Curriculum Vitae 25th October 2024

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Academic Qualifications

- **PhD,** University of Edinburgh (Department of Computer Science), 1992
  - Thesis Title: *Efficient Algorithms for Listing Combinatorial Structures.*
  - Scholarships: US National Science Foundation Graduate Fellowship, Marshall Scholarship. (The Marshall Scholarship is supported by the government of the UK. It was offered to thirty graduates of US universities in 1987.)
- **BA,** Rice University, 1987 (Summa Cum Laude)
  - Degree Course: Computer Science (single honours), Political Science (single honours).
  - Scholarships and Awards: Outstanding graduate, School of Engineering; Outstanding student, Department of Computer Science; National Merit Scholarship.

Employment History

- **Department of Computer Science, University of Oxford**
  - From October 2021, Head of Department
  - From July 2013, Professor of Computer Science and Senior Research Fellow, St. Edmund Hall
- **Department of Computer Science, University of Liverpool.**
  - Aug. 2006 – June 2013 Professor
- **Department of Computer Science, University of Warwick.**
  - Oct. 2003 – Aug. 2006 Reader
  - Oct. 2000 – Sept. 2003: Senior Lecturer
  - Oct. 1995 – Sept. 2000: Lecturer and Warwick Research Fellow
- **Algorithms and Discrete Mathematics Department, Sandia National Laboratories, USA.**
  - 1993 — Sept. 1995: Senior Member of Technical Staff
  - 1992 — 1993: Research Fellow

Prizes and honours

- *EATCS Fellow 2023* "For fundamental contributions to many areas of theoretical computer science, primarily focusing on randomized algorithms and their limitations." European Association for Theoretical Computer Science.
- *AAIA Fellow 2023* "For outstanding achievements in the area of algorithms and complexity theory"
- *Best Paper Prize 2017.* 12th International Symposium on Parameterized and Exact Computation (IPEC 2017). The paper "A Fixed-Parameter Perspective on #BIS" with R. Curticapean, H. Dell, F. Fomin and J. Lapinskas won the best-paper prize.
- *Suffrage Science Award (Maths and Computing)* 2016. This scheme "celebrates women in science for their scientific achievement and for their ability to inspire others". It was initiated in 2011 by the MRC (Medical Research Council) Clinical Sciences Centre. One of the initial award winners in maths and computing.
- *Best Paper Prize 2016.* 43th Int'l Colloquium on Automata, Languages and Programming (ICALP 2016). The paper "Amplifiers for the Moran Process" with Galanis, Göbel, Lapinskas, and Richerby won best-paper prize for Track A (Algorithms, Automata, Complexity and Games).
- Awarded an ERC Advanced Grant, 2014.
- elected member of the European Academy of Sciences *Academia Europaea* 2014.
- *Best Paper Prize 2012.* ICALP 2012. The paper " The Complexity of Computing the Sign of the Tutte Polynomial (and consequent #P-hardness of Approximation)" with Jerrum won best-paper prize for Track A.
- *Best Paper Prize 2010.* ICALP 2010. The paper "Approximating the partition function of the ferromagnetic Potts model" with Jerrum won best-paper prize for Track A .
- *Best Paper Prize 2006.* ICALP 2006. The paper "On Counting Homomorphisms to Directed Acyclic Graphs" with Dyer and Paterson won best-paper prize for Track A.
- 1991–1992 *UK Distinguished Dissertations in Computer Science* (one of three winners)

Recent and Upcoming Invited Keynote or Plenary Talks

- 35th Int'l Conference on Probabilistic, Combinatorial and Asymptotic Methods for the Analysis of Algorithms (AofA 2024)
- 60th Dutch Mathematical Congress (NMC 2024)
- 28th Int'l Computing and Combinatorics Conference (COCOON 2022)
- 49th Int'l Conference on Automata, Languages, and Programming (ICALP 2022)
- 41st Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS 2021)
- 30th Int'l Symposium on Algorithms and Computation (ISAAC 2019)
- 36th Int'l Symposium on Theoretical Aspects of Computer Science (STACS 2019)
- 43rd Mathematical Foundations of Computer Science (MFCS 2018)
- 14th Latin American Theoretical Informatics Symposium (LATIN 2018)

