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Autore	Gueye Cheikh Thiecoumba
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Soggetti	Discrete mathematics Cryptography Data encryption (Computer science) Coding theory Information theory Mathematical models Applications of Discrete Mathematics Cryptology Coding and Information Theory Mathematical Modeling and Industrial Mathematics
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Nota di contenuto	- Mathematics and computer science in the information revolution -- NLP and some research results in Senegal -- On absolute valued algebras with nonzero central element -- On algebraic algebras without divisors of zero satisfying $(xp, xq, xr) = 0$ -- Computing minimal free resolutions over monomial semirings with coefficients in D-A rings -- Schur complement and inequalities of eigenvalues on block Hadamard product -- A perturbed Mann-type algorithm for zeros of maximal monotone mappings -- On Rickart and Baer semimodules -- Completion fractions modules of filtered modules over non-necessarily

commutative filtered rings -- On S-lifting semimodules over semirings -- A contribution to the study of a class of noncommutative ideals admitting finite Gröbner bases -- Construction of numbers with the same “normality” properties as a given number. - Robustness of imputation methods with backpropagation algorithm in nonlinear multiple regression -- A better random forest classifier: Labels guided Mondrian forest -- Remote sensing of artisanal mines buried in the ground by infrared thermography using UAV -- Implementation of EdDSA in the Ethereum blockchain -- Vulnerability prediction of web applications from source code based on machine learning and deep learning: Where are we at? -- Business process management and process mining on the large: Overview, challenges and research directions.

Sommario/riassunto

This proceedings book gathers selected, peer-reviewed papers presented at the Fifth Scientific Days of the Doctoral School of Mathematics and Computer Sciences - S2DSMCS, held from December 20–22, 2023, at Cheikh Anta Diop University in Dakar, Senegal. The cutting-edge works cover timely topics in cryptography, cybersecurity, and artificial intelligence, with applications extending to fields such as telecommunications and smart networks. This collection showcases research activities developed by a new generation of mathematicians and computer scientists from Africa, Europe, Asia, and America. By fostering cooperation among both young and experienced researchers, the S2DSMSC conference aligns with other conferences in the region, such as Africacrypt - the International Conference on Cryptology in Africa, the Non-commutative Algebra and Operator Theory (NANCAOT) international workshops, and the International Conference in Algebra, Codes, and Cryptology (A2C), all with proceedings published by Springer.
