leuven, Belgium, June 2017: *Halfspace depths for scatter, concentration and shape matrices.*

124. Godeaux lecture, Joint VVWL-BMS-SBPMef conference of mathematics, Brussels, Belgium, May 2017: *Hypothesis testing in non-standard situations* (invited talk).

123. Lille Research Workshop on Statistics and Econometrics, Université Lille 3, Lille, France, May 2017: *Inference on the mode of weak directional signals: a Le Cam perspective on hypothesis testing near singularities.*

122. Ecole Polytechnique, Paris, April 2017: *Testing uniformity on high-dimensional spheres.*

121. Adolphe Quetelet Seminar, Universiteit Gent, Ghent, Belgium, March 2017: *Inference on the mode of weak directional signals: a Le Cam perspective on hypothesis testing near singularities.*

120. Statistics workshop at London School of Economics, London, UK, February 2017: *Testing uniformity on high-dimensional spheres against monotone rotationally symmetric alternatives.*

119. Nationale Wiskunde Dagen, Noordwijkerhout, The Netherlands, February 2017: *Statistics and cinema: the good, the bad and the ugly* (invited talk).

118. 10th ICSA International Conference, Shanghai, China, December 2016: *Testing uniformity on high-dimensional spheres against symmetric and asymmetric spiked alternatives* (invited talk).

117. 9th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2016), Seville, Spain, December 2016: *Efficiency in the high-dimensional one-sample location problem* (invited talk).

116. 10th International Chinese Statistical Association, Shanghai, China, December 2016: *Testing uniformity on high-dimensional spheres against symmetric and asymmetric spiked alternatives* (invited talk).

115. Statistics workshop at Tilburg University, The Netherlands, December 2016: *Testing uniformity on high-dimensional spheres against monotone rotationally symmetric alternatives*.

114. Séminaire de statistique, Université de Lille 1 - INRIA Modal, Lille, France, November 2016: *Testing uniformity on high-dimensional spheres against monotone rotationally symmetric alternatives*.

113. 24th Annual Meeting of the Belgian Statistical Society, Namur, Belgium, October 2016: *Inference on the mode of weak directional signals: A Le Cam perspective on hypothesis testing near singularities*.

112. Seventh Workshop on "New developments in econometrics and time series", Madrid, Spain, October 2016: *Testing uniformity on high-dimensional spheres* (invited talk).

111. Short course, Programme doctoral en statistique et probabilités appliquées, Villars-sur-Ollon, Switzerland, September 2016: *From statistical depth to multivariate quantiles*.

110. Third Conference of the International Society for Nonparametric Statistics, Avignon, France, June 2016: *Testing uniformity on high-dimensional spheres against symmetric and asymmetric spiked alternatives* (invited talk).

109. Seminar for Econometrics and Statistics, Toulouse School of Economics, Université Toulouse 1 Capitole, France, April 2016: *Inference on the mode of weak directional signals: a Le Cam perspective on hypothesis testing near singularities*.

108. Statistics and probability seminar of the Institut Elie Cartan, Nancy, France, March 2016: *Testing uniformity on high-dimensional spheres against monotone rotationally symmetric alternatives*.

107. Journée organisée par la Régionale de l'APMEP (Association des Professeurs de Mathématiques de l'Enseignement Public) de Lorraine, Nancy, France, March 2016: *La statistique fait son cinéma : illustration de quelques méthodes statistiques sur des données cinématographiques*.

106. Mathematics colloquium, Aalto University, Helsinki, Finland, January 2016: *Inference on the mode of weak directional signals: a Le Cam perspective on hypothesis testing near singularities*.

105. 8th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2015), London, UK, December 2015: *Testing for spherical location in the vicinity of the uniform distribution* (invited talk).

104. Statistics seminar, University of Orsay, Paris, France, November 2015: *Testing uniformity on high-dimensional spheres against rotationally symmetric alternatives*.