- 27th Int'l Workshop on Combinatorial Algorithms (IWOCA 2016)
- Foundations of Genetic Algorithms XIII (FOGA 2015)
- Max Planck Institute for Computer Science Distinguished Lecturer Series, Sept 2014
- 8th Int'l Conference on Language and Automata Theory and Applications (LATA 2014)
- 13th Int'l Conference on Approximation Algorithms for Combinatorial Optimization Problems (APPROX 2010)

Short term and invited positions

- Visiting Scientist, Simons Institute for the Theory of Computing, Berkeley, Counting Complexity and Phase Transitions, January-May 2016.
- Visiting Scientist, Centre de Recerca Matematica (CRM), Barcelona, Probabilistic Techniques in Computer Science, September 2009
- Visiting Fellow, Newton Institute for Mathematical Sciences, Combinatorics and Statistical Mechanics, June 2008
- Visiting Researcher, Mathematica Sciences Research Institute (MSRI), Berkeley, Probability, Algorithms and Statistical Physics, March-May 2005
- Visiting Fellow, Newton Institute for Mathematical Sciences, Computation, Combinatorics and Probability, July-August 2002

Editorial Boards

1. Journal of the ACM (JACM), Area editor for "Randomized Algorithms and Probabilistic Analysis of Algorithms" 2018–2020
2. Journal of Discrete Algorithms, (co)-Editor-in-Chief 2014–2017
3. SIAM Journal on Computing (SICOMP) 2008 – 2016
4. LMS Journal of Computation and Mathematics 2010 – 2012
5. ACM Transactions on Algorithms 2004–2013
6. Journal of Algorithms 2000–2003

Chair Functions and Steering Committees at International Conferences

1. **PC Chair** RANDOM 2011, Princeton, USA.
2. **PC Chair** ICALP 2008, Track A: Algorithms and Complexity, Reykjavik, Iceland.
3. Steering Committee ICALP 2018–2022

