CURRICULUM VITÆ 17/01/2025

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Education

Baccalauréat section Mathématiques élémentaires. Mention Bien. Académie de Versailles, July 1967.

Licence en Sciences mathématiques. La plus grande distinction. Université libre de Bruxelles, July 1971.

Agrégation de l'enseignement moyen supérieur. Grande distinction. Université libre de Bruxelles, July 1971.

Certificat de Recherche opérationnelle. Université libre de Bruxelles, July 1971.

Licence en Sciences actuarielles. La plus grande distinction. Université libre de Bruxelles, July 1972.

Doctorat en Sciences (advisor: S. Huyberechts). La plus grande distinction. Université libre de Bruxelles, April 1976.

Positions held

Mathematics teacher, Athénée royal de Wavre (1970-1971).

Assistant (Teaching Assistant), Service de Statistique et de Recherche opérationnelle, Faculté des Sciences Sociales, Politiques et Economiques, Université libre de Bruxelles (October 1971-October 1977).

Premier Assistant (tenured Assistant Professor), Faculté des Sciences Sociales, Politiques et Economiques, Université libre de Bruxelles (October 1977-July 1978).

Chargé de cours associé (Associate Professor), Faculté des Sciences Sociales, Politiques et Economiques, Université libre de Bruxelles (July 1978-October 1984).

Chargé de cours (Associate Professor), Faculté des Sciences Sociales, Politiques et Economiques, Université libre de Bruxelles (October 1984-October 1988).

Professeur ordinaire (Full Professor), Faculté des Sciences Sociales, Politiques et Economiques, Université libre de Bruxelles (October 1988-October 1992).

Professeur ordinaire (Full Professor), Faculté des Sciences, Université libre de Bruxelles (October 1992-October 2009).

Professeur ordinaire émérite (Professor Emeritus), Université libre de Bruxelles (October 2009).

Invited Positions

Visiting associate Professor, Department of Mathematics, Indiana University, Bloomington, Indiana, January-May 1985.

Professeur invité, UFR de Mathématiques pures et appliquées, Université de Lille I, February-June 1988.

Buitegewoon Docent, Departement Wiskunde, Katholieke Universiteit Leuven, February-June 1989 (Capita selecta uit de Wiskunde, tweede Licentiaat Wiskundige Wetenschappen).

Professeur invité, Département de Mathématiques, Université Catholique de Louvain, October 1989-January 1990 (Questions spéciales de Mathématiques, 2nde Licence en Sciences mathématiques).

Professeur invité, UFR de Mathématiques pures et appliquées, Université de Lille I, February-June 1989.

Visiting Professor, Departamento de Matemàtica, Universidade Nova de Lisboa, Lisbon, May 1990.

Professeur invité, UER de Mathématiques, Université Pierre-et-Marie-Curie (Paris 6), February-June 1991.

Professeur invité, UFR de Mathématiques pures et appliquées, Université de Lille I, January 1992.

Invited member, CORE, Université Catholique de Louvain, 1992-1993.

Professeur invité, UFR de Mathématiques pures et appliquées, Université de Lille I, February-June 1994.

Professeur invité, Université de Neuchâtel, May-June 1994; June 1995.

Professeur invité, Université de Calais et de la Côte d'Opale, September 2001.

Professeur invité, Université Pierre-et-Marie-Curie (Paris 6), November 2001-April 2002, October-December 2002, October-December 2003, and October-December 2004.

Visiting Professor, Princeton University, September 2006-February 2007.

Professeur invité, Université Pierre-et-Marie-Curie (Paris 6), October-December 2007, October-December 2008.

Visiting Professor, European University Institute, Florence, March-May 2008.

Visiting Senior Research Scholar, ORFE, Princeton University, February-July 2010, September 2010-February 2011, September 2011-February 2012, September 2012-February 2013, September 2013-February 2014, September 2014-February 2015.

– Doctoral course (High-Dimensional Time Series and Factor Models), Institute for Advanced Studies, Vienna, March 2013.

– Visiting scholar and doctoral course (High-Dimensional Time Series and Factor Models), INET and Department of Economics, and visiting overseas scholar, Saint John's College, University of Cambridge, January 20-March 20, 2014.

– Doctoral course (Dynamic Factor Models), Chinese University of Hong Kong, June 2016.

– Chargé de cours invité, Faculté des Sciences, Université catholique de Louvain, 2016, 2017, 2018 (Théorie asymptotique des Expériences statistiques).

– Doctoral course (An Introduction to Le Cam's Asymptotic Theory of Statistical Experiments), Universidad Carlos III de Madrid, May 2017.

Awards and Fellowships

Prix du Concours annuel 1983 of the Classe des Sciences, Académie Royale des Sciences, des Lettres et des Beaux-Arts de Belgique, for a dissertation entitled *Equations aux Différences Stochastiques et Modèles de Séries chronologiques*, 100 pp.

Membre titulaire, Institut International de Statistique/International Statistical Institute (I.S.I.), 1985 - .

Fellow, the Institute of Mathematical Statistics (I.M.S.), 1990 - .

Fellow, the Indiana University Institute for Advanced Study, 1991 - .

Prix du Statisticien d'Expression française, Société de Statistique de Paris, 1993.

Prix de l'Association française des Banques, 1995.

Fellow, the American Statistical Association (A.S.A.), 1997 - .

Elected Member, Classe des Sciences de l'Académie Royale des Sciences, des Lettres et des Beaux-Arts de Belgique, 1999- .

Francqui Chair at the Katholieke Universiteit Leuven, Fall 2005.

Medal of the Faculty of Mathematics and Physics, Charles University, Prague, 2006.

Fernand Braudel Fellow, European University Institute, Florence, 2008.

Fellow, Fondation Banque de France, 2008 - .

Extra-muros Fellow, CentER, Tilburg University, 2009 - .

Honorary Member (Membre d'Honneur), the Royal Statistical Society of Belgium, 2009 - .

Honorary Member (Membre d'Honneur), the Société Française de Statistique, 2012- .

Humboldt-Forschungspreis, Alexander-von-Humboldt-Stiftung, 2012-2013.

Cátedra de Excelencia, Universidad Carlos III de Madrid, 2016-2017.

Recipient of the Hermann Otto Hirschfeld Lecture Series, Humboldt-Universität zu Berlin, November 20-21, 2017.

Recipient of the P.C. Mahalanobis Memorial Lecture, the Indian Statistical Institute, Kolkata, Delhi, Chennai, and Bangalore, February 4–18, 2018.

Fellow of the *Journal of Econometrics*, 2019- .

2022 Research.com Mathematics in Belgium Leader Award

2022 Prix Pierre-Simon de Laplace, Société française de Statistique.

2022 Gottfried E. Noether Distinguished Scholar Award, American Statistical Association.

2023 “Mejor contribución metodológica en el campo de la Estadística” Award of the Spanish Sociedad de Estadística e Investigación Operativa (joint with Eustasio del Barrio, Juan Antonio Cuesta-Albertos, and Carlos Matrán) for “Distribution and quantile functions, ranks, and signs in dimension d: a measure transportation approach” (*Annals of Statistics* 49).

2024 Medallion Award and Lecture, Bernoulli-IMS 11th World Congress in Probability and Statistics, Bochum, August 12-16, 2024.

The Conference *Nonparametric Statistics and Time Series* was organized at the Palais des Académies in Brussels, 27-28 November 2009, on the occasion of my retirement, with the participation of Jan Beirlant (Katholieke Universiteit Leuven), Denis Bosq (Université Pierre-et-Marie-Curie (Paris 6)), Christophe Croux (Katholieke Universiteit Leuven), Paul Deheuvels (Université Pierre-et-Marie-Curie (Paris 6)), Holger Dette (Ruhr-Universität Bochum), Jean-Marie Dufour (McGill University Montréal), Christian Genest (McGill University Montréal), Jana Jurečková (Charles University Prague), Hira Koul (Michigan State University), Marco Lippi (Universitá di Roma La Sapienza), Zudi Lu (University of Adelaide), Hannu Oja (University of Tampere), Ivan Mizera (University of Alberta, Edmonton), Noël Veraverbeke (Hasselt University), Bas Werker (Tilburg University).

A special issue (G. Biau and D. Paindaveine, Editors), with a foreword by Paul Deheuvels, has been published in 2012 by the *Journal de la Société française de Statistique* (Vol. **153**) on the occasion of my 63rd birthday.

A 2023 interview (in French) by Jean-Jacques Droesbeke: “Un entretien avec Marc Hallin,” *Statistique et Société* **11** (2023), 65–74.

A 2024 interview (in English) by Christian Genest: “A conversation with Marc Hallin,” *International Statistical Review*, `https://doi.org/10.1111/insr.12576`.

A 2024 Festschrift: (M. Barigozzi, S. Hörmann, and D. Paindaveine, Editors) *Recent Advances in Econometrics and Statistics*, 16 + 618 pp., Springer.

A 1972–2023 bibliography can be found in

Barigozzi, M., Hörmann, S., and Paindaveine, D. (2024). Marc Hallin: A Commented Bibliography (from 1972 to 2023). In: Barigozzi, M., Hörmann, S., and Paindaveine, D. (eds) *Recent Advances in Econometrics and Statistics*. Springer, Cham. `https://doi.org/10.1007/978-3-031-61853-6_1`

Rankings and Citations

– Google Scholar citations: 15023

– h-index (Google Scholar): 56

– number of publications with at least 10 citations (Google Scholar): 162

– Most cited papers

- Forni, M., M. Hallin, M. Lippi, and L. Reichlin (2000) The generalized dynamic factor model: identification and estimation. *The Review of Economics and Statistics* **82** (2000), 540–554 (2465 Google Scholar citations)
- Forni, M., M. Hallin, M. Lippi, and L. Reichlin (2005) The generalized dynamic factor model: one-sided estimation and forecasting. *Journal of the American Statistical Association* **100** (2005), 830–840 (1221 Google Scholar citations)

- Hallin, M. and R. Liška. (2007) The generalized dynamic factor model: determining the number of factors. *Journal of the American Statistical Association* **102** (2007), 603–617 (714 Google Scholar citations)
- Forni, M., M. Hallin, M. Lippi, and L. Reichlin (2004) The generalized dynamic factor model: consistency and rates. *Journal of Econometrics* **119** (2004), 231–255 (421 Google Scholar citations)
- Chernozhukov, V., Galichon, A., Hallin, M., and Henry, M. (2017) Monge–Kantorovich depth, quantiles, ranks, and signs. *Annals of Statistics* **45** (2017), 223-256 (297 Google Scholar citations).
- Hallin, M., D. Paindaveine, and M. Šiman (2010) Multivariate quantiles and multiple-output regression quantiles: from L_1 optimization to halfspace depth [with Discussion and Rejoinder]. *Annals of Statistics* **38** (2010), 635-703 (271 Google Scholar citations).

– In the 2024 Google Scholar h5-index list of

- the *Annals of Statistics* (number 46 of an h5-index list of 81): Center-outward distribution and quantile functions, ranks, and signs in $\mathbb{R}^d$: a measure transportation approach, *Annals of Statistics* **49**, 1139–1165, 2021 (coauthors: Estasio del Barrio, Juan Cuesta-Albertos, and Carlos Matrán; 181 Google Scholar citations).

Publications

1972

1. Jeux à information incomplète. *Cahiers du Centre d'Etudes de Recherche Opérationnelle* **14**, 1-22.

1973

2. Jeux de survie économique et théorie moderne du risque. *Cahiers du Centre d'Etudes de Recherche Opérationnelle* **15**, 16-38.
3. Stratégies subjectivement mixtes. *Cahiers du Centre d'Etudes de Recherche Opérationnelle* **15**, 123-138.
4. Caractérisation des échelles de production optimales en avenir déterministe. *Cahiers du Centre d'Etudes de Recherche Opérationnelle* **15**, 397-404 (coauthors: K. de Vries and J. Lemaire).

1976

5. Jeux de marchandage à information incomplète et échanges d'information. *Comptes Rendus du Colloque de Théorie des Jeux, Institut des Hautes Etudes de Belgique, Bruxelles, Mai 1975, Cahiers du Centre d'Etudes de Recherche Opérationnelle* **18**, 173-200.

1977

6. Structures de coalition et problèmes de négociation. Echanges d'information dans les jeux à information incomplète. *Cahiers du Centre d'Etudes de Recherche Opérationnelle* **19**, 3-157.
7. Indéterminabilité pure et inversibilité des processus autorégressifs-moyenne mobile. *Comptes Rendus du Colloque* Séries Chronologiques; Approches fréquentielle et temporelle*, Institut des Hautes Etudes de Belgique, Bruxelles, Mai 1977, Cahiers du Centre d'Etudes de Recherche Opérationnelle* **19**, 385-392 (coauthor: G. Mélard).

8. Etude statistique des facteurs influençant un risque. *Bulletin de l'Association Royale des Actuaires Belges* **71**, 76-92.

9. Subjectively mixed strategies. The public event case. *International Journal of Game Theory* **5**, 23-25.

10. Méthodes statistiques de construction de tarifs. *Mitteilungen der Vereinigung Schweizer Versicherungsmathematiker* **77**, 161-175.

1978

11. Mixed autoregressive-moving average multivariate processes with time-dependent coefficients. *Journal of Multivariate Analysis* **8**, 567-572.

12. Band strategies: the random walk of reserves. *Blätter, Deutsche Gesellschaft für Versicherungsmathematik* **14**, 231-236.

1980

13. Invertibility and generalized invertibility of time-series models. *Journal of the Royal Statistical Society Series B* **42**, 210-212.

14. Jeux de marchandage et fonctions d'utilité multidimensionnelles. *Comptes Rendus du Colloque* Aide à la Décision et Jeux de Stratégies*, Institut des Hautes Etudes de Belgique, Bruxelles, Avril 1979, Cahiers du Centre d'Etudes de Recherche Opérationnelle* **22**, 81-89.

15. Modèles non inversibles de séries chronologiques. *Comptes Rendus du Colloque* Processus aléatoires et Problèmes de Prévision*, Institut des Hautes Etudes de Belgique, Bruxelles, Avril 1980*, *Cahiers du Centre d'Etudes de Recherche Opérationnelle* **22**, 363-368.

1981

16. Nonstationary first-order moving average processes; the model-building problem. In *Time Series Analysis*, O.D. Anderson and M.R. Perryman, Eds., North-Holland, Amsterdam and New York, 189-206.

17. Addendum to "Invertibility and generalized invertibility". *Journal of the Royal Statistical Society Series B* **43**, 103.

18. Etude statistique de la probabilité de sinistre en assurance automobile. *ASTIN Bulletin* **12**, 40-56 (coauthor: J.-Fr. Ingenbleek).

1982

19. The model-building problem for nonstationary multivariate autoregressive processes. In *Time Series Analysis: Theory and Practice I*, O.D. Anderson, Ed., North-Holland, Amsterdam and New York, 599-607 (coauthor: J.-Fr. Ingenbleek).

20. Moving average models for time-dependent autocovariance functions. *Proceedings of the Business and Economic Statistics Section of the American Statistical Association*, 182-185.

21. Nonstationary second-order moving average processes. In *Applied Time Series Analysis*, O.D. Anderson, Ed., North-Holland, Amsterdam and New York, 75-83.

22. Une propriété des opérateurs moyenne-mobile. Mélanges offerts au Professeur P.P. Gillis à l'occasion de son 70e anniversaire, *Cahiers du Centre d'Etudes de Recherche Opérationnelle* **24**, 229-236.

1983

23. The Swedish automobile portfolio in 1977: a statistical study. *Skandinavisk Aktuarietidskrift* **83**, 49-64 (coauthor: J.-Fr. Ingenbleek).

24. Nonstationary second-order moving average processes II: model-building and invertibility. In *Time Series Analysis: Theory and Practice 4*, O.D. Anderson, Ed., North-Holland, Amsterdam and New York, 55-64.

25. The theoretical model-building problem for nonstationary moving average processes. *Proceedings of the Business and Economic Statistics Section of the American Statistical Association*, 172-174.

26. Nonstationary Yule-Walker equations. *Statistics and Probability Letters* **1**, 189-195 (coauthor: J.-Fr. Ingenbleek).

1984

27. Spectral factorization of nonstationary moving average processes. *Annals of Statistics* **12**, 172-192.

28. Efficacité asymptotique relative de quelques statistiques de rangs pour le test d'une autorégression d'ordre un. In *Alternative Approaches to Time Series Analysis, Proceedings of the 3rd Franco-Belgian Meeting of Statisticians, Rouen, November 1982*, J.-P. Florens, M. Mouchart, J.-P. Raoult, and L. Simar, Eds., FUSL, Bruxelles, 29-43 (coauthor: J.-Fr. Ingenbleek).

29. Modèles non stationnaires-Séries univariées et multivariées. In *Analyse des Séries Chronologiques : Spécification, Estimation et Validation de Modèles Stochastiques*, J.-J. Droesbeke, B. Fichet, and Ph. Tassi, Eds., Publications de l'A.S.U., Paris, 117-153.

29bis Second Edition, Economica, Paris, 1988.

30. Linear serial rank tests for randomness against ARMA alternatives. *Proceedings of the Business and Economic Statistics Section of the American Statistical Association*, 500-502 (coauthors: J.-Fr. Ingenbleek and M.L. Puri).

1985

31. Tests de rangs linéaires pour une hypothèse de bruit blanc. *Comptes Rendus de l'Académie des Sciences de Paris* t.301, Série I, 49-52 (coauthors: J.-Fr. Ingenbleek and M.L. Puri).

32. Linear serial rank tests for randomness against ARMA alternatives. *Annals of Statistics* **13**, 1156-1181 (coauthors: J.-Fr. Ingenbleek and M.L. Puri).

33. From premium calculation to premium rating. *Proceedings of the Four Countries ASTIN Symposium, Akersloot, September 1984*, ASTIN-Groep Nederland, Rotterdam, 27-45.

34. Tests de rangs quadratiques pour une hypothèse de bruit blanc. *Comptes Rendus de l'Académie des Sciences de Paris* t.301, Série I, 935-938 (coauthors: J.-Fr. Ingenbleek and M.L. Puri).

1986

35. Nonstationary q-dependent processes and time-varying moving average models : invertibility properties and the forecasting problem. *Advances in Applied Probability* **18**, 170-210.

36. Performances asymptotiques des modèles MA dans la prévision des processus q-dépendants. In *Asymptotic Theory for non i.i.d. Processes, Proceedings of the 5th Franco-Belgian Meeting of Statisticians, Marseille, November 1985*, J.-P. Florens Ed., FUSL, Bruxelles, 77-92.

37. Les tests de rangs dans l'analyse des séries chronologiques.*Comptes Rendus du Colloque* Approches non paramétriques en Analyse chronologique, *Institut des Hautes Etudes de Belgique, Bruxelles, Septembre 1985, Cahiers du Centre d'Etudes de Recherche Opérationnelle* **28**, 41-55 (coauthors: J.-Fr. Ingenbleek and M.L. Puri).

38. Tests de rangs pour une contre-hypothèse de dépendance ARMA multivariée contiguë. *Comptes Rendus du Colloque* Approches non paramétriques en Analyse chronologique, *Institut des Hautes Etudes de Belgique, Bruxelles, Septembre 1985, Cahiers du Centre d'Etudes de Recherche Opérationnelle* **28**, 69-77 (coauthor: J.-Fr. Ingenbleek).

39. Les statistiques de rangs dans l'identification des modèles de séries chronologiques. *Comptes Rendus du Colloque* Approches non paramétriques en Analyse chronologique, *Institut des Hautes Etudes de Belgique, Bruxelles, Septembre 1985, Cahiers du Centre d'Etudes de Recherche Opérationnelle* **28**, 117-129 (coauthor: G. Mélard and X. Milhaud).

40. *La Recherche Opérationnelle par l'Exemple I: Programmation Linéaire.* Collection Ellipses, Editions Marketing, Paris, 192 pp. (coauthors: J.-J. Droesbeke and Cl. Lefèvre).

41. Locally asymptotically optimal tests for randomness. In *New Perspectives in Theoretical and Applied Statistics*, M.L. Puri, J.-P. Vilaplana, and W. Wertz Eds., J. Wiley, New York, 87-95 (coauthor: M.L. Puri).

42. Tests de rangs localement optimaux pour une hypothèse de bruit blanc multivarié. *Comptes Rendus de l'Académie des Sciences de Paris* t.303, Série 1, 901-904. (coauthors: J.-Fr. Ingenbleek and M.L. Puri).

43. On fractional linear bounds for probability generating functions. *Journal of Applied Probability* **23**, 904-913 (coauthors: Cl. Lefèvre and P.K. Narayan).

1987

44. Linear and quadratic serial rank tests for randomness against serial dependence. *Journal of Time Series Analysis* **8**, 409-424 (coauthors: J.-Fr. Ingenbleek and M.L. Puri).

45. *La Recherche Opérationnelle par l'Exemple II: Théorie des graphes.* Collection Ellipses, Editions Marketing, Paris (coauthors: J.-J. Droesbeke and Cl. Lefèvre).

