

# Liste de publications de MATH

## Articles dans des revues avec comité de lecture

### A paraître

Boucher, M., Francq, C., Goto, Y., & Verdebout, T. (2025). On runs tests for directional data and their local and asymptotic optimality properties. *Statistica sinica*.

Peralvo Maroto, L., Paindaveine, D., & Verdebout, T. (2026). Rank tests for PCA under weak identifiability. *Annals of statistics*.

García-Portugués, E., Verdebout, T., & Paindaveine, D. (2026). On a class of Sobolev tests for symmetry of directions, their detection thresholds, and asymptotic powers. *Journal of the American Statistical Association*.

Delaby, R., Leemans, D., & Tranchida, P. A. (2026). Geometries with trialities arising from linear spaces. *Algebraic combinatorics*.

Leemans, D., & Mulpas, J. (2026). Two gluing methods for string C-group representations of the symmetric groups. *Combinatorial Theory*.

Kong, T.-T., Feng, Y. Q., Hou, D. D., Leemans, D., & Qu, H. P. (2026). Chiral polytopes of order  $2p^m$ . *Ars Mathematica contemporanea*.

Fischer, A., Gaunt, R., & Swan, Y. (2025). Stein's Method of Moments on the Sphere. *Bernoulli*.

Batista, E., Hautekiet, W., Saracco, P., & Vercruysse, J. (2025). Towards a classification of simple partial comodules of Hopf algebras. *Journal of algebra*, 664, 312-347. doi:10.1016/j.jalgebra.2024.10.005

Denuit, M., Petit, R., Simon, P.-A., & Trufin, J. (2026). Recursive Partitioning based on Gini index for insurance pricing. *European Actuarial Journal*.

Bernou, A., & Duerinckx, M. (2026). Uniform-in-time estimates on the size of chaos for interacting Brownian particles. *Probability theory and related fields*.

### 2026

Leemans, D., & Vandenschrick, A. (2026). On simple groups that admit a string C-group representation. *The art of discrete and applied mathematics*, 9, #1.07.

Bernou, A., Duerinckx, M., & Ménard, M. (2026). Creation of chaos for interacting Brownian particles. *Stochastic processes and their applications*, 193, 104849. doi:https://doi.org/10.1016/j.spa.2025.104849

### 2025

Duerinckx, M., Lemm, M., & Pagano, F. (2025). On Bourgain's approach to stochastic homogenization. *Archive for rational mechanics and analysis*, 249, 81. doi:<https://doi.org/10.1007/s00205-025-02145-5>

Jansen, M. (2025). Constructing wavelets by welding segments of smooth functions. *Journal of Computational and Applied Mathematics*, 477, 117160.

Duerinckx, M., & Gloria, A. (2025). Large-scale dispersive estimates for acoustic operators: homogenization meets localization. *Journal of functional analysis*, 289(8), 111068. doi:<https://doi.org/10.1016/j.jfa.2025.111068>

Duerinckx, M., & Jabin, P.-E. (2025). Dynamics of point-vortex systems near thermal equilibrium: relaxation or not? *Probability and Mathematical Physics*, 6(4), 1181-1244. doi:[10.2140/pmp.2025.6.1181](https://doi.org/10.2140/pmp.2025.6.1181)

Simon, P.-A., Denuit, M., & Trufin, J. (2025). DPTree and DPForest: Tree-based methods fulfilling demographic parity. *Annals of Actuarial Science*, 1-19. doi:[10.1017/S1748499525100092](https://doi.org/10.1017/S1748499525100092)

Denuit, M., Huyghe, J., Simon, P.-A., & Trufin, J. (2025). Tweedie dominance for autocalibrated predictors and Laplace transform order. *Scandinavian actuarial journal*. doi:[10.1080/03461238.2025.2557295](https://doi.org/10.1080/03461238.2025.2557295)

Bonheure, D., & Galdi, G. P. (2025). Global Weak Solutions to a Time-Periodic Body-Liquid Interaction Problem. *Annales de l'Institut Henri Poincaré. Analyse non linéaire*, 42(6), 1509–1541.

Leemans, D., & Toledo Roy, M. A. (2025). Faithful and thin non-polytopal maniplexes. *Ars Mathematica contemporanea.*, P1.04.