Research Grants

- L.A. Goldberg, "Mapping the Complexity of Counting", ERC Advanced Grant 334828. 1 March 2014 – 31 August 2019; 2,499,093 Euros.
- M. Dyer, L.A. Goldberg, and M.Jerrum, "Computational Counting" The project consists of 3 EPSRC Grants. Leslie's is EP/I011528/1. 1 March 2011 - 28 February 2014, GBP 327,205
- S. Schewe (Principal Investigator) L. Goldberg and T. Shenton (co-investigators) "Synthesis and Verification in Markov Game Structures", July 2010 - August 2013. EPSRC EP/H046623/1 GBP 335,487
- P. Goldberg (Principal Investigator) L. Goldberg and P. Krysta (co-Investigators) "Efficient Decentralisated Approaches in Algorithmic Game Theory", EPSRC EP/G069239/1, 01/10/2009 - 30/09/2012 GBP 398,269 (this project is joint with an EPSRC grant of Artur Czumaj at Warwick).
- M. Dyer, L.A. Goldberg, and M. Jerrum, "The Complexity of Counting in Constraint Satisfaction Problems", this project consists of 3 EPSRC Grants. Leslie's is EP/E062482/1, 01/12/2007 - 30/11/2010, GBP 191,813.
- P. Goldberg (Principal Investigator), L.A. Goldberg (co-Investigator), "Algorithmics of Network-sharing Games", EPSRC GR/T07343/02, GBP 53,457, 14/08/2006 - 13/01/2008
- M. Paterson (Principal Investigator), A. Stuart, L. Goldberg, and B. Chen (co-Investigators), "The Centre for Discrete Mathematics and its Applications", EPSRC Science and Innovation Grant, GBP 3,768,168 1/10/06–30/09/12 EPSRC Grant EP/D063191/1
- M. Dyer, L.A. Goldberg, and M. Jerrum, "Discontinuous Behaviour in the Complexity of randomized Algorithms", This project consists of 3 EPSRC Research Grants. Leslie's is GR/S76168/01, 19 Jan 04 - 18 Jan 07. GBP 107,361. (Final overall assessment: Outstanding)
- L.A. Goldberg, EPSRC Research Grant, GR/R44560/01, Analysing Markov-chain based random sampling algorithms, 15 Oct 01 – 14 Oct 03. GBP 82,911.74 (Final overall assessment: Outstanding)
- M. Paterson (principal investigators at the Warwick site) and H. Djidjiv and L.A. Goldberg and P. Goldberg and Alexandre Tiskin (other investigators at the Warwick site), IST Programme of the EU, Contract IST-1999-14186, ALCOM-FT, 1 June 00 – 1 June 03.
- M. Dyer, L.A. Goldberg, and M. Jerrum, "Sharper analysis of randomised algorithms: a computational approach", This project consists of 3 EPSRC Research Grants. Leslie's is GR/M96940, 1 Apr 00 to 31 March 03. GBP 66,793. (Final overall assessment: Outstanding)
- L.A. Goldberg, EPSRC Research Grant GR/L60982, "Design and Analysis of Contention-Resolution Protocols", 1 Oct 97 – 30 Sept 00, GBP 16,377. (Final overall assessment: Outstanding)
- M. Paterson (principal investigator at the Warwick site) and L.A. Goldberg and S. Muthukrishnan (other investigators at the Warwick site), ESPRIT Project 20244, ALCOM-IT, "Algorithms and Complexity in Information technology", Jan 96 – Jun 99.
- L.A. Goldberg, Warwick Teaching and Research Innovations Grant 0951CSA, "Computer Algorithms for Constructing Evolutionary Trees", 20 August 1996 – 19 August 1997, GBP 1,500.

- E. Brickell, J. DeLaurentis and L.A. Goldberg (principal investigator), "Optical Communication for Future High Performance Computers," Laboratory Directed Research and Development Grant, 1995, Sandia National Labs, $571,000.
- J. DeLaurentis and L.A. Goldberg, "Random Structures and Algorithms." US Department of Energy's Office of Scientific Computing, 1995, $180,000.
- L.A. Goldberg, P.W. Goldberg, C.A. Phillips and T. Warnow (principal investigator), A New Approach to Protein Function and Structure Prediction, Laboratory Directed Research and Development Grant, 1994, Sandia National Labs, $629,000.

External Research Committees

- Vice President of the EATCS (European Association of Theoretical Computer Science) 2016–2020. Elected member of the Council 2009–2013, 2013–2017 (Chair of the Publications Committee 2012–16, and of the Awards Committee 2013–14).
- Chair, EPSRC ICT Prioritisation Panel 2019
- ERC Consolidator Grant Committee PE6
  Computer Science and Informatics ERC-2015-CoG and ERC-2017-CoG
- Specialist Advisor to sub-panel 23, Computer Science and Informatics, 2008 Research Assessment Exercise (RAE)