46. Fractions continuées matricielles et matrices-bandes définies positives infinies. In *Statistique et Calcul Scientifique, Proceedings of the Seventh Franco-Belgian Meeting of Statisticians, Rouen, November 1986*, J.-P. Florens and J.-P. Raoult Eds., *Cahiers du Centre d'Etudes de Recherche Opérationnelle* **32**, 37-54.

47. Tests non paramétriques optimaux pour une autorégression d'ordre un. *Annales d'Economie et de Statistique* **6-7**, 411-434 (coauthor: J.-M. Dufour).

1988

48. Optimal rank-based procedures for time series analysis: testing an ARMA model against other ARMA models. *Annals of Statistics* **16**, 402-432 (coauthor: M.L. Puri).

49. Rank-based tests for randomness against first-order serial dependence. *Journal of the American Statistical Association* **83**, 1117-1129 (coauthor: G. Mélard).

50. On time-reversibility and the uniqueness of moving average representations for non-Gaussian stationary time series. *Biometrika* **75**, 170-171 (coauthors: Cl. Lefèvre and M.L. Puri).

51. On locally asymptotically maximin tests for ARMA processes. In *Statistical Theory and Data Analysis II, Proceedings of the second Pacific Area Statistical Conference*, K. Matusita Ed., North-Holland, Amsterdam and New York, 495-500 (coauthor: M.L. Puri).

52. Locally asymptotically optimal rank-based procedures for testing autoregressive-moving average dependence. *Proceedings of the National Academy of Sciences of the USA* **85**, 2031-2035 (coauthor: M.L. Puri).

53. Tests de rangs signés localement optimaux pour une hypothèse de dépendance ARMA. *Comptes Rendus de l'Académie des Sciences de Paris* t.307, Série I, 355-358 (coauthor: M.L. Puri).

1989

54. Asymptotically most powerful rank tests for multivariate randomness against serial dependence. *Journal of Multivariate Analysis* **30**, 34-71 (coauthors: J.-Fr. Ingenbleek and M.L. Puri).

55. Discussion of "Leave k-out diagnostics for time series" by A.G. Bruce and R.D. Martin. *Journal of the Royal Statistical Society Series B* **51**, 411-412 (coauthor: G. Mélard).

1990

56. Distribution-free tests against serial dependence: signed or unsigned ranks? *Journal of Statistical Planning and Inference* **24**, 151-165 (coauthors: A. Laforet and G. Mélard).

57. An exponential bound for the permutational distribution of a first-order autocorrelation coefficient. *Statistique et Analyse des Données* **15**, 45-56 (coauthor: J.-M. Dufour).

1991

58. Nonuniform bounds for nonparametric t-tests. *Econometric Theory* **7**, 253-263 (coauthor: J.-M. Dufour).

59. Time series analysis via rank-order theory; signed-rank tests for ARMA models. *Journal of Multivariate Analysis* **39**, 1-29 (coauthor: M.L. Puri).

60. Rank tests for time-series analysis: a bibliographical survey. *Österreichische Zeitschrift für Statistik und Informatik* **21**, 169-176.

1992

61. Simple exact bounds for distributions of linear signed rank statistics. *Journal of Statistical Planning and Inference* **31**, 311-333 (coauthor: J.-M. Dufour).

62. Improved Berry-Esséen-Chebyshev bounds with statistical applications. *Econometric Theory* **8**, 223-240 (coauthor: J.-M. Dufour).

63. Permutational extreme values of autocorrelation coefficients and a Pitman test against serial dependence. *Annals of Statistics* **20**, 523-534 (coauthors: G. Mélard and X. Milhaud).

64. Optimal rank-based tests against first-order superdiagonal bilinear dependence. *Journal of Statistical Planning and Inference* **32**, 45-61 (coauthor: Y. Benghabrit).

65. Some asymptotic results for a broad class of nonparametric statistics. *Journal of Statistical Planning and Inference* **32**, 165-196 (coauthor: M.L. Puri).

66. Rank tests for time-series analysis: a survey. In *New Directions in Time Series Analysis*, D. Brillinger, E. Parzen, and M. Rosenblatt Eds, Springer-Verlag, New York, 111-154 (coauthor: M.L. Puri).

1993

67. A Chernoff-Savage result for serial signed rank statistics. In *Developments in Time Series Analysis, Volume in Honour of Maurice Priestley*, T. Subba Rao Ed., Chapman and Hall, London, 241-253 (coauthor: J. Allal).

68. Improved Eaton bounds for linear combinations of bounded random variables, with statistical applications. *Journal of the American Statistical Association* **88**, 1026-1033 (coauthor: J.-M. Dufour).

1994

69. Aligned rank tests for linear models with autocorrelated errors. *Journal of Multivariate Analysis* **50**, 175-237 (coauthor: M.L. Puri).

70. On the invertibility of periodic moving-average models. *Journal of Time Series Analysis* **15**, 263-268 (coauthor: M. Bentarzi).

71. Les séquences généralisées, outil pour l'analyse des séries hétéroscédastiques? Conférence prononcée à l'occasion de la remise du Prix du Statisticien d'Expression française, *Journal de la Société de Statistique de Paris* **135**, 1-13.

72. On the Pitman nonadmissibility of correlogram-based time series methods. *Journal of Time Series Analysis* **16**, 607-612.

73. Asymptotic influence of initial values on parametric and rank-based measures of residual autocorrelation. Proceedings of the Colloque de Mathématiques appliquées, Oujda, April 1993. *Journal de Mathématiques du Maroc* **2**, 100-109.

1995

74. A multivariate Wald-Wolfowitz rank test against serial dependence. *Canadian Journal of Statistics* **23**, 55-65 (coauthor: M.L. Puri).

75. Local asymptotic normality of multivariate ARMA processes with a linear trend. *Annals of the Institute of Statistical Mathematics* **47**, 551-579 (coauthor: B. Garel).

76. Comportement asymptotique de la moyenne et de la variance d'une statistique de rangs sérielle simple. In *Hommage à Simone Huyberechts*, *Cahiers du Centre d'Etudes de Recherche Opérationnelle* **36**, 189-201 (coauthor: Kh. Rifi).

1996

77. Kernel density estimation for linear processes: asymptotic normality and bandwidth selection. *Annals of the Institute of Statistical Mathematics* **48**, 429-449 (coauthor: L.T. Tran).

78. Rank-based tests for autoregressive against bilinear serial dependence. *Journal of Nonparametric Statistics* **6**, 253-272 (coauthor: Y. Benghabrit).

79. The asymptotic behavior of the characteristic function of simple serial rank statistics. *Mathematical Methods of Statistics* **5**, 199-213 (coauthor: Kh. Rifi).

80. Locally asymptotically optimal tests for autoregressive against bilinear serial dependence. *Statistica Sinica* **6**, 147-170 (coauthor: Y. Benghabrit).

81. Locally optimal tests against periodic autoregression: parametric and nonparametric approaches. *Econometric Theory* **12**, 88-112 (coauthor: M. Bentarzi).

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226. Forecasting conditional covariance matrices in high-dimensional time series with application to dynamic portfolio optimization: a General Dynamic Factor approach (coauthors: C. Trucíos, J.H.G. Mazzeu, M. Zevallos, L.K. Hotta, P.L. Valls Pereira), *Journal of Business and Economic Statistics* **41**, 40–52. [This paper received the LACSC 2019 best paper award at the 4th Latin American Conference on Statistical Computing in Guayaquil, Ecuador, May 2019.]

227. On universally consistent and fully distribution-free rank tests of vector independence, *Annals of Statistics* **50**, 1933-1959 (coauthors: Hongjian Shi, Mathias Drton, and Fang Han).

228. Fully distribution-free center-outward rank tests for multiple-output regression and MANOVA. *Journal of the American Statistical Association* **118**, 1923–1939 (coauthors: Daniel Hlubinka and Šarka Hudecová).

229. The integrated copula spectrum. *Annals of Statistics* **50**, 3563–3591 (coauthors: Holger Dette, Yuichi Goto, Tobias Kley, Ria van Hecke, and Stanislav Volgushev).

230. Center-outward R-estimation for semiparametric VARMA models, *Journal of the American Statistical Association* **117**, 925–938 (coauthors: Davide La Vecchia and Hang Liu).

231. Measure transportation and statistical decision theory, *Annual Review of Statistics and its Applications* **9**, 401–424.

2023

232. On the finite-sample performance of measure-transportation-based multivariate rank tests, in Mengxi Yi and Klaus Nordhausen, Editors, *Robust and Multivariate Statistical Methods: Festschrift in Honor of David E. Tyler*, Springer, 87–119. Available at `http://arxiv.org/abs/2111.04705` (coauthor: Gilles Mordant).

233. M-estimation for GARCH models in the absence of higher-order moments, in Yan Liu, Junichi Hirukawa, and Yoshihide Kakizawa, Editors, *Research Papers in Statistical Inference for Time Series and Related Models, Essays in Honor of Masanobu Taniguchi,* Springer, 187–210 (coauthors: Hang Liu and Kanchan Mukherjee).

234. Factor models for high-dimensional functional time series I: Representation results. *Journal of Time Series Analysis* **44**, 578–600, special issue in honor of Masanobu Taniguchi (coauthors: Gilles Nisol and Shahin Tavakoli).

235. Factor models for high-dimensional functional time series II: Estimation and forecasting. *Journal of Time Series Analysis* **44**, 601–621, special issue in honor of Masanobu Taniguchi (coauthors: Gilles Nisol and Shahin Tavakoli).

236. Manfred Deistler and the General-Dynamic-Factor-Model approach to the analysis of high-dimensional time series. *Econometrics*, special issue on *High-Dimensional Time Series in Macroeconomics and Finance* in honor of Manfred Deistler, Benedikt Pötscher, Leopold Sögner, and Martin Wagner, Editors, available online: at `https://www.mdpi.com/2225-1146/10/4/37/pdf`.

237. Three applications of measure transportation in statistical inference. In Nguyen Ngoc Thach, Vladik Kreinovich, Doan Thanh Ha, and Nguyen Duc Trung, Eds, *"Optimal Transport Statistics for Economics and Related Topics," Proceedings of the Sixth Econometric Conference of Vietnam*, Springer, pp. 90–106.

238. Center-outward rank- and sign-based VARMA portmanteau tests: Chitturi, Hosking, and Li–McLeod revisited, *Econometrics and Statistics*, special issue in honor of Elvezio Ronchetti and Peter Rousseeuw, to appear (coauthor: Hang Liu). Available at `http://arxiv.org/abs/2208.12143`.

239. On bounded completeness and the L_1-denseness of likelihood ratios. *Sankhya A: The Indian Journal of Statistics*, special issue in honor of R.R. Bahadur. Available at `https://doi.org/10.48550/arXiv:2211.10822` (coauthors: Bas Werker and Bo Zhou).

240. Rank-based testing for semiparametric VAR models: a measure transportation approach, *Bernoulli* **29**, 229-273 (coauthors: Davide La Vecchia and Hang Liu).

241. Forecasting Value-at-Risk and Expected Shortfall in large portfolios: a General Dynamic Factor Model approach, *Econometrics and Statistics* **27**, 1-15 (coauthor: Carlos Trucíos).

2024

242. Inferential theory for Generalized Dynamic Factor Models. *Journal of Econometrics* **239**, special issue in honor of Jianqing Fan's 60th anniversary (coauthors: Matteo Barigozzi, Matteo Luciani, and Paolo Zaffaroni).

243. Dynamic Factor Models: a genealogy, in Nguyen Ngoc Thach, Nguyen Duc Trung, Doan Thanh Ha, and Vladik Kreinovich Eds, *Partial Identification in Econometrics and Related Topics*, Proceedings of the 7th International Econometric Conference of Vietnam, Springer, 3–24 (coauthor: Matteo Barigozzi).

244. Multivariate quantiles: geometric and measure-transportation-based contours, in Vladik Kreinovich, Woraphon Yamaka, and Supanika Leurcharusmee, Eds, *Applications of Optimal Transport to Economics and Related Topics*, Proceedings of the 17th International Conference of the Econometrics Society of Thailand, Springer, 61–78 (coauthor: Dimitri Konen).

245. Distribution-free tests of multivariate independence based on center-outward quadrant, Spearman, Kendall, and van der Waerden statistics, *Bernoulli* **31**, 106–129 (coauthors: Hongjian Shi, Mathias Drton, and Fang Han).

246. Nonparametric measure-transportation-based methods for directional data, *Journal of the Royal Statistical Society Series B* **86**, 1172–1196 (coauthors: Hang Liu and Thomas Verdebout).

247. Ancillarity, maximal ancillarity, and semiparametric efficiency. *IMS Bulletin* **53**, April/May 2024, 10–11.

2025

248. Nonparametric multiple-output center-outward quantile regression, *Journal of the American Statistical Association*, to appear (coauthors: Eustasio del Barrio and Alberto González-Sanz).

Submitted Papers - Preprints

249. Center-outward multiple-output Lorenz curves and Gini indices: a measure transportation approach. *Journal of Business and Economic Statistics*, to appear. Available at `https://doi.org/10.48550/arXiv:2211.10822` (coauthor: Gilles Mordant).

250. Monotone measure-preserving maps in Hilbert spaces: existence, uniqueness, and stability. Available at `https://doi.org/10.48550/arXiv:2211.10822` (coauthors: Alberto González-Sanz and Bodhisattva Sen).

251. Consistent distribution-free affine-invariant tests for the validity of independent component models. Available at `https://doi.org/10.48550/arXiv:2404.07632` (coauthors: Simos Meintanis and Klaus Nordhausen).

252. The Dynamic, the Static, and the Weak: factor models and the analysis of high-dimensional time series. Available at `http://arxiv.org/abs/2407.10653` (coauthor: Matteo Barigozzi).

253. Quantiles and quantile regression on Riemannian manifolds: a measure-transportation-based approach. Available at `arXiv:2410.15711` (coauthor: Hang Liu).

254. A model-free test of the time-reversibility of climate change processes. Available at `https://arxiv.org/abs/2411.11248` (coauthor: Yuichi Goto).

255. The Econometric Theory Interview: Marco Lippi. *Econometric Theory*, to appear (coauthors: Matteo Barigozzi and Manfred Deistler).

Editorial Activities

– *Spatial Processes and Spatial Time Series Analysis, Proceedings of the VIth Franco-Belgian Meeting of Statisticians, Brussels, November 1985.* FUSL, Brussels (1986), 230 pp. (coeditor: Jean-Jacques Droesbeke).

- *Approches non paramétriques en Analyse des Séries Chronologiques*, Actes du Colloque organisé par l'Institut des Hautes Etudes de Belgique, Bruxelles, September 1986. *Cahiers du Centre d'Etudes de Recherche Opérationnelle* **28** (1986), 247 pp.
- *Invariance, Proceedings of the Xth Franco-Belgian Meeting of Statisticians, Brussels, November 1991.* Special issue, *Journal of Statistical Planning and Inference* **32** (1992), 280 pp. (coeditor: Jean-Pierre Raoult).
- *Hommage à Simone Huyberechts.* Special issue, *Cahiers du Centre d'Etudes de Recherche Opérationnelle* **36** (1994), 343 pp.
- *Nonlinear Time Series Models, Proceedings of the XVIth Franco-Belgian Meeting of Statisticians, Brussels, November 1995.* Special issue, *Journal of Statistical Planning and Inference* **68** (1998), 418 pp. (coeditors: Ishwar Basawa, Dag Tjøstheim, and Howell Tong).
- *Madan Lal Puri, Selected Collected Work.* V.S.P., Utrecht and Boston, 3 volumes (2003), xvi + 787, xi + 743, and xvi + 773 pages (coeditors: Peter G. Hall and George G. Roussas).
- *Encyclopedia of Environmetrics*, 2nd edition, 6 volumes, 3510 pages, Wiley, 2012. Statistical Theory and Methods Section Editor.
- *Mathematical Statistics and Limit Theorems: Festschrift in Honor of Paul Deheuvels.* Springer, 2015, vi + 326 pages (coeditors: David Mason, Dietmar Pfeifer, and Jozef Steinebach).
- Guest Editor, *Computational Statistics & Data Analysis* **100**, 2016, Special issue on Time Series Econometrics, 2016 (coeditors: Peter Boswijk, Christian Francq, and Robert Taylor), 860 pages.
- *Time Series in High Dimensions: the General Dynamic Factor Model*, World Scientific, Singapore, 2020 `https://doi.org/10.1142/11204`, xxxvi + 726 pp. (coeditors: Marco Lippi, Matteo Barigozzi, Mario Forni, and Paolo Zaffaroni).
- Guest Editor, *Journal of Time Series Analysis* **44** (5-6, 2023), special issue in honor of Masanobu Taniguchi, 2023 (coeditors: Yoshihide Kakizawa and Hira Koul).
- Guest Editor, *Econometrics and Statistics*, special issue in honor of Marco Lippi, 2024 (coeditors: Matteo Barigozzi and Manfred Deistler).

Other Publications

- L'Institut de Statistique. *Telex* **90** (October 1993), 8-9.
- Peut-on mesurer l'activité statistique des Nations? *BStatNews, the Newsletter of the Belgian Statistical Society* **3** (September 1994), 3-8.
- Non-culture statistique? "Carte Blanche", *Le Soir*, 12-13/11/1994.
- Statistics in the Belgian Universities: l'Université libre de Bruxelles. *BStatNews, the Newsletter of the Belgian Statistical Society* **7** (January 1996), 3-5.
- Pour saluer Quetelet. "Carte Blanche", *Le Soir*, 12/03/1996 and *BStatNews, the Newsletter of the Belgian Statistical Society* **8** (April 1996), 4-6.
- Lucien Le Cam, Docteur honoris causa de l'Institut de Statistique de l'Université libre de Bruxelles. *BStatNews, the Newsletter of the Belgian Statistical Society* **11** (April 1997), 3-6.
- John Nash, prix Nobel d'Economie 1994. *Mathématique et Pédagogie* **113** (1997), 29-31 (coauthor: L. Lemaire).

– Jef Teugels, Chaire Francqui au titre belge à l'Institut de Statistique et de Recherche Opérationnelle de l'Université libre de Bruxelles. *BStatNews, the Newsletter of the Belgian Statistical Society* **13** (January 1998), 7-9.

– Breakthroughs in Statistics. *BStatNews, the Newsletter of the Belgian Statistical Society* **14** (April 1998), 4-6.

– Eurocoin: A Real-Time Coincident Indicator of the Euro Area Business Cycle CEPR Discussion Paper No. 3108 (2001) (coauthors: Filippo Altissimo, Antonio Bassanetti, Riccardo Cristadoro, Mario Forni, Marco Lippi, Lucrezia Reichlin and Giovanni Veronese).

– Journées de Statistique: la Conférence Lucien Le Cam. *Journal de la Société française de Statistique* **145** (2004), 3-6.

– Davy Paindaveine to receive the American Statistical Association 2007 Gottfried Noether Award. *BStatNews, the Newsletter of the Belgian Statistical Society* **40** (May 2007), 18-19.

– Le bonheur dans les mathématiques? *l'Echo* (14/03/2009) (coauthor: V. Ginsburgh).

– Statisticien, le job de demain? *l'Echo* (28/08/2009) (coauthor: V. Ginsburgh).

– Les Stats deviennent sexy! *le Soir* (31/10/2009) (coauthor: N. Veraverbeke).

– The sexy job in the next ten years ... *BStatNews, the Newsletter of the Belgian Statistical Society* **48** (January 2010), 3-5 (coauthor: N. Veraverbeke).

– Gillis, Paul Pierre. *Nouvelle Biographie Nationale* (2010), 195-201 (coauthor: J. Mawhin).

– Foreword from the Editors, special 20th anniversary issue of *Statistical Inference for Stochastic Processes* **21** (2018), 261-262 (coauthor: Yury Kutoyants).

– Préface to: Jean-Jacques Droesbeke, *Adolphe Quetelet, Passeur d'Idées*, Nouvelle Biographie Nationale Supplément 2, Académie Royale de Belgique (2021), 11–14.

– Preface, Special Issue in Honor of Masanobu Taniguchi, *Journal of Time Series Analysis* **44**, 440–441 (2023) (coauthors: Y. Kakizawa and H.L. Koul).

– Factor models and high-dimensional time series: a tribute to Marco Lippi on the occasion of his 80th birthday, *Econometrics and Statistics*, to appear (coauthors: Matteo Barigozzi and Manfred Deistler).

Conferences, Seminars, Invitations

1975

– Invited talk, Séminaire de Théorie des Assurances, University of Kinshasa, April 1975 (Rationalité des contrats de réassurance).

– Colloque de Théorie des Jeux, Institut des Hautes Etudes de Belgique, Brussels, May 1975 (Jeux de marchandage à information incomplète et échanges d'information).

1976

– Conference *Structures Economiques et Econométrie*, Lyon, April 1976 (Le rôle de l'information dans les modèles de marchandage).