103. Statistics seminar, Bocconi University, Milan, Italy, November 2015: *Testing uniformity on high-dimensional spheres against rotationally symmetric alternatives.*

102. A path through probability, conference in honour of F. Thomas Bruss, Brussels, Belgium, September 2015: *Testing uniformity on high-dimensional spheres.*

101. Congrès annuel de la Société Belge des Professeurs de Mathématique d'expression française (SBPMef), Mons, Belgium, August 2015: *La statistique fait son cinéma : illustration de quelques méthodes statistiques sur des données cinématographiques.*

100. The Joint Statistical Meetings, Seattle, USA, August 2015: *Multiple-output Functional Quantile Regression* (invited talk).

99. 47èmes Journées de Statistique, annual meeting of the French Statistical Society, Lille, France, June 2015: *Tests d'uniformité sur la sphère unité de grande dimension.*

98. Seminar for Econometrics and Statistics, Toulouse School of Economics, Université Toulouse 1 Capitole, France, April 2015: *Testing uniformity against contiguous rotationally symmetric alternatives on high-dimensional spheres.*

97. Seminar for Statistics, Aalto university, Finland, April 2015: *Testing uniformity against contiguous rotationally symmetric alternatives on high-dimensional spheres.*

96. Mathematics colloquium, KULeuven, Belgium, March 2015: *Testing uniformity on high-dimensional spheres.*

95. Institut des Hautes Etudes de Belgique, Brussels, Belgium, March 2015: *La statistique fait son cinéma : illustration de quelques méthodes statistiques sur des données cinématographiques.*

94. Second Conference of the International Society for Nonparametric Statistics, Cadiz, Spain, June 2014: *Multiple-output Functional Quantile Regression* (invited talk).

93. Second Conference of the International Society for Nonparametric Statistics, Cadiz, Spain, June 2014: *Universal asymptotics for high-dimensional sign tests* (invited talk).

92. Meeting entitled "Advances in Directional Statistics", Université libre de Bruxelles, Belgium, May 2014: *Universal asymptotics for high-dimensional sign tests* (invited talk).

91. Seminar for Statistics, TU Dortmund, Germany, January 2014: *Rank-based inference for one-sample and multi-sample principal component analysis.*

90. Seminar for Statistics, Heinrich Heine Universität Düsseldorf, Germany, January 2014: *Rank-based inference for one-sample and multi-sample principal component analysis.*

89. 6th International Conference of the ERCIM Working Group on Computational and Methodological Statistics (ERCIM'13), University of London, UK, December 2013: *Local Depth for Functional Data* (invited talk).

88. ULB-UCL Statistics seminar, Université catholique de Louvain, Belgium, November 2013: *From depth to local depth : a focus on centrality.*

87. 59th World Statistics Congress, Hong Kong, China, August 2013: *From Depth to Local Depth : A Focus on Centrality* (invited talk).

86. 2013 edition of the Brussels Summer School of Mathematics (BSSM), August 2013: *Profondeur statistique et quantile* (invited talk).

85. 2ème Rencontre de Statistique Avignon-Marseille, June 2013: *Quantiles multivariés et profondeur conditionnelle* (invited talk).

84. Seminar for Statistics, University of Cambridge, UK, May 2013: *From depth to local depth : a focus on centrality.*

83. Seminar for Statistics, "point de vue" series, Université Paris-Diderot Paris 7, February 2013: *Quantiles multivariés et profondeur conditionnelle.*

82. Seminar for Statistics, University of Cologne, Germany, February 2013: *Local depth through depth-based neighborhoods.*

81. Seminar for Statistics, University of Vienna, Austria, January 2013: *Local multiple-output quantile regression.*

80. 5th International Conference of the ERCIM Working Group on Computing & Statistics (ERCIM'12), Oviedo, Spain, December 2012: *Local Multiple-Output Quantile Regression* (invited talk).

79. Statistische woche 2012, Vienna, Austria, September 2012: *Nonparametrically consistent depth-based classifiers* (Gumbel invited lecture).

