Liste de publications de MATH

Articles dans des revues avec comité de lecture

A paraître

Cahen, M., Gérard, M., Gutt, S., & Hayyani, M. (2020). Distributions associated to almost complex structures on symplectic manifolds. *Journal of symplectic geometry*.

Cahen, M., Gutt, S., & Waldmann, S. (2020). Nuclear Group Algebras for Finitely Generated Groups. *Bulletin of the Belgian Mathematical Society Simon Stevin*.

Bertelson, M., & Meigniez, G. G. (2023). Conformal Symplectic structures, Foliations and Contact Structures. *Journal of symplectic geometry*, 40.

Bonheure, D., & Galdi, G. P. (2024). Global Weak Solutions to a Time-Periodic Body-Liquid Interaction Problem. *Annales de l'Institut Henri Poincaré. Analyse non linéaire*., To appear.

Fine, J., & Panov, D. (2020). Symplectic domination. *Bulletin of the London Mathematical Society*, 4.

Fine, J., & Herfray, Y. (2021). An ambient approach to conformal geodesics. *Communications in Contemporary Mathematics*.

Leemans, D., Stokes, K., & Tranchida, P. A. (2024). On trialities and their absolute geometries. *Advances in geometry*.

Cameron, P., Fernandes, M. E., & Leemans, D. (2024). The number of string C-groups of high rank. *Advances in mathematics*.

Leemans, D., & Toledo Roy, M. A. (2024). Faithful and thin non-polytopal maniplexes. *Ars Mathematica contemporanea*.

Anastasiou, A., Barp, A., Briol, F. X., Ebner, B., Gaunt, R., Ghaderinezad, F., Gorham, J., Ley, C., Liu, Q., Mackey, L., Reinert, G., & Swan, Y. (2022). Stein’s Method Meets Statistics: A Review of Some Recent Developments. *Statistical science*.

Ernst, M., & Swan, Y. (2021). Distances between distributions via Stein's method. *Journal of theoretical probability*.

Duerinckx, M., Gloria, A., & Shirley, C. (2021). Approximate normal forms via Floquet-Bloch theory: Nehorosev stability for linear waves in quasiperiodic media. *Communications in Mathematical Physics*.

Spenko, Š., & Van den Bergh, M. (2023). A class of perverse schobers in Geometric Invariant Theory. *Selecta mathematica, New series*.

2024

Cruzeiro, E. Z., De Mol, C., Massar, S., & Pironio, S. (2024). Quantum-inspired classification based on quantum state discrimination. *Quantum Machine Intelligence*, 6(2). doi:10.1007/s42484-024-00216-6

Bonheure, D., Galdi, G. P., & Gazzola, F. (2024). Stability of equilibria and bifurcations for a fluid-solid interaction problem. *Journal of differential equations*, 408, 324-367. doi:10.1016/j.jde.2024.07.007

Morsomme, H., Alonso Garcia, J., & Devolder, P. (2024). Intergenerational risk sharing in pay-as-you-go pension schemes. *Scandinavian actuarial journal*, 1-29. doi:10.1080/03461238.2024.2427229

Loris, I., & Rebegoldi, S. (2024). Convergence analysis of a primal-dual optimization-by-continuation algorithm. *Journal of computational and applied mathematics*, 452, 116299. doi:10.1016/j.cam.2024.116299

Belhouari, O., Deelstra, G., & Devolder, P. (2024). Hybrid life insurance valuation based on a new standard deviation premium principle in a stochastic interest rate framework. *European Actuarial Journal*, 2024, 1-28.

Deelstra, G., Devolder, P., & Roelants Du Vivier, B. (2024). Impact of correlation between interest rates and mortality rates on the valuation of various life insurance products. *ASTIN bulletin*, 2024, 1-31.

Bernard, G., & Verdebout, T. (2024). Power enhancement for dimension detection of Gaussian signals. *Statistica sinica*, 34, 2161-2182.

Hallin, M., Liu, H., & Verdebout, T. (2024). Nonparametric Measure-transportation-based Methods for Directional Data. *Journal of the Royal Statistical Society. Series B. Methodological*, 86, 1172-1196.

Denuit, M., Huyghe, J., Trufin, J., & Verdebout, T. (2024). Testing for auto-calibration with Lorenz and Concentration curves. *Insurance. Mathematics & economics*, 117, 130-139. doi:10.1016/j.insmatheco.2024.04.003

Grosskopf, P., & Vercruysse, J. (2024). Free and co-free constructions for Hopf categories. *Journal of pure and applied algebra*, 228(10), 107704. doi:10.1016/j.jpaa.2024.107704

Berger, J., Saracco, P., & Vercruysse, J. (2024). Everybody knows what a normal gabi-algebra is. *Advances in mathematics*, 451, 109797. doi:10.1016/j.aim.2024.109797

Batista, E., Hautekiet, W., & Vercruysse, J. (2024). A comonadicity theorem for partial comodules. *Quaestiones mathematicae*. doi:10.2989/16073606.2024.2322011

Berchio, E., Bonheure, D., Galdi, G. P., Gazzola, F., & Perotto, S. (2024). Equilibrium Configurations of a Symmetric Body Immersed in a Stationary Navier–Stokes Flow in a Planar Channel. *SIAM journal on mathematical analysis*, 56(3), 3759-3801. doi:10.1137/23M1568752

Bonheure, D., Casteras, J.-B., & Premoselli, B. (2024). Classification of radial blow-up at the first critical exponent for the Lin–Ni–Takagi problem in the ball. *Mathematische Annalen*. doi:10.1007/s00208-024-02888-8

Bhattacharya, S., Lefèvre, L., Chatzistergos, T., Hayakawa, H., & Jansen, M. (2024). RudolfWolf to AlfredWolfer: The Transfer of the Reference Observer in the International Sunspot Number Series (1876–1893). *Solar physics*, 299, 45.

