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Nota di contenuto	Invited Paper -- Disjoint Paths in Expander Graphs via Random Walks: a Short Survey -- Regular Papers -- A Derandomization Using Min-Wise Independent Permutations -- An Algorithmic Embedding of Graphs via Perfect Matchings -- Deterministic Hypergraph Coloring and Its Applications -- On the Derandomization of Space-Bounded Computations -- Talagrand's Inequality and Locality in Distributed Computing -- On-line Bin-Stretching -- Combinatorial Linear Programming: Geometry Can Help -- A Note on Bounding the Mixing

Time by Linear Programming -- Robotic Exploration, Brownian Motion and Electrical Resistance -- Fringe analysis of synchronized parallel algorithms on 2–3 trees -- On Balls and Bins with Deletions -- “Balls into Bins” — A Simple and Tight Analysis -- Invited Paper -- Tornado Codes: Practical Erasure Codes Based on Random Irregular Graphs -- Regular Papers -- Using Approximation Hardness to Achieve Dependable Computation -- Complexity of Sequential Pattern Matching Algorithms -- A Random Server Model for Private Information Retrieval -- Almost Optimal (on the average) Combinatorial Algorithms for Boolean Matrix Product Witnesses, Computing the Diameter (Extended Abstract) -- Randomized Lower Bounds for Online Path Coloring -- Parallel Random Search and Tabu Search for the Minimal Consistent Subset Selection Problem -- On Various Cooling Schedules for Simulated Annealing Applied to the Job Shop Problem -- A High Performance Approximate Algorithm for the Steiner Problem in Graphs -- Invited Paper -- Random Geometric Problems on [0, 1]2 -- Regular Papers -- A Role of Constraint in Self-Organization -- Constructive Bounds and Exact Expectations for the Random Assignment Problem -- The “Burnside Process” Converges Slowly -- Quicksort Again Revisited -- Sampling Methods Applied to DenseInstances of Non-Boolean Optimization Problems -- Second-Order Methods for Distributed Approximate Single- and Multicommodity Flow.

Sommario/riassunto

TheWorkshoponRandomizationandApproximationTechniquesinComputer Science, Random'98, focuses on algorithmic and complexity aspects arising inthedevelopmentofe cientrandomizedsolutionstocomputationallydi cult problems. Itaims, inparticular,atfosteringthecooperationamongpractitioners andtheoreticiansandamongalgorithmicandcomplexityresearchersinthe eld. RANDOM'98,heldattheUniversityofBarcelona(UPC),October8 {10,1998, isthesecondintheseries,afterBologna. This volume contains all contributed papers accepted for presentation at theworkshop, togetherwithinvitedlecturesbyJosepD az(UPCBarcelona), AlanM. Frieze (CarnegieMellonU.),MichaelLuby(ICSIBerkeley),andEmo Welzl(ETHZuric ¨ h). Thecontributedpaperswereselectedoutofseveraldozen submissions received in response to the call for papers. All papers published intheworkshopproceedingswereselectedbytheprogramcommitteeonthe basisofrefereereports. Considerablee ortwasdevotedtotheevaluationofthe submissionsbytheprogramcommitteeandanumberofotherreferees. Extensive feedbackwasprovidedtoauthorsasaresult, whichwehopehasprovenhelpful tothem. Wewouldliketothankalloftheauthorswhorespondedtothecallforpapers, ourinvitedspeakers,thereferees, andthemembersoftheprogramcommittee: MichaelLuby,Chair, ICSIBerkeley AndreiBroder,DigitalSystemsResearchCenter BernardChazelle,PrincetonU. AndreaClementi,U. ofRome AnnaKarlin,U. ofWashington RichardKarp,U. ofWashington ClaireKenyon,U. ofParisSud MichaelMitzenmacher,DigitalSystemsResearchCenter RajeevMotwani, StanfordU. PrabhakarRaghavan,IBM MariaSerna,UPCBarcelona AlistairSinclair,U. ofCalifornia,Berkeley MadhuSudan,MIT AviWigderson, HebrewU. PeterWinkler,BellLabs WegratefullyacknowledgesupportfromtheEuropeanAssociationINTAS, theComissionatperaUniversitatsiRecerca{GeneralitatdeCatalunya,and Universitat Polit ecnica de Catalunya. Finally, we would like to thank Helena Martinez,CarmeAlvarez,ConradoMartinez, andJordiPetitiSilvestrefortheir helpinthepreparationofthemeeting. August1998 MichaelLuby,Jos eD. P. Rolim,MariaJ. Serna Contents Invited Paper Disjoint Paths in Expander Graphs via Random Walks: A