1977

- Invited seminar, Groupe de Recherche sur la Théorie des Jeux, University of Saint-Etienne, April 1977 (Transformations de structures de coalition et théorie coopérative).
- Conference *Structures Economiques et Econométrie*, Lyon, April 1977 (Stratégies subjectivement mixtes et jeux à information incomplète).
- Conference *Séries Chronologiques: Approches fréquentielle et temporelle,* Institut des Hautes Etudes de Belgique, Brussels, May 1977 (Indéterminabilité pure et inversibilité des modèles autorégressifs-moyenne mobile à coefficients dépendant du temps).
- XIIIth ASTIN Colloquium, Washington, May 1977 (Statistical methods in premium rating).
- XXIIIth International Meeting of the Institute of Management Sciences, Athens, July 1977 (Information transmission in games with incomplete information: bidding processes).
- Association Royale des Actuaires Belges, Brussels, October 1977 (Méthodes statistiques de construction de tarifs).

1978

- Xth *Journées de Statistique*, Colloque de l'ASU, Nice, May 1978 (Processus autorégressifs-moyenne mobile multivariés à coefficients dépendant du temps: indéterminabilité pure et inversibilité).
- XIVth ASTIN Colloquium, Taormina, October 1978 (Band strategies: the random walk of reserves, and Etude statistique des facteurs influençant la probabilité de sinistre en assurance automobile).
- XXIVth International Meeting of the Institute of Management Sciences, Honolulu, June 1979 (A Nash-Harsanyi-Selten approach to multiattribute utility).

1979

- Conference *Aide à la Décision et Jeux de Stratégies*, Institut des Hautes Etudes de Belgique, Brussels, April 1979 (Jeux de marchandage et fonctions d'utilité multidimensionnelles).
- XIth *Journées de Statistique*, Colloque de l'ASU, Paris, May 1979 (Inversibilité et inversibilité au sens de Granger et Andersen).
- Invited seminar, Institut für Mathematische Wirtschaftsforschung, University of Bielefeld, May 1979 (Truthful information transmission in two-person bargaining situations under incomplete information).

1980

- Conference *Processus aléatoires et Problèmes de Prévision*, Institut des Hautes Etudes de Belgique, Brussels, April 1980 (Modèles non inversibles de séries chronologiques).
- XIIth *Journées de Statistique*, Colloque de l'ASU, Toulouse, May 1980 (Modèles k-inversibles de processus moyenne mobile).
- 3rd International Time Series Meeting, Houston, August 1980 (Nonstationary first-order moving average processes: the model-building problem).

1981

- XVth ASTIN Colloquium, Loen, Norway, June 1981 (Etude statistique des facteurs influençant le risque dans le portefeuille suédois en 1979).

- 4th International Time Series Meeting, Valencia, Spain, June 1981 (The model-building problem for nonstationary multivariate autoregressive processes).
- 5th International Time Series Meeting, Houston, August 1981 (Nonstationary second-order moving average processes).
- Joint Meetings of the American Statistical Societies, Detroit, August 1981 (Moving average models for time-dependent autocovariance functions).

1982

- XIVth *Journées de Statistique*, Colloque de l'ASU, Brussels, May 1982.
- Annual Meeting of the Société Mathématique de Belgique, Antwerp, July 1982 (Processus moyenne mobile non stationnaires).
- 7th International Time Series Meeting, Cincinnati, August 1982 (Nonstationary second-order moving average processes : model-building and invertibility).
- Joint Meetings of the American Statistical Societies, Cincinnati, August 1982 (The theoretical model-building problem for nonstationary moving average processes).
- Invited speaker, the Mathematisches Forschungsinstitut, Oberwolfach, September 1982 (Tariff construction : principles and methods).
- XVIth ASTIN Colloquium, Liège, September 1982 (Principes de construction de tarifs).
- Invited speaker, 3rd Rencontre Franco-Belge de Statisticiens, Rouen, November 1982 (Contiguïté et processus autorégressifs).
- Association Royale des Actuaires Belges, Bruxelles, December 1982 (Principes de tarification).

1983

- Troisième Cycle FNRS en Recherche opérationnelle, Mons, January 1983 (Modèles de séries chronologiques non stationnaires).
- XVth *Journées de Statistique*, Colloque de l'ASU, Lyon, May 1983 (Factorisation spectrale des processus moyenne mobile non stationnaires).
- Invitation to the Department of Mathematics, Indiana University, Bloomington Indiana (August-September 1983); Probability and Statistics Seminar (Spectral factorization of time-varying moving average autocovariance functions).

1984

- XVIth *Journées de Statistique*, Colloque de l'ASU, Montpellier, May 1984 (Tests de rangs optimaux pour une hypothèse de bruit blanc).
- Joint Meetings of the American Statistical Societies, Philadelphia, August 1984 (Linear serial rank tests for randomness against autocorrelated alternatives)
- Invitation to the Department of Mathematics, Indiana University, Bloomington (August-September 1984).
- Invited speaker, Mathematisches Forschungsinstitut, Oberwolfach, September 1984 (Tariff principles).

– Invited speaker, Journées d'Etude en Statistique, Centre International de Rencontres Mathématiques, Marseille-Luminy, October 1984 (Modèles à coefficients dépendant du temps).

– Inaugural Lecture, Four Countries ASTIN Symposium, Akersloot, October 1984 (From premium calculation to premium rating).

– Invited speaker, 5th Rencontre Franco-Belge de Statisticiens, Aix-Marseille, November 1984 (Performances asymptotiques des modèles MA dans la prévision des processus q-dépendants).

– Invited speaker, Département de Mathématiques de l'Université d'Alger, November 1984 (three lectures on Time Series).

1985

– Visiting associate Professor, Department of Mathematics, Indiana University, Bloomington, February-May 1985.

– Invited seminar, Département de Sciences Economiques and Département d'Informatique et de Recherche Opérationnelle, University of Montréal, March 1985 (Test de rangs linéaires et quadratiques pour une hypothèse de bruit blanc).

– XVIIth *Journées de Statistique*, Colloque de l'ASU, Pau, May 1985 (Statistiques de rangs sérielles du type Box-Pierce).

– Invited speaker, 3rd Statistical Meeting in the Basque Country, Bilbao, August 1985 (Locally asymptotically optimal rank tests for randomness).

– Conference *Approches non paramétriques en Analyse Chronologique*, Institut des Hautes Etudes de Belgique, Brussels, September 1985 (Les tests de rangs dans l'analyse des séries chronologiques (joint with J.-Fr. Ingenbleek, and M.L. Puri); Tests de rangs pour une contre-hypothèse de dépendance ARMA multivariée contiguë (joint with J.-Fr. Ingenbleek); Les statistiques de rangs dans l'identification des modèles de séries chronologiques (joint with G. Mélard)).

– Invitation to the Department of Mathematics, Indiana University, Bloomington, November 1985.

1986

– Invited seminar, Institut für Mathematische Statistik und Versicherungslehre, University of Bern, February 1986 (Rank-based testing procedures in time-series analysis).

– Invitation to the Department of Mathematics, Indiana University, Bloomington, Indiana, March 1986.

– Invited seminar talk, University of California in Santa Barbara, March 1986 (Distribution-free methods in time-series analysis).

– Invitation to the Département de Mathématique de l'Université d'Alger, May 1986 (Three lectures on stochastic difference equations and their applications in time series analysis).

– XVIIIth *Journées de Statistique*, Colloque de l'ASU, Lille, May 1986 (Statistiques de Box-Pierce pondérées).

– Invited speaker, Fourth Purdue Symposium on Statistical Decision Theory and Related Topics, Purdue University, Lafayette, Indiana, June 1986 (Time series analysis via rank-order theory).

– Invited speaker, Matematisk Institutt of the University of Bergen (Norway), September 1986 (Locally asymptotically optimal tests for ARMA models: Asymptotic predictive performances of time-varying moving average models).

– Invited speaker, annual meeting of the Société Mathématique de Belgique, Mons, October 1986 (Rank-based procedures in time-series analysis).

– Invited speaker, 7th Rencontre Franco-Belge de Statisticiens, Rouen, November 1986 (Fractions continuées matricielles et factorisation des matrices-bandes infinies).

1987

– Invitation to the Department of Mathematics, Indiana University, Bloomington, March 1987.

– Invitation to the Département de Sciences Economiques and the Centre de Recherche et Développement en Economique, University of Montréal, March 1987.

– Invited seminar, Séminaire d'Econométrie Malinvaud, Paris, April 1987.

– XIXth *Journées de Statistique*, Colloque de l'ASU, Lausanne, May 1987 (Tests de rangs localement optimaux pour une hypothèse de bruit blanc multivarié).

– Invitation to the Département de Mathématiques of the Université de Savoie, Chambéry, May 1987.

– Invitation to the Département de Mathématiques of the Université d'Alger, May 1987.

– Invitation to the Département de Mathématiques of the Université d'Oujda, June 1987.

– Invited speaker, special session on Recent Developments in Time Series Analysis, annual meeting of the Institute of Mathematical Statistics, San Francisco, August 1987.

– Invitation to the Département de Mathématiques de l'Université des Sciences et Techniques du Languedoc, Montpellier, September 1987.

– Invited seminar, Université Paul Sabatier, Toulouse, September 1987.

– First European Course in Advanced Statistics: Methods for multidimensional Data Analysis, Naples, October 1987.

1988

– Invited seminar, Katholieke Universiteit Leuven (KUL), January 1988.

– Invited seminar, Séminaire de Calcul des Probabilités et Statistique de l'Université de Lille, February 1988.

– Invited speaker, XXth *Journées de Statistique*, Colloque de l'ASU, Grenoble, May 1988 (Les tests de permutations dans l'analyse des séries chronologiques).

– Professeur invité, UFR de Mathématiques Pures et Appliquées de l'Université des Sciences et Techniques de Lille (2nd semester).

– Invitation to the Centre de Recherche et Développement en Economique de l'Université de Montréal, Montréal, September 1988.

– Invitation to the University of Fès, October 1988.

1989

– Invited seminar, ISUP, Paris 6, January 1989.

- Professeur invité, UFR de Mathématiques pures et appliquées, Université de Lille I.
- Buitegewoon Docent, Departement Wiskunde, Katholieke Universiteit Leuven (Capita selecta uit de Wiskunde, tweede Licenciaat Wiskundige Wetenschappen).
- Invited short course on Forecasting, Tadbiran Awam Negara Institute, Kuala Lumpur, Malaysia, April 1989.
- Invitation to the Ecole Normale Supérieure de Fès, May 1989 (Crédibilité et filtre de Kalman).
- Invitation to the Faculté des Sciences de l'Université de Fès, May 1989 (Tests de rangs et tests de permutations).
- Invitation to the Département de Mathématiques de l'Université d'Alger, May 1989.
- XXIth *Journées de Statistique*, Colloque de l'ASU, Rennes, May 1989 (Bornes non uniformes de type Berry-Esséen; applications à l'inférence statistique).
- 47th Session of the International Statistical Institute, Paris, September 1989 (Une amélioration de certaines bornes non uniformes du type Berry-Esséen-Chebyshev).
- Invitation to the Centre de Recherche et Développement en Economique, University of Montréal, Montréal, September 1989 (Econometrics seminar: Une amélioration de certaines bornes du type Berry-Esséen-Chebyshev, avec applications statistiques).

1990

- Professeur invité, Département de Mathématiques de l'Université Catholique de Louvain (Questions spéciales de mathématiques, 2nde licence en Sciences mathématiques).
- Invited seminar, CORE, Université Catholique de Louvain, February 1990 (Rank-based inference in time series analysis).
- Invitation to the Department of Mathematics, Indiana University, Bloomington, March 1990.
- Invited speaker, Deuxième Rencontre Franco-Algérienne de Recherche Opérationnelle, University of Algiers, May 1990.
- Professeur invité, Departamento de Matemàtica, Universidade Nova de Lisboa, Lisbonne, May 1990 (Erasmus mobility and training program).
- Invited speaker, XXIIth *Journées de Statistique*, Colloque de l'ASU, Tours, May 1990 (Méthodes statistiques fondées sur les rangs pour l'analyse des séries temporelles).
- Invited seminar, Université Joseph Fourier, Grenoble, June 1990.
- Invitation to the Centre de Recherche et Développement en Economique de l'Université de Montréal, Montréal, September 1990.
- 11th Rencontre Franco-Belge de Statisticiens, CIRM, Marseille-Luminy, November 1990.

1991

- Invited seminar, Université Pierre et Marie Curie-Paris 6, January 1991 (Tests de rangs et tests de permutation alignés).
- Professeur invité, Université Pierre et Marie Curie-Paris 6/ISUP, February-June 1991.
- Invited seminar, Österreichische Statistiche Gesellschaft, Vienna, May 1991 (Rank tests in time series analysis : a review).

– XXIIIth *Journées de Statistique*, Colloque de l'ASU, Strasbourg, May 1991 (Bornes d'Eaton améliorées).

– Joint AMS-IMS-SIAM Summer Research Conference. Theory and applications of multivariate time series analysis. Seattle, July 1991.

– Invitation to the Institute of Advanced Study, Indiana University, Bloomington, June-September 1991.

– Invited talk, Departmental Colloquium, Department of Mathematics, Indiana University, Bloomington, September 1991 (Invariance, ranks and aligned ranks in statistical inference).

– Invited seminar, Department of Statistics, Purdue University, September 1991 (Rank-based inference in time series analysis).

– Invitation to the Centre de Recherche et Développement en Economique de l'Université de Montréal, Montréal, September 1991.

1992

– Professeur invité, Université de Lille I, January 1992.

– Invitation to the Centro de Matemática, Universidade de Coimbra, April 1992 (Invariance, rangs et rangs alignés; Tests de rangs optimaux pour les modèles de séries chronologiques).

– XXIVth *Journées de Statistique*, Colloque de l'ASU, Brussels, May 1992 (Normalité asymptotique locale d'un processus ARMA multivarié avec tendance linéaire, joint with B. Garel; Tests de rangs localement optimaux pour une hypothèse de dépendance autorégressive par rapport à une contre-hypothèse de dépendance bilinéaire diagonale, joint with Y. Benghabrit).

– Fifth Purdue Symposium on Statistical Decision Theory and Related Topics, Purdue University, Lafayette, Indiana, June 1992 (Optimal parametric and nonparametric tests for linear against bilinear dependence).

– Invitation to the Graduate School of Business, University of Chicago, June 1992.

– Invited speaker, Workshop on New Directions in Time Series Analysis, Heidelberg, June 1992 (Locally asymptotically optimal rank tests for autoregressive against bilinear dependence).

– Invitation to the Centre de Recherche et Développement en Economique de l'Université de Montréal, Montréal, August 1992.

– Invited seminar, Institut de Statistique, UCL, November 1992 (Parametric and nonparametric locally optimal tests for autoregressive against bilinear dependence).

1993

– Professeur invité, Université Pierre et Marie Curie-Paris 6, March-April 1993.

– Invited seminar, Institut für Mathematische Stochastik, University of Braunschweig, February 1993 (Locally optimal tests for stationary against periodical autoregression).

– Invited seminar, Université Paul Sabatier, Toulouse, February 1993 (Tests localement optimaux du caractère périodique d'une autorégression).

– Second IMS International Symposium on Probability and Applications, Bloomington, March 1993 (Improved Eaton bounds, with statistical applications).

- Invited speaker, Conference on stochastic Geometry, convex bodies, and empirical measures, Palermo, April 1993 (Invariance, ranks, and local asymptotic sufficiency).
- Invited speaker, Colloque de Mathématiques Appliquées, Oujda, April 1993 (Invariance, rangs et exhaustivité locale asymptotique).
- Invitation to the Faculté des Sciences de Fès, May 1993 (Bornes d'Eaton améliorées).
- Invitation to the Ecole Normale Supérieure de Fès, May 1993 (Invariance, rangs et exhaustivité locale asymptotique).
- Invitation to the Ecole Mohammedia d'Ingénieurs, Rabat, May 1993 (Bornes d'Eaton améliorées).
- XXVth *Journées de Statistique*, Colloque de l'ASU, Vannes, May 1993 (Tests du caractère périodique d'une autorégression).
- Invited speaker, Première Journée de Statistique et Probabilités de Dunkerque, Dunkerque, June 1993 (Bornes d'Eaton améliorées).

1994

- Invitation to the Centre de Recherche et Développement en Economique de l'Université de Montréal, Montréal, January 1994 (Séminaire: Tests du caractère périodique d'une autorégression).
- Professeur invité, Université Lille I, February-July 1994. (Seminar talk: Test du caractère périodique d'une autorégression: approches paramétrique et non-paramétrique).
- Prix du Statisticien d'Expression française, Société de Statistique de Paris, April 1994 (Les séquences généralisées, outil pour l'analyse des séries hétéroscédastiques?).
- Professeur invité, Université de Neuchâtel (Diplôme postgrade en Statistique), May-June 1994.
- Invited speaker, XXVIth *Journées de Statistique*, Colloque de l'ASU, Neuchâtel, May 1993 (Les tests de rangs dans l'analyse statistique des processus).
- Jaroslav Hájek Memorial Symposium, Charles University, Prague, June 1994.
- Invited speaker, Journées d'Etude en Statistique: Inférence nonparamétrique—les Statistiques de Rangs. CIRM Marseille, October 10-15, 1994 (Non-biais, invariance, tests de permutation, tests de rangs. Statistiques de rangs linéaires (joint with Ph. Barbe). Introduction à la théorie asymptotique des expériences statistiques. Tests de rangs dans le modèle linéaire général. Tests de rangs dans les modèles ARMA).
- Invited speaker, Tinbergen Econometric Institute, Erasmus Universiteit Rotterdam, November 1994 (Rank-based methods in the statistical analysis of stochastic processes: a guided tour).
- Invited speaker, Mathematisches Forschungsinstitut, Oberwolfach, December 1994 (Rank-based methods in the statistical analysis of stochastic processes).

1995

- Invitation to the Wirtschaftswissenschaftliche Fakultät, von Humboldt Universität Berlin, January 1995.
- Invited speaker, Seminar of the Weierstrass Institut für Angewandte Analysis und Stochastik (Rank-based methods in the statistical analysis of stochastic processes), Berlin, January 1995.

– Invitation to the Institut National Polytechnique de Toulouse (ENSEEIHT), May 1995 (Conference on the theme “La Statistique: principes fondamentaux et tendances nouvelles”), May 1995.

– XXVIIth *Journées de Statistique*, Colloque de l’ASU, Jouy-en-Josas, May 1995 (Tests de séquences généralisés).

– Professeur invité, Université de Neuchâtel (Diplôme postgrade en Statistique), June 1995.

– Invitation to the Institut National Polytechnique de Toulouse (ENSEEIHT), July 1995.

– 50th Session of the ISI, Beijing, August 1995 (Generalized run tests).

– Invited speaker, the Paris-Berlin Seminar, Schmerwitz, September 1995 (Generalized runs and the analysis of heteroscedastic time series).

1996

– Invitation to the Charles University, Prague, January 1996.

– Invitation to the Comenius University, Bratislava, January 1996.

– Invited seminar, London School of Economics, February 1996 (Rank tests in time series analysis).

– Invited seminar, University of Tilburg (CentER), March 1996 (Asymptotic inference in time series: from Lagrange multipliers to regression rank scores).

– Invited seminar, Université Catholique de Louvain, Louvain-la-Neuve, March 1996 (Optimal tests for autoregressive processes based on regression rank scores).

– Workshop du Centre d’Economie Mathématique de l’Université libre de Bruxelles, March 1996 (two lectures on the asymptotic theory of statistical experiments).

– Invited seminar, Séminaire commun de Statistique non paramétrique et semi-paramétrique, Université de Paris VI and CREST, April 15, 1996 (Tests optimaux dans les modèles autorégressifs: des multiplicateurs de Lagrange aux scores de rangs de régression).

– Invited lecture at the Journée de Contact avec les professeurs de mathématique de l’enseignement secondaire, May 1996: Défense et Illustration de la Statistique.

– Invited seminar, Wright State University, Dayton, Ohio, May 1996 (Generalized run tests).

– XXVIIIth *Journées de Statistique*, Colloque de l’ASU, Université Laval, Québec, May 1996 (Optimal tests in time series analysis based on regression rank scores, joint with M. Harel).

– COMPSTAT ’96, Barcelona, August 1996 (When does Edgeworth beat Berry and Esséen?).

– Invitation to the Institut National Polytechnique de Toulouse (ENSEEIHT), August-September 1996.

– AIO Meeting (Dutch Statistical Society), Lunteren, November 1996 (Unbiasedness, invariance, permutations and ranks in semiparametric models).

1997

– Invited seminar, Séminaire de Statistique asymptotique des Processus stochastiques, Le Mans, January 27-28, 1997 (Adaptive estimation of the lag parameter of a long memory process).

