Collab – Publication list

Papers accepted or published

2013

Brodtkorb, A.R., Hagen, T.R., Schulz, C., Hasle, G.: ***GPU computing in discrete optimization. Part I: Introduction to the GPU.*** EURO J Transp Logist (2013) 2:129–157. DOI: 10.1007/s13676-013-0025-1.

Schulz, C., Hasle, G., Brodtkorb, A.R., Hagen, T.R.: ***GPU computing in discrete optimization. Part II: Survey focused on routing problems.*** EURO J Transp Logist (2013) 2:159–186. DOI 10.1007/s13676-013-0026-0.

Talbi E.-G., G. Hasle: ***Editorial, Special Issue Metaheuristics on GPU.*** Journal of Parallel and Distributed Computing. Volume 73, Issue 1, January 2013, Pages 1-3, ISSN 0743-7315, 10.1016/j.jpdc.2012.09.014.

Schulz C.: ***Efficient local search on the GPU—Investigations on the vehicle routing problem,*** Journal of Parallel and Distributed Computing, Volume 73, issue 1 (January, 2013), p. 14-31, ISSN 0743-7315, DOI 10.1016/j.jpdc.2012.02.020.

Brodtkorb A. R., T. R. Hagen, M. L. Sætra: ***Graphics processing unit (GPU) programming strategies and trends in GPU computing,*** Journal of Parallel and Distributed Computing, Volume 73, issue 1 (January, 2013), p. 4-13, ISSN 0743-7315, DOI 10.1016/j.jpdc.2012.04.003

2012

Schulz C.: ***Efficient local search on the GPU—Investigations on the vehicle routing problem.*** Journal of Parallel and Distributed Computing 73(1), 14 - 31 (2013). Metaheuristics on GPUs.

Brodtkorb A. R., T. R. Hagen, M. L. Sætra: ***Graphics processing unit (GPU) programming strategies and trends in GPU computing***, Journal of Parallel and Distributed Computing, Volume 73, Issue 1, January 2013, Pages 4-13, ISSN 0743-7315, 10.1016/j.jpdc.2012.04.003.

2011

Talbi E.-G., G. Hasle: ***Special issue of the Journal of Parallel and Distributed Computing: Metaheuristics on GPU (call for papers)***, Journal of Parallel and Distributed Computing, Volume 71, Issue 4, April 2011, Pages 621-622, ISSN 0743-7315, 10.1016/j.jpdc.2011.02.002. http://www.sciencedirect.com/science/article/pii/S074373151100030X

2010

Luong T V, N. Melab, E-G Talbi: ***GPU-based island model for evolutionary algorithms.*** Proc. GECCO 2010 pp 1089-1096.

Hasle G., Kloster O., Riise A., Schulz C., Smedsrud M.: ***Using Heterogeneous Computing for Solving Vehicle Routing Problems.*** TRISTAN VII Book of Extended Abstracts, p354-357 http://www.sintef.no/project/tristan/Tristan%20VII%20-%20Details%20-%20Current.pdf

Luong T V, N. Melab, E-G Talbi: ***Local Search Algorithms on Graphics Processing Units. A Case Study: The Permutation Perceptron Problem.*** Proc. EvoCOP 2010 pp 264-275.

Hoff A., H. Andersson, M. Christiansen, G. Hasle, A. Løkketangen: ***Industrial Aspects and Literature Survey: Fleet Composition and Routing.*** Computers & Operations Research 37 (12), December 2010, Pages 2041-2061.

Andersson H., A. Hoff, M. Christiansen, G. Hasle, A. Løkketangen: ***Industrial Aspects and Literature Survey: Combined Inventory Management and Routing.*** Computers & Operations Research 37 (9) 2010, pp 1515-1536.

2009

Crainic T.G., G.C. Crisan, M Gendreau., N. Lahrichi, W. Rei: *A Concurrent Evolutionary approach for Rich Combinatorial Problems*. Proceedings of GECCO 2009 Genetic and Evolutionary Computation Conference, Montreal, Canada, CD-ROM, ACM Order Number 910092.

