

Liste de publications de INFO

Articles dans des revues avec comité de lecture

A paraître

Joret, G., & Petit, R. (2025). A Caro-Wei bound for induced linear forests in graphs. *SIAM journal on discrete mathematics*.

Dujmović, V. V., Hickingbotham, R., Hodor, J., Joret, G., La, H., Micek, P., Morin, P., Rambaud, C., & Wood, D. R. (2025). The grid-minor theorem revisited. *Combinatorica*.

Barral, H., Abdeddaïm, Y., Masson, D., & Goossens, J. (2025). Response time analysis for sporadic tasks in uniprocessor fixed-priority scheduling with starting and resuming delays. *Proceedings of Real-Time and Network Systems*.

Alkoudsi, I., Baruah, S., Ekberg, P., Fohler, G., Goossens, J., & Moslehi, M. (2025). Extending Periodic Task Sets with Sporadic Tasks: Computational Complexity and Exact Feasibility Tests. *Proceedings of Real-Time and Network Systems*.

Gaspard, T., Bertout, A., Richard, P., Grolleau, E., & Goossens, J. (2025). An unfair optimal scheduling algorithm for uniform multiprocessors. *Proceedings - Design, Automation, and Test in Europe Conference and Exhibition*.

Schuh, M., Maiza, C., Raymond, P., Ferres, B., Goossens, J., & De Dinechin, B. D. (2025). Communication and Shared Memory Efficient Mapping Techniques of Real-Time DAGs upon Clustered Multicore Platforms. *Proceedings of Real-Time and Network Systems*.

2026

Paldino, G. M., & Bontempi, G. (2026). VPP-Sim: A Modular Open-Source Framework for Developing and Deploying ML-Driven Strategies in Virtual Power Plants. *Lecture notes in computer science*, 2841 CCIS, 126-138. doi:10.1007/978-3-032-19102-1_8

Renard, S., Louveaux, Q., & Fortz, B. (2026). Lifted branching: Learning to improve branching strategies. *European journal of operational research*. doi:10.1016/j.ejor.2026.07.046

Morales Hernández, A., De Caro, F., Paldino, G. M., Tribel, P., Vaccaro, A. A., & Bontempi, G. (2026). A direct classification approach for reliable wind ramp event forecasting under severe class imbalance. *Electric power systems research*, 257, 112951. doi:10.1016/j.epsr.2026.112951

Hamdani, Y., Richard, P., Bertout, A., Goossens, J., & Grolleau, E. (2026). Preempt Less, Schedule Better: Revisiting PCG for Real-Time Uniform Processors. *Proceedings (Euromicro Conference on Real-Time Systems)*, 38th European Conference on Real-Time Systems (ECRTS 2026). doi:https://doi.org/10.4230/LIPIcs.ECRTS.2026.2

Aronov, B. B., Cardinal, J., Dallant, J., & Iacono, J. (2026). A General Technique for Searching in Implicit Sets via Function Inversion. *Algorithmica*, 88(3), 37. doi:10.1007/S00453-026-01385-5

Farrell, G., Adamidi, E., Andrade Buono, R., Anton, M., Attafi, O. A., Capella-Gutierrez, S., Capriotti, E., Castro, L. J., Cirillo, D., Crossman, L., Dessimoz, C., Dimopoulos, A. A., Fernández-Díaz, R., Fragkouli, S.-C., Goble, C., Gu, W., Hancock, J. J., Khanteymoori, A., Lenaerts, T., Liberante, F. G., Maccallum, P., Monzon, A. M., Palmblad, M., Poveda, L., Radulescu, O., Shields, D. C., Sufi, S., Vergoulis, T., Psomopoulos, F. F., & Tosatto, S. S. (2026). Open and sustainable AI: challenges, opportunities and the road ahead in the life sciences. *Nature methods*. doi:10.1038/s41592-026-03037-6