Public Understanding of Mathematics and Computer Science

- In Our Time, Alan Turing, Radio 4, 15 Oct 2020 Hosted by Melvyn Bragg `https://www.bbc.co.uk/programmes/m000ncmw`
- New Scientist "Instant Expert" day on mathematics, 1 April 2017 `https://www.newscientist.com/event/the-mathematical-world/`
- *Algorithm Complexity and P vs NP* The Training Partnership "Computer Science in Action" 24 Nov 2016 UCL (698 students) and 7 Dec 2016 Warwick (475 students)
  `http://www.thetrainingpartnership.org.uk/study-day/computer-science-in-action/`
- Algorithms and their Limitations, Hay Festival, 29 May 2016
  `https://www.hayfestival.com/p-10763-leslie-ann-goldberg.aspx`
- In Our Time, P vs NP, Radio 4, 5 Nov 2015. Hosted by Melvyn Bragg
  `http://www.bbc.co.uk/programmes/b06mtms8?` This episode was chosen as one of the Listeners' Top 10 programmes to mark the 750th edition `http://www.bbc.co.uk/programmes/articles/wvSdFMv6yP0m6W5J8xyhBh/the-in-our-time-listeners-top-10`
- The Secret Rules of Modern Living: Algorithms, BBC Four, 24 Sept 2015 Presented by Marcus du Sautoy `http://www.bbc.co.uk/programmes/p030s6b3`

Publications

Journal Articles

J1. Andreas Galanis, Leslie Ann Goldberg, Paulina Smolarova, Sampling from the random cluster model on random regular graphs at all temperatures via Glauber dynamics, *Combinatorics, Probability, and Computing*, (To Appear).

J2. Jacob Focke, Leslie Ann Goldberg, Marc Roth, Stanislav Živný, Approximately Counting Answers to Conjunctive Queries with Disequalities and Negations, *ACM Transactions on Algorithms*, (To Appear).

J3. Zongchen Chen, Andreas Galanis, Leslie Ann Goldberg, Heng Guo, Andres Herrera-Poyatos, Nitya Mani, and Ankur Moitra, Fast Sampling of Satisfying Assignments from Random k-SAT with Applications to Connectivity, *SIAM Journal on Discrete Mathematics*, (To Appear).

J4. Marco Bressan, Leslie Ann Goldberg, Kitty Meeks, Marc Roth, Counting Subgraphs in Somewhere Dense Graphs, *SIAM Journal on Computing*, (To Appear).

J5. Leslie Ann Goldberg and Marc Roth, Parameterised and Fine-grained Subgraph Counting, modulo 2, *Algorithmica*, (To Appear).

J6. Leslie Ann Goldberg, Marc Roth, and Tassilo Constantin Schwarz, Parameterised Approximation of the Fixation Probability of the Dominant Mutation in the Multi-Type Moran Process, *Theoretical Computer Science*, 1016 (2024) 114785 https://doi.org/10.1016/j.tcs.2024.114785

J7. Ivona Bezáková, Andreas Galanis, Leslie Ann Goldberg, and Daniel Štefankovič, Fast sampling via spectral independence beyond bounded-degree graphs, 20(1) Article 7 pp 1–26, *ACM Transactions on Algorithms*, (2024). https://doi.org/10.1145/3631354

J8. Amin Coja-Oghlan, Andreas Galanis, Leslie Ann Goldberg, Jean Bernoulli Ravelomanana, Daniel Stefankovic, and Eric Vigoda. Metastability of the Potts ferromagnet on random regular graphs,*Communications in Mathematical Physics*, (2023) https://link.springer.com/article/10.1007/s00220-023-04644-6

J9. Andreas Galanis, Leslie Ann Goldberg, Daniel Štefankovič, Implementations and the independent set polynomial below the Shearer threshold, *Theoretical Computer Science*, 939 194–215 (2023).

J10. Andreas Galanis, Leslie Ann Goldberg, Andres Herrera-Poyatos, The complexity of approximating the complex-valued Ising model on bounded degree graphs, *SIAM Journal on Discrete Mathematics*, 36(3) 2159–2204 (2022). https://doi.org/10.1137/21M1454043

J11. Andreas Galanis, Leslie Ann Goldberg, James Stewart, Fast mixing via polymers for random graphs with unbounded degree, *Information and Computation*, Volume 285 Part B (2022). https://doi.org/10.1016/j.ic.2022.104894

J12. Andreas Galanis, Leslie Ann Goldberg, Andrés Herrera-Poyatos, The complexity of approximating the complex-valued Potts model, *Computational Complexity*, 31. Article 2 (2022). https://doi.org/10.1007/s00037-021-00218-x

