

CURRICULUM VITAE

Thành Nguyen

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- EDUCATION
- PhD, Applied Mathematics, Cornell University, USA. (May 2010.)
- Thesis: Network Resource Allocation Games and Applications.
 - Advisor: Professor Éva Tardos.
- Diploma of Mathematics, Eötvös University, Budapest, Hungary. (1999 – 2004.)
- Thesis: Disjoint Paths and Cuts in Planar Graphs.
 - Advisor: Professor András Frank.
- PROFESSIONAL EXPERIENCE
- Research Intern at Microsoft Research, Cambridge, UK, Summer 2009.
 - Visiting Researcher at Eötvös University, Budapest, Hungary, Fall 2007.
 - PC member of Sigmetrics (shadow).
 - Journal Reviewer for Operation Research Letters, Algorithmica.
- SKILLS
- Programming languages: C++, Python, Matlab.
- AWARDS
- Scholarship of ACM SIGecom 2007.
 - Scholarship of Hungarian Republic 1999-2004.
- TEACHING EXPERIENCE
- Instructor for
CS 482: Introduction to Analysis of Algorithms.
 - Teaching assistant for:
CS 684: Algorithmic Game Theory,
CS 485: Mathematical Foundations for the Information Age,
CS 482: Introduction to Analysis of Algorithms,
CS 481: Introduction to Theory of Computing.
- PATENTS
- Weighted proportional sharing mechanism,
Microsoft Corporation (filed September 2009).
- PAPERS
- Worst-case Revenue Maximization in Single-Parameter Auctions
In Preparation
We introduce a revenue benchmark for Single-Parameter Auctions, and give a mechanism obtaining a constant factor of the benchmark.
 - Revenue Upper Bound for Quasi-proportional Sharing Mechanism,
(with M. Vojnović), *In preparation.*

We show a revenue upper bound on prior-free quasi proportional sharing mechanisms, and give a mechanism that achieves a near optimal revenue.

- The Weighted Proportional Sharing Mechanism,
(with M. Vojnović), *Submitted*.
We study the traditional proportional sharing mechanism when providers act strategically, and show applications to sponsored search.
- Approximate Pure Nash Equilibria via Lovász Local Lemma,
(with É. Tardos), *WINE* 2009.
We introduce a new technique to prove the existence and find approximate pure Nash equilibria in graphical games in polynomial time.
- Approximately Maximizing Efficiency and Revenue in Polyhedral Environments,
(with É. Tardos), *EC* 2007.
We generalize the bandwidth sharing game to a general polyhedral, and analyze the efficiency as well as revenue of a Nash equilibrium.
- Parallel Imaging Problem,
(with É. Tardos), *ESA* 2008.
We develop a new type of graph cut algorithms to reconstruct medical images obtained by MRI machines.
- A Simple LP Relaxation for the Asymmetric Traveling Salesman Problem,
APPROX-RANDOM, 2008.
We introduce a new linear program relaxation for this classical problem. We show that our relaxation is as strong as the Held-Karp relaxation but it improves the number of non-zero coordinates of the extreme points.
- On the Disjoint Paths Problem,
Operation Research Letters, Vol. 35, 1, 2007.
We give a simple combinatorial algorithm for the Disjoint Paths Problem. This is the currently best known approximation algorithm for the problem.
- Subgraph Characterization of Red/Blue-split Graphs and König-Egerváry Graphs,
(with E. Korach and B. Peis), *SODA* 2006.
We characterize the class of graphs whose maximum matchings and minimum vertex covers are of the same size.

REFERENCES

Jon Kleinberg, Cornell University, USA,
kleinber@cs.cornell.edu.

Éva Tardos, Cornell University, USA,
eva@cs.cornell.edu.