- Invited seminar, Séminaire commun de Statistique non paramétrique et semi-paramétrique, University of Paris VI and CREST, March 24, 1997 (Estimation adaptative dans les modèles à mémoire longue).
- Invited speaker, Mathematisches Forschungsinstitut, Oberwolfach, March 1997 (Asymptotic inference for long-memory process).
- Workshop of the Centre d'Economie Mathématique et d'Econométrie, U.L.B., April 1997 (Rank-based AR identification).
- Invitation to the Faculté des Sciences and the Ecole Normale Supérieure de Fès, April 1997 (Normalité locale asymptotique et estimation adaptative dans les processus à mémoire longue).
- Invited seminar, University of Kent at Canterbury, May 1997 (Optimal testing in semiparametric AR models).
- Invited seminar, the Royal Statistical Society, Time Series, Chaos and Applications Study Group Meeting (Rank-based AR order identification), May 1997.
- XXIXth *Journées de Statistique*, Colloque de l'ASU, Carcassonne, May 1997 (Quand Edgeworth bat-il Berry et Esséen?).
- Invited speaker, Workshop on Semiparametric Inference and Time Series, Leiden, July 1997 (LAN for long-memory processes).
- Invited speaker, Third International Conference on Statistical Data Analysis based on the L_1 norm and related methods, Neuchâtel, August 1997 (Unimodality and the asymptotics of M-estimators, joint with I. Mizera).
- 51th Session of the International Statistical Institute, Istanbul, August 1997 (Rank-based AR order identification).
- Invited speaker, Workshop on Nonparametric and Semiparametric Statistical Methods, Centro Internacional de Matematica, Coimbra, November 1997.
- Invited seminar, University of Heidelberg, November 1997 (Rank-based AR order identification).

1998

- Invitation to the Charles University, Prague, January 1998.
- Invited speaker, the CEPR Meeting "New Approaches to the Study of Business Cycles," Madrid January 30-31, 1998 (New approaches for modelling dynamics of large cross sections).
- Invited seminar, Departamento de Estadistica y Econometria, Universidad Carlos III, Madrid, January 1998 (Rank-based AR order identification).
- Invited speaker, Mathematisches Forschungsinstitut, Oberwolfach, March 1998 (Optimal tests for autoregressive models based on autoregression rank scores).
- Invited seminar, Université Louis Pasteur, Strasbourg, March 1998 (Tests optimaux dans les modèles AR fondés sur les scores de rangs d'autorégression).
- Invited speaker, Probastat'98, Comenius University, Bratislava, February 1998 (M-estimation in heterogeneous models).
- Invited speaker, Atelier sur l'Analyse des Séries Chronologiques, Centre de Recherches Mathématiques, Université de Montréal, March 1998.

– Invited seminar, Department of Statistics, University of Illinois at Urbana-Champaign, March 1998 (Rank-based AR order identification).

– Inaugural talk, XXXth *Journées de Statistique*, annual meeting of the Société Française de Statistique, Rennes, May 1998.

– Invited seminar, Université Joseph Fourier, Grenoble, June 1998 (Tests optimaux dans les modèles AR fondés sur les scores de rangs d'autorégression).

– Invited speaker, Workshop on Perspectives in Modern Statistical Inference, celebration of the 650 years of the Charles University, Prague, August 1998 (Optimal inference for discretely observed semiparametric Ornstein-Uhlenbeck processes, joint with B. Werker and Chr. Koell).

– Invited seminar, ENSAI Rennes, November 1998 (Tests optimaux dans les modèles AR fondés sur les scores de rangs d'autorégression).

– Two lectures on Ranks, ENSAE, Paris, December 1998.

1999

– Invitation to the University of Rome La Sapienza, January 4-24, 1999.

– Two lectures at the Seminari di Econometria de l'Ente per gli Studi Monetari, Bancari e Finanziari Luigi Einaudi, on Optimal testing for semiparametric AR models, (January 21 and 22, 1999).

– Invited seminar, Université de Lille I (March 24, 1999) (Tests optimaux dans les modèles AR fondés sur les scores de rangs d'autorégression).

– XXXIth *Journées de Statistique*, annual meeting of the Société Française de Statistique, Grenoble, May 1999 (Projection de Hájek et polynômes de Bernstein; From .864 to .856 : asymptotic performances of some nonparametric competitors to correlogram-based methods).

– Invited speaker, Workshop on Financial Statistics, Hong Kong (July 5-8, 1999): On two problems of optimal detection in nonlinear time series models.

– Invited speaker, Colloquium of the Département de Mathématiques, University of Montpellier (October 21, 1999).

– Invited speaker, Kolloquium of the Departement of Mathematics, University of Düsseldorf (8 November 1999).

– Invited speaker, 20th Rencontre Franco-Belge de Statisticiens, Université libre de Bruxelles, 25-26 November 1999 (The generalized factor model : consistency and rates).

– Invitation to the University of Osaka (December 1999) (Efficient detection of random coefficients in AR(p) models).

– Invited seminar, University of Tokyo (December 1999) : Local asymptotic normality of fractionally integrated long memory models, with statistical applications.

– Invited seminar, University Meiji Gakuin, Tokyo (December 1999) : Rank-based inference for time series.

2000

– Invitation to the University of Rome La Sapienza, January 16-31, 2000.

- Invited seminar, Seminari di Econometria de l'Ente per gli Studi Monetari, Bancari e Finanziari Luigi Einaudi (January 28, 1999) : An introduction to Le Cam's asymptotic theory of statistical experiments.
- Conference at the CEPULB : Statistiques et Statistique—les Jeux de la Science et du Hasard (February 14, 2000).
- Conference at the Vrije Universiteit Brussel : Statistics—the Eyes and Ears of Science (March 15, 2000).
- Invited seminar, Séminaire de Statistique non paramétrique et semi-paramétrique, Université de Paris VI, March 13, 2000 (Détection optimale de coefficients aléatoires dans les modèles autorégressifs).
- Hamburger Stochastik-Tage 2000 (20-24 mars) : From .864 to .856: the efficiency of some nonparametric competitors to correlogram-based methods.
- Invited speaker, Colloque "Théorèmes limites en Statistique et Probabilités", Université de Lille I (March 29-31, 2000) : Normalité locale asymptotique des modèles fractionnaires à mémoire longue.
- Institut National de Statistique et d'Economie Appliquée, Rabat : Scores de rangs de régression et d'autorégression (April 19, 2000).
- Invited seminar, IUT of Vannes : Invariance, adaptivité et efficacité semi-paramétrique. (April 2000)
- Invited speaker, Symposium on Inference for Stochastic Processes, University of Georgia, Athens, GA (May 9-12): Optimal detection of random components in autoregressive models.
- XXXIIth *Journées de Statistique*, annual meeting of the Société Française de Statistique, Fès, May 2000 (Nonparametric estimation in linear random fields).
- Invited speaker, Workshop on "Recent developments in regression", Université de Neuchâtel, May 28-31, 2000 : Optimal tests for autoregressive models, based on autoregression rank scores.
- Invited speaker, first Rencontre d'Econométrie et de Statistique (Lille 3-Littoral, June 20, 2000): Détection optimale de coefficients aléatoires dans les modèles autorégressifs.
- First Brussels-Prague Statistics Seminar, Bruxelles, 8-9 September 2000 (Détection optimale de coefficients aléatoires dans les modèles autorégressifs).
- Invited speaker, Mathematisches Forschungsinstitut Oberwolfach, 10-16 September 2000 (Controlling complexity for strong stochastic dependencies).
- Invitation to the Department of mathematics, University of Coimbra, 1-9 September 2000 (Asymptotic inference for long-memory time series models).
- Short course on Rank-based Statistical Inference, Universidad Mayor de San Simon de Cochabamba (Bolivia), November 2000.
- Invited speaker, Joint Meeting of the Indian Statistical Associations, New Delhi (30 December 2000 - 3 January 2001).

2001

- Invitation to the University of Rome La Sapienza, (January 8-27, 2001).

- First Brussels-York Seminar in Econometrics and Statistics, Brussels, March 23, 2001 (Optimal detection of random coefficients in AR(p) models).
- XXXIIIth *Journées de Statistique*, annual meeting of the Société Française de Statistique, Nantes, May 13-18, 2001.
- Invited seminar, Colloquium of the Department of Mathematics, University of Bayreuth (May 31, 2001).
- Invitation to the Department of Statistics, Charles University, Prague, June 2001.
- Conference on "Monitoring the Euro area business cycle", Banca d'Italia/CPER, Rome, 7-8 September 2001.
- Four lectures on the asymptotic theory of statistical experiments, Université du Littoral et de la Côte d'Opale, Calais, September 2001.
- Deuxièmes Journées de la Fondation Banque de France : le financement des économies européennes, problèmes et options économiques, Paris, October 25-26 (Do financial variables help forecasting inflation and real activity in the Euro area? joint with L. Reichlin).
- Invited seminar, University of York : Economics Seminar (October 30; Generalized dynamic factor models and the analysis of large panels of time series data) and Econometrics Seminar (October 31; Semiparametric efficiency, distribution-freeness, and invariance).
- First Dortmund-Brussels Workshop on the analysis of large panels of time series data, Dortmund, 15-16 November.
- Invited seminar, Université du Littoral et de la Côte d'Opale, Calais (3 December; Semiparametric efficiency, distribution-freeness, and invariance).
- Professeur invité, Université Pierre-et-Marie-Curie (Paris 6), November 2001-April 2002.

2002

- Invited speaker, Workshop "Dependence Structures in high-dimensional Dynamic Processes", EURANDOM, Eindhoven (January 31-February 1st) : The generalized dynamic factor model: estimation, consistency, and forecasting.
- Invited seminar, Departement Wiskunde, KUL, February 20; Optimal tests for multivariate location based on interdirections and Mahalanobis ranks (joint with D. Paindaveine).
- PAI Workshop, Louvain-la-Neuve (February 22): Large panels of time series data.
- Economics seminar, ECARES (March 1st). Semiparametric efficiency and invariance.
- Invited seminar, Institut de Statistique, UCL (April 19). Semiparametric efficiency and invariance.
- Second Brussels-York Seminar on Statistics, York, June 22.
- Invited speaker, International Conference on current Advances and Trends in nonparametric Statistics, Iraklion, July 15-19 (Semiparametric efficiency and ranks in time series models, joint with B. Werker; Optimal tests for multivariate location based on interdirections and pseudo-Mahalanobis ranks, joint with D. Paindaveine).
- Invited speaker, 4th International Conference on Statistical Data Analysis based on the L_1-norm and Related Methods, Neuchâtel, August 4-9 (Estimating the quantile density function of the innovation of an AR process).

- Invited speaker, 24th European Meeting of Statisticians, Prague, August 19-23 (Semiparametric efficiency, distribution-freeness, and invariance).

- Second Prague-Brussels Statistics Seminar, Prague, August 24-25.

- Second Latino American-European Workshop on *New tools for the analysis of economic data*, CIMAT, Guanajuato, October 3-5 (The dynamic factor model: consistency and forecasting).

- Séminaire de Statistique et Probabilité, Université des Sciences et Technologies de Lille, December 11 (Tests de bruit blanc multivarié optimaux fondés sur les interdirections de Randles et les rangs de Mahalanobis; with D. Paindaveine).

2003

- Invitation to the Mathematics Department, University of Jyväskylä, Finland (January 5-19) (Himos Seminar: Sign-and-rank statistics. Jyväskylä Seminar: Invariance, distribution-freeness, and semiparametric efficiency).

- Seminar, Institute for Econometrics and Systems Theory, Technische Universität Wien, March 19-22 (The dynamic factor model: consistency and forecasting).

- XXXVth *Journées de Statistique*, annual meeting of the Société Française de Statistique, Lyon, June 2-6, 2003 (Local linear regression for random fields).

- Invited speaker, 31th Annual Meeting of the Statistical Society of Canada. Halifax, June 8-11 (Tests de rangs signés multivariés pour l'hypothèse de bruit blanc).

- Brussels-Rome Workshop, Rome, June 21-22 (Semiparametric efficiency, distribution-freeness, and invariance).

- Invited speaker, International Conference on Robust Statistics, Antwerp, July 13-18 (Optimal R-estimation of shape).

- Invited speaker, Mathematisches Forschungsinstitut Oberwolfach, August 31-September 5 (Resampling Methods for Checking Models and Statistical Hypotheses).

- Statistics and Econometrics Seminar, University of York, October 2003 (Optimal R-estimation of shape).

- Internal Seminar, ECARES, December 2003 (Optimal R-estimation of shape).

- Statistics Seminar, University of Jyväskylä, Finland, December 2003 (Optimal rank-based tests for sphericity).

2004

- Invited speaker, International Seminar "Recent Developments in nonlinear Time Series Analysis with Applications to Finance", Waseda University, Tokyo, January 20-30 (Optimal signed-rank tests for elliptical VARMA models).

- Econometrics Seminar, Katholieke Universiteit Leuven, February 10 (Dynamic factor models in the analysis of large panels of time series data).

- Invitation, Mathematics Department, Indiana University, Bloomington, February 17-23.

- Invited speaker, Workshop on Multivariate Time Series Analysis, Heidelberg, February 24-29 (The dynamic factor model : consistency, rates, and forecasting).

- Séminaire de Probabilités et Statistique, Université de Paris 7, March 15 (Optimal rank-based tests of sphericity).

– Séminaire de l'ISUP, Université de Paris 6, March 22 (Optimal R-estimation of shape).

– Invited speaker, Econometrics Seminar, London School of Economics, April 29 (Optimal rank-based tests of sphericity).

– XXXVIth *Journées de Statistique*, annual meeting of the Société Française de Statistique, Montpellier, May 24-29 (Optimal R-estimation of shape).

– Invited speaker, International Workshop on Recent Advances in Time Series Analysis, Protaras, Cyprus, June 9-12 (The dynamic factor model).

– Invited speaker, Workshop on Linear Dynamic Factor Models, Institute for Advanced Studies, Vienna, August 27 (Dynamic factor models: consistency and rates).

2005

– Invitation, Mathematics Department, Waseda University, Tokyo, January 15-25 (Heavy-tailed elliptical families : optimal inference for shape—joint with Davy Paindaveine).

– Econometrics Seminar, Tilburg, April 13 (Rank-based inference for the shape of an elliptical distribution—joint with Davy Paindaveine).

– Workshop on Dynamic Factor Models, Department of Economics, University of Modena, April 16 (The dynamic factor model: determining the number of factors).

– Invited speaker, "Analytical Methods in Number Theory, Probability Theory and Mathematical Statistics," conference in the honor of Yu. Linnik, Saint Petersburg, Steklov Institute, April 25-29 (Optimal rank-based tests for sphericity).

– Invited speaker, Workshop on Nonparametric Statistical Methods, Tampere, June 6-10 (Semiparametrically efficient one-step R-estimation).

– Invited speaker, International Conference on Robust Statistics, Jyväskylä, June 12-17 (Semiparametrically efficient inference based on signs and ranks for median restricted models).

– G. C. Chow Econometric Research Program-Oskar Morgenstern Memorial Seminar, Department of Economics, Princeton, September 27 (The dynamic factor model: determining the number of factors).

– Econometrics Seminar, Economics Department, Yale, September 28 (The dynamic factor model: determining the number of factors).

– Joint Columbia/NYU Econometrics Seminar, September 30 (The dynamic factor model: determining the number of factors).

– Statistics Department Seminar, University of Columbia, October 3 (Rank-based inference for shape).

– Invited speaker, Stochastics Meeting Lunteren 2005, November 14-16 (1. Invariance, semiparametric efficiency, and ranks; 2. Rank-based inference for shape).

– Invited speaker (opening lecture), Journées de la Statistique Rennaise, Rennes, November 17-18 (Spatial quantile regression).

– Statistics Seminar, Ecole Polytechnique fédérale de Lausanne, November 25 (Rank-based inference for shape).

2006

– Invitation to the University of Rome La Sapienza, (January 11-24, 2006).

- Invited speaker, Seminari di Econometria de l'Ente per gli Studi Monetari, Bancari e Finanziari Luigi Einaudi, January 19 (Determining the number of factors in the generalized dynamic factor model).
- Invited speaker, Gesellschaft für Klassifikation, Berlin, March 8-10 (Happy birthday, Mr Wilcoxon!).
- Invited speaker, 2006 International Workshop on Applied Probability, University of Connecticut, Storrs, May 14-19 (Serial regression and autoregression rank score statistics).
- XXXVIIIth *Journées de Statistique*, annual meeting of the Société Française de Statistique, Clamart, May 29-June 2.
- Invitation to the University of Tilburg, June 6-9; (seminar: Determining the number of factors in the generalized dynamic factor model).
- Invitation to the Jaroslav Hájek Center for Theoretical and Applied Statistics, Charles University, Prague, June 12-16.
- Invited speaker, Conference on "Quantile Regression, LMS and Robust Methods in the 21st Century", International Centre for Mathematical Sciences, University of Edinburgh, June 2006 (Spatial quantile regression).
- Invited speaker, Prague Stochastics 2006, Charles University, Prague, August 2006 (Spatial quantile regression).
- Visiting Professor, Princeton University (Department of Operations Research and Financial Engineering), September 2006-February 2007.
- Invited speaker, Conference on Nonparametric Statistics and Related Topics, Carleton University, Ottawa, September 15-17, 2006 (Optimal R-estimation of shape).
- Statistics Seminar, University of Illinois at Urbana-Champaign, October 6, 2006 (The generalized dynamic factor model).
- Statistics Seminar, Michigan State University, East Lansing October 10, 2006 (Rank tests of the homogeneity of scatter).
- Statistics Seminar, Wharton School, University of Pennsylvania, Philadelphia October 11, 2006 (The generalized dynamic factor model).
- Statistics Seminar, University of Chicago, October 16, 2006 (From distribution-freeness to semiparametric efficiency: sixty years of rank-based inference).
- Statistics Seminar, University of Illinois at Chicago, October 18, 2006 (From distribution-freeness to semiparametric efficiency: sixty years of rank-based inference).
- Statistics Seminar, Université de Montréal, November 10, 2006 (From distribution-freeness to semiparametric efficiency: sixty years of rank-based inference).
- Statistics Seminar, University of Columbia, November 15, 2006 (From distribution-freeness to semiparametric efficiency: sixty years of rank-based inference).
- Statistics Seminar, Binghamton University, November 17, 2006 (The generalized dynamic factor model).

2007

- Invited speaker, University of Tampere, Himos Seminar, January 16, 2007 (From distribution-freeness to semiparametric efficiency: sixty years of rank-based inference).

- Visiting Professor, Université Pierre-et-Marie-Curie (Paris 6), February-July, 2007.
- Invitation to the National University of Singapore, March 2-13, 2007 (Seminar: Determining the number of factors in the generalized dynamic factor model).
- Statistics Seminar, Université de Genève, March 30, 2007 (The generalized dynamic factor model).
- Séminaire de Statistique, ENSAI Rennes, May 2007 (Soixante années d'inférence basée sur les rangs).
- Statistics Seminar, Tilburg University, May 30, 2007 (Rank tests for homogeneity of scatter).
- XXXIXth *Journées de Statistique*, annual meeting of the Société Française de Statistique, Angers, June 11-15.
- Invited speaker, XIIth Brazilian Time Series and Econometrics School, Gramado, Brazil, August 01-03, 2007.
- Econometrics Seminar, Getulio Vargas Foundation, Rio de Janeiro, Brazil, August 2007 (The generalized dynamic factor model).
- Invited speaker, Fourth Prague-Brussels Seminar in Mathematical Statistics, Hejnice, Czech Republic, September 2007.
- Invited speaker, Jaroslav Hájek Centre Workshop on Robust and Nonparametric Inference, Hejnice, Czech Republic, September 2007.
- Invited speaker, Deuxièmes Rencontres des jeunes Statisticiens (Société française de Statistique), Centre Paul Langevin, Aussois, September 2007.
- Invited speaker, "Statistique non paramétrique et Statistique des processus", Colloque en l'honneur de Denis Bosq, Université de Paris 6 and Institut de Statistique de l'Université de Paris, Paris, September 14, 2007 (Une méthode générale de construction de tests pseudo-gaussiens).
- Invited speaker, International Conference on Robust Statistics, Buenos Aires, September 17-21, 2007 (A class of optimal tests for symmetry).
- First Tokyo-Brussels Seminar on Time Series and Statistical Finance, Hakone (Japan), October 29-31 (A general method for constructing pseudo-Gaussian tests).
- Invited speaker, Waseda Seminar on Time Series and Statistical Finance, Waseda University, Tokyo, November 2 (The general dynamic factor model).
- Invited speaker, Data-Driven Modelling in Engineering, Econometrics, and Statistics, an Interdisciplinary Workshop on Data-Driven Modelling, VUB, Brussels, November 7 (The general dynamic factor model).
- Séminaire de Statistique, Université de Paris 6, November 12 (Optimal rank-based tests for the homogeneity of scatter).

2008

- Statistics Seminar, Queen Mary's College, London, February 4, 2008 (The generalized dynamic factor model).
- Séminaire de Statistique, Université de Paris X, February 7, 2008 (Sixty years of rank-based inference).