J13. Leslie Ann Goldberg, John Lapinskas, David Richerby, Faster Exponential-time Algorithms for Approximately Counting Independent Sets, *Theoretical Computer Science*, 892(12) 48–84 (2021). https://doi.org/10.1016/j.tcs.2021.09.009

J14. Andreas Galanis, Leslie Ann Goldberg, Heng Guo and Kuan Yang, Counting solutions to random CNF formulas, *SIAM Journal on Computing*, 50(6), 1701–1738 (2021). https://doi.org/10.1137/20M1351527

J15. Jacob Focke, Leslie Ann Goldberg, Marc Roth, Stanislav Živný, Counting Homomorphisms to K_4-minor-free Graphs, modulo 2, *SIAM Journal on Discrete Mathematics*, 35(4) 2749–2814 (2021). https://doi.org/10.1137/20M1382921

J16. Andreas Galanis, Leslie Ann Goldberg, James Stewart, Fast algorithms for general spin systems on bipartite expanders, *ACM Transactions on Computation Theory*, 13(4) Article 25 pp 1–18 (2021). https://doi.org/10.1145/3470865

J17. Jacob Focke, Leslie Ann Goldberg, and Stanislav Živný, The Complexity of Approximately Counting Retractions to Square-Free Graphs, *ACM Transactions on Algorithms*, Vol 17, No 3, Article 22 (2021) https://doi.org/10.1145/3458040

J18. Ivona Bezáková, Andreas Galanis, Leslie Ann Goldberg, and Daniel Štefankovič, The complexity of approximating the matching polynomial in the complex plane, *ACM Transactions on Computation Theory*, Vol 13, No 2, Article 13 (2021) https://doi.org/10.1145/3448645

J19. Leslie Ann Goldberg, Joost Jorritsma, Júlia Komjáthy, John Lapinskas, Increasing efficacy of contact-tracing applications by user referrals and stricter quarantining, *PLoS ONE*, 16(5):e0250435 (2021). https://doi.org/10.1371/journal.pone.0250435

J20. Zongchen Chen, Andreas Galanis, Leslie Ann Goldberg, Will Perkins, James Stewart, and Eric Vigoda, Markov chains for the hard-core model via polymer models, *Random Structures and Algorithms*, 58(2) (2021) 294–321. http://dx.doi.org/10.1002/rsa.20968

J21. Andreas Galanis, Leslie Ann Goldberg, Kuan Yang, Approximating partition functions of bounded-degree Boolean counting Constraint Satisfaction Problems, *Journal of Computer and Systems Sciences*, 115 (2021) 187–213. https://doi.org/10.1016/j.jcss.2020.08.003

J22. Ivona Bezáková, Andreas Galanis, Leslie Ann Goldberg, and Daniel Štefankovič, Inapproximability of the independent set polynomial in the complex plane, *SIAM Journal on Computing* 49(5) pp. STOC18-395–STOC18-448 (2020) https://doi.org/10.1137/18M1184485

J23. Martin E. Dyer, Andreas Galanis, Leslie Ann Goldberg, Mark Jerrum, and Eric Vigoda, Random Walks on Small World Networks, *ACM Transactions on Algorithms* 16(3) Article 37 (2020) https://doi.org/10.1145/3382208

J24. Miriam Backens and Leslie Ann Goldberg, Holant clones and the approximability of conservative holant problems, *ACM Transactions on Algorithms*, 16(2) Article 23 (2020) https://doi.org/10.1145/3381425

J25. Antonio Blanca, Andreas Galanis, Leslie Ann Goldberg, Daniel Štefankovič, Eric Vigoda, Kuan Yang, Sampling in Uniqueness from the Potts and Random-Cluster Models on Random Regular Graphs, *SIAM Journal on Discrete Mathematics* 34(1) 742–793 (2020) https://doi.org/10.1137/18M1219722