Hou, D. D., Feng, Y. Q., & Leemans, D. (2025). Regular 3-polytopes of order  $2n p$ . *Journal of group theory*. doi:[10.1515/jgth-2024-0154](https://doi.org/10.1515/jgth-2024-0154)

Leemans, D., Stokes, K., & Tranchida, P. (2025). Flag transitive geometries with trialities and no dualities coming from Suzuki groups. *Journal of combinatorial theory. Series A*, 213, 106033. doi:[10.1016/j.jcta.2025.106033](https://doi.org/10.1016/j.jcta.2025.106033)

Hou, D. D., Feng, Y. Q., Leemans, D., & Qu, H. P. (2025). String C-groups of order  $4pm$ . *Communications in algebra*. doi:[10.1080/00927872.2025.2459858](https://doi.org/10.1080/00927872.2025.2459858)

Araujo-Pardo, G., Conder, M., Garcia Colin, N., Kiss, G., & Leemans, D. (2025). A note on girth-diameter cages. *The art of discrete and applied mathematics*, 8, 3.06. doi:[10.26493/2590-9770.1743.19f](https://doi.org/10.26493/2590-9770.1743.19f)

Fischer, A., Gaunt, R., & Swan, Y. (2025). Stein's method of moments for truncated multivariate distributions. *Electronic Journal of Statistics*, 19(1), 1784-1808. doi:[10.1214/25-EJS2373](https://doi.org/10.1214/25-EJS2373)

Fiorini, S., Joret, G., Weltge, S., & Yuditsky, Y. (2025). Integer programs with bounded subdeterminants and two nonzeros per row. *Journal of the Association for Computing Machinery*, 72(1), 3.

Aprile, M. F., Fiorini, S., Joret, G., Kober, S., Seweryn, M. M., Weltge, S., & Yuditsky, Y. (2025). Integer programs with nearly totally unimodular matrices: the cographic case\*. *Proceedings of the annual ACM-SIAM Symposium on Discrete Algorithms*, 2301-2312.

Boucher, M., Meilán-Vila, A., Meurice, V., & Verdebout, T. (2025). On a modified Watson test for spherical location. *Statistical papers*, 66(4), 79. doi:10.1007/s00362-024-01651-0

Fine, J., He, W., & Yao, C. (2025). Convergence of the hypersymplectic flow on T4 with T3#symmetry. *Journal of the London Mathematical Society*, 111(6). doi:10.1112/jlms.70217

Alonso Garcia, J., Boado-Penas, M. D. C., & Eisenberg, J. (2025). Assessing public pensions using risk measures: pay-as-you-go versus mixed schemes. *Scandinavian actuarial journal*, 1-27. doi:10.1080/03461238.2025.2514601

Duerinckx, M., Ertzbischoff, L., Girodroux-Lavigne, A., & Höfer, R. R. (2025). Hydrodynamic limit of multiscale viscoelastic models for rigid particle suspensions. *Archive for rational mechanics and analysis*, 249, 23. doi:https://doi.org/10.1007/s00205-025-02092-1

Premoselli, B., & Robert, F. (2025). One-bubble nodal blow-up for asymptotically critical stationary Schrödinger-type equations. *Journal of functional analysis*, 288(6), 110808. doi:10.1016/j.jfa.2024.110808

Bonheure, D., Galdi, G. P., & Gazzola, F. (2025). Flow-induced oscillations via Hopf bifurcation in a fluid–solid interaction problem. *Mathematische Annalen*. doi:10.1007/s00208-025-03179-6

Bonheure, D., Galdi, G. P., & Patriarca, C. (2025). Forced Oscillations of a Spring-Mounted Body by a Viscous Liquid: Rotational Case. *Pure and Applied Analysis*, 7, 4.

Germain, G., & Swan, Y. (2025). Bounding the L1-Distance Between One-Dimensional Continuous and Discrete Distributions via Stein's Method. *Journal of theoretical probability*, 38(1), 1-43.

Jansen, M. (2025). Multiscale local polynomial density estimation. *Communications in statistics. Theory and methods*, 54(16), 5164-5190. doi:10.1080/03610926.2024.2434933

## Rapports de recherche, comptes rendus, lettres à l'éditeur, working papers

2025

Denuit, M., Trufin, J., & Verdebout, T. (2025). Comparison of predictors' performance in insurance pricing: testing for Bregman dominance based on Murphy diagrams. *European Actuarial Journal*, 15, 493-504. doi:10.1007/s13385-025-00429-4