78. International Conference on Robust Statistics (ICORS), Burlington, Vermont, USA, August 2012: *Testing linear constraints in IC models* (invited talk).

77. 8th World Congress in Probability and Statistics, Istanbul, Turkey, July 2012: *Universally consistent depth-based classifiers* (invited talk).

76. First Conference of the International Society for Nonparametric Statistics, Chalkidiki, Greece, June 2012: *R-estimation in independent component analysis* (invited talk).

75. First Joint Conference of the Belgian, Royal Spanish and Luxembourg Mathematical Societies, Liège, Belgium, June 2012: *Statistical depth and classification* (invited talk).

74. Workshop on robust methods for dependent data, Dortmund, Germany, February 2012: *Universally consistent depth-based classifiers* (invited talk).

73. 4th International Conference of the ERCIM Working Group on Computing & Statistics (ERCIM'11), University of London, UK, December 2011: *Semiparametrically efficient inference based on signed ranks in symmetric independent component models* (invited talk).

72. Seminar for Statistics, ETH Zurich, Switzerland, November 2011: *Rank-based inference for independent component analysis.*

71. 19th Annual Meeting of the Belgian Statistical Society, Hasselt, Belgium, October 2011: *Rank-based ICA*.

70. IMA's 3rd Conference on Mathematics in Sport, Manchester, United Kingdom, June 2011: *A stochastic analysis of some two-person sports*.

69. Statistics Seminar, GREMAQ/TSE, Université des Sciences Sociales de Toulouse, France, May 2011: *Multivariate quantiles and multiple-output regression quantiles : from L_1 optimization to halfspace depth*.

68. Wonder Research Afternoon, Tilburg, The Netherlands, April 2011: *Multivariate runs tests* (invited talk).

67. Econometrics and Statistics Seminar, EQUIPPE, Université de Lille III, France, March 2011: *Rank tests for PCA*.

66. Atami seminar, Atami, Japan, March 2011: *Depth-based runs tests for multivariate central symmetry* (invited talk).

65. Waseda symposium on Theory and Applications for Time Series Analysis, Waseda university, Japan, March 2011: *Rank tests for PCA* (invited talk).

64. 4th CSDA International Conference on Computational and Financial Econometrics (CFE'10), University of London, UK, December 2010: *Rank-based inference in independent component models* (invited talk).

63. Conference on time series, quantile regression and model choice, University of Dortmund, Germany, September 2010: *Local bilinear multiple-output quantile regression* (invited talk).

62. Conference on Nonparametric Statistics and Statistical Learning, The Ohio State University, USA, May 2010: *Rank tests for PCA* (invited talk).

61. Statistics Seminar, The Open University, Milton Keynes, United Kingdom, February 2010: *Multivariate quantiles and multiple-output regression quantiles: From L_1 optimization to halfspace depth*.

60. Statistics Seminar, University of Bayreuth, Germany, January 2010: *Multivariate quantiles and multiple-output regression quantiles: From L_1 optimization to halfspace depth*.

59. Statistics Seminar, Università di Padova, Italy, September 2009: *Singularities in skew-symmetric models: characterization results and asymptotic implications*.

58. European Meeting of Statisticians, Toulouse, France, July 2009: *On multivariate runs tests for randomness*.

57. Fourth Brussels-Waseda Seminar on Time Series and Financial Statistics, Brussels, Belgium, June 2009: *Multivariate quantiles, from L_1 optimization to halfspace depth*.

56. International Conference on Robust Statistics (ICORS), Parma, Italy, June 2009: *On multivariate runs tests for randomness*.

55. Statistics seminar, University of Tampere, Finland, May 2009: *On multivariate runs tests for randomness.*

54. Statistics seminar, the University of Texas at Dallas, USA, April 2009: *Rank-based tests of multivariate independence in independent component models.*

53. Workshop on "Nonparametric Statistics, Refined, Redefined, and Renewed", the University of Texas at Arlington, USA, April 2009: *On multivariate runs tests for randomness* (invited talk).