J26. Jacob Focke, Leslie Ann Goldberg, and Stanislav Živný, The Complexity of Approximately Counting Retractions, *ACM Transactions on Computation Theory* 12(3) Article 15 (2020) https://doi.org/10.1145/3397472

J27. Miriam Backens, Andrei Bulatov, Leslie Ann Goldberg, Colin McQuillan, Stanislav Živný, Boolean approximate counting CSPs with weak conservativity, and implications for ferromagnetic two-spin, *Journal of Computer and Systems Sciences* 109 95–125 (2020) https://doi.org/10.1016/j.jcss.2019.12.003

J28. Leslie Ann Goldberg, John Lapinskas, and David Richerby Phase Transitions of the Moran Process and Algorithmic Consequences, *Random Structures and Algorithms* 1–51 (2019) https://doi.org/10.1002/rsa.20890

J29. Leslie Ann Goldberg and Mark Jerrum, Approximating Pairwise Correlations in the Ising Model, *ACM Transactions on Computation Theory* (2019). https://doi.org/10.1145/3337785

J30. Radu Curticapean, Holger Dell, Fedor Fomin, Leslie Ann Goldberg, and John Lapinskas, A Fixed-Parameter Perspective on #BIS, *Algorithmica* (2019). https://doi.org/10.1007/s00453-019-00606-4

J31. Jacob Focke, Leslie Ann Goldberg, and Stanislav Živný, The Complexity of Counting Surjective Homomorphisms and Compactions, *SIAM Journal on Discrete Mathematics* 33(2) 1006–1043 (2019). https://doi.org/10.1137/17M1153182

J32. Ivona Bezáková, Andreas Galanis, Leslie Ann Goldberg, Heng Guo, and Daniel Štefankovič, Approximation via Correlation Decay when Strong Spatial Mixing Fails, *SIAM Journal on Computing* 48(2) 279–349 (2019). https://doi.org/10.1137/16M1083906

J33. Leslie Ann Goldberg, John Lapinskas, Johannes Lengler, Florian Meier, Konstantinos Panagiotou, and Pascal Pfister, Asymptotically Optimal Amplifiers for the Moran Process, *Theoretical Computer Science* 758 (2019) 93–93 https://doi.org/10.1016/j.tcs.2018.08.005

J34. Andreas Galanis, Leslie Ann Goldberg, Kuan Yang, Uniqueness for the 3-State Antiferromagnetic Potts Model on the Tree, *Electronic Journal of Probability*, (2018) Vol. 23, paper no. 82, 1-43. https://doi.org/10.1214/18-EJP211

J35. L.A. Goldberg and H. Guo, The complexity of approximating complex-valued Ising and Tutte partition functions, *Computational Complexity*, (2017) pp 1–69, https://doi.org/10.1007/s00037-017-0162-2

J36. A. Galanis, L.A. Goldberg and Mark. Jerrum, A complexity trichotomy for approximately counting list H-colourings, *ACM Transactions on Computation Theory*, 9(2) Article 9, (2017).

J37. A. Bulatov, L.A. Goldberg, M. Jerrum, D. Richerby, and S. Živný, Functional Clones and Expressibility of Partition Functions, *Theoretical Computer Science*, 687, 11–39, (2017).

J38. A. Galanis, A. Göbel, L.A. Goldberg, J. Lapinskas, and D. Richerby, Amplifiers for the Moran Process, *Journal of the ACM*, 64(1) Article 5, (2017).

J39. A. Galanis and L.A. Goldberg, The complexity of approximately counting in 2-spin systems on k-uniform bounded-degree hypergraphs, *Information and Computation*, 251 36–66 (2016).

J40. L.A. Goldberg, R. Gysel and J. Lapinskas, Approximately counting locally-optimal structures, *Journal of Computer and Systems Sciences*, 82 1144–1160 (2016) .