El Kaoutit, L., Ghobadi, A., Saracco, P., & Vercruysse, J. (2024). Correspondence theorems for Hopf algebroids with applications to affine groupoids. *Canadian journal of mathematics*, 1-51. doi:10.4153/S0008414X23000238

Delbrouck, C., & Alonso Garcia, J. (2024). COVID-19 and Excess Mortality: An Actuarial Study. *Risks*, 12(4), 61. doi:10.3390/risks12040061

Wolf, F. L., Deelstra, G., & Grzelak, L. (2024). Consistent asset modelling with random coefficients and switches between regimes. *Mathematics and computers in simulation*, 223, 65-85. doi:10.1016/j.matcom.2024.03.021

Jansen, M. (2024). Information criteria for structured parameter selection in high dimensional tree and graph models. *Digital signal processing*, 148, 104437.

Saracco, P., & Vercruysse, J. (2024). Geometric partial comodules over flat coalgebras in Abelian categories are globalizable. *Journal of pure and applied algebra*, 228(3), 107502. doi:10.1016/j.jpaa.2023.107502

De Saedeleer, J., Leemans, D., & Mulpas, J. (2024). A rank augmentation theorem for rank three string C-group representations of the symmetric groups. *Journal of algebraic combinatorics*, 59(2), 393-411. doi:10.1007/s10801-023-01291-x

Bernard, G., & Verdebout, T. (2024). On some multivariate sign tests for scatter matrix eigenvalues: On some multivariate sign tests for scatter matrix eigenvalues. *Econometrics and Statistics*, 29, 252-260.

García-Portugués, E., Lafaye De Micheaux, P., Meintanis, S., & Verdebout, T. (2024). Nonparametric tests of independence for circular data based on trigonometric moments. *Statistica sinica*, 34, 567-588.

Bernard, G., & Verdebout, T. (2024). On testing the equality of latent roots of scatter matrices under ellipticity. *Journal of Multivariate Analysis*, 199, 105232. doi:10.1016/j.jmva.2023.105232

Duerinckx, M., Gloria, A., & Ruf, M. (2024). Un ansatz spectral pour l'homogénéisation de l'équation des ondes en temps long. *Journal de l'Ecole Polytechnique - Mathematiques*, 11, 523-587. doi:10.5802/JEP.259

Alonso Garcia, J., Sherris, M., Thirurajah, S., & Ziveyi, J. (2024). Taxation and policyholder behavior: the case of guaranteed minimum accumulation benefits. *ASTIN bulletin*, 1-28. doi:10.1017/asb.2023.38

2023

Betten, A., Leemans, D., Muhlherr, B., Parkinson, J., Thas, K., & van Maldeghem, H. (2023). Preface [In memoriam: Jacques Tits]. *Innovations in Incidence Geometry*, 20(2-3), 63-64.

Claeskens, G., & Jansen, M. (2023). Comments on: Statistical inference and large-scale multiple testing for high-dimensional regression models. *Test*, 32(4), 1177-1179. doi:10.1007/s11749-023-00896-5

Simon, P.-A., Trufin, J., & Denuit, M. (2023). Bivariate Poisson credibility model and bonus-malus scale for claim and near-claim events. *North American actuarial journal*.

Gireg, W., Trufin, J., & Denuit, M. (2023). Boosted Poisson regression trees: A guide to the BT package in R. *Annals of Actuarial Science*.

Bienek, T., Deelstra, G., Lichtenstern, A., & Zagst, R. (2023). A multi-curve HJM factor model for pricing and risk management. *Quantitative finance*, 23(11), 1659-1675. doi:10.1080/14697688.2023.2251179

Bonheure, D., & Iacopetti, A. (2023). A Sharp Gradient Estimate and $$W^{2,q}$$ Regularity for the Prescribed Mean Curvature Equation in the Lorentz-Minkowski Space. *Archive for rational mechanics and analysis*, 247(5). doi:10.1007/s00205-023-01910-8

Huyghe, J., Trufin, J., & Denuit, M. (2023). Boosting cost-complexity pruned trees on Tweedie responses: the ABT machine for insurance ratemaking. *Scandinavian actuarial journal*, 1-23. doi:10.1080/03461238.2023.2258135

Aprile, M., Drescher, M., Fiorini, S., & Huynh, T. (2023). A 7/3-approximation algorithm for feedback vertex set in tournaments via Sherali–Adams. *Discrete applied mathematics*, 337, 149-160. doi:10.1016/j.dam.2023.04.016

Leemans, D., & Stokes, K. (2023). Incidence geometries with trialities coming from maps with Wilson trialities. *Innovations in Incidence Geometry*, 20(2-3), 325-340.

McKeague, I. I., & Swan, Y. (2023). Stein's method and approximating the multidimensional quantum harmonic oscillator. *Journal of Applied Probability*, 60(3), 855-873. doi:10.1017/jpr.2022.125

Duerinckx, M., & Gloria, A. (2023). The Clausius-Mossotti formula. *Asymptotic analysis*, 134(3-4), 437-453.

Denuit, M., & Trufin, J. (2023). Model selection with Pearson's correlation, concentration and Lorenz curves under autocalibration. *European Actuarial Journal*, 13, 871-878.