52. Statistics seminar, Columbia University, New York, USA, November 2008: *Optimal rank-based tests for homogeneity of scatter.*

51. Joint Statistical Meetings, Denver, Colorado, USA, August 2008: *A new approach to R-estimation* (invited talk, for the *Gottfried E. Noether Young Scholar Award*).

50. Second Brussels-Waseda Seminar on Time Series and Financial Statistics, Brussels, Belgium, June 2008: *A new approach to R-estimation.*

49. Twenty-second Nordic Conference on Mathematical Statistics, Vilnius, Lithuania, June 2008: *Invariant semiparametric methods for independent components models* (invited talk).

48. Joint Meeting of the Statistical Society of Canada and the Société Française de Statistique, Ottawa, Canada, May 2008: *Invariant methods for independent component models* (invited plenary talk).

47. Nonparametric statistics and mixture models: past, present, and future, Penn State University, USA, May 2008: *Rank-based tests of multivariate independence in independent component models* (invited talk).

46. Statistics seminar, School of Public Health, Université Libre de Bruxelles, Belgium, April 2008: *Independent component (IC) models: new extensions of the multinormal model.*

45. ECORE seminar, Université catholique de Louvain, Belgium, February 2008: *Independent component models: new extensions of the multivariate normal model.*

44. Presentation for the Association of Belgian Science Journalists, Brussels, Belgium, janvier 2008: *Mathématique: Modèles et décision.*

43. Workshop on robust and nonparametric statistical inference, Hejnice, Czech Republic, September 2007: *A new approach to R-estimation* (invited talk).

42. Statistics seminar, KULeuven, Belgium, February 2007: *Testing for multivariate independence in independent component models.*

41. Workshop on multivariate nonparametric statistics, Himos, Finland, janvier 2007: *Multivariate medians: A quick review and a new proposal.*

40. Statistics seminar, University of Dortmund, Germany, December 2006: *A class of affine-equivariant rank-based estimators for the shape of an elliptical distribution.*

39. Conference on nonparametric statistics and related topics, Ottawa, Canada, September 2006: *Optimal rank-based tests for homogeneity of scatter* (invited talk).

38. International Conference on Robust Statistics (ICORS), Lisbon, Portugal, July 2006: *efficiency- and validity-robust tests for homogeneity of scatter matrices.*

37. Swiss Statistics Seminars, Institut für Exakte Wissenschaften, University of Bern, Switzerland, May 2006: *Rank-based tests of multivariate independence in independent component models.*

36. Statistics seminar, University of Tampere, Finland, February 2006: *Rank-based tests for the equality of covariance matrices.*

35. Journées de la Statistique Rennaise, Université de Rennes, France, November 2005: *Rank-based estimation of shape* (invited talk).

34. Workshop on nonparametric statistical methods, University of Tampere, Finland, June 2005: *Rank-based inference on the shape of elliptical distributions* (invited talk).

33. Joint meeting of the Belgian, Dutch, Luxemburg, and French mathematical societies, Ghent, Belgium, May 2005: *A class of affine-equivariant rank-based estimators for the shape of an elliptical distribution* (invited talk).

32. Statistics seminar, Universidad Carlos III de Madrid, Spain, May 2005: *Inference on the shape of elliptical distributions.*

31. Econometrics and Statistics seminar, Tilburg University, The Netherlands, April 2005: *On the shape of elliptical distributions. Rank-based estimators and tests.*

30. Series of lectures on research in mathematics for first year Bachelor students in Mathematics, Vrije Universiteit Brussel, Belgium, March 2005: *Seeking the Holy Grail: ultimate estimators of multivariate location.*

29. Statistics seminar, Waseda University, Tokyo, Japan, January 2005: *Inference on the shape of elliptical distributions.*

28. Stochastics colloquium, Institute for Mathematical Stochastics, University of Goettingen, Germany, October 2004: *Optimal rank-based tests for sphericity.*

27. Journées MAS de la SMAI, Nancy, France, September 2004: *Inférence semi-paramétrique sur la forme des lois elliptiques* (invited talk).