- Conference Altaïr, February 16, 2008 (La Statistique, ou l'Ecole du Doute).
- Statistics Seminar, the Open University, Milton Keynes, February 22, 2008 (From Distribution-Freeness to Semiparametric Efficiency: Sixty Years of Rank-Based Inference).
- Séminaire de Statistique, Université de Neuchâtel, February 26, 2008 (The generalized dynamic factor model).
- Invited speaker, Einaudi Institute for Economics and Finance, Rome, March 20, 2008 (From Distribution-Freeness to Semiparametric Efficiency).
- Econometrics Seminar, European University Institute, Florence, April 4, 2008 (Sixty years of rank-based inference).
- Statistics Seminar, Department of Statistics, Universität Wien, April 28, 2008 (Dynamic factors with block structure).
- Invited speaker, "Nonparametric Statistics and Mixture Models—Past, Present, and Future," May 23-24, Penn State University, University Park, Pennsylvania (Optimal rank tests for symmetry).
- Joint meeting of the Société française de Statistique (XLth Journées de Statistique) and the Statistics Society of Canada, Ottawa, May 25-29, 2008 (Co-chair of the Program Committee).
- Invited speaker, 22nd Nordic Conference on Mathematical Statistics, Vilnius, June 16-19, 2008 (A general method for constructing pseudo-Gaussian tests).
- Second Brussels-Waseda Statistics Seminar, Brussels, June 22-25, 2008.
- Invited speaker, Joint IMS-ASA Statistical Meetings, Denver, Colorado, August 3-8, 2008 (Dynamic factors with block structure).
- Invited speaker, "Understanding the New Statistics: Expanding Core Statistical Theory", Banff International Research Station for Mathematical Research and Discovery, September 14-19, 2008 (The generalized dynamic factor model).
- Keynote speaker, "Factor Structures for Panel and Multivariate Time Series Data", University of Maastricht, September 19-20, 2008 (Dynamic factors with block structure).
- Statistics Seminar, Waseda University, Tokyo, October 31, 2008 (From Distribution-Freeness to Semiparametric Efficiency).
- Third Brussels-Waseda Statistics Seminar, Izu (Japan), November 2-5, 2008 (A class of optimal rank tests for symmetry).
- Invited speaker, the Japan Statistical Society, Conference in the honor of Hirotogu Akaike, University of Kyoto, November 6-8, 2008 (Dynamic factors with block structure).
- Joint ULB-UCL statistics seminar, Louvain-la-Neuve, November 21, 2008 (Sixty years of rank-based inference).

2009

- Invitation to the University of Rome La Sapienza (January 6-February 3, 2009).
- Invited speaker, Einaudi Institute for Economics and Finance, Rome, January 22, 2009 (Dynamic factors with block structure).
- Statistics Seminar, Università del Sannio, Benevento, January 30, 2009 (From Distribution-Freeness to Semiparametric Efficiency).

– Séminaire de Statistique, Université de Grenoble, March 5, 2009 (Dynamic factor models).

– Invited speaker, Workshop on "Skew-symmetric distributions", Università del Sannio, Benevento, March 15-22, 2009 (A class of tests for symmetry based on Edgeworth expansions).

– Invited talk, Conference on "Reduction of Complexity in Multivariate Data Structures", Technische Universität Dortmund, April 2-3rd, 2009 (Dynamic factors with block structure).

– Statistics Seminar, University of Texas at Dallas, April 14 (Sixty years of rank-based inference).

– Invited talk, Workshop on "Nonparametric Statistics, Refined, Redefined, Renewed", University of Texas at Arlington, April 16-17, 2009 (From quantile regression to halfspace depth).

– XLIth *Journées de Statistique*, annual meeting of the Société Française de Statistique, Bordeaux, May 25-29, 2009 (Optimal rank-based tests in linear models with alpha-stable noise).

– Invited speaker, 31st Finnish Summer School on Probability Theory, Tampere, June 1-5, 2009 (An introduction to Le Cam's asymptotic theory of statistical experiments).

– Invited talk, "Conférence sur l'analyse factorielle dynamique, la régression PLS et l'analyse des tableaux de configuration", Université du Luxembourg, June 17, 2009 (Dynamic factors with block structure).

– Invited speaker, "Troisièmes Rencontres des jeunes Statisticiens" (Société française de Statistique), Centre Paul Langevin, Aussois, August 31-September 4, 2009 (Dynamic Factor Models: identification, estimation, and blocks).

– Joint Econometrics and Statistics Seminar, Department of Economics, Columbia University, September 29, 2009 (Dynamic factors with block structure).

– Invited speaker, Annual Meeting of the Belgian Statistical Society, Lommel, October 15-16, 2009 (From quantile regression to halfspace depth).

– Invited speaker, "Recent Developments in Time Series and Its Applications", Waseda Symposium on Statistics, Tokyo, December 1st, 2009 (Multivariate quantiles: from L_1 optimization to halfspace depth and local linear quantile regression).

– Invited speaker, Conference on "Theory and Applications of Statistical Inference in Multivariate and Time Series Models", Kagoshima University (Japan), December 3-5, 2009 (On testing for symmetry in skew-normal families).

– Invited speaker, Conference on "Nonlinear Time Series: Threshold Modelling and Beyond" (in celebration of Howell Tong's 65th birthday), the University of Hong Kong, Department of Statistics and Actuarial Science, December 17-19, 2009 (Market liquidity as dynamic factors).

2010

– Visiting Senior Research Scholar, Princeton University, February-July and September-December 2010.

– Financial Econometrics Seminar, Operations Research and Financial Engineering, Princeton University, February 19, 2010 (Market liquidity as dynamic factors).

– Invited speaker, Biennal German Conference on Probability and Statistics, Leipzig, March 2-5 (Multivariate quantiles: from L_1 optimization to halfspace depth and local linear quantile regression).

– Statistics Seminar, Michigan State University, March 18, 2010 (Multivariate quantiles: from L_1 optimization to halfspace depth and local linear quantile regression).

– Departmental Colloquium, ORFE, Princeton University, March 23 (Sixty-five years of rank-based inference).

– Invited speaker, Conference on “Latest developments in heavy-tailed distributions”, Brussels, March 26-27 (Rank-based tests in α-stable families).

– Economics Seminar, Johns Hopkins University, April 21, 2010 (Dynamic factors with block structure).

– Statistics Seminar, Rutgers University, April 28, 2010 (Multivariate quantiles: from L_1 optimization to halfspace depth and local linear quantile regression).

– Invited speaker, Quatrième Colloque CIREQ sur les Séries Temporelles / Fourth Time Series Conference, Montreal, May 14-15, 2010 (Dynamic factors with block structure; application to market liquidity).

– Conference on nonparametric statistics and statistical learning, Ohio State University, Columbus, May 19-22, 2010 (Rank-based tests in α-stable families).

– Invited speaker, XLIIth *Journées de Statistique*, annual meeting of the Société Française de Statistique, Marseille, May 25-28, 2010 (Régression quantile spatiale localement linéaire).

– International Conference on Robust Statistics, Prague, June 28-July 2 (Rank-based tests in α-stable families).

– Invited speaker, 2010 Joint Statistical Meetings, Vancouver, July 31 - August 5 (From multiple-output quantiles to signed ranks: a new multivariate probability integral transformation.).

– Invited speaker, “Prague Asymptotics”, Prague, August 30-September 3, 2010 (On the estimation of cross-information quantities).

– Invited speaker, Workshop on “Time Series, Quantile Regression and Model Choice”, University of Dortmund, September 20-21, 2010 (Multivariate quantiles: from L_1 optimization to halfspace depth and local linear quantile regression).

– Statistics Seminar, University of Florida, Gainesville, October 14, 2010 (Multivariate quantiles: from L_1 optimization to halfspace depth and local bilinear quantile regression).

– 2nd Princeton Day of Statistics, Princeton University, October 22, 2010 (Multivariate quantiles: from L_1 optimization to halfspace depth and local bilinear quantile regression).

– Statistics Seminar, University of Texas at Dallas, November 11 (General dynamic factor models).

– Statistics Seminar, University McGill, Montreal, November 19, 2010 (Multivariate quantiles: from L_1 optimization to halfspace depth and local bilinear quantile regression).

– Invited speaker, 3rd International Conference of the ERCIM Working Group on Computing & Statistics, University of London and LSE, London, 10-12 December 2010 (with R. van den Akker and B. Werker: Rank-based tests for unit roots; with Z. Lu, D. Paindaveine, and M. Šiman: Local bilinear multiple-output quantile regression).

– Invited speaker, 4th CSDA International Conference on Computational and Financial Econometrics, University of London and LSE, London, 10-12 December 2010 (with M. Lippi, M. Forni, P. Zaffaroni: The unrestricted generalized dynamic factor model; with Y. Swan, T. Verdebout, D. Veredas: Rank-based testing and estimation in the general linear model with stable errors).

2011

- Invited speaker, Workshop on Recent Advances in Nonlinear Time Series, Institute of Mathematical Sciences, National University of Singapore, 7-18 February 2011 (On the tuning of penalty terms in information criterion-based identification; Quantiles, spectral analysis, and time series).
- Invited talk, Waseda Symposium, Waseda University, Tokyo, March 1-2, 2011 (Rank-based inference in linear models with stable errors).
- Invited talk, Seminar on the Theory and Applications of Time Series Analysis, Atami, Japan, March 3-4, 2011 (Skew-symmetric distributions and Fisher information - A tale of two densities).
- Statistics Seminar, University of Lugano, March 22 (Rank-based inference in linear models with stable errors).
- Statistics Seminar, Université de Lille III, April 14 (Of quantiles, spectra, and time series).
- Statistics Seminar, Institute of Advanced Studies, Vienna, May 2nd (Of quantiles, spectra, and time series).
- Invited speaker, "Probabilistic and Inferential Aspects of Skew-Symmetric Models: A Workshop in Honour of Adelchi Azzalini's 60th Birthday", Santiago de Chile, May 16-19, 2011 (Skew-symmetric distributions and Fisher information - A tale of two densities).
- Invited speaker, "Econometric and statistical modelling of multivariate time series", Louvain-la-Neuve, May 25-27 (Of quantiles, spectra, and time series).
- Invited speaker, "Time series analysis and computational statistics", Colloque en l'honneur de Guy Mélard, Université libre de Bruxelles, June 10 (Matrix continued fractions and applications).
- Speaker, the "Journal of Nonparametric Statistics invited session", 2011 Graybill Conference, Fort Collins, Colorado, June 22-24, 2011 (Rank-based inference for linear models with stable errors; one of the three papers selected by the Editors among those published in the journal in 2010).
- International Conference on Robust Statistics, Valladolid, June 28-July 2 (3 talks: R-estimation in α-stable families; Rank tests for unit roots; Skew-symmetric densities and Fisher information).
- Invited speaker, NBER Summer Institute NBER/NSF Forecasting Seminar, July 12-15, 2011, Cambridge, Massachusetts (One-sided representations in the generalized dynamic factor model, with Mario Forni, Marco Lippi, and Paolo Zaffaroni).
- 58th World Statistics Congress of the ISI, Dublin, August 21-26 2011.
- Invited speaker, "Recent Development in Statistics, Empirical Finance and Econometrics", University of Kyoto, 0ctober 29-December 1, 2011 (One-sided representation of dynamic factor models).
- Invited speaker, Theory and Applications of Empirical Likelihood, Discriminant and Cluster Analysis, University of Wakayama, December 2-4 (Skew-symmetric distributions and Fisher information).
- Invited speaker, Waseda University, Tokyo, December 5-6 (Optimal rank-based tests for individual effects in small T, large n panel data).

- Visiting Senior Research Scholar, Princeton University, September-December 2011.

2012

- Statistics Seminar, Université Pierre-et-Marie-Curie (Paris 6), January 23 (Représentations unilatérales dans le modèle à facteurs dynamiques).
- Statistics Seminar, London School of Economics, January 27 (One-sided representation of dynamic factor models).
- Statistics Seminar, TU Wien, February 3 (Dynamic factor models in the presence of blocks).
- Statistics Seminar, Universität Braunschweig, February 15 (One-sided representation of dynamic factor models).
- Statistics Seminar, Department of Mathematics and Statistics, University of Melbourne, March 6 (Multivariate quantiles: from L_1 optimization to halfspace depth and local bilinear quantile regression).
- Statistics Seminar, University of Adelaide, March 9 (One-sided representation of dynamic factor models).
- Statistics Seminar, Université de Franche-Comté, Besançon, March 19 (One-sided representation of dynamic factor models).
- Statistics Seminar, ETH Zürich, March 23 (One-sided representation of dynamic factor models).
- Statistics Seminar, Universidad Carlos III, Madrid, April 17 (One-sided representation of dynamic factor models).
- Statistics Seminar, Universität Heidelberg, May 8 (The general dynamic factor model).
- Invited speaker, *Journées Internationales Analyse Statistique, Théorie et Applications* (JIASTA2012), Oujda, Morocco, June 4-6 (One-sided representation of dynamic factor models).
- Invited speaker, First Conference of the International Society for NonParametric Statistics, Chalkidiki, Greece, June 15-19 ((i) Of quantiles, ranks, spectra, and time series: a L_1 approach to spectral analysis; (ii) Optimal rank-based tests for common principal components).
- Statistics Seminar, Department of Statistics, University of Michigan, Ann Arbor, September 21 (Of quantiles, ranks, spectra, and time series: a L_1 approach to spectral analysis).
- Statistics Seminar, Department of Statistics, Texas A&M University, September 28 (Of quantiles, ranks, spectra, and time series: a L_1 approach to spectral analysis).
- Statistics Seminar, Department of Economics (Séminaire Marcel Dagenais), University of Montreal, October 11 (Of quantiles, ranks, spectra, and time series: a L_1 approach to spectral analysis).
- Statistics Colloquium, Department of Statistics, University of Chicago, October 29 (Of quantiles, ranks, spectra, and time series: a L_1 approach to spectral analysis).
- Statistics Seminar, Biostatistics Department, Columbia University, November 8 (Local Bilinear Multiple-Output Quantile Regression: from L_1 Optimization to Regression Depth).
- Invited speaker, "Frontiers in Quantile Regression", Mathematisches Forschungsinstitut, Oberwolfach, November 25-30 (Of quantiles, depth, and quantile regression).

– Invited speaker, *International Workshop on Recent Advances in Mathematical Statistics* organized in honor of Professor Marie Hušková, Charles University Prague, November 30-December 2 (The double sin of the skew-normal).

– Visiting Senior Research Scholar, Princeton University, September-December 2012.

2013

– Statistics Seminar, Department of Pure Mathematics and Mathematical Statistics, University of Cambridge, February 8 (Local bilinear multiple-output quantile regression: from L_1 optimization to regression depth).

– Invited Discussant, Read Paper Session, Royal Statistical Society, London, February 13 (discussion of a paper by J. Fan, Y. Liao, and M. Mincheva).

– Statistics Seminar, Laboratoire de Probabilités et de Modélisation Aléatoire, Paris 7, February 25 (Quantiles multivariés et profondeur conditionnelle; with D. Paindaveine).

– Invited doctoral course (High-Dimensional Time Series and Factor Models), Institute for Advanced Studies, Vienna, March 2013.

– Invited speaker, Mathematischen Kolloquium, Mathematisches Institut, Heinrich-Heine Universität Düsseldorf, April 12 (Local bilinear multiple-output quantile regression: from L_1 optimization to regression depth).

– Invited speaker, First Vienna Workshop on High-Dimensional Times Series in Macroeconomics and Finance, Vienna, Institut für Höhere Studien, May 2-4 (Signal detection in high dimension: testing sphericity against spiked alternatives).

– Keynote speaker, *Mathematical Statistics and Limit Theorems*, Conference in honor of Paul Deheuvels, Université Pierre-et-Marie-Curie (Paris 6), Paris, June 20-21 (Signal detection in high dimension: testing sphericity against spiked alternatives).

– Invited speaker, "Les Trimestres du Laboratoire de Mathématiques de Besançon", inaugural conference, June 25-26 (Signal detection in high dimension).

– ICORS 2013, Saint Petersburg, July 8-12 (R-estimation for asymmetric Independent Component Analysis).

– Invited discussant, 59th ISI World Statistics Congress, Hong Kong, 25-30 August 2013 (Frontiers in quantile regression).

– Invited speaker, "Recent Advances in Asymptotic Statistics", Chinese University of Hong Kong, August 29, 2013 (The asymptotics of high-dimensional sphericity and spiked alternatives).

– Invited speaker, Wilks Seminar, Princeton University, September 27 (Time series in high dimension: dynamic principal components, dynamic factor models, and the blessing of dimensionality).

– Invited speaker, Statistics Seminar, Cornell University, October 3 (Time series in high dimension: dynamic principal components, dynamic factor models, and the blessing of dimensionality).

– Invited speaker, "Applicable Semiparametrics" Conference, School of Business and Economics, Humboldt-Universität zu Berlin, October 11-12 (One-sided representation of dynamic factor models).

- Invited speaker, Statistics Seminar, Wharton School, University of Pennsylvania, October 24 (Signal detection in high dimension: testing sphericity against spiked alternatives).
- Invited speaker, Princeton-Humboldt Conference, Princeton, November 1-2, 2013 (Signal detection in high dimension: testing sphericity against spiked alternatives).
- Invited speaker, CeMMAP conference on "High-dimensional econometric models", London, November 7-9 (Signal detection in high dimension: testing sphericity against spiked alternatives).
- Invited speaker, Statistics Seminar, University of Ottawa, November 15 (Signal detection in high dimension: testing sphericity against spiked alternatives).
- Invited speaker, Workshop on "Advanced Multivariate Analysis", University of Lille 3, November 22 (Signal detection in high dimension: testing sphericity against spiked alternatives).
- Invited speaker, Centre de recherches mathématiques (CRM), Montréal, November 29 (Signal detection in high dimension: testing sphericity against spiked alternatives).
- Invited keynote speaker, CFE-ERCIM 2013 Conference, University of London, 14-16 December 2013 (Signal detection in high dimension: testing sphericity against spiked alternatives).
- Visiting Senior Research Scholar, Princeton University, September-December 2013.

2014

- Overseas Visiting Scholar, Saint John's College, Cambridge, January-April 2014.
- One-month senior Visiting Scholar, Economics Department and INET, Cambridge.
- Mathematics Colloquium, Ruhr Universität Bochum, January 29, 2014 (Signal detection in high dimension: testing sphericity against spiked alternatives).
- Invited speaker, Conference on Nonparametric and Semiparametric Methods, Cambridge, February 14-15 2014 (Of quantiles, ranks, spectra, and time series: a quantile-based approach to spectral analysis).
- Cambridge-INET Masterclass: Dynamic Factor Models and the Analysis of High-Dimensional Time Series, February 17-19, 2014.
- Statistics Seminar, Department of Pure Mathematics and Mathematical Statistics, University of Cambridge, February 21, 2014 (The double sin of the skew-normal).
- Econometrics Seminar, Department of Economics, University of Cambridge, February 26, 2014 (One-sided representation of dynamic factor models).
- Statistics Seminar, University of Sankt Gallen, March 10, 2014 (Signal detection in high dimension: testing sphericity against spiked alternatives).
- Statistics Seminar, Open University, Milton Keynes, March 14, 2014 (The double sin of the skew-normal).
- Invited speaker (Econometrics Journal Special Session on Large Dimensional Models), Annual meeting of the Royal Economic Society, Manchester, April 7- 9, 2014 (General dynamic factors and volatilities).
- Econometrics Seminar, Department of Economics, University of Southampton, May 14, 2014 (A quantile-based approach to spectral analysis).

– Statistics Seminar, Statistical Sciences Research Institute, University of Southampton, May 15, 2014 (The double sin of the skew-normal).

– Invited discussant, MMF Workshop on "Empirical Modelling of Financial Markets", Centre for Empirical Finance, Brunel University, London, May 28, 2014 (discussion of Andrew Harvey and Stephen Thiele, "Testing for time-varying correlation").

– Keynote speaker, 10th BMRC-DEMS Conference on Macro and Financial Economics/Econometrics, Brunel University, 28-30th May 2014 (Dynamic factors and volatilities).

– Invited speaker, NORDSTAT2014, the 25th Nordic Conference in Mathematical Statistics, University of Turku, June 2nd-6th, 2014 (R-Estimation for asymmetric independent component analysis).

– Plenary invited lecture, 2nd Conference of the International Society of NonParametric Statistics, Cadiz, June 12-16 (Monge-Kantorovich depth).

– Invited speaker, International Symposium on Financial Engineering and Risk Management 2014 (FERM 2014), Central University of Finance and Economics, Beijing, China, June 27-28, 2014 (Dynamic factors and volatilities).

– Invited speaker, 3rd Institute of Mathematical Statistics Asia Pacific Rim Meeting, Taipei, June 29-July 3, 2014 (Monge-Kantorovich depth).

– Invited speaker, "New Developments in Econometrics and Time Series", Rome, EIEF, September 11-13, 2014 (Dynamic factors and volatilities).

– Invited speaker, "Nonlinear Time Series Analysis – Thresholding and Beyond", Workshop in honor of Howell Tong, London School of Economics, September 19-20, 2014 (Quantile-based spectral analysis).

– Invited speaker, Workshop on Financial Time Series, Stevanovich Center, University of Chicago, September 26-28, 2014 (General dynamic factors and volatilities).

– Invited speaker, CREATES conference on "Advances in Dynamic Factor Models", Aarhus University, Denmark, November 14-15, 2014 (Dynamic factors and volatilities).

– Invited speaker, Sixth French Econometrics Conference – Celebrating Christian Gouriéroux's Contribution to Econometrics, Paris-Dauphine, December 5-6, 2014 (Dynamic factors and volatilities).

– Visiting Senior Research Scholar, Princeton University, September-December 2014.