Deelstra, G., & Hieber, P. (2023). Randomization and the valuation of guaranteed minimum death benefits. *European journal of operational research*, 309(3), 1218-1236. doi:10.1016/j.ejor.2023.01.059

Clozeau, N., & Gloria, A. (2023). Quantitative Nonlinear Homogenization: Control of Oscillations. *Archive for rational mechanics and analysis*, 247(4), 67. doi:10.1007/s00205-023-01895-4

McKeague, I. I., & Swan, Y. (2023). Stein's method and approximating the multidimensional quantum harmonic oscillator. *Journal of Applied Probability*.

Swan, Y., & Germain, G. (2023). A note on one-dimensional Poincaré inequalities by Stein-type integration. *Bernoulli*, 29(2), 1714-1740.

Anastasiou, A., Barp, A., Briol, F. X., Ebner, B., Gaunt, R., Ghaderinezhad, F., Gorham, J., Gretton, A., Ley, C., Liu, Q., Mackey, L., Oates, C. C., Reinert, G., & Swan, Y. (2023). Stein's Method Meets Computational Statistics: A Review of Some Recent Developments. *Statistical science*, 38(1), 120-139. doi:10.1214/22-STS863

Claeskens, G., Jansen, M., & Zhou, J. (2023). Discussion on: ``A scale-free approach for false discovery rate control in generalized linear models'' by Dai, Lin, Zing, Liu. *Journal of the American Statistical Association*, 118(543), 1573-1577.

Xu, M., Alonso Garcia, J., Sherris, M., & Shao, A. W. (2023). Insuring longevity risk and long-term care: Bequest, housing and liquidity. *Insurance. Mathematics & economics*, 111, 121-141. doi:10.1016/j.insmatheco.2023.03.004

Sinner, C., Dominicy, Y., Trufin, J., Waterschoot, W., Weber, P., & Ley, C. (2023). From Pareto to Weibull – A Constructive Review of Distributions on #+. *International statistical review*, 91(1), 35-54. doi:10.1111/insr.12508

Leemans, D., & Toledo Roy, M. A. (2023). Maniplexes with automorphism group PSL(2,q). *Discrete mathematics*, 346(9), 113527.

Bordemann, M., Elchinger, O., Gutt, S., & Makhlouf, A. (2023). L#-formality check for the Hochschild complex of certain universal enveloping algebras. *Journal of geometry and physics*, 187, 104789. doi:10.1016/j.geomphys.2023.104789

Germain, G., & Swan, Y. (2023). A note on one-dimensional Poincaré inequalities by Stein-type integration. *Bernoulli*, 29(2), 1714-1740.

D'Adderio, M., Hautekiet, W., Saracco, P., & Vercruysse, J. (2023). Partial and Global Representations of Finite Groups. *Algebras and representation theory*. doi:10.1007/s10468-022-10136-3

Deelstra, G., Grzelak, L., & Wolf, F. L. (2023). Accelerated computations of sensitivities for xVA. *International Journal of Computer Mathematics*, 1-23. doi:10.1080/00207160.2023.2203277

Duerinckx, M., & Gloria, A. (2023). Continuum percolation in stochastic homogenization and the effective viscosity problem. *Archive for rational mechanics and analysis*, 247, 26.

de Mol van Otterloo, S., & Alonso Garcia, J. (2023). A multi-state model for sick leave and its impact on partial early retirement incentives: the case of the Netherlands. *Scandinavian actuarial journal*, 2023(3), 244-268. doi:10.1080/03461238.2022.2092891

Alonso Garcia, J. (2023). AAS Thematic issue: "Mortality: from Lee–Carter to AI". *Annals of Actuarial Science*, 17(1), 212-214. doi:10.1017/S1748499522000069

Ciatto, N., Verelst, H., Trufin, J., & Denuit, M. (2023). Does autocalibration improve goodness of lift? *European Actuarial Journal*, 13, 479-486.

Mijoule, G., Rai#, M., Reinert, G., & Swan, Y. (2023). Stein's density method for multivariate continuous distributions. *Electronic Journal of Probability*, 28, 59. doi:10.1214/22-EJP883

Bhattacharya, S., Lefèvre, L., Hayakawa, H., Jansen, M., & Clette, F. L. (2023). Scale Transfer in 1849: Heinrich Schwabe to Rudolf Wolf. *Solar physics*, 298(1), 1-12.

Agore, A. L., Gordienko, A. S., & Vercruysse, J. (2023). V-universal Hopf algebras (co)acting on #-algebras. *Communications in Contemporary Mathematics*., 2150095. doi:10.1142/S0219199721500954

Benth, F. E., Deelstra, G., & Kozpinar, S. (2023). Pricing Energy Quanto Options in the Framework of Markov-Modulated Additive Processes. *IMA journal of management mathematics*, 34(1), 187-220. doi:10.1093/IMAMAN/DPAB032

2022

Mesfioui, M., Trufin, J., & Zuyderhoff, P. (2022). Bounds on Spearman's rho when at least one random variable is discrete. *European Actuarial Journal*, 12, 321-348. doi:10.1007/s13385-021-00289-8

Mesfioui, M., & Trufin, J. (2022). Best upper and lower bounds on Spearman's rho for zero-inflated continuous variables and their application to insurance. *European Actuarial Journal*, 12, 417-423. doi:10.1007/s13385-021-00296-9

Hainaut, D., Trufin, J., & Denuit, M. (2022). Response versus gradient boosting trees, GLMs and neural networks under Tweedie loss and log-link. *Scandinavian actuarial journal*, 2022(10), 841-866. doi:10.1080/03461238.2022.2037016

Callant, J., Trufin, J., & Zuyderhoff, P. (2022). Some expressions of a generalized version of the expected time in the red and the expected area in red. *Methodology and Computing in Applied Probability*, 24, 595-611.