26. Sixth ICSA (International Chinese Statistical Association) international conference, Singapore, July 2004: *Optimal rank-based tests for sphericity* (invited talk).

25. Statistics seminar, University of Dortmund, Germany, June 2004: *Optimal rank-based tests for sphericity.*

24. XXXVIèmes Journées de Statistique, annual meeting of the French Statistical Society, Montpellier, France, May 2004: *Tests de sphéricité optimaux fondés sur les rangs.*

23. Statistics seminar, Institut für Mathematische Stochastik, Technical University of Braunschweig, Germany, May 2004: *Multivariate rank-based procedures for testing elliptical randomness against VARMA dependence.*

22. Workshop on multivariate time series analysis, Heidelberg, Germany, February 2004: *Multivariate signed rank tests in vector autoregressive order identification.*

21. Statistics seminar, Université de Liège, Belgium, January 2004: *Optimal rank-based tests for sphericity.*

20. Statistics seminar, University of Orsay, Paris, France, January 2004: *Multivariate rank-based procedures for testing elliptical randomness against VARMA dependence.*

19. Statistics seminar, Université Catholique de Louvain, Belgium, December 2003: *Multivariate rank-based procedures for testing elliptical randomness against VARMA dependence.*

18. Meeting on mathematical statistics, C.I.R.M. (Centre International de Rencontres Mathématiques), Marseille-Luminy, France, December 2003: *Optimal rank-based tests for sphericity.*

17. Statistics and Econometrics seminar, University of York, United Kingdom, October 2003: *Multivariate rank-based procedures for testing elliptical randomness against VARMA dependence.*

16. GREMARS seminar, Université de Lille III, France, October 2003: *Optimal procedures based on interdirections and pseudo-Mahalanobis ranks for testing multivariate elliptic white noise against ARMA dependence.*

15. XXXVèmes Journées de Statistique, annual meeting of the French Statistical Society, Lyon, France, June 2003: *Procédures optimales fondées sur les rangs multivariés (invited plenary talk, for the Marie-Jeanne Laurent-Duhamel prize).*

14. Statistics seminar, Tilburg university, The Netherlands, March 2003: *Hyperplane-based procedures for testing elliptical randomness against VARMA dependence.*

13. Statistics seminar, Université de Paris VI, February 2003: *Tests de bruit blanc multivarié optimaux fondés sur les interdirections de Randles et les rangs de Mahalanobis.*

12. Statistics seminar, University of Jyväskylä, Finland, January 2003: *Hyperplane-based identification procedures for the order of a multivariate AR series.*

11. Workshop on multivariate nonparametric statistics, Himos, Finland, January 2003: *Affine Invariant Linear Hypotheses for the Multivariate GLM with VARMA Error Terms.*

10. Statistics seminar, Université de Lille I, France, December 2002: *Tests optimaux de bruit blanc multivarié fondés sur des rangs signés généralisés.*

9. Second Prague-Brussels seminar, Prague, Czech Republic, August 2002: *Affine-invariant linear hypotheses for the multivariate general linear model with ARMA error terms.*

8. Fourth international conference on statistical data analysis based on the L_1-norm and related methods, Neuchâtel, Switzerland, August 2002: *Optimal one-sample testing procedures based on hyperplanes* (invited speaker).

7. Fourth international conference on statistical data analysis based on the L_1-norm and related methods, Neuchâtel, Switzerland, August 2002: *Optimal tests of randomness based on interdirections and pseudo-Mahalanobis ranks for testing multivariate elliptic white noise against ARMA dependence.*

6. International conference on current advances and trends in nonparametric statistics, Crete, Greece, July 2002: *Tests of randomness against VARMA dependence based on interdirections and Mahalanobis ranks.*

5. XXXIVèmes Journées de Statistique, annual meeting of the French Statistical Society, Bruxelles, Belgium, May 2002: *Tests de bruit blanc multivarié optimaux fondés sur les interdirections de Randles et les rangs de Mahalanobis.*