2015

– Invited speaker, International Conference on Robust Statistics, Indian Statistical Institute, Kolkata, January 12-16, 2015 (Monge-Kantorovich depth, quantiles, ranks, and signs).

– Statistics Seminar, Department of Statistics, Technische Universität Dortmund, February 3 (Dynamic factors and volatilities).

– Statistics Seminar, Department of Applied Mathematics, Technische Universiteit Delft, February 19 (Dynamic factors and volatilities).

– Invited speaker, "Asymptotic Sufficiency, Asymptotic Efficiency, and Semimartingales", Waseda University, Tokyo, March 2-4, 2015 (Dynamic factors and volatilities).

– Invited speaker, Miura Statistical Seminar, Miura, March 5-7, 2015 (Monge-Kantorovich depth, quantiles, ranks, and signs).

– Econometrics Seminar, Centre de Recerca en Economia Internacional (CREI) Universitat Pompeu Fabra, Barcelona, March 24, 2015 (Dynamic factors and volatilities).

– Statistics Seminar, Czech Academy of Sciences and Charles University, Prague, April 29, 2015 (Monge-Kantorovich ranks and signs).

– Invited speaker, 55e Congrès de la Société Canadienne de Science Économique, session in honor of Jean-Marie Dufour, Montreal, May 13-15, 2015 (Dynamic factors and volatilities).

– Keynote speaker, workshop on "Nouveaux Développements dans la Modélisation et la Prévision des Risques extrêmes en Finance", Marseille, la Vieille Charité, May 18-19, 2015 (Dynamic factors and volatilities).

– Keynote speaker, Workshop in Statistical Finance, Southwestern University of Finance and Economics, Chengdu, Sichuan, China, May 25-27 (An introduction to factor model methods for time series analysis in high dimension; Dynamic factors and volatilities: extracting the market volatility shocks).

– 5th Workshop on New Developments in Econometrics and Time Series, Ruhr Universität Bochum, June 11-12.

– Invited speaker, 2nd Workshop on Goodness-of-Fit and Change-point problems, Department of Economics, National & Kapodistrian University of Athens, September 4-6, 2015 (Monge-Kantorovich depth, ranks, and signs).

– Invited speaker, *A Path through Probability*, workshop in honour of F.T. Bruss, Brussels, September 10-11 (Ranks, Signs, and Measure Transportation).

– Statistics Seminar, Toulouse School of Economics, Toulouse I, September 25, 2015 (Monge-Kantorovich depth, ranks, and signs).

– Seminar, Institut de Mathématique de Toulouse, Université Paul-Sabatier, Toulouse III, September 29, 2015 (Local bilinear multiple-output quantile regression).

– Economics Seminar, Department of Economics, Ca' Foscari University of Venice, November 2nd, 2015 (Dynamic factors and volatilities).

– Economics Seminar, Department of Economics, University of York, November 11, 2015 (Dynamic factors and volatilities).

– Statistics Seminar, Université catholique de Louvain, Louvain-la-Neuve, November 20, 2015 (Monge-Kantorovich depth, ranks, and signs).

– Invited speaker, Conference on *Complex Systems in Time Series*, London School of Economics, December 4-5, 2015 (Rank-based estimation for dynamic location-scale models).

– Invited speaker, Conference on *New Directions in Quantile Regression*, Cambridge-INET Institute, Cambridge December 10-11 (Elliptical quantile regression).

– Invited tutorial, CFE-ERCIM 2015 Conference, University of London, December 11, 2015 (Validity-robust semiparametrically efficient inference for nonlinear time series models).

– Invited speaker, CFE-ERCIM 2015 Conference, University of London, 12-14 December 2015, Special Invited Session on "Modern Multivariate and Robust Methods" (On multivariate ranks and signs).

2016

– Mathematics Department Colloquium, University of Texas at Dallas, January 12 (Monge-Kantorovich depth, ranks, and signs).

- Invited speaker, Workshop “Structured Multivariate Data”, Texas A&M, January 14-16, 2016 (R-estimation for Independent Component Analysis).
- Invited address, Manfred Deistler’s honorary degree, University of Dortmund, January 27, 2016 (Manfred Deistler and dynamic factor models).
- Statistics Seminar, Katholieke Universiteit Leuven, March 10 (Monge-Kantorovich depth, ranks, and signs).
- Invited speaker, Waseda Symposium on High-Dimensional Statistical Analysis for Time and Spatial Processes, Waseda University, Tokyo, February 29-March 2 (Monge-Kantorovich Ranks and Signs).
- Invited speaker, Kumamoto Symposium on Quantile Analysis for Time Series, Kumamoto (Kyushu), March 3-5 (R-estimation in nonlinear dynamic location-scale models).
- Invited speaker, Ibusuki Symposium, Ibusuki, March 6-8 (Elliptical Multiple-Output Quantile Regression).
- Invited speaker, DAGStat Tagung 2016, Fourth Joint Statistical Meeting of the Deutsche Arbeitsgemeinschaft Statistik, Göttingen, March 14-18 (Monge-Kantorovich depth, ranks, and signs).
- Invited speaker, BeneLuxMC Meeting, joint conference of the Belgian, Dutch and Luxembourgian Mathematical Societies, Amsterdam, March 22-23 (Monge-Kantorovich depth, ranks, and signs).
- Statistics Seminar, Institut für Mathematik, Humboldt-Universität zu Berlin and Weierstrass Institut, April 20 (Monge-Kantorovich depth, ranks, and signs).
- Statistics Seminar, Research Center for Statistics, University of Geneva, April 29 (Monge-Kantorovich depth, ranks, and signs).
- Statistics Seminar, University of Trento, May 24 (Monge-Kantorovich depth, ranks, and signs).
- Short course on Dynamic Factor Models, Chinese University of Hong Kong, June 12-26, 2016.
- Distinguished Lecture Session, 4th Institute of Mathematical Statistics Asia Pacific Rim Meeting, Hong Kong, June 27-30, 2016 (Multiple-output quantile regression: a survey).
- Invited speaker, Workshop *Advances in Statistics for Stochastic Processes, in honor of Yury Kutoyants’ 70th birthday*, Université du Maine, Le Mans, September 7-9, 2016 (Dynamic functional principal components).
- Invited speaker, FSM2016, University of Ghent, September 15-16.
- Statistics Seminar, Department of Statistics, University of Toronto, November 10 (Monge-Kantorovich ranks).
- Keynote speaker, Conference on *New Challenges for Big Data in Economics and Finance*, Toronto, November 11-12, 2016 (Dynamic functional principal components).
- Invited speaker, 5th Princeton Day of Statistics, Princeton, November 18, 2016 (Center-outward distribution functions and Monge-Kantorovich ranks).
- ECARES 25th, Université libre de Bruxelles, November 25, 2016 (Big data, econometrics, and ECARES).

– Invited speaker, XIVth Latin American Congress of Probability and Mathematical Statistics (CLAPEM 2016), Universidad de Costa Rica, the Universidad Nacional and the Instituto Tecnológico de Costa Rica, San José, Costa Rica, December 5-9, 2016 (Glivenko-Cantelli for Monge-Kantorovich distribution functions).

– Invited speaker, Computational and Financial Econometrics Meeting (CFE2016), Seville, December 9-11, 2016 (Dynamic functional principal components).

2017

– Statistics Seminar, Department of Statistics, University Carlos III, Madrid, January 13 (On distribution and quantile functions in $\mathbb{R}^d$: a measure-transportation approach).

– Keynote speaker, 7th Workshop in Time Series Econometrics, University of Zaragoza, March 30-31, 2017 (Quantile spectral analysis for locally stationary time series).

– Statistics Seminar, Department of Statistics, Universidade de Santiago de Compostela, April 27, 2017 (Dynamic Principal components and optimal dimension reduction in functional time series).

– Keynote speaker, International Conference on Statistics and Econometrics (CISEM-2017), University of Monastir, Campus Mahdia, Tunisia, May 5-7, 2017 (On distribution and quantile functions in $\mathbb{R}^d$: a measure-transportation approach).

– Mathematics Colloquium, Department of Mathematics, Universidade de Valladolid, May 18, 2017 (On distribution and quantile functions in $\mathbb{R}^d$: a measure-transportation approach).

– Short course, Universidad Carlos III de Madrid, May 22-24 (An introduction to Le Cam's asymptotic theory of statistical experiments).

– Invited plenary speaker, Conference on Stochastic Dynamical Models in Mathematical Finance, Econometrics, and Actuarial Sciences, Bernoulli Center of the EPFL in Lausanne, May 29-June 2, 2017.

– Invited speaker (opening lecture), Third Vienna Workshop on High-Dimensional Time Series in Macroeconomics and Finance, Institute for Advanced Studies, Vienna, June 8-9, 2017 (Dynamic principal components and optimal dimension reduction in functional time series).

– Seminar talk, Department of Statistics & Actuarial Science, 50th Anniversary Seminar Series, the University of Hong Kong, June 14, 2017 (On distribution and quantile functions in $\mathbb{R}^d$: a measure-transportation approach).

– Keynote speaker, 1st International Conference on Econometrics and Statistics (EcoSta2017), Hong Kong University of Science and Technology, Hong Kong, June 15-17, 2017 (Quantile spectral analysis for locally stationary time series).

– Cátedra de Excelencia Seminar, Department of Statistics, University Carlos III, Madrid, June 20 (Optimal dimension reduction for high-dimensional and functional time series).

– Keynote speaker, Set Optimization and Abstract Convexity with Applications in Statistics, Free University of Bozen/Bolzano, Campus Bruneck/Brunico, June 30-July 1st (On distribution and quantile functions in $\mathbb{R}^d$: a measure-transportation approach).

– Special Bernoulli Journal Invited Lecture, 81th ISI World Statistics Congress, Marrakech, July 16-21, 2017 (Quantile spectral analysis for locally stationary time series).

– Statistics Seminar, Southampton Statistical Sciences Research Institute, University of Southampton, October 12, 2017 (Quantile spectral analysis for locally stationary time series).

– Invited speaker, 25th Annual Meeting of the Belgian Royal Statistical Society, Leuven, October 18-20, 2017 (Quantile spectral analysis for locally stationary time series).

– Econometrics Seminar, Erasmus School of Economics, Erasmus Universiteit Rotterdam, October 26, 2017 (Quantile spectral analysis for locally stationary time series).

– Invited talk, Symposium on *Big Data in Finance, Retail & Commerce: Statistical and Computational Challenges*, University of Lisbon, November 2-3, 2017 (Dynamic Factor Models and the Analysis of Time Series in High Dimension).

– *New Developments in Econometrics and Time Series*, Rome, November 16-17, 2017 (program and organization committees).

– 2017 Hermann Otto Hirschfeld Lecture Series, Weierstrass Institut and Humboldt-Universität zu Berlin, November 20-21, 2017 (Four lectures on Dynamic Factor Models).

– Keynote speaker, Workshop on Semiparametric Inference, University of Ghent, December 13-14, 2017 (On distribution and quantile functions in $\mathbb{R}^d$: a measure-transportation approach).

2018

– Statistics Seminar, Ecole Polytechnique, Palaiseau, January 9, 2018 (On distribution and quantile functions in $\mathbb{R}^d$: a measure-transportation approach).

– 2018 P.C. Mahalanobis Memorial Lectures, the Indian Statistical Institute, Kolkata, Chennai, Bengaluru and Delhi, February 2018 (On distribution and quantile functions in $\mathbb{R}^d$: a measure-transportation approach; Quantile spectral analysis for locally stationary time series; Optimal dimension reduction for high-dimensional and functional time series).

– Invited speaker, Waseda Symposium on *High Dimensional Statistical Analysis for Time and Spatial Processes* , Waseda University, Tokyo, February 26-28, 2018 (Quantile spectral analysis for locally stationary time series).

– Invited speaker, Kagawa Symposium on *Quantile Analysis for Time Series*, March 1-3, 2018 (On optimal dimension reduction in time series analysis).

– Invited speaker, Kouchi Seminar, March 4-6, 2018 (From spiked models to factor models: the needle and the haystack).

– Keynote speaker, Waseda Research Institute for Science and Engineering Institute for Mathematical Science Kickoff Meeting, March 6, 2018 (On distribution and quantile functions in $\mathbb{R}^d$: a measure-transportation approach).

– Statistics Seminar, London School of Economics, March 23, 2018 (Optimal dimension reduction for time series and factor models).

– Invited talk, workshop "Forecasting from Complexity, Institute for Mathematics and its Applications, University of Minnesota in Minneapolis, April 23-27, 2018 (Optimal dimension reduction for high-dimensional and functional time series).

– Invited seminar talk, Isaac Newton Institute, Cambridge May 22, 2018 (On distribution and quantile functions in $\mathbb{R}^d$: a measure-transportation approach).

– Keynote speaker, Workshop on "Macroeconomic and Financial Time Series Analysis", the Lancaster University Management School, May 31-June 1, 2018 (A Simple R-Estimation Method for Semiparametric Duration Models).

– Invited speaker, Symposium "*Mathematics for Data*", Université de Liège, June 4-6, 2018 (On distribution and quantile functions in $\mathbb{R}^d$: a measure-transportation approach).

– Invited speaker, Conference "*New Statistical Methods for Big Data*", Universidad Carlos III de Madrid, June 7-8, 2018 (Identification of global and national shocks in international financial markets via general dynamic factor models).

– Invited speaker, *International Symposium on Financial Engineering and Risk Management*, School of Data Science, School of Management, and Institute of Finance, Fudan University, Shanghai, June 13-14, 2018 (Identification of global and national shocks in international financial markets via general dynamic factor models).

– Invited speaker, *International Workshop on Statistical Challenges in High-dimensional and Complex Data"*, Columbia University, September 14-15, 2018 (R-Estimation for Semiparametric Duration Models).

– Keynote speaker (opening talk), XXIIIrd Brazilian Symposium on Probability and Statistics (Brazilian Statistics Association), São Pedro, September 24-28, 2018 (On distribution and quantile functions in $\mathbb{R}^d$: a measure-transportation approach).

– Seminar talk, Université de Paris-Nanterre, October 25, 2018 (Center-outward distribution and quantile functions in $\mathbb{R}^d$: a measure-transportation approach).

– Seminar talk, Technische Universität Wien, November 13, 2018 (Center-outward distribution and quantile functions in $\mathbb{R}^d$: a measure-transportation approach).

– Seminar talk, University of Graz, November 15, 2018 (Center-outward distribution and quantile functions in $\mathbb{R}^d$: a measure-transportation approach).

– Guest lecture at KULeuven, *Mathematics of the 21st Century*, November 23, 2018 (On a result by Alessio Figalli, 2018 Fields Medalist).

2019

– Séminaire de Probabilités et Statistique de l'Institut de Mathématiques de Toulouse, January 22, 2019 (Center-outward distribution and quantile functions in $\mathbb{R}^d$: a measure-transportation approach).

– Keynote speaker, Waseda Cherry Blossom Workshop, Tokyo, March 19–21, 2019 (Recovering the market volatility shocks in high-dimensional time series: consistency, rates, and prediction intervals).

– Invited participant, Humboldt Colloquium "Research without Borders—Alexander von Humboldt's Legacy Today" Madrid, April 11–13, 2019.

– Invited speaker, 51th *Journées de Statistique*, annual meeting of the Société Française de Statistique, special Mathematical Statistics Section of the SFdS session on "Statistique mathématique et Transport optimal", Nancy, June 3–7 (Ordonner $\mathbb{R}^d$, $d \geq 2$: fonctions de répartition, fonctions quantiles et transports de mesures) [canceled due to health problems].

– Invited speaker, Workshop on High-Dimensional Data Analysis, Durham University, June 27–28 (Volatilities in high-dimensional time series).

– Keynote speaker, 2019 African Meeting of the Econometric Society, Rabat, July 11–13, 2019 (Volatilities in high-dimensional time series).

– Invited speaker, *Modern Challenges in Spectral Analysis of Time Series*, University of Bristol, September 9–11, 2019 (Spectral analysis and high-dimensional time series).

– Invited speaker, *Analytical Methods in Statistics*, Liberec (Czech Republic), September 16–19, 2019 (Center-outward R-estimation for semiparametric VARMA models).

– Invited speaker, Wilks Seminar, University of Princeton, October 18, 2019 (Center-outward distribution and quantile functions in $\mathbb{R}^d$: a measure-transportation approach).

– Invited speaker, Statistics Seminar, University of Washington, Seattle, October 20–27, 2019 (Center-outward R-estimation for semiparametric VARMA models).

2020

– Technische Universität Wien, February 16-23, 2020.

– Invited seminar talk, Toulouse School of Economics, Toulouse, March 5, 2020 (Center-outward R-estimation for semiparametric VARMA models).

– Invited talk, Annual Meeting of the Société belge de Mathématique, March 25, 2020 (Measure transportation and semiparametric inference). Canceled.

– Invited seminar talk, Department of Mathematics, Universidade de Valladolid, March 26–31, 2020 (Center-outward R-estimation for semiparametric VARMA models. Center-outward rank tests for multiple output regression and MANOVA). Canceled.

– Invited speaker, 52th *Journées de Statistique*, annual meeting of the Société Française de Statistique, Mathematical Statistics Section of the SFdS session on "Statistique mathématique et Transport optimal", Nice, June 25-29 (Ordonner $\mathbb{R}^d$, $d \geq 2$: fonctions de répartition, fonctions quantiles et transports de mesures). Canceled.

– Invited speaker, Conference "New Trends in Mathematical Stochastics", Euler International Mathematical Institute, Saint Petersburg, August 31–September 4. Canceled.

– Invitation to the St. Petersburg Department, Steklov Mathematical Institute of the Russian Academy of Sciences, October-December 2020. Canceled.

2021

– Seminar talk (virtual), University of Jyväskylä, May 7, 2021 (Fully distribution-free rank tests for multiple-output regression and MANOVA).

– Seminar talk (virtual), Université de Strasbourg, May 24, 2021 (Fully distribution-free rank tests for multiple-output regression and MANOVA).

– Joint Statistical Meetings (virtual), Seattle, August 2021 (Fully distribution-free rank tests for multiple-output regression and MANOVA).

– Invited speaker, "Contributions in Extreme Value Statistics," Jan Beirlant Emeritus Celebration, Leuven September 30-October 1, 2021 (From multivariate quantiles to copulas and statistical depth, and back).

– Classe des Sciences de l'Académie Royale de Belgique, October 9 (75 années d'inférence fondée sur les rangs: trop d'information tue-t-il l'information?).

– Seminar talk, Department of Statistics, University Carlos III de Madrid, November 5 (Fully distribution-free rank tests for multiple-output regression and MANOVA: a measure transportation approach).

– Invited talk, "New Bridges between Mathematics and Data Science," University of Valladolid, November 8-11, 2021 (From multivariate quantiles to copulas and statistical depth, and back).

– Seminar talk, Faculty of Mathematics, Charles University, Prague, December 15 (Fully distribution-free rank tests for multiple-output regression and MANOVA: a measure transportation approach).

2022

- Invited talk, Waseda International Symposium (virtual), Tokyo, March 6-9 (Fully distribution-free rank tests for multiple-output regression and MANOVA).
- Seminar talk, Granger Centre Seminar, University of Nottingham, March 31 (Factor models for high-dimensional functional time series).
- Seminar talk, Department of Economics, University of Bologna, May 9 (Factor models for high-dimensional functional time series).
- Keynote speaker, "Set Optimization for Applications," Bilkent University, Ankara, May 30-June 3, 2022 (From multivariate quantiles to statistical depth, and back).
- Keynote speaker, 5th Vienna Workshop on High-dimensional Time Series in Macroeconomics and Finance – A tribute to Manfred Deistler, Vienna June 9-10 (Factor models for high-dimensional functional time series).
- Manfred Deistler, a Laudatio, 5th Vienna Workshop on High-dimensional Time Series in Macroeconomics and Finance – A tribute to Manfred Deistler, Vienna June 9-10.
- Laplace lecture, 53th *Journées de Statistique*, annual meeting of the Société Française de Statistique, Lyon, June 13-17 (Quantiles multivariés, profondeur statistique et transports de mesures).
- Organization of a topic contributed session on *Recent Advances in Rank-Based Inference*, 2022 IMS Annual Meeting, London, June 27-30.
- Gottfried Noether Lecture, Joint Statistical Meetings, Washington DC, August 6-11 (From quantiles to depth, and back).
- Organization of an invited session, Joint Statistical Meetings, Washington DC, August 6-11.
- Invited talk, "Goodness-of-Fit and Change-Point Problems," Rennes, September 2-4 (A measure-transportation-based GOF test for directional data).
- Seminar talk, Kyushu University, Fukuoka, September 9 (From quantiles to depth, and back).
- Seminar talk, Waseda University, Tokyo, September 17 (Measure transportation: three applications in statistical inference).
- Invited talk, International Rome-Waseda Symposium on Time Series Analysis, University of Roma 2 Tor Vergata, October 5–7 (Rank-based testing for semiparametric VAR models: a measure transportation approach).
- Invited talk, International Bologna-Waseda Workshop on Time Series Analysis, University of Bologna, October 8–10 (A class of rank-based VARMA portmanteau tests: Chitturi-Hosking-Li-McLeod revisited).
- Seminar talk, ESSEC and Institut des Actuaires, Paris, November 9 (From multivariate quantiles to statistical depth, and back).