Lunghi, D., Molinghen, Y., Simitsis, A., Lenaerts, T., & Bontempi, G. (2026). Fraud-RLA: A Reinforcement Learning Adversarial Attack Against Credit Card Fraud Detection. *IEEE Transactions on Dependable and Secure Computing*, 23(3), 7468-7481. doi:10.1109/TDSC.2026.3673847

Haeupler, B., Hlad'ik, R., Iacono, J., Rozhon, V., Tarjan, R., & Tetek, J. (2026). Fast and Simple Sorting Using Partial Information. *Algorithmica*, 88(3), 41. doi:10.1007/S00453-026-01387-3

Paldino, G. M., & Bontempi, G. (2026). Causal discovery in multivariate time series through mutual information featurization. *International journal of forecasting*. doi:10.1016/j.ijforecast.2026.05.001

Brenner, S., Cardinal, J., McConville, T., Merino, A., & Mütze, T. (2026). Combinatorial generation via permutation languages. VII. Supersolvable hyperplane arrangements. *European journal of combinatorics*, 135, 104367. doi:10.1016/j.ejc.2026.104367

Paldino, G. M., Petit, R., Iuliano, S., Vaccaro, A. A., & Bontempi, G. (2026). Topology-aware feature engineering for data-driven Dynamic Security Assessment using electricity market data. *International journal of electrical power & energy systems*, 177, 111865. doi:10.1016/j.ijepes.2026.111865

Akiyama, J., Langerman, S., & Matsunaga, K. (2026). Unveil the Secret Hidden in the Haberdasher's Puzzle: —Survey on Reversibility—. *Lecture notes in computer science*, 14364 LNCS, 64-82. doi:10.1007/978-3-032-00281-5_5

Fragkouli, S.-C., Iqbal, S., Crossman, L., Gravel, B., Masued, N., Onders, M., Haseja, D., Stikkelman, A., Valencia, A., Lenaerts, T., Psomopoulos, F. F., Broin, P., Queralt-Rosinach, N., & Cirillo, D. (2026). An ELIXIR scoping review on domain-specific evaluation metrics for synthetic data in life sciences. *NAR Genomics and Bioinformatics*, 8(1), lqag012. doi:10.1093/nargab/lqag012

Bosch, I., Gravel, B., Renaux, A., Nowe, A., Laan, M., & Lenaerts, T. (2026). Benchmarking knowledge graph embedding models for the prediction of oligogenic combinations. *Briefings in bioinformatics*, 27(1), bbaf712. doi:10.1093/bib/bbaf712

Paldino, G. M., Caelen, O., Oueslati, M., Ansay, M., Johanesa, T. V. T., & Bontempi, G. (2026). On the integration of domain adaptation and causal discovery in digital twins:

A case study for plastic injection molding. *Future generations computer systems*, 182, 108427. doi:10.1016/j.future.2026.108427

Colot, M., Simar, C., Cebolla Alvarez, A. M., & Bontempi, G. (2026). Linear non-conservative unsupervised domain adaptation for cross-subject EMG gesture recognition. *Biomedical Signal Processing and Control*, 111, 108283. doi:10.1016/j.bspc.2025.108283

2025

Gilchrist, V., Marco, L., Petit, C., & Tang, G. (2025). On the security of two blind signatures from code equivalence problems. *IACR communications in cryptology*, 2(4).

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

Panny, L., Petit, C., & Stopar, M. (2025). KLaPoTi: An asymptotically efficient isogeny group action from 2-dimensional isogenies. *IACR communications in cryptology*, 2(3).