J41. M. Dyer, L.A. Goldberg and D. Richerby, Counting 4×4 Matrix Partitions of Graphs, *Discrete Applied Mathematics*, doi:10.1016/j.dam.2016.05.001 (2016).

J42. A. Göbel, L.A. Goldberg and D. Richerby, Counting Homomorphisms to Square-Free Graphs, Modulo 2, *ACM Transactions on Computation Theory*, 8(3) Article 12, (2016).

J43. J-Y. Cai, A. Galanis, L.A. Goldberg, H. Guo, M. Jerrum, D. Štefankovičand E. Vigoda, #BIS-Hardness for 2-Spin Systems on Bipartite Bounded Degree Graphs in the Tree Nonuniqueness Region, *Journal of Computer and Systems Sciences*, 82 690–711 (2016).

J44. A. Galanis, L.A. Goldberg, and M. Jerrum, Approximately Counting H-Colourings is #BIS-Hard, *SIAM Journal on Computing*, 45(3) 680–711 (2016).

J45. L.A. Goldberg and M. Jerrum, The complexity of counting locally maximal satisfying assignments of Boolean CSPs, *Theoretical Computer Science*, 634, 35–46, (2016).

J46. J. Diaz, L.A. Goldberg, D. Richerby and M. Serna, Absorption Time of the Moran Process, *Random Structures and Algorithms*, doi: 10.1002/rsa.20617 (2016).

J47. L.A. Goldberg and M. Jerrum, A complexity classification of spin systems with an external field, *Proceedings of the National Academy of Sciences of the USA*, 112(43), 13161–13166, (2015).

J48. A. Göbel, L.A. Goldberg, C. McQuillan, D. Richerby and T. Yamakami, Counting list matrix partitions of graphs, *SIAM Journal on Computing*, 44(4), 1089–1118, (2015).

J49. L.A. Goldberg, M. Jerrum, and C. McQuillan, Approximating the partition function of planar two-state spin systems, *Journal of Computer and Systems Sciences*, 81(1), 330–358, (2015).

J50. X. Chen, M. Dyer, L.A. Goldberg, M. Jerrum, P. Lu, C. McQuillan, and D. Richerby, The complexity of approximating conservative counting CSPs, *Journal of Computer and Systems Sciences*, 81(1) 311–329, (2015).

J51. L.A. Goldberg and M. Jerrum, The Complexity of Computing the Sign of the Tutte Polynomial, *SIAM Journal on Computing*, 43(6), 1921–1952, (2014).

J52. A. Göbel, L.A. Goldberg and D. Richerby, The Complexity of Counting Homomorphisms to Cactus Graphs Modulo 2 , *ACM Transactions on Computation Theory*, 6(4), Article 17, (2014).

J53. L.A. Goldberg and M. Jerrum, The Complexity of Approximately Counting Tree Homomorphisms, *ACM Transactions on Computation Theory*, 6(2), Article 8, (2014).

J54. J. Diaz, L.A. Goldberg, G.B. Mertzios, D. Richerby, M. Serna, and P.G. Spirakis, Approximating Fixation Probabilities in the Generalized Moran Process, *Algorithmica*, 69(1), 78–91, (2014).

J55. B. Doerr and L.A. Goldberg, Adaptive Drift Analysis, *Algorithmica*, 65(1), 224–250, (2013).

J56. A.A. Bulatov, M.E. Dyer, L.A. Goldberg, M. Jerrum, and C. McQuillan, The expressibility of functions on the Boolean domain, with applications to Counting CSPs, *Journal of the ACM*, 60(5), Article 32, (2013).

J57. L.A. Goldberg and M. Jerrum, A polynomial-time algorithm for estimating the partition function of the ferromagnetic Ising model on a regular matroid, *SIAM Journal on Computing*, 42(3) 1132–1157 (2013).

