

SemAlg

Seminar (Combinatorial) Algorithms

Hendrik Jan Hoogeboom & Walter Kusters

Universiteit Leiden


















































































Spring 2015

www.liacs.leidenuniv.nl/~kusterswa/semalg/

We discuss papers from the series of “Fun with Algorithms” conferences, in particular from the years 2014, 2012, 2010 and 2007:

www.informatik.uni-trier.de/~Ley/db/conf/fun/index.html

7. FUN 2014: Lipari Island, Sicily, Italy

-    Alfredo Ferro, Fabrizio Luccio, Peter Widmayer (Eds.): **Fun with Algorithms - 7th International Conference, FUN 2014, Lipari Island, Sicily, Italy, July 1-3, 2014. Proceedings.** Springer 2014 Lecture Notes in Computer Science ISBN 978-3-319-07889-2
-    Paolo Boldi: **Algorithmic Gems in the Data Miner's Cave.** 1-15
-    Erik D. Demaine, Martin L. Demaine: **Fun with Fonts: Algorithmic Typography.** 16-27
-    Md. Jawaherul Alam, Stephen G. Kobourov, Sergey Pupyrev, Jackson Toeniskoetter: **Happy Edges: Threshold-Coloring of Regular Lattices.** 28-39
-    Greg Aloupis, Erik D. Demaine, Alan Guo, Giovanni Viglietta: **Classic Nintendo Games Are (Computationally) Hard.** 40-51
-    Michele Borassi, Pierluigi Crescenzi, Michel Habib, Walter A. Koster, Andrea Marino, Frank W. Takes: **On the Solvability of the Six Degrees of Kevin Bacon Game - A Faster Graph Diameter and Radius Computation Method.** 52-63
-    Michael Brand: **No Easy Puzzles: A Hardness Result for Jigsaw Puzzles.** 64-73
-    Peter Burcsi, Gabriele Fici, Zsuzsanna Lipták, Frank Ruskey, Joe Sawada: **Normal, Abby Normal, Prefix Normal.** 74-88
-    Ke Chen, Adrian Dumitrescu: **Nonconvex Cases for Carpenter's Rulers.** 89-99
-    Ferdinando Cicalese, Gennaro Cordasco, Luisa Gargano, Martin Milanić, Joseph G. Peters, Ugo Vaccaro: **How to go Viral: Cheaply and Quickly.** 100-112
-    Shantanu Das, Paola Flocchini, Giuseppe Prencipe, Nicola Santoro: **Synchronized Dancing of Oblivious Chameleons.** 113-124
-    Vladimir G. Deineko, Gerhard J. Woeginger: **Another Look at the Shoelace TSP: The Case of Very Old Shoes.** 125-136
-    Erik D. Demaine, Fermi Ma, Erik Waingarten: **Playing Dominoes Is Hard, Except by Yourself.** 137-146
-    Palash Dey, Prachi Goyal, Neeldhara Misra: **UNO Gets Easier for a Single Player.** 147-157
-    Jannik Dreier, Hugo Jonker, Pascal Lafourcade: **Secure Auctions without Cryptography.** 158-170
-    Guillaume Fertin, Shahrad Jamshidi, Christian Komusiewicz: **Towards an Algorithmic Guide to Spiral Galaxies.** 171-182
-    Rudolf Fleischer, Tao Zhang: **Competitive Analysis of the Windfall Game.** 183-193
-    Konstantinos Georgiou, Evangelos Kranakis, Danny Krizanc: **Excuse Me! or The Courteous Theatregoers' Problem - (Extended Abstract).** 194-205
-    Vincenzo Gervasi, Giuseppe Prencipe, Valerio Volpi: **Zombie Swarms: An Investigation on the Behaviour of Your Undead Relatives.** 206-217
-    Kazuya Haraguchi, Hirotaka Ono: **Approximability of Latin Square Completion-Type Puzzles.** 218-229
-    Takashi Horiyama, Masashi Kyomi, Yoshio Okamoto, Ryuhei Uehara, Takeaki Uno, Yushi Uno, Yukiko Yamauchi: **Sankaku-Tori: An Old Western-Japanese Game Played on a Point Set.** 230-239
-    Minghui Jiang, Pedro J. Tejada, Haitao Wang: **Quell.** 240-251
-    Barbara Keller, David Peleg, Roger Wattenhofer: **How Even Tiny Influence Can Have a Big Impact!** 252-263
-    Irina Kostitsyna, Maarten Löffler, Valentin Polishchuk: **Optimizing Airspace Closure with Respect to Politicians' Egos.** 264-276
-    Sven Oliver Krumke, Florian D. Schwahn, Clemens Thielen: **Being Negative Makes Life NP-hard (for Product Sellers).** 277-288
-    Christos Levkopoulos, Andrzej Lingas, Bengt J. Nilsson, Pawel Zyliniński: **Clearing Connections by Few Agents.** 289-300
-    Andrei Asinowski, Balázs Keszegh, Tillmann Miltzow: **Counting Houses of Pareto Optimal Matchings in the House Allocation Problem.** 301-312
-    Takaaki Mizuki, Hiroki Shizuya: **Practical Card-Based Cryptography.** 313-324
-    Harrah Eszed, Wei Theresie: **The Harassed Waitress Problem.** 325-339
-    Giovanni Viglietta: **Lemmings is PSPACE-Complete.** 340-351
-    Bang Ye Wu: **Finding Centers and Medians of a Tree by Distance Queries.** 352-363
-    Katsuhisa Yamanaka, Erik D. Demaine, Takehiro Ito, Jun Kawahara, Masashi Kyomi, Yoshio Okamoto, Toshiki Saitoh, Akira Suzuki, Kei Uchizawa, Takeaki Uno: **Swapping Labeled Tokens on Graphs.** 364-375

How is the seminar organized? Do the following twice:

Present a paper during a 45 minutes **lecture**.

Make slides, and use the blackboard.

Produce a 6–10 page **paper/report in L^AT_EX/PDF**.

Use your own words.

Grading is based on the four **P**s: presentation (2×), paper (2×), participation (including presence) and maybe peer review OR programming.