Haydys, A. (2022). Seiberg–Witten monopoles and flat PSL (2 , R) -connections. *Advances in mathematics*, 409, 108686. doi:10.1016/j.aim.2022.108686

Corradin, A., Denuit, M., Detyniecki, M., Grari, V., Sammarco, M., & Trufin, J. (2022). Joint modelling of claim frequencies and behavorial signals in motor insurance. *ASTIN bulletin*, 52(1), 33-54. doi:10.1017/asb.2021.24

Cameron, P., Herman, A., & Leemans, D. (2022). String C-groups with real Schur index 2. *Journal of pure and applied algebra*, 226, 107025.

Leemans, D., & Mulpas, J. (2022). The string C-group representations of the Suzuki, Rudvalis and O'Nan sporadic groups. *The art of discrete and applied mathematics*, 5(3), #P3.09. doi:10.26493/2590-9770.1405.4ce

Marquis, B., & Jansen, M. (2022). Information criteria bias correction for group selection. *Statistical papers*, 63(5), 1387-1414.

Mesfioui, M., & Trufin, J. (2022). Bounds on Multivariate Kendall's Tau and Spearman's Rho for Zero-Inflated Continuous Variables and their Application to Insurance. *Methodology and Computing in Applied Probability*, 24, 1051-1059. doi:10.1007/s11009-021-09869-3

Dabo-Niang, S., Thiam, B., & Verdebout, T. (2022). Asymptotic efficiency of some nonparametric tests for location on hyperspheres. *Statistics & probability letters*, 188, 109524. doi:10.1016/j.spl.2022.109524

Duerinckx, M., & Gloria, A. (2022). A short proof of Gevrey regularity for homogenized coefficients of the Poisson point process. *Comptes rendus. Mathématique*, 360, 909-918.

Deelstra, G., Grzelak, L., & Wolf, F. L. (2022). Sensitivities and Hedging of the Collateral Choice Option. *International journal of theoretical and applied finance*, 25(6), 2250027. doi:10.1142/S0219024922500273

Saracco, P., & Vercruysse, J. (2022). Globalization for geometric partial comodules. *Journal of algebra*, 602, 37-59. doi:10.1016/j.jalgebra.2022.03.013

Ernst, M., Reinert, G., & Swan, Y. (2022). On Papathanasiou's covariance expansions. *Alea (Rio de Janeiro)*, 19, 1827-1849.

Ernst, M., Reinert, G., & Swan, Y. (2022). On Papathanasiou's covariance expansions. *Alea (Rio de Janeiro)*, 19(2), 1827-1849. doi:10.30757/ALEA.V19-69

Saracco, P., & Vercruysse, J. (2022). On the globalization of geometric partial (co)modules in the categories of topological spaces and algebras. *Semigroup forum*. doi:10.1007/s00233-022-10269-3

Duerinckx, M., & Gloria, A. (2022). Sedimentation of random suspensions and the effect of hyperuniformity. *Annals of PDE*, 8(1), 2. doi:10.1007/s40818-021-00115-0

Paindaveine, D., Rasoafaraniaina, R. J., & Verdebout, T. (2022). Preliminary multiple-test estimation, with applications to k-sample covariance estimation. *Journal of the American Statistical Association*, 117, 1904-1915.

Araujo-Pardo, G., & Leemans, D. (2022). Edge-girth-regular graphs arising from biaffine planes and Suzuki groups. *Discrete mathematics*, 345, 112991.

Leemans, D., & Vandenschrick, A. (2022). On chiral polytopes having a group PSL(3,q) as automorphism group. *Journal of the London Mathematical Society*, 106(1), 85-111.

Wolf, F. L., Grzelak, L., & Deelstra, G. (2022). Cheapest-to-deliver collateral: a common factor approach. *Quantitative finance*, 22(4), 707-723.

Stevens, R., Alonso Garcia, J., Bateman, H., van Soest, A., & Bonekamp, J. (2022). Saving preferences after retirement. *Journal of economic behavior & organization*, 198, 409-433. doi:10.1016/j.jebo.2022.04.005

Duerinckx, M., Fischer, J., & Gloria, A. (2022). Scaling limit of the homogenization commutator for Gaussian coefficient fields. *The Annals of applied probability*, 32(2), 1179-1209. doi:10.1214/21-AAP1705

Bonheure, D., Moreira dos Santos, E., Parini, E., Tavares, H., & Weth, T. (2022). Nodal Solutions for Sublinear-Type Problems with Dirichlet Boundary Conditions. *International mathematics research notices*, 2022(5), 3760-3804. doi:10.1093/imrn/rnaa233

Premoselli, B. (2022). Towers of Bubbles for Yamabe-Type Equations and for the Brézis–Nirenberg Problem in Dimensions n# 7. *The Journal of geometric analysis*, 32(3), 73. doi:10.1007/s12220-021-00836-5

Bonheure, D., Gazzola, F., Lasiecka, I., & Webster, J. (2022). Long-time dynamics of a hinged-free plate driven by a nonconservative force. *Annales de l'Institut Henri Poincaré. Analyse non linéaire*, 39(2), 457-500. doi:10.4171/AIHPC/13

Cutting, C., Paindaveine, D., & Verdebout, T. (2022). Testing uniformity on high-dimensional spheres: the non-null behaviour of the Bingham test. *Annales de l'Institut Henri Poincaré. Section B. Calcul des probalités et statistiques*, 58, 567–602.

