

Stanford



Serge Plotkin

Associate Professor of Computer Science, Emeritus

Bio

BIO

Plotkin's focus is on optimization problems that are encountered in the context of design, management, and maintenance of broadband communication networks. Currently his main effort in this area is concentrated on development of algorithms for network topology design, routing, capacity sizing, server placement, and fair resource allocation. His goal is to develop both offline strategies that can be used during network design stage, as well as online strategies that can be applied to optimize existing network infrastructure.

ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Computer Science

PROFESSIONAL EDUCATION

- PhD, MIT (1988)

Publications

PUBLICATIONS

- **COST-DISTANCE: TWO METRIC NETWORK DESIGN** *SIAM JOURNAL ON COMPUTING*
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- **An online throughput-competitive algorithm for multicast routing and admission control** *JOURNAL OF ALGORITHMS*
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Meyerson, A., O'Callaghan, L., Plotkin, S.
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- **Web caching using access statistics.**
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- **On the integrality gap of capacitated facility location problem.** *GSIA Working Paper*
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- **Facility location with interference.** *GSIA Working Paper 2001-E23*
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Goel, A., Meyerson, A., Plotkin, S.
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- **Designing networks incrementally** *42nd Annual Symposium on Foundations of Computer Science (FOCS 2001)*
Meyerson, A., Munagala, K., Plotkin, S.
IEEE COMPUTER SOC.2001: 406–415
- **Distributed admission control, scheduling, and routing with stale information** *12th Annual ACM-SIAM Symposium on Discrete Algorithms*
Goel, A., Meyerson, A., Plotkin, S.
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- **A sublinear parallel algorithm for stable matching** *THEORETICAL COMPUTER SCIENCE*
Feder, T., Megiddo, N., Plotkin, S. A.
2000; 233 (1-2): 297-308
- **Cost-Distance: Two metric network design** *41st Annual Symposium on Foundations of Computer Science (FOCS 00)*
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IEEE COMPUTER SOC.2000: 624–630
- **Combining fairness with throughput: Online routing with multiple objectives.**
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- **Scheduling data transfers in a network and the set scheduling problem.**
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- **POLYNOMIAL DUAL NETWORK SIMPLEX ALGORITHMS** *MATHEMATICAL PROGRAMMING*
Orlin, J. B., Plotkin, S. A., Tardos, E.
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Goldberg, A. V., Plotkin, S. A., Vaidya, P. M.
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