J58. L.A. Goldberg, P.W. Goldberg, P. Krysta, and C. Ventre, Ranking games that have competitiveness-based strategies, *Theoretical Computer Science*, 476, 24–37, (2013).

J59. J. Diaz, L.A. Goldberg, G.B. Mertzios, D. Richerby, M. Serna and P.G. Spirakis, On the fixation probability of superstars, *Proceedings of the Royal Society A*, 469, Article 20130193, (2013).

J60. L.A. Goldberg and M. Jerrum, Approximating the Tutte polynomial of a binary matroid and other related combinatorial polynomials, *Journal of Computer and Systems Sciences*, 79(1), 68–78, (2013).

J61. L.A. Goldberg and M. Jerrum, Approximating the partition function of the ferromagnetic Potts model, *Journal of the ACM*, 59(5), Article 25, (2012).

J62. M. Dyer, L.A. Goldberg, M. Jalsenius and D. Richerby, The Complexity of Approximating Bounded-Degree Boolean #CSP, *Information and Computation*, 220, 1–14, (2012)

J63. P. Chebolu, L.A. Goldberg and R. Martin, The complexity of approximately counting stable roommate assignments, *Journal of Computer and Systems Sciences*, 78(5), 1579–1605, (2012).

J64. L.A. Goldberg and M. Jerrum, Inapproximability of the Tutte polynomial of a planar graph, *Computational Complexity*, 21(4), 605–642, (2012).

J65. P. Chebolu, L.A. Goldberg and R. Martin, The complexity of approximately counting stable matchings, *Theoretical Computer Science*, 437, 35–68, (2012).

J66. A. Bulatov, M. Dyer, L.A. Goldberg, M. Jalsenius, M. Jerrum and D. Richerby, The complexity of weighted and unweighted #CSP, *Journal of Computer and Systems Sciences*, 78(2), 681–688, (2012).

J67. L.A. Goldberg and M. Jerrum, A Counterexample to rapid mixing of the Ge-Štefankovič Process, *Electronic Communications in Probability*, 17(5), 1–6, (2012).

J68. L.A. Goldberg, M. Grohe, M. Jerrum and M. Thurley, A complexity dichotomy for partition functions with mixed signs, *SIAM Journal on Computing*, 39(7), 3336–3402, (2010).

J69. M. Dyer, L.A. Goldberg, and M. Jerrum, A complexity dichotomy for hypergraph partition functions, *Computational Complexity*,19(4), 605-633, (2010).

J70. L.A. Goldberg, M. Jerrum and M. Karpinski, The Mixing Time of Glauber Dynamics for Colouring Regular Trees, *Random Structures and Algorithms*, 36(4), 464-476, (2010).

J71. M. Dyer, L.A. Goldberg, and M. Jerrum, An approximation trichotomy for Boolean #CSP, *Journal of Computer and Systems Sciences*, 76, 267-277, (2010).

J72. M. Dyer, L.A. Goldberg, and M. Jerrum, The Complexity of Weighted Boolean #CSP, *SIAM Journal on Computing*, 38(5), 1970–1986, (2009).

J73. M. Dyer, L.A. Goldberg, and M. Jerrum, Matrix norms and rapid mixing for spin systems, *Annals of Applied Probability*, 19(1), 71–107, (2009).

J74. A. Bulatov, M. Dyer, L.A. Goldberg, M. Jalsenius and D. Richerby, The Complexity of Weighted Booleam #CSP with Mixed Signs, *Theoretical Computer Science*, 410, 3949–3961, (2009).

J75. E. Elkind, L.A. Goldberg, P. Goldberg and M. Wooldridge, A tractable and expressive class of marginal contribution nets and its applications, *Mathematical Logical Quarterly*, 55(4), 362–376, (2009).

J76. E. Elkind, L.A. Goldberg, P.W. Goldberg and M. Wooldridge, On The Computational Complexity of Weighted Voting Games, *Annals of Mathematics and Artificial Intelligence*, 56(2), 109–131, (2009).

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