Spenko, Š., & Van den Bergh, M. (2022). Perverse schobers and GKZ systems. *Advances in mathematics*, 402. doi:https://doi.org/10.1016/j.aim.2022.108307

Spenko, Š., Van den Bergh, M., & Bell, J. P. (2022). On the noncommutative Bondal–Orlov conjecture for some toric varieties. *Mathematische Zeitschrift*, 300(1), 1055-1068. doi:10.1007/s00209-021-02910-8

Raedschelders, T., Spenko, Š., & Van den Bergh, M. (2022). The Frobenius morphism in invariant theory II. *Advances in mathematics*, 410. doi:10.1016/j.aim.2022.108587

Fiorini, S., Joret, G., Weltge, S., & Yuditsky, Y. (2022). Integer programs with bounded subdeterminants and two nonzeros per row. *Annual Symposium on Foundations of Computer Science*,, FOCS 2021 13-24. doi:10.1109/FOCS52979.2021.00011

2021

Bertelson, M., & Distexhe, J. (2021). Triangulations of smooth volume forms. *arXiv.org*, 21.

Denuit, M., Charpentier, A., & Trufin, J. (2021). Autocalibration and Tweedie-dominance for insurance pricing with machine learning. *Insurance. Mathematics & economics*, 101, 485-497. doi:10.1016/j.insmatheco.2021.09.001

Zittersteyn, G., & Alonso Garcia, J. (2021). Common Factor Cause-Specific Mortality Model. *Risks*, 9(12), 221. doi:10.3390/risks9120221

Denuit, M., Trufin, J., & Verdebout, T. (2021). Testing for more positive expectation dependence with application to model comparison. *Insurance. Mathematics & economics*, 101, 163-172. doi:10.1016/j.insmatheco.2021.07.008

Premoselli, B. (2021). Einstein-Lichnerowicz type singular perturbations of critical nonlinear elliptic equations in dimension 3. *Discrete and continuous dynamical systems*, 41(11), 5087-5103. doi:10.3934/dcds.2021069

Jijiie, A.-S., Alonso Garcia, J., & Arnold, S. (2021). Mortality by socio-economic class and its impact on the retirement schemes: how to render the systems fairer? *European Actuarial Journal*. doi:10.1007/s13385-021-00295-w

Bonheure, D., Cheikh-Ali, H., & Alves Do Nascimento Filho, R. (2021). A Paneitz–Branson type equation with Neumann boundary conditions. *Advances in Calculus of Variations*, 14(4), 499-519. doi:10.1515/acv-2019-0023

Aprile, M. F., Fiorini, S., Huynh, T., Joret, G., & Wood, D. R. (2021). Smaller Extended Formulations for Spanning Tree Polytopes in Minor-closed Classes and Beyond. *The electronic journal of combinatorics*, 28(4), P4.47. doi:10.37236/10522

Cahen, M., Gutt, S., & Rawnsley, J. (2021). On twistor almost complex structures. *Journal of Geometric Mechanics*, 13(3), 313-331. doi:10.3934/jgm.2021006

Bonheure, D., Casteras, J.-B., & Gladiali, F. (2021). Bifurcation analysis of the Hardy-Sobolev equation. *Journal of differential equations*, 296, 759-798. doi:10.1016/j.jde.2021.06.012

Francfort, G. G., Gloria, A., & Lopez-Pamies, O. (2021). Enhancement of elasto-dielectrics by homogenization of active charges. *Journal de mathématiques pures et appliquées*. doi:10.1016/j.matpur.2021.10.002

Gloria, A., Neukamm, S., & Otto, F. (2021). QUANTITATIVE ESTIMATES IN STOCHASTIC HOMOGENIZATION FOR CORRELATED COEFFICIENT FIELDS. *Analysis and PDE*, 14(8), 2497-2537. doi:10.2140/apde.2021.14.2497

Mesfioui, M., & Trufin, J. (2021). Dispersive order comparisons on extreme order statistics from homogeneous dependent random vectors. *Dependence Modeling*, 9, 385-393.

Bhattacharya, S., Teague, E., Fay, S., Lefèvre, L., Jansen, M., & Clette, F. L. (2021). A Modern Reconstruction of Richard Carrington's Observations (1853–1861). *Solar physics*, 296(8), 118. doi:10.1007/s11207-021-01864-8

Bernard, G., & Verdebout, T. (2021). On some multivariate sign tests for scatter matrix eigenvalues. *Econometrics and Statistics*. doi:10.1016/j.ecosta.2021.04.001

Daly, F., Ghaderinezhad, F., Ley, C., & Swan, Y. (2021). Some simple variance bounds from Stein's method. *Alea (Rio de Janeiro)*, 18(2), 1845-1858. doi:10.30757/ALEA.V18-69

Ley, C., Daly, F., Ghaderinezad, F., & Swan, Y. (2021). Simple variance bounds with applications to Bayesian posteriors and intractable distributions. *Alea (Rio de Janeiro)*.

Alves, M. M. S., Batista, E., Castro, F., Quadros, G., & Vercruysse, J. (2021). Partial corepresentations of Hopf algebras. *Journal of algebra*, 577, 74-135. doi:10.1016/j.jalgebra.2021.03.001

Fiorini, S., Huynh, T., Joret, G., & Muller, C. (2021). Unavoidable Minors for Graphs with Large #p -Dimension. *Discrete & computational geometry*, 66(1), 301-343. doi:10.1007/s00454-021-00285-5

Pechon, F., Denuit, M., & Trufin, J. (2021). Home and Motor insurance joined at a household level using multivariate credibility. *Annals of Actuarial Science*, 15(1), 84-114. doi:10.1017/S1748499520000160

Garcia Colin, N., & Leemans, D. (2021). An infinite family of locally X graphs based on incidence geometries. *The art of discrete and applied mathematics*, 4, #P3.01.