2023

- Keynote speaker (opening conference, "Optimal Transport Statistics for Economics and Related Topics," Sixth International Econometric Conference of Vietnam, Ho Chi Minh City, January 9-11 (From multivariate quantiles to statistical depth, and back).
- Keynote speaker, First Luxembourg-Waseda Seminar, Luxembourg, January 23-25 (Fully distribution-free rank tests for multiple-output regression and MANOVA).

- Online seminar talk, TIFR Bangalore and Centre for Applicable Mathematics of the Tata Institute of Fundamental Research, Mumbai, January 31 (From copulas and statistical depth to multivariate quantiles and ranks).
- Seminar talk, Faculty of Mathematics, Charles University, Prague, February 22 (Rank-based portmanteau tests for VARMA models: Hosking, Chitturi, and Li-McLeod revisited).
- Hommage à Pierre Dagnelie, Gembloux Agro-Bio Tech, March 14.
- Keynote speaker, Workshop *Complex Data in Econometrics and Statistics*, Limassol (Cyprus), April 3-4 (Portmanteau tests for VARMA models: Hosking, Chitturi, and Li-McLeod revisited).
- Seminar talk, Department of Mathematics and Statistics, University of Cyprus, Nicosia, April 5 (From copulas and depth to measure transportation: the long quest for multivariate quantiles and ranks).
- Invited speaker, *Statistical Foundations of Data Science and their Applications*, a conference in celebration of Jianqing Fan's 60th Birthday, Princeton, May 8-10, 2023 (Inferential Theory for Generalized Dynamic Factor Models).
- Invited speaker, *Recent Advances in Statistics and Data Science*, a conference in honor of Regina Liu and Cun Hui Zhang, Rutgers University, May 11-13, 2023 (Center-outward rank- and sign-based VARMA portmanteau tests: Chitturi, Hosking, and Li–McLeod revisited).
- Keynote speaker, tenth Italian Congress of Econometrics and Empirical Economics, University of Cagliari, May 26-28, 2023 (From copulas and depth to measure transportation: the long quest for multivariate quantiles and ranks).
- Seminar talk, University of Vienna, June 19, 2023 (From copulas and depth to measure transportation: the long quest for multivariate quantiles and ranks).
- Workshop "New Perspectives of Quantile Regression in Applied Sciences," University of Rome la Sapienza, September 22, 2023 (Center-outward multiple-output quantile regression).
- Seminar talk, Department of Mathematics, University of Geneva, September 29 (Multiple-output quantile regression).
- Seminar talk, Department of Statistics and Data Science, Washington University in Saint Louis (MO), October 3 (Multiple-output quantile regression).
- Invited talk, "Big Data and Machine Learning in Econometrics, Finance, and Statistics," University of Chicago, October 5-7 (Forecasting Value at Risk and Expected Shortfall in large portfolios).
- Seminar talk, National and Capodistrian University of Athens, November 6 (Multiple-output quantile regression).
- Seminar talk, Charles University, Prague, November 22 (A measure-transportation-based GOF test for directional data).
- Seminar talk, Colloquium of the Department of Stochastic Informatics, Institute of Information Theory and Automation, Czech Academy of Sciences, Prague, November 24 (Nonparametric measure-transportation-based multiple-output center-outward quantile regression).
- Seminar talk, University of L'Aquila, November 29 (The long quest for multivariate quantiles).

– Invited speaker, "High-Dimensional Data: Theory and Applications—a synergy between physics, statistics, and economy," INFN, Laboratori Nazionali del Gran Sasso, Assergi, Italy, November 30 (Factor Models for High-Dimensional Functional Time Series).

– Invited session, 16th International Conference of the ERCIM Working Group on Computational and Methodological Statistics, Berlin, December 16-18, 2023.

– Invited talk, 2023 IMS International Conference on Statistics and Data Science (ICSD), Lisbon, Portugal, December 18-21, 2023 (Measure-transportation-based multiple-output quantile regression).

2024

– Keynote speaker, 17th International Conference of the Econometrics Society of Thailand, Chiang Mai, January 4-6, 2024 (Center-outward multiple-output quantile regression).

– Keynote speaker, ECONVN2024, Seventh International Econometric Conference of Vietnam, Ho Chi Minh City, January 9-11, 2024 (Dynamic Factor models: a genealogy).

– Seminar talk, University of Kyushu, Fukuoka, Japan, January 15 (Forecasting Value-at-Risk and Expected Shortfall in Large Portfolios: a General Dynamic Factor Model Approach).

– Invited talk, Workshop on "Time series and Directional Statistics," University of Luxembourg, February 29 (A measure-transportation-based GOF Test for directional data).

– Seminar talk, University of Lund, Sweden, March 14 (The long quest for multivariate quantiles).

– Seminar talk, Heriot-Watt University, Edinburgh March 28 (Measure-transportation-based multiple-output quantile regression).

– Invited talk, Workshop on Time Series in honor of Mohamed Bentarzi, Université Houari Boumediène, Algiers, Algeria, May 2nd (Régression quantile multivariée) [canceled due to a delayed flight].

– Invited talk (online), "Analysis of Complex Data: Tensors, Networks and Dynamic Systems," Banff, May 12-17, 2024 (Factors: the static, the dynamic, and the weak).

– Probastat 2024, Smolenice, Slovakia, May 20–23 (Consistent distribution-free affine-invariant tests for the validity of independent component models).

– Invited lecture, *Leçons de Mathématiques et d'Informatique d'Aujourd'hui*, École Doctorale de Mathématiques et Informatique de l'Université de Bordeaux, May 24 (Quantiles, Rangs et Signes dans $\mathbb{R}^d$: une approche fondée sur les Transports de Mesures).

– 55th Journées de Statistique, annual meeting of the Société française de Statistique, Bordeaux, May 27–31 (Consistent distribution-free affine-invariant tests for the validity of independent component models).

– Seminar talk, Weierstrass-Institut für Angewandte Analysis und Stochastik, Berlin, June 12 (The long quest for quantiles in $\mathbb{R}^d$ and manifolds).

– Medallion Lecture, IMS annual Meeting – Bernoulli-IMS 11th World Congress in Probability and Statistics, Bochum, August 12-16, 2024 (Ancillarity, maximal ancillarity, and the elimination of nuisances).

– Invited session organization, COMPSTAT, Giessen, August 27–30.

– Keynote speaker, Analytical Methods in Statistics (AMISTAT 2024), September 9–11, Bardejov, Slovakia (Measure-transportation-based multiple-output quantile regression).

– Invited speaker, Time Series Symposium 2024, Frascati, October 1–4 (The Dynamic, the Static, and the Weak: factor models and the analysis of high-dimensional time series).

– Keynote speaker, JSL2024, Faculté de Mathématiques de l'Université Houari Boumediène, Algiers, November 9–10 (Régression quantile multivariée).

– Invited lecture, *Lucien Le Cam (1924-2000)*, Paris, Institut Henri Poincaré, November 19 (Le Cam, Hájek, and ranks).

– Annual Meeting of the Royal Statistical Society of Belgium, Gent, November 7–8 (The Dynamic, the Static, and the Weak: factor models and the analysis of high-dimensional time series).

– CFE-CM Statistics 2024, London, December 14–16 (Optimal tests for the absence of random individual effects in large n and small T dynamic panels, with Y. Goto).

2025

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Miscellanea

(a) Member of the Advisory Editorial Board of the *International Statistical Review* (2019 to present)

(b) Member of the Editorial Boards of

- *Journal of Business and Economic Statistics* (Associate Editor, 2018 to present)
- *Journal of the American Statistical Association* (Associate Editor, 2005 to present)
- *Econometrics & Statistics* (Associate Editor, 2015 to present)
- *Statistical Inference for Stochastic Processes* (Associate Editor, 1997- 2013; co-Editor-in-Chief, 2013–2019; Associate Editor, 2019 to present)
- *Statistical Methods and Applications*, Journal of the Italian Statistical Society (Associate Editor, 2016 to present)
- *Publications de l'Institut de Statistique de l'Université de Paris*, from 2000 on *Annales de l'Institut de Statistique de l'Université de Paris* (1989 to present)
- the Springer series *Statistique et Probabilités Appliquées* (2000 to present)

- *International Statistical Review* (Associate Editor, 2007–2009; Editor, 2009–2010; Editor-in-Chief, 2010–2015)
- *Journal of Econometrics* (Associate Editor, 2013–2019)
- *Journal of the Japan Statistical Society* (Associate Editor, 2008–2014)
- *Journal of Time Series Analysis* (1994-2009)
- *Annals of Computational and Financial Econometrics* (Associate Editor, 2013–2015)
- the Springer series *Mathématiques et Applications* (2000-2009)
- *Journal de la Société Française de Statistique* (1999–2009)
- *Journal of Statistical Planning and Inference* (Associate Editor, 1990–1997; Coordinating Editor, 1997–2008)
- *Sankhya* (2006–2008)

– *Bulletin de la Société Mathématique de Belgique* (1987–2000)
– *Statistique et Analyse des Données* (1985–1990)
– *Cahiers du Centre d'Etudes de Recherche Opérationnelle* (1985–1995)
– Editor of the Series *Actuariat*, Editions de l'Université de Bruxelles, 1991–2002.

(c) Referee reports for

Académie Royale de Belgique; Advances in Econometrics; American Mathematical Society; Annales de l'IHP; Annals of Computational and Financial Econometrics; Annals of Statistics; Annals of the Institute of Statistical Mathematics; Applied Mathematics and Computation; Applied Stochastic Models and Data Analysis; Applied Stochastic Models for Business and Industry; Asian Journal of Economics and Banking; Bernoulli; Biometrika; Bulletin de la Société Mathématique de Belgique; Cahiers du Centre d'Etudes de Recherche Opérationnelle; Cambridge University Press; the Canadian Journal of Statistics; Collectanea Mathematica; Communications in Statistics/Theory and Methods; Comptes Rendus de l'Académie des Sciences de Paris; Computational Statistics; Computational Statistics and Data Analysis; Econometrica; Econometric Theory; Econometrics and Statistics; The Econometrics Journal; Economic Inquiry; Economics Letters; Empirical Economics; W. de Gruyter; IEEE Transactions on Information Theory; IEEE Transactions on Signal Processing; Entropy; Insurance, Mathematics and Economics; International Journal of Forecasting; International Journal of Mathematics and Mathematical Sciences; International Statistical Review; JORBEL; Journal of Applied Econometrics; Journal of the American Statistical Association; Journal of Business and Economic Statistics; Journal of Computational and Applied Mathematics; Journal of Computational and Graphical Statistics; Journal of Econometrics; Journal of the Iranian Statistical Society; Journal of the Japan Statistical Society; Journal of the Korean Statistical Society; Journal of Mathematical Control and Information; Journal de Mathématiques du Maroc; Journal of Multivariate Analysis; Journal of Nonparametric Statistics; Journal of the Royal Statistical Society Series B; Journal de la Société Française de Statistique; Journal of Statistical Planning and Inference; Journal of Stochastic Analysis and Applications; Journal of Time Series Analysis; Linear Algebra and its Applications; Mathematical Methods of Statistics; Metrika; Modern Stochastics: Theory and Applications; Oxford Research Encyclopedia of Economics and Finance; Oxford University Press; Pakistan Journal of Statistics and Operations Research; Physica A; Probability Theory and Related Fields; Proceedings of the Royal Society, Series A; Publications des Facultés Universitaires Saint-Louis; Publications de l'Institut de Statistique de l'Université de Paris; Review of Economics and Statistics; Review of Economic Studies; Revista Colombiana de Estatistica; REVSTAT Statistical Journal; Revue de Statistique appliquée; Sankhya; Scandinavian Journal of Statistics; SIAM Classics in Applied Mathematics Series; SIAM Journal on Mathematics of Data Science ; Springer-Verlag; Statistical Inference for Stochastic Processes; Statistical Methodology; Statistical Methods & Applications; Statistical Papers; Statistical Science; Statistica Neerlandica; Statistica Sinica; Statistics; Statistics & Computing; Statistics & Decisions; Statistics & Probability Letters; Statistique et Analyse des Données; Statistique et Société; Stochastic Processes and their Applications; Student; Studies in Nonlinear Dynamics & Econometrics; Tatra Mountains Mathematical Publications; TEST; J.Wiley; World Scientific.

(d) Member of the Organization or Program Committees, or invited session organizer for

– XIVth *Journées de Statistique*, annual Meeting of the Association des Statisticiens Universitaires, de la Société Francophone de Classification, de la Société Statistique de Paris et de la Société Française de Biométrie, Brussels, May 1982.
– Colloque "Approches non paramétriques dans l'Analyse des Séries chronologiques", Institut des Hautes Etudes de Belgique, Brussels, September 1985.
– 6th Rencontre Franco-Belge de Statisticiens - Processus spatiaux et spatio-temporels, Brussels, November 1985.

- 7th Rencontre Franco-Belge de Statisticiens - Statistique et Calcul scientifique, Rouen, November 1986.
- 8th Rencontre Franco-Belge de Statisticiens - Méthodes Bayésiennes : nouvelles tendances et expériences récentes, Louvain-la-Neuve, November 1987.
- 10th Rencontre Franco-Belge de Statisticiens - Invariance, Brussels, November 1989 (Chair of the Program Committee).
- XXIVth *Journées de Statistique*, Annual Meeting of the French Statistical Societies, Brussels, May 1992 (Chair of the Program Committee).
- 13th Rencontre Franco-Belge de Statisticiens - Résultats nouveaux en Théorie des Valeurs extrêmes, Lille, November 1992.
- XXVIIth *Journées de Statistique*, Annual Meeting of the French Statistical Societies, Jouy-en-Josas, May 1995.
- 16th Rencontre Franco-Belge de Statisticiens - Modèles non linéaires de Séries chronologiques, Bruxelles, November 1995 (Chair of the Program Committee).
- XXVIIIth *Journées de Statistique*, Annual Meeting of the French Statistical Societies, Université Laval, Québec, May 1996.
- 1ère Conférence Internationale de Mathématiques appliquées et des Sciences de l'Ingénieur, Casablanca, 1997.
- XXIXth *Journées de Statistique*, Annual Meeting of the French Statistical Societies, Carcassonne, May 1997.
- "The Art of Nonparametrics", Louvain-la-Neuve, February 1997.
- 2ème Conférence Internationale de Mathématiques appliquées et des Sciences de l'Ingénieur, Casablanca, 1998.
- XXXIth *Journées de Statistique*, Annual Meeting of the French Statistical Societies, Grenoble, May 1999 (Chair of the Program Committee).
- 3ème Conférence Internationale de Mathématiques appliquées et des Sciences de l'Ingénieur, Casablanca, 1999.
- XXXIInd *Journées de Statistique*, Annual Meeting of the French Statistical Societies, Fès, May 2000.
- 4ème Conférence Internationale de Mathématiques appliquées et des Sciences de l'Ingénieur, Casablanca, 2000.
- First Brussels-Prague Statistics Seminar, Brussels, 8-9 September 2000 (Chair).
- XXXIVth *Journées de Statistique*, Annual Meeting of the Société française de Statistique, Brussels, May 2002 (Chair of the Program Committee).
- 24th European Meeting of Statisticians, Prague, August 2002 (organization of a special invited session).
- International Conference on Current Advances and Trends in Nonparametric Statistics (IMS-ASA), Iraklion, July 2002 (organization of a special invited session).
- 54th Session of the International Statistical Institute, Berlin, August 2002 (organization of a special invited session).
- XIth Annual Meeting of the Belgian Statistical Society, La Roche-en-Ardenne, October 2003 (chair of the Program Committee).
- XIIth Annual Meeting of the Belgian Statistical Society, Vielsalm, October 2004 (member of the Program Committee).
- Third Brussels-Prague Seminar in Mathematical Statistics, Brussels, May 13-14, 2005 (Chair).

- Joint BeNeLux-France Conference in Mathematics, Ghent, May 20-22, 2005 (session co-organizer).
- Summer School (European Courses in Advandced Statistics) on "Quantile Regression and Applications", La Roche-en-Ardenne, September 10-15, 2005 (program chair).
- Joint Meeting of the Canadian Statistical Society and the Société française de Statistique, Ottawa, May 25-29, 2008 (Co-Chair of the Scientific Committee).
- Second Brussels-Waseda Statistics Seminar on Time Series and Financial Statistics, Brussels, June 22-25, 2008 (Chair).
- International Workshop on Flexible Modelling: Smoothing and Robustness (FMSR 2008), Leuven, November 12 - 14, 2008.
- Fourth Brussels-Waseda Statistics Seminar on Time Series and Financial Statistics, ENSAI Rennes and ULB Brussels, June 18 and 22, 2009 (Chair).
- Troisièmes Rencontres des jeunes Statisticiens (Société française de Statistique), Centre Paul Langevin, Aussois, August 31-September 4, 2009.
- Workshop on "Time Series, Quantile Regression and Model Choice", supported by the Deutsche Forschungsgemeinschaft (DFG), (SFB 823 "Statistical Modelling of Nonlinear Dynamic Processes"), Dortmund, Germany, September 20-21, 2010.
- 1er Congrès Africain de Probabilités et Statistique (CAPSI), Dakar June 6-9, 2011.
- Program Committee, *New Developments in Econometrics and Time Series*, Brussels, September 12-13, 2011.
- "A Passion for Science", Royal Academy of Belgium, January 20-21, 2012 (Scientific Committee).
- XLIVth *Journées de Statistique*, Annual Meeting of the Société française de Statistique, Brussels, May 2012 (Member of the Organizing Committee).
- First Conference of the International Society for NonParametric Statistics (ISNPS), Chalkidiki, June 15-19, 2012.
- Program Committee, *New Developments in Econometrics and Time Series*, Rome, September 10-11, 2012.
- Comité scientifique, "Trimestres du Laboratoire de Mathématiques de Besançon", 2012-
- Comité scientifique, *Mathematical Statistics and Limit Theorems*, Conference in honor of Paul Deheuvels, Paris, June 21-22, 2013.
- Program and Organization committees, *New Developments in Econometrics and Time Series*, Brussels, September 12-13, 2013.
- Program Committee, *Large-scale Factor Models in Finance*, co-organized by SoFiE (Society for Financial Econometrics), the Swiss Finance Institute and the University of Lugano, Lugano, October 11-12, 2013.
- Program Committee, *New Developments in Econometrics and Time Series*, Rome, September 11-13, 2014.
- Program Committee, *New Developments in Econometrics and Time Series*, Bochum, June 11-12, 2015.
- 30th European Meeting of Statisticians, Amsterdam, July 2015 (Chair of the Program Committee).
- Scientific Programme Committee, CFE 2015, University of London, December 12-14, 2015.
- Invited Session organizer, Conference of the International Society for NonParametric Statistics (ISNPS), Avignon, June 11-16, 2016.

- Scientific Programme Committee, *New Developments in Econometrics and Time Series*, Madrid, September 22-23, 2016.
- Organizer of a Special Invited Session, Computational and Financial Econometrics Meeting (CFE2016), Seville, December 9-11, 2016.
- Organizer of a Special Invited Session, 31st European Meeting of Statisticians, Helsinki, July 2017.
- Member of the Scientific Programme Committee, CFE 2017, London, December 16-18, 2017.
- Member of the Scientific Programme Committee, First Nonparametric UC3M Workshop, Universidad Carlos 3 de Madrid, March 2017.
- Scientific Programme Committee, *New Developments in Econometrics and Time Series*, Rome, EIEF, November 16-17, 2017; Copenhagen, September 20-21, 2018; Graz, June 6-7, 2019; Rennes, October 1-2, 2020 (canceled).
- Organization of a topic contributed session, 2022 IMS Annual Meeting, London, June 27-30, 2022.
- Organization of an invited session, Joint Statistical Meetings, Washington DC, August 6-11, 2022.
- Program Committee member of ITISE 2023, 9th International Conference on Time Series and Forecasting.
- Organization Committee member, 54th *Journées de Statistique* (JdS 2023), annual meeting of the Société française de Statistique, Brussels July 3–8, 2023.
- Organizer of a special invited session, 16th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2023), University of Applied Sciences, Berlin, Germany, 16-18 December 2023.
- Co-organizer (with Cun-Hui Zhang, Aukosh Jagannath, Tracy Ke, Elynn Chen, Rong Chen, and Han Xiao) of the workshop "Analysis of Complex Data: Tensors, Networks and Dynamic Systems," BIRS Proposal 24w5263, Banff International Research Station, May 12–17, 2024.
- Scientific Programme Committee, COMPSTAT 2024, 26th International Conference on Computational Statistics, Giessen, Germany, August 27-30, 2024.
- Scientific Program Committee, International Conference of Econometrics and Empirical Economics (ICEEE), Palermo, May 29–31, 2025.