Akitaya, H. A., Biniarz, A., De Carufel, J. L., Iacono, J., Smid, M. M., Theocharous, L., Aloupis, G., Bose, P., Gavaille, C., Kleist, L., & Souvaine, D. D. (2025). An Improved Bound for Plane Covering Paths. *Leibniz international proceedings in informatics*, 351, 75. doi:10.4230/LIPIcs.ESA.2025.75

Brodal, G. S., Iacono, J., Meyer, U., Sitchinava, N., Goodrich, M. M., Lo, J., Pagan, V., & Svenning, R. (2025). External-Memory Priority Queues with Optimal Insertions. *Leibniz international proceedings in informatics*, 351, 5. doi:10.4230/LIPIcs.ESA.2025.5

Markowitch, O., & Dricot, J.-M. (2025). IoT Security: Threat Detection, Analysis, and Defense. *Future Internet*, 17(9), 399. doi:10.3390/fi17090399

Balachander, M., Filiot, E., & Raskin, J.-F. (2025). LTL Reactive Synthesis with a Few Hints. *Journal of automated reasoning*, 69(3), 24. doi:10.1007/s10817-025-09737-6

Montero Porras, E., Suchon, R., Lenaerts, T., & Fernandez Domingos, E. (2025). From self-interest to collective action: The role of defaults in governing common resources. *PloS one*, 20(9), e0331348. doi:10.1371/journal.pone.0331348

Njoku, U. U., Abelló, A., Bilalli, B., & Bontempi, G. (2025). Towards fair machine learning using many-objective feature selection. *Applied Soft Computing*, 181, 113411. doi:10.1016/j.asoc.2025.113411

Piron, A., Szymczak, F., Folon, L., Crouch, D. J. M., Papadopoulou, T., Lytrivi, M., Tong, Y., Alvelos, M. I., Colli, M. L., Yi, X., Pekalski, M. M., Hatzikotoulas, K., Huerta-Chagoya, A., Taylor, H. J., Type 2 Diabetes Global Genomics Initiative,, Defrance, M., Todd, J. A., Eizirik, D. L., Mercader, J. M., & Cnop, M. (2025). Identification of novel type 1 and type 2 diabetes genes by co-localization of human islet eQTL and GWAS variants with colocRedRibbon. *Cell Genomics*, 101004. doi:10.1016/j.xgen.2025.101004

Saponara, M., Fernández Domingos, E., Pacheco, J. J., & Lenaerts, T. (2025). Evolution favours positively biased reasoning in sequential interactions with high future gains. *Journal of the Royal Society interface*, 22(229), 20250153. doi:10.1098/rsif.2025.0153

Saponara, M., Fernandez Domingos, E., Pacheco, J. M. D. S. J., & Lenaerts, T. (2025). Evolution favours positively biased reasoning in sequential interactions with high future gains. *Journal of the Royal Society interface*, 22(229). doi:10.1098/rsif.2025.0153

Balachander, M., Filiot, E., Gentillini, R., & Tzevelekos, N. (2025). Register Automata with Permutations. *Leibniz international proceedings in informatics*, 345, 14. doi:10.4230/LIPIcs.MFCS.2025.14

Biniarz, A., Bose, P., Chung, C., De Carufel, J. L., Iacono, J., Maheshwari, A., Odak, S., Smid, M. M., & Tóth, C. D. (2025). Tight Bounds on the Number of Closest Pairs in Vertical Slabs. *Leibniz international proceedings in informatics*, 349, 8. doi:10.4230/LIPIcs.WADS.2025.8

Dujmovi#, V. V., Joret, G., Micek, P., Morin, P. P., & Wood, D. (2025). Planar Graphs in Blowups of Fans. *Proceedings of the annual ACM-SIAM Symposium on Discrete Algorithms*, 3382-3391.

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.

Dujmovi#, V. V., Joret, G., Micek, P., & Morin, P. (2025). Tight bound for the Erdős-Pósa property of tree minors. *Combinatorics, probability & computing*, 34(2), 321-325.

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.