Denuit, M., & Trufin, J. (2021). Generalization error for Tweedie models: decomposition and error reduction with bagging. *European Actuarial Journal*, 11(1), 325-331. doi:10.1007/s13385-021-00265-2

Deelstra, G., Devolder, P., & Melis, R. (2021). Optimal annuitisation in a deterministic financial environment. *Decisions in economics and finance*, 44, 161-175. doi:10.1007/s10203-020-00316-5

Bonheure, D., Cingolani, S., & Secchi, S. (2021). Concentration phenomena for the Schrödinger-Poisson system in r2. *Discrete and Continuous Dynamical Systems. Series S*, 14(5), 1631-1648. doi:10.3934/DCDSS.2020447

Alonso Garcia, J., Bateman, H., Bonekamp, J., & Stevens, R. (2021). Spending from regulated retirement drawdowns: The role of implied endorsement. *The Scandinavian journal of economics*., Online. doi:10.1111/sjoe.12437

Leemans, D. (2021). String C-group representations of almost simple groups: a survey. *Contemporary mathematics - American Mathematical Society*, 764, 157-178.

Fernandes, M. E., Leemans, D., Piedade, C. A., & Weiss, A. I. (2021). Two families of locally toroidal regular 4-hypertopes arising from toroids. *Contemporary mathematics - American Mathematical Society*, 764, 89-100.

Bettonville, C., d'Oultremont, L., Denuit, M., Trufin, J., & Van Oirbeek, R. (2021). Matrix calculation for ultimate and 1-year risk in the Semi-Markov individual loss reserving model. *Scandinavian actuarial journal*, 2021(5), 380-407. doi:10.1080/03461238.2020.1848912

Bonheure, D., Casteras, J.-B., & Román, C. (2021). Unbounded mass radial solutions for the Keller–Segel equation in the disk. *Calculus of variations and partial differential equations*, 60(5), 198, 30 pp. doi:10.1007/s00526-021-02081-8

Paindaveine, D., Rasoafaraniaina, R. J., & Verdebout, T. (2021). Preliminary test estimation in ULAN models. *Scandinavian journal of statistics*, 48, 689-707.

Gauchon, R., Loisel, S., Rullière, J. L., & Trufin, J. (2021). Optimal prevention of large risks with two types of claims. *Scandinavian actuarial journal*, 2021(4), 323-334. doi:10.1080/03461238.2020.1844791

Agore, A., Gordienko, A., & Vercruysse, J. (2021). Equivalences of (co) module algebra structures over Hopf algebras. *Journal of Noncommutative Geometry*.

Buckley, M., Fieremans, T., Vasilakopoulou, C., & Vercruysse, J. (2021). Oplax Hopf algebras. *Higher Structures*, 5(1), 71-120. doi:10.21136/HS.2021.03

Bonheure, D., Dolbeault, J., Esteban, M. J., Laptev, A., & Loss, M. (2021). Inequalities involving Aharonov-Bohm magnetic potentials in dimensions 2 and 3. *Reviews in mathematical physics*, 33(3), 2150006, 29 pp. doi:10.1142/S0129055X21500069

Ameijeiras-Alonso, J., Ley, C., Pewsey, A., & Verdebout, T. (2021). On optimal tests for circular reflective symmetry about an unknown central direction. *Statistical papers*, 62, 1651-1674. doi:10.1007/s00362-019-01150-7

Leemans, D., & Tranchida, P. (2021). On residual connectedness in chiral geometries. *Algebraic combinatorics*, 4(3), 491-499.

Buekenhout, F., Leemans, D., & Tranchida, P. (2021). A new algorithm to classify chiral polytopes with a given automorphism group. *Beiträge zur Algebra und Geometrie*, 62, 21-36.

Buckley, M., Fieremans, T., Vasilakopoulou, C., & Vercruysse, J. (2021). A Larson-Sweedler theorem for Hopf V -categories. *Advances in mathematics*, 376, 107456. doi:10.1016/j.aim.2020.107456

Caselli, F., D'Adderio, M., & Marietti, M. (2021). Weak generalized lifting property, bruhat intervals, and coxeter matroids. *International mathematics research notices*, 9(3), 1678-1698. doi:10.1093/imrn/rnaa124

Spenko, Š., & Van den Bergh, M. (2021). Semi-orthogonal decomposition of GIT quotient stacks. *Selecta mathematica, New series*, 27, 16. doi:10.1007/s00029-021-00628-3

Spenko, Š., & Van den Bergh, M. (2021). Tilting bundles on hypertoric varieties. *International mathematics research notices*, 2021(2), 1034-1042. doi:10.1093/imrn/rnz218

2020

Paindaveine, D., Remy, J., & Verdebout, T. (2020). Testing for principal component directions under weak identifiability. *Annals of statistics*, 48(1), 324-345. doi:10.1214/18-AOS1805

D'Adderio, M., Iraci, A., & Vanden Wyngaerd, A. (2020). Theta operators, refined Delta conjectures, and coinvariants. *Advances in mathematics*., 107447. doi:10.1016/j.aim.2020.107447

Gloria, A. (2020). A Scalar Version of the Caflisch#Luke Paradox. *Communications on pure and applied mathematics*. doi:10.1002/cpa.21970

Cossette, H., Marceau, E., Trufin, J., & Zuyderhoff, P. (2020). Ruin-based risk measures in discrete-time risk models. *Insurance. Mathematics & economics*, 93, 246-261.