(e) Supervision of doctoral students

(1991) (1) Jelloul Allal. R-estimateurs pour le paramètre d'une autorégression d'ordre un. *[Professor, Mathematics Department, Université Mohammed Ier, Oujda.]*

(1992) (2) Youssef Benghabrit. Inférence asymptotique paramétrique et non paramétrique pour les modèles bilinéaires. *[Professor and Directeur adjoint, Ecole Nationale Supérieure des Arts et Métiers (ENSAM), Université Moulay Ismaïl, Meknès.]*

(1993) (3) Abdelaziz El Matouat. Ordre d'un modèle et contraste de Kullback. *[Professor, Université du Havre.]*

(1993) (4) Khalid Rifi. Bornes de Berry-Esséen pour les statistiques de rangs sérielles. *[Professor, Ecole Normale Supérieure, Fès.]*

(1994) (5) Mohamed Bentarzi. Modèles de séries chronologiques à coefficients périodiques. *[Professor, Department of Mathematics, Université des Sciences et Techniques Houari Boumediène, Algiers.]*

(1995) (6) Abderrahmane Jarrar-Oulidi. R-estimation pour les processus autorégressifs d'ordre p. *[Professor, Université Sidi Mohammed Ben Abdellah, Fès.]*

(1995) (7) Abdelhadi Akharif. Tests paramétriques et non paramétriques dans les modèles de régression et d'autorégression à coefficients aléatoires. *[Professor, Université Abdelmalek Essaadi, Tanger.]*

(1996) (8) Abdeslam Serroukh. Inférence asymptotique pour les modèles ARMA fractionnaires. *[Professor, University Sidi Mohamed Ben Abdellah, Faculty of Taza, Morocco]*

(1996) (9) Mustafa Zafri. Généralisation multivariée des tests de rangs : inférence fondée sur les interdirections. *[Directeur de la Comptabilité Nationale, Haut Commissariat au Plan, Rabat]*

(1997) (10) Omar Assili. Tests paramétriques et non paramétriques dans les modèles à erreurs ARCH. *[Professor, Institut Supérieur de Commerce et d'Administration des Entreprises (ISCAE), Casablanca.]*

(2000) (11) Catherine Vermandele. Tests d'hypothèses basés sur les signes et les rangs : efficacités paramétrique et semi-paramétrique (copromoter: Bas Werker). *[Professor, Université libre de Bruxelles.]*

(2001) (12) Faouzi El Bantli. M-estimation under nonstandard conditions and inference based on autoregression rank scores.

(2002) (13) Davy Paindaveine. Optimal invariant signed rank tests for elliptically symmetric location and time series problems. This thesis received the 2002 Prix de la Société française de Statistique, awarded every second year for the best PhD dissertation in Statistics defended in a French-speaking University; Davy Paindaveine since then also obtained the 2007 Gottfried Noether Young Researcher Award of the American Statistical Association. *[Professor, Université libre de Bruxelles.]*

(2002) (14) Mohamed Selmouni. Estimation adaptative dans les modèles ARCH semi-paramétriques avec tendance linéaire. *[Professor, ICHEC Brussels and University of Namur.]*

(2003) (15) Abdessamad Saidi. Modèles ARMA multivariés: estimation et tests de non-corrélation. *[Head of Research Department, Central Bank of Morocco, Rabat.]*

(2004) (16) Soumia Lotfi. Efficient tests for the periodic structure of some time series models.

(2005) (17) Christel Bouquiaux. Semiparametric estimation for extreme values (copromoters: Jan Beirlant and Bas Werker).

(2005) (18) Maria Caterina Bramati. Some robust methods in the analysis of multivariate time series (copromoter: Davy Paindaveine). *[Professor, Faculty of Economics, University of Rome La Sapienza.]*

(2007) (19) Delphine Cassart. Optimal tests of symmetry (copromoter: Davy Paindaveine).

(2008) (20) Roman Liška. Three essays on spectral analysis and dynamic factors. *[European Union Research Center of Ispra.]*

(2008) (21) Thomas Verdebout. Optimal inference for one-sample and multisample principal component analysis (copromoter: Davy Paindaveine). *[Professor, University of Lille III then Université libre de Bruxelles.]*

(2009) (22) Hiroyuki Taniai. Statistical inference for the quantiles of GARCH processes. *[Professor, Tsuru University, Japan.]*

(2010) (23) Nezar Bennala. Optimal tests for panel data (copromoter: Davy Paindaveine). *[Assistant Professor, Facultés universitaires Saint-Louis, Brussels then Université libre de Bruxelles.]*

(2014) (24) Tobias Kley. Quantile-based spectral analysis: asymptotic theory and computation (Ruhr Universität Bochum; copromoter Holger Dette). *[Institute for Mathematical Stochastics, Georg-August Universität Göttingen.]*

(2014) (25) Chintan Mehta. Rank-based inference for independent component analysis (Princeton University; copromoter Jianqing Fan). *[Senior Research Engineer,* Principles*, N.Y.]*

(f) Participation in Doctoral Committees (external member)

- Université de Lille I - Processus fractionnaires, Esmeralda Gonçalves, January 1988.
- Université Joseph Fourier, Grenoble - Fonction d'autocorrélation partielle et estimation autorégressive dans le domaine temporel, Serge Degerine, July 1988.
- Université Joseph Fourier, Grenoble - Identification du degré d'un processus autorégressif en présence de valeurs aberrantes, Housseini Fouzia Laraqui, July 1989.
- Université de Paris Sud-Orsay - Convergence faible de la statistique de rangs pour des variables aléatoires faiblement dépendantes et non stationnaires, Michel Harel, November 1989.
- Université de Montréal - Nonparametric tests of independence with econometric applications, Brian Campbell, March 1990.
- Université catholique de Louvain, Louvain-la-Neuve - Apport en analyse spectrale d'un périodogramme modifié, Pierre Dutilleul, March 1990.
- Université de Lille I - Sur diverses méthodes d'estimation du contour d'une répartition ponctuelle aléatoire, H. Abbar, July 1990.
- Université de Lille I - Infinie divisibilité, principes d'invariance et estimation de noyaux de transition en théorie des mesures aléatoires, Paulo de Oliveira, January 1991.
- Université de Paris 6 - Contribution à l'estimation et à la prévision non paramétrique d'un processus ponctuel multidimensionnel, Nadia Bensaid, July 1992.
- Université de Paris 6 - Méthodes non paramétriques en analyse des séries temporelles multivariées: estimation de mesures de dépendance, Emmanuel Guerre, January 1993.
- Université Paul Sabatier, Toulouse - Familles exponentielles sur les cônes symétriques, Evelyne Bernadac, February 1993.
- Université de Rouen - Habilitation à diriger des recherches, Daniel Fourdrinier, June 1994.
- Université de Limoges - Convergence faible du processus empirique et de la U-statistique empirique corrigée à variables dépendantes, B. Ragbi, November 1994.
- Université Henri Poincaré, Nancy - Etude des problèmes d'estimation de certains modèles ARMA évolutifs, S. Hamdoune, November 1994.
- Université de Paris 13 - Etude de tests paramétriques et non paramétriques asymptotiquement puissants pour les modèles autorégressifs bilinéaires, Joseph N'Gatchou Wandji, May 1995.
- Université de Lille I - Habilitation à diriger des recherches, M. Carbon, December 1995.
- Université de Toulouse I - Contribution à l'étude statistique des modèles de régression semi-paramétriques, Marian Hristache, February 1996.
- Katholieke Universiteit Leuven - Applications of generalized quantiles in multivariate statistics, Colette Vynckier, January 1997.
- Université Joseph Fourier, Grenoble - Estimation non linéaire par ondelettes, M. Bouatou, March 1997.
- University of Oulu (Finland) - On multivariate sign and rank methods, Jyrki Möttönen, June 1997.
- Universiteit Antwerpen - Robust regression for data analysis, Mia Hubert, December 1997.

– Université de Lille I - Habilitation à diriger des recherches, Jean-Michel Zakoian, December 1997.
– Faculté des Sciences de l'Université Sidi Mohamed ben Abdellah, Fès - Statistiques de rangs et polynômes de Bernstein, A. Mellouk, March 1999.
– Université de Paris 6 - Tests minimax d'hypothèses paramétriques contre alternatives non-paramétriques, Christophe Pouet, January 2000.
– Université de Montréal - Quelques contributions en théorie de l'échantillonnage et dans l'analyse des séries chronologiques multidimensionnelles, P. Duchesne, June 2000.
– Technische Universiteit Eindhoven - Exact distributions of distribution-free statistics, Mark van de Wiel, September 2000.
– Faculté des Sciences de l'Université Mohamed Ier, Oujda - Estimation non paramétrique fondée sur les rangs pour les modèles ARMA, A. Kaaouachi, October 2000.
– Université de Paris 6 - Habilitation of Emmanuel Guerre, July 2001.
– Université Paul Sabatier, Toulouse - Contribution à l'étude statistique des modèles à variables latentes, V. Dortet-Bernadet, December 2001.
– Université de Montpellier - Habilitation à diriger des Recherches, Ali Gannoun, May 2002.
– Université de Calais et de la Côte d'Opale - Habilitation à diriger des Recherches, Elias Ould Said, June 2002.
– University of Jyväskylä, Finland - Sign and rank covariance matrices, with applications in multivariate analysis, Esa Ollila, June 2002.
– Université Mohammed Ier, Oujda - Contribution à l'estimation fonctionnelle dans les espaces de Banach, Noureddine Rhomari, July 2002.
– Université d'Orléans - Comportement asymptotique de certains estimateurs sur des modèles paramétriques et sous des conditions non standard, Hugo Lhéritier, May 2003.
– Université Pierre-et-Marie-Curie (Paris 6) and Université d'Ouagadougou - Tests fonctionnels d'ajustement et de non-influence pour des variables aléatoires dépendantes, Dembo Gadiaga, November 2003.
– Université Mohammed Ier, Oujda - Contribution à la résolution de problèmes de tests d'hypothèses paramétriques et non paramétriques dans quelques modèles de séries temporelles, Said El Melhaoui, September 2003.
– Université Pierre-et-Marie-Curie (Paris 6) - Contributions à la statistique non paramétrique et ses applications, Habilitation of Gérard Biau, December 2003.
– University of Jyväskylä, Finland - On nonparametric tests of independence and robust canonical correlation analysis, Sara Taskinen, December 2003.
– Université de Paris Sud-Orsay - Estimation semi-paramétrique de la période de fonctions périodiques inconnues dans divers modèles statistiques: théorie et applications, Céline Lévy-Leduc, November 2004.
– Universität Bremen - Optimal estimation in regression and autoregression, Habilitation Ursula Müller, January 2005.
– Université de Montréal et Ecole des Hautes Etudes en Sciences Sociales (E.H.E.S.S.) - Inférence exacte en échantillon fini dans des modèles de régression et des modèles structurels, Elise Coudin, June 2007.
– Université Paul Sabatier (Toulouse III) - Inférence statistique par des transformées de Fourier pour des modèles de régression semi-paramétriques, Myriam Vimond, July 2007.
– Université Pierre-et-Marie-Curie (Paris 6) - Sur l'estimation fonctionnelle et les tests non paramétriques d'adéquation en séries temporelles non linéaires - Habilitation à diriger des Recherches, Naâmane Laib, October 2007.

- Tilburg University - Integer-valued time series, Ramon van den Akker, November 2007.
- Scuola Superiore Sant'Anna, Pisa - Dynamic factor models : new developments in forecasting and structural identification techniques, Matteo Barigozzi, April 2008.
- Université Pierre-et-Marie-Curie (Paris 6) - Contributions à la prévision statistique, Olivier Faugeras, November 2008.
- Université Catholique de Louvain - Evolutionary factor analysis, Giovanni Motta, February 2009.
- Université de Lille III - Contribution à la statistique non paramétrique et à l'estimation fonctionnelle - Habilitation à diriger des Recherches, Sophie Dabo-Niang, November 2009.
- Università della Svizzera italiana, Lugano, Switzerland - Contributions to robustness theory, Davide La Vecchia, March 2011.
- Princeton University - Essays on the estimation of time series models, Lei Qi, June 2011.
- Tilburg University - Limiting experiments for panel data and jump-diffusion models, Irene Gaia Becheri, December 2012.
- Faculté des Sciences Dhar El Mahraz, Fès - Identification de modèles par les critères d'information et la technique de rééchantillonnage avec données incomplètes, Freedath Djibril Moussa, March 2014.
- Princeton University - High-Dimensional Covariance Matrix Estimation and Financial Applications, Martina Mincheva, May 2014.
- Princeton University - Essays on high-dimensional factor models, Xiaofeng Shi, May 2014.
- University of Jyväskylä, Finland - On statistical properties of blind source separation methods based on joint diagonalization, Jari Miettinen, June 2014.
- Princeton University - Testing and forecasting factor models, Jiawei Yao, November 2014.
- Université Paul-Sabatier, Toulouse - Surfaces quantiles: propriétés, convergences et applications, Adil Ahidar, July 2015.
- University of Adelaide - Semiparametric models for nonlinear spatio-temporal data, with application to the United States housing price indexes, Dawlah Alsulami, March 2016.
- Indian Statistical Institute, Kolkata - Asymptotics of large variance-covariance matrices, Monika Bhattacharjee, June 2016.
- Abdelmalek Essaâdi University, Tangier - Efficient detection of random coefficients in regression models, Mohamed Fihri, January 2018.
- Charles University, Prague - Habilitation, Marek Omelka, 2018.
- Indian Institute of Technology Kanpur - A study on nonparametric methodologies related to location parameter, scatter parameter and regression function, Chitradipa Chakraborty, November 2018.
- Universiteit Gent - Advances in flexible models and efficient statistical procedures for heavy-tailed and asymmetric data, Slađana Babić, June 2021.
- Université catholique de Louvain - Transporting probability measures : some contributions to statistical inference, Gilles Mordant, July 2021.
- Université d'Aix-Marseille - Transport optimal et Echantillonnage, Habilitation à diriger des Recherches, Thibaut Le Gouic, July 2023.

(g) Varia

- Secretary of the Jury of the Section des Sciences Economiques (Université libre de Bruxelles), 1978-1981.
- Secretary of the Jury of the Institut de Statistique (Université libre de Bruxelles), 1989-1995.
- Coordinator of ERASMUS programs with the Universities of Lille, Lisbon, Paris (ENSAE), Rome (la Sapienza), 1988-1991.
- Local coordinator for ERASMUS programs with the Universities of Lille, Lisbon, Coimbra, Porto, Berlin, Montpellier, Barcelona, of Sussex in Brighton, 1990-1996.
- Local coordinator for TEMPUS programs with the Romanian Universities, 1991-1996.
- Organisation of the "Chaire U.P.E.A. de Théorie Mathématique des Assurances", 1989-1992.
- Member of the Centre d'Economie Mathématique et d'Econométrie (CEME) (Université libre de Bruxelles).
- Elected member of the Council of the Association des Statisticiens Universitaires (A.S.U.), 1984–1988.
- Member of the Scientific Committee of the Rencontres Franco-Belges de Statisticiens, 1984-1995.
- Member of the Comité d'Evaluation de l'Institut IMAG (Informatique et Mathématiques Appliquées de Grenoble), pour l'Unité de Recherche associée au CNRS TIM3 (Techniques de l'Informatique, des Mathématiques, de la Microélectronique et de la Microscopie quantitative) then for the Laboratoire de Modélisation et Calcul (Institut National Polytechnique de Grenoble, Ecole Normale Supérieure de Lyon et Université Joseph Fourier de Grenoble), 1989-1994.
- Member of the Comité d'Evaluation of OMII (Outils Mathématiques pour l'Informatique et l'Industrie; Institut National de Sciences Appliquées et Université de Rouen), 1989-1994.
- Member of the Comité Scientifique du CREST-ENSAE, 1990-1994 et 1994- .
- Member of the Recruiting Committee of the Département de Mathématiques appliquées de l'Ecole Polytechnique (Palaiseau), 1991-1996.
- Vice-President of the Société belge de Statistique, 1991-1993.
- Member of the Conseil wallon de la Statistique, 1991-2000 .
- Elected member of the Council of the Association pour la Statistique et ses Utilisations (A.S.U.), 1992-1996.
- President of the Institut de Statistique (Université libre de Bruxelles), 1992-1996.
- Member of CORE (Université Catholique de Louvain), 1992-1994.
- President of the Société belge de Statistique/Belgische Vereniging voor Statistiek, 1993-1996.
- Coordinator of a European Human Capital and Mobility Network on Non- and Semiparametric Statistical Methods with the universities of Berlin (von Humboldt), Heidelberg, Grenoble, Eindhoven, Utrecht, Coimbra, Canterbury, Louvain-la-Neuve, Leuven and Diepenbeek, 1995-1998.
- Member of the Board of the Institut des Hautes Etudes de Belgique, 1995-2003.
- President of the Jury of the Institut de Statistique (Université libre de Bruxelles), 1995-2006.
- Member of the Mathematics Committee of the Fonds voor Wetenschappelijk Onderzoek Vlaanderen, 1997-2006.

– Member of the Commission de Mathématique of the Fonds National de la Recherche Scientifique, 1997-2010.
– Member of the Commission Scientifique de l'Institut des Comptes Nationaux (National Bank of Belgium), 1997-2000.
– President of the Conseil wallon de la Statistique, 1997-2000.
– Elected member of the Council of the Société Mathématique de Belgique, 1999-2000.
– Member of the Jury of the Service des Etudes et de la Statistique of the Région wallonne, 1999- .
– Member of the Council of the Belgian Statistical Society, 1999-2007.
– Member of the scientific committee of the Laboratoire LEN7, Institut National Polytechnique de Toulouse, 2000- .
– Co-Director of ECARES (European Centre for Advanced Research in Economics and Statistics), 2002-2005.
– Vice-President of the Institut de Statistique et de Recherche Opérationnelle (Université libre de Bruxelles), 2003-2004.
– Member of the Conseil de l'Institut de Statistique de l'Université de Paris, 2003-2005.
– Elected member of the Conseil de la Société française de Statistique, 2003-2006.
– Member of the Jury, F.R.I.A. grants, 2003- (vice-President, 2004-2006).
– President of the Institut de Statistique et de Recherche Opérationnelle (Université libre de Bruxelles), 2004-2005.
– Vice-Président, Société française de Statistique, 2004-2006.
– Member of the NSF Statistics Screening Panel, Washington DC, 2005.
– Chair of the Commission de Mathématique of the Fonds National de la Recherche Scientifique, 2006-2010.
– Vice-President, Département de Mathématique de l'Université libre de Bruxelles, 2006 -2009.
– President of the Jury of the Masters in Statistics (Université libre de Bruxelles), 2007-2009.
– Member of the Conseil de l'Institut de Statistique de l'Université de Paris (ISUP), 2007-
– Council member, the Jaroslav Hájek Center for Theoretical and Applied Mathematics (Prague).
– Member of the steering committee of ICORS, 2007-
– Member of the Mathematics Panel, Academy of Finland, 2008.
– Member of the NSF Statistics Screening Panel, Washington DC, January 2010.
– Chair of the Committee of the *Conférence Lucien Le Cam*, Société française de Statistique, 2000-2010.
– Member of the Charting Committee, International Society for NonParametric Statistics, 2012-
– Member of the IMS Nominating Committee for the periods August 2012-July 2013, August 2013-July 2014 and August 2014-July 2015.
– Chair of the IMS Nominating Committee for the period August 2013-July 2014.
– Elected Member, Council of the International Society for Nonparametric Statistics, 2015–
– Member of the 2019 ISI Karl Pearson Award Committee.

– Chair, the Laplace Award Committee, Société française de Statistique, 2024–

(h) Participation in evaluation committees

– Laboratoire de Statistique et Modélisation du CREST, INSEE Paris (2006)
– Departement Wiskunde, Vrije Universiteit Brussel (2007)
– AERES evaluation of the Laboratoire de Mathématiques de l'Université de Paris-Dauphine (CEREMADE) (2007): member of the visiting committee
– AERES evaluation of the Equipe d'accueil de Mathématiques de l'Université de Paris 10 (MODAL'X) (2007): member of the visiting committee
– AERES evaluation of the Laboratoire de Mathématiques Paul Painlevé (Université de Lille I) (2008): member of the visiting committee
– AERES evaluation of the Laboratoire de Mathématiques de Besançon (UMR 6623) (2011): member of the visiting committee
– Valutazione della Qualità della Ricerca 2004-2010, Evaluation of the quality of research in Italian universities for the period 2004-2010: member of the group of experts for Economics and Statistics (2013).
– AERES evaluation of the Laboratoire de Statistique Théorique et Appliquée (Université de Paris 6) (2013): Chair of the visiting committee
– Evaluator, ERC consolidator and frontier research grants, European Commission (2013, 2015, 2021)
– HCERES evaluation of the Institut de Recherche Mathématiques de Rennes (2016): member of the visiting committee
– HCERES evaluation of the Laboratoire J.A. Dieudonné de Nice-Sophia-Antipolis (2017): member of the visiting committee
– HCERES evaluation of the Laboratoire de Mathématiques de l'Université de Reims (2019): member of the visiting committee
– HCERES evaluation of the Laboratoire Algèbre-Géométrie-Modélisation de l'Université de Cergy-Pontoise (2019): member of the visiting committee
– Lund University Research Quality Evaluation (2020): member of the visiting committee
– Czech Academy of Sciences 2020 Research Quality Evaluation: member of the committee.