Crainic T.G., G.C. Crisan, M Gendreau., N. Lahrichi, W. Rei: *Multi-thread integrative cooperative optimization for rich combinatorial problems*, Proceedings of NIDISC'09, Rome, Italy.

Technical Reports

2012

Hasle G., O. Kloster, M. Smedsrud, K. Gaze: *Experiments on the Node, Edge, and Arc Routing Problem.* SINTEF Report A23265, ISBN 978-82-14-05288-6, Oslo, May 2012.

2011

Bach L., G. Hasle, S. Wøhlk: *Lower and Upper Bounds for the Node, Edge, and Arc Routing Problem.* SINTEF Report A21884, Oslo November 2011, ISBN 978-82-14-05277-0.

Schulz C. *Efficient Local Search on the GPU. Investigations on the Vehicle Routing Problem.* SINTEF Report A19678, ISBN 9788214049848, May 24 2011.

Presentations, seminars, and lectures

2012

Hasle G.: *Vehicle Routing in Practice*. Seminar (invited talk), University of Sannio, Benevento, Italy, 12.10.2012

Hasle G.: *Vehicle Routing in Practice.* Invited part of the MSc/PhD course "Metodi di Ottimizzazione per la Logistica e la Produzione", UNIMORE, Reggio Emilia, Italy 01/10-04/10 2012.

Bräysy O., Dullaert W. (2012). *A Simple Parameter-free heuristic for the fleet size and mix problem with time windows.* EURO 2012, Vilnius, Italy 8.-11.7.2012.

Dullaert W., O. Bräysy: *Integrated distribution network design: exploiting the benefits of joint location-routing optimization.* VeRoLog 2012 - First Conference of the EURO Working Group on Vehicle Routing and Logistics Optimization. Bologna, Italy 2012-06-18 - 2012-06-20.

Hasle G., Bräysy, O.: *The Gap between Theory and Practice.* VeRoLog 2012 - First Conference of the EURO Working Group on Vehicle Routing and Logistics Optimization. Bologna, Italy 2012-06-18 - 2012-06-20.

Bräysy O., Hasle, Geir. *Commercial Vehicle Routing.* VeRoLog 2012 - First Conference of the EURO Working Group on Vehicle Routing and Logistics Optimization. Bologna, Italy 2012-06-18 - 2012-06-20.

Dell'Amico M., Diaz Diaz J. C., Hasle G., Iori, M.: *An Iterated Local Search to solve the Node, Edge and Arc Routing Problem.* In Extended Abstracts, 5th International Workshop on Freight Transportation and Logistics (ODYSSEUS 2012); Mykonos, Greece 2012-05-21 - 2012-05-25 http://odysseus2012.dmst.aueb.gr/

Bach L, Hasle G., Wøhlk S.: *Lower Bound for the Node, Edge, and Arc Routing Problem.* In Extended Abstracts, 5th International Workshop on Freight Transportation and Logistics (ODYSSEUS 2012); Mykonos, Greece 2012-05-21 - 2012-05-25 http://odysseus2012.dmst.aueb.gr/

Hasle G.: *Vehicle Routing in Practice*. Day 1 lectures of the 5 day international PhD course

Local Distribution Planning (DRL 018), Molde University College Specialized University in Logistics, Molde, Norway, March 12 2012.
http://kursinfo.himolde.no/forskningsgrupper/optimering/phdkurs/index.htm

2011

Gendreau M., T. Vidal, T.G. Crainic, N. Lahrichi, W. Rei. *A hybrid genetic algorithm for multi-depot and periodic vehicle routing problems.* 9th Metaheuristics International Conference (MIC 2011), Udine, 25-28 July, 2011.

Gendreau M., T. Vidal, T.G. Crainic, N. Lahrichi, W. Rei. *A Hybrid Genetic Algorithm for Multi-depot and Periodic