Abels, A., & Lenaerts, T. (2025). Wisdom from Diversity: Bias Mitigation Through Hybrid Human-LLM Crowds. *IJCAI*, 321-329. doi:10.24963/ijcai.2025/37

Molinghen, Y., Avalos, R., Van Achter, M., Nowe, A., & Lenaerts, T. (2025). Laser Learning Environment: A New Environment for Coordination-Critical Multi-agent Tasks. *Communications in computer and information science*, 2187 CCIS, 135-154. doi:10.1007/978-3-031-74650-5_8

Abels, A., Trianni, V., Nowe, A., & Lenaerts, T. (2025). Collective Intelligence in Decision-Making with Non-Stationary Experts. *The journal of artificial intelligence research*, 83, 9. doi:10.1613/jair.1.16228

Giordano, L., Dirks, I., Lenaerts, T., & Vandemeulebroucke, J. (2025). Region of interest detection for efficient aortic segmentation. *Progress in biomedical optics and imaging*, 13406, 134061K. doi:10.1117/12.3046724

Bontempi, G. (2025). Between Accurate Prediction and Poor Decision Making: The AI/ML Gap. *Lecture notes in computer science*, 15508 LNCS, 333-343. doi:10.1007/978-3-031-82481-4_23

Colot, M., Simar, C., Petieau, M., Cebolla Alvarez, A. M., Chéron, G., & Bontempi, G. (2025). EMG Subspace Alignment and Visualization for Cross-Subject Hand Gesture

Classification. *Communications in computer and information science*, 2136 CCIS, 416-423. doi:10.1007/978-3-031-74640-6_34

Verhelst, T., Mercier, D., Sheshta, J., & Bontempi, G. (2025). A Churn Prediction Dataset from the Telecom Sector: A New Benchmark for Uplift Modeling. *Communications in computer and information science*, 2136 CCIS, 292-299. doi:10.1007/978-3-031-74640-6_21

Halin, A., Piérard, S., Vandeghen, R., Gérin, B., Zanella, M., Colot, M., Held, J., Cioppa, A., Jean, E., Bontempi, G., Mahmoudi, S., Macq, B., & Droogenbroeck, M. V. (2025). Physically Interpretable Probabilistic Domain Characterization. *Lecture notes in computer science*, 15482 LNCS, 17-35. doi:10.1007/978-981-96-2641-0_2

Guastella, D. A., Silva Munoz, M., Montero-Porras, E., & Bontempi, G. (2025). A Simulation Tool to Assess the Impact of Deviation Plans on Disruptive Events of Urban Traffic. *Proceedings of the International Conference on Simulation and Modeling Methodologies, Technologies and Applications*, 1, 51-61. doi:10.5220/0013518900003970

Demaine, E. D., & Langerman, S. (2025). Tiling with Three Polygons Is Undecidable. *Leibniz international proceedings in informatics*, 332, 39. doi:10.4230/LIPIcs.SOCG.2025.39

Barfuss, W., Flack, J., Gokhale, C. C., Hammond, L., Hilbe, C., Hughes, E., Leibo, J. J., Lenaerts, T., Leonard, N. E., Levin, S. A., Sehwal, U. M., McAvoy, A., Meylahn, J. J., & Santos, F. F. (2025). Collective cooperative intelligence. *Proceedings of the National Academy of Sciences of the United States of America*, 122(25), e2319948121. doi:10.1073/pnas.2319948121

Terrucha, I., Domingos, E. F., Suchon, R., Santos, F. C., Simoens, P., & Lenaerts, T. (2025). Humans program artificial delegates to accurately solve collective-risk dilemmas but lack precision. *Proceedings of the National Academy of Sciences of the United States of America*, 122(25), e2319942121. doi:10.1073/pnas.2319942121

Terrucha, I., Fernandez Domingos, E., Suchon, R., Santos, F. F., Simoens, P., & Lenaerts, T. (2025). Humans program artificial delegates to accurately solve collective-risk dilemmas but lack precision. *Proceedings of the National Academy of Sciences of the United States of America*, 122(25). doi:10.1073/pnas.2319942121

Iacono, J., & Nekrich, Y. (2025). Incremental Planar Nearest Neighbor Queries with Optimal Query Time. *Leibniz international proceedings in informatics*, 332, 59. doi:10.4230/LIPIcs.SOCG.2025.59