4. Statistics seminar, KULeuven, Belgium, February 2002: *Optimal tests for multivariate location based on interdirections and pseudo-Mahalanobis ranks.*

3. XXXIIIèmes Journées de Statistique, annual meeting of the French Statistical Society, Nantes, France, May 2001: *Tests optimaux pour le problème de position multivarié fondés sur les interdirections de Randles et les pseudo-rangs de Mahalanobis.*

2. XXXIIèmes Journées de Statistique, annual meeting of the French Statistical Society, Fès, Morocco, May 2000: *Sélection d'une suite de derniers succès dans une suite d'expériences aléatoires indépendantes.*

1. 7th annual meeting of the Belgian Statistical Society, Ysermonde, October 1999: Selecting a sequence of last successes in independent trials.

12   PhD student supervision

Laura Peralvo Maroto, *Asymptotic inference based on ranks in triangular array contexts*, with Th. Verdebout, in progress.

Julien Rémy, *Inference on directions under weak identifiability*, with Th. Verdebout, January 2023.

Dimitri Konen, *Topics in multivariate spatial quantiles*, December 2022.

Joséa Rasoafaraniaina, *Pre-test estimators in local and asymptotically normal families*, with Th. Verdebout, September 2020.

Christine Cutting, *High-dimensional sign tests*, with Th. Verdebout, June 2020.

Isabelle Charlier, *Conditional quantile estimation through optimal quantization*, with J. Saracco, December 2015.

Germain Van Bever, *Contributions to nonparametric and semiparametric inference based on statistical depth*, September 2013.

Christophe Ley, *Univariate and multivariate symmetry: statistical inference and distributional aspects*, November 2010.

Nezar Bennala, *Rank-based optimal tests in panel data models*, with M. Hallin, September 2010.

Thomas Verdebout, *Optimal inference for one-sample and multisample principal component analysis*, with M. Hallin, October 2008.

Delphine Cassart, *Optimal tests for symmetry*, with M. Hallin, June 2007.

Maria-Caterina Bramati, *Some robust methods in the analysis of multivariate time series*, with M. Hallin, September 2005.

Dimitri Konen's thesis was awarded the *Prix Antonella Karlson 2023* from the FNRS, Germain Van Bever's thesis was awarded the *Olbrechts Prize 2014* from the ULB, and Christophe Ley's thesis was awarded the *Prix Marie-Jeanne Laurent-Duhamel 2014* from the French Statistical Society.

13 Research interests

Asymptotic statistics, high-dimensional statistics, directional statistics, nonparametric statistics, depth-based methods, multivariate quantiles.

14 Referee reports for...

Annals of Statistics, Journal of the American Statistical Association, Journal of the Royal Statistical Society B, Probability Theory and Related Fields, Bernoulli, Statistica Sinica, Scandinavian Journal of Statistics, Journal of Computational and Graphical Statistics, Journal of Nonparametric Statistics, Annals of the Institute of Mathematical Statistics, Journal of Multivariate Analysis, Journal of Statistical Planning and Inference, Electronic Journal of Statistics, Canadian Journal of Statistics, Statistical Science, Statistics and Probability Letters, International Statistical Review, Computational Statistics and Data Analysis, Journal of Time Series Analysis, Test, Journal of Econometrics, Journal of Financial Econometrics, Communications in Statistics (theory and methods), Communications in Statistics (simulation and computation), Journal of Statistical Software, Austrian Journal of Statistics, Journal of the Korean Statistical Society, Journal of Applied Statistics, Journal of Statistical Computation and Simulation, Journal of Business & Economic Statistics, Journal of Statistical Distributions and Applications, Econometrics & Statistics, Computational Statistics, Biometrical Journal, Annals of Applied Probability, Statistical Inference for

Stochastic Processes, Sequential Analysis Journal, Statistical Papers, Statistical Methods and Applications, METRON International Journal of Statistics, IEEE Transactions on Information Theory, IMS Collection Series, Stat.