Duerinckx, M., & Gloria, A. (2020). Corrector Equations in Fluid Mechanics: Effective Viscosity of Colloidal Suspensions. *Archive for rational mechanics and analysis*. doi:10.1007/s00205-020-01589-1

Brooksbank, P. P., Ferrara, J., & Leemans, D. (2020). Orthogonal Groups in Characteristic 2 Acting on Polytopes of High Rank. *Discrete & computational geometry*, 63, 656-669. doi:10.1007/s00454-019-00083-0

Hou, D. D., Feng, Y. Q., & Leemans, D. (2020). On Regular Polytopes of 2-Power Order. *Discrete & computational geometry*, 64(2), 339-346. doi:10.1007/s00454-019-00119-5

Deelstra, G., Latouche, G., & Simon, M. (2020). On barrier option pricing by Erlangization in a regime-switching model with jumps. *Journal of computational and applied mathematics*, 371, 112606. doi:10.1016/j.cam.2019.112606

Fine, J., Krasnov, K., & Singer, M. (2020). Local rigidity of Einstein 4-manifolds satisfying a chiral curvature condition. *Mathematische Annalen*,(55). doi:10.1007/s00208-020-02097-z

Pechon, F., Trufin, J., & Denuit, M. (2020). Preliminary selection of risk factors in P&C ratemaking. *Variance*, 13(1), 124-140.

Fine, J., & Premoselli, B. (2020). Examples of compact Einstein four-manifolds with negative curvature. *Journal of the American Mathematical Society*.

Jansen, M. (2020). Density Estimation Using Multiscale Local Polynomial Transforms. *Springer Proceedings in Mathematics and Statistics*, 339, 249-260. doi:10.1007/978-3-030-57306-5_23

Marquis, B., & Jansen, M. (2020). Correction for Optimisation Bias in Structured Sparse High-Dimensional Variable Selection. *Springer Proceedings in Mathematics and Statistics*, 339, 357-365. doi:10.1007/978-3-030-57306-5_32

Callies, M., & Haydys, A. (2020). Local Models of Isolated Singularities for Affine Special Kähler Structures in Dimension Two. *International mathematics research notices*, 2020(17), 5215-5235. doi:10.1093/imrn/rny165

Jammalamadaka, S. R., Meintanis, S., & Verdebout, T. (2020). On Sobolev tests of uniformity on the circle with an extension to the sphere. *Bernoulli*, 26(3), 2226-2252. doi:10.3150/19-BEJ1191

Fernandes, M. E., Leemans, D., & Weiss, A. I. (2020). An Exploration of Locally Spherical Regular Hypertopes. *Discrete & computational geometry*, 64(2), 519-534. doi:10.1007/s00454-020-00209-9

Ernst, M., Reinert, G., & Swan, Y. (2020). First-order covariance inequalities via Stein's method. *Bernoulli*, 26(3), 2051-2081. doi:10.3150/19-BEJ1182

Gloria, A., Neukamm, S., & Otto, F. (2020). A Regularity Theory for Random Elliptic Operators. *Milan journal of mathematics*. doi:10.1007/s00032-020-00309-4

Cicalese, M., Gloria, A., & Ruf, M. (2020). From Statistical Polymer Physics to Nonlinear Elasticity. *Archive for rational mechanics and analysis*. doi:10.1007/s00205-019-01487-1

Duerinckx, M., & Gloria, A. (2020). Multiscale functional inequalities in probability: Constructive approach. *Annales Henri Lebesgue*, 3, 825-872. doi:10.5802/ahl.47

Deelstra, G., Devolder, P., Gnameho, K. K., & Hieber, P. (2020). Valuation of hybrid financial and actuarial products in life insurance by a novel 3-step method. *ASTIN bulletin*, 50(3), 709-742.

Cutting, C., Paindaveine, D., & Verdebout, T. (2020). On the power of axial tests of uniformity on spheres. *Electronic Journal of Statistics*, 14(1), 2123-2154. doi:10.1214/20-EJS1716

Cossette, H., Marceau, É. T. E., Trufin, J., & Zuyderhoff, P. (2020). Ruin-based risk measures in discrete-time risk models. *Insurance. Mathematics & economics*, 93, 246-261. doi:10.1016/j.insmatheco.2020.05.003

Haydys, A., & Xu, B. (2020). Special Kähler structures, cubic differentials and hyperbolic metrics. *Selecta mathematica, New series*, 26(3). doi:10.1007/s00029-020-00560-y

Fiorini, S., Joret, G., & Schaudt, O. (2020). Improved approximation algorithms for hitting 3-vertex paths. *Mathematical programming*, 182(1-2), 355–367. doi:10.1007/s10107-019-01395-y

Hu, J., & Vercruysse, J. (2020). Geometrically partial actions. *Transactions of the American Mathematical Society*, 373(6), 4085-4143. doi:10.1090/tran/8058

Duerinckx, M., & Gloria, A. (2020). Multiscale functional inequalities in probability: Concentration properties. *Alea (Rio de Janeiro)*, 17(1), 133-157. doi:10.30757/ALEA.v17-06

Bonheure, D., d'Avenia, P., Pomponio, A., & Reichel, W. (2020). Equilibrium measures and equilibrium potentials in the Born-Infeld model. *Journal de mathématiques pures et appliquées*, 139, 35-62. doi:10.1016/j.matpur.2020.05.001

Bonheure, D., Galdi, G. P., & Gazzola, F. (2020). Equilibrium configuration of a rectangular obstacle immersed in a channel flow. *Comptes rendus. Mathématique*, 358(8), 887-896. doi:10.5802/CRMATH.95

Paindaveine, D., Remy, J., & Verdebout, T. (2020). Sign Tests for Weak Principal Directions. *Bernoulli*, 29, 2987-3016.