Dallant, J., & Iacono, J. (2025). Conditional Lower Bounds for Dynamic Geometric Measure Problems. *ACM transactions on algorithms*, 21(2), 23. doi:10.1145/3727878

Njoku, U. U., Abelló, A., Bilalli, B., & Bontempi, G. (2025). On many-objective feature selection and the need for interpretability. *Expert systems with applications*, 267, 126191. doi:10.1016/j.eswa.2024.126191

Paldino, G. M., Caelen, O., Oueslati, M., Ansay, M., Johanesa, T. V. T., & Bontempi, G. (2025). Integrating Domain Adaptation and Causal Discovery in Digital Twins for

Plastic Injection Molding. *IEEE International Conference on Pervasive Computing and Communications Workshops, PerCom Workshops*, (2025), 110-115. doi:10.1109/PerComWorkshops65533.2025.00050

Filiot, E., Jecker, I. R., Puppis, G., Löding, C., Muscholl, A., & Winter, S. (2025). Finite-valued Streaming String Transducers. *TheoretiCS*, Volume 4. doi:10.46298/theoretics.25.1

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

Bhattacharyya, R., Kollath, S., & Petit, C. (2025). Code-Based Fully Dynamic Accountable Ring Signatures and Group Signatures Using the Helper Methodology. *Lecture notes in computer science*, 15659 LNCS, 84-103. doi:10.1007/978-981-96-9098-5_5

Castricky, W., Decru, T., Kutas, P., Laval, A., Petit, C., & Ti, Y. B. (2025). KLPT2: Algebraic Pathfinding in Dimension Two and Applications. *Lecture notes in computer science*, 16000 LNCS, 167-200. doi:10.1007/978-3-032-01855-7_6

Chen, M., & Petit, C. (2025). Computing the Endomorphism Ring of a Supersingular Elliptic Curve from a Full Rank Suborder. *Lecture notes in computer science*, 15606 LNCS, 446-474. doi:10.1007/978-3-031-91095-1_16

Kunzweiler, S., Maino, L., Moriya, T., Petit, C., Pope, G., Robert, D., Stopar, M., & Ti, Y. B. (2025). Radical 22-Isogenies and Cryptographic Hash Functions in Dimensions 1, 21, 2 and 33. *Lecture notes in computer science*, 15676 LNCS, 265-299. doi:10.1007/978-3-031-91826-1_9

Cai, S., Chen, M., & Petit, C. (2025). Faster Algorithms for Isogeny Computations over Extensions of Finite Fields. *Lecture notes in computer science*, 14966 LNCS, 136-155. doi:10.1007/978-3-031-82380-0_4

Articles dans des revues sans comité de lecture

2025

Akitaya, H. A., Aloupis, G., Biniiaz, A., Bose, P., De Carufel, J. L., Gavoille, C., Iacono, J., Kleist, L., Smid, M. M., Souvaine, D. D., & Theocharous, L. (2025). An Improved Bound for Plane Covering Paths. *arXiv.org*, arXiv:2507.06477.

Iacono, J., & Nekrich, Y. (2025). Incremental Planar Nearest Neighbor Queries with Optimal Query Time. *arXiv.org*, arXiv:2504.07366.

Biniiaz, A., Bose, P., Chung, C., De Carufel, J. L., Iacono, J., Maheshwari, A., Odak, S., Smid, M. M., & Tóth, C. D. (2025). Tight Bounds on the Number of Closest Pairs in Vertical Slabs. *arXiv.org*, arXiv:2502.17600.

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

2026

Bosch, I., Gravel, B., Renaux, A., Nowé, A., Laan, M., & Lenaerts, T. (2026). Benchmarking knowledge graph embedding models for the prediction of oligogenic combinations. *Briefings in bioinformatics*, 27. doi:<https://doi.org/10.1093/bib/bbaf712>