Spenko, Š., & Van den Bergh, M. (2020). Non-commutative crepant resolutions for some toric singularities. II. *Journal of Noncommutative Geometry*, 14(1), 73-103. doi:10.4171/JNCG/359

Duerinckx, M., Gloria, A., & Otto, F. (2020). Robustness of the pathwise structure of fluctuations in stochastic homogenization. *Probability theory and related fields*, 178, 531-566. doi:10.1007/s00440-020-00983-w

Duerinckx, M., Gloria, A., & Otto, F. (2020). The Structure of Fluctuations in Stochastic Homogenization. *Communications in Mathematical Physics*, 377, 259-306. doi:10.1007/s00220-020-03722-3

D'Adderio, M., Iraci, A., & Vanden Wyngaerd, A. (2020). The generalized Delta conjecture at t=0. *European journal of combinatorics*, 86, 103088. doi:10.1016/j.ejc.2020.103088

Rao Jammalamadaka, S., Meintanis, S., & Verdebout, T. (2020). On new Sobolev tests of uniformity on the circle with extension to the sphere. *Bernoulli*, 26, 2226-2252.

Paindaveine, D., & Verdebout, T. (2020). Inference for spherical location under high concentration. *Annals of statistics*, 48, 2982-2998.

Paindaveine, D., & Verdebout, T. (2020). Detecting the Direction of a Signal on High-dimensional Spheres: Non-null and Le Cam Optimality Results. *Probability theory and related fields*, 176, 1165-1216.

García-Portugués, E., Paindaveine, D., & Verdebout, T. (2020). On Optimal Tests for Rotational Symmetry Against New Classes of Hyperspherical Distributions. *Journal of the American Statistical Association*, 115, 1873–1887. doi:10.1080/01621459.2019.1665527

D'Adderio, M., Iraci, A., & Vanden Wyngaerd, A. (2020). Decorated Dyck paths, polyominoes, and the Delta conjecture. *Memoirs of the American Mathematical Society*.

D'Adderio, M., Iraci, A., & Vanden Wyngaerd, A. (2020). The Delta square conjecture. *International mathematics research notices*.

Bonheure, D., Dolbeault, J., Esteban, M. J., Laptev, A., & Loss, M. (2020). Symmetry Results in Two-Dimensional Inequalities for Aharonov–Bohm Magnetic Fields. *Communications in Mathematical Physics*, 375(3), 2017-2087. doi:10.1007/s00220-019-03560-y

Bonheure, D., Casteras, J.-B., & Földes, J. (2020). Singular radial solutions for the Keller-Segel equation in high dimension. *Journal de mathématiques pures et appliquées*, 134, 204–254. doi:10.1016/j.matpur.2019.12.002

Arras, B., Azmoodeh, E., Poly, G., & Swan, Y. (2020). Stein characterizations for linear combinations of gamma random variables. *Brazilian Journal of Probability and Statistics*, 34(2), 394-413. doi:doi:10.1214/18-BJPS420

Gaunt, R., Mijoule, G., & Swan, Y. (2020). Some new Stein operators for product distributions. *Brazilian Journal of Probability and Statistics*, 34(4), 795-808. doi:doi:10.1214/19-BJPS460

Ernst, M., Reinert, G., & Swan, Y. (2020). First order covariance inequalities via Stein's method. *Bernoulli*, 26(3), 2051-2081. doi:doi:10.3150/19-BEJ1182

Callegaro, F., D'Adderio, M., Delucchi, E., Migliorini, L., & Pagaria, R. (2020). Orlik-Solomon-type presentations for the cohomology algebra of toric arrangements. *Transactions of the American Mathematical Society*, 373(3), 1909-1940. doi:10.1090/tran/7952

D'Adderio, M. (2020). e-Positivity of vertical strip LLT polynomials. *Journal of combinatorial theory. Series A*, 172, 105212. doi:10.1016/j.jcta.2020.105212

Callegaro, F., D'Adderio, M., Delucchi, E., Migliorini, L., & Pagaria, R. (2020). Erratum: Orlik-Solomon-type presentations for the cohomology algebra of toric arrangements (Trans. Amer. Math. Soc. (2020) 373:3 (1909-1940) DOI: 10.1090/tran/7952). *Transactions of the American Mathematical Society*, 373(3), 1909-1940. doi:10.1090/tran/8262

Gauchon, R., Loisel, S., Rullière, J. L., & Trufin, J. (2020). Optimal prevention strategies in the classical risk model. *Insurance. Mathematics & economics*, 91, 202-208.

Spenko, Š., & Van den Bergh, M. (2020). Noncommutative crepant resolutions for some toric singularities I. *International mathematics research notices*, 2020(21), 8120-8138. doi:10.1093/imrn/rnaa006

Conforti, M., Fiorini, S., Huynh, T., Joret, G., & Weltge, S. (2020). The stable set problem in graphs with bounded genus and bounded odd cycle packing number. *Proceedings of the annual ACM-SIAM Symposium on Discrete Algorithms*, SODA 2020, 2896-2915. doi:10.1137/1.9781611975994.176

Fiorini, S., Huynh, T., & Weltge, S. (2020). Strengthening convex relaxations of 0/1-sets using Boolean formulas. *Mathematical programming*. doi:10.1007/s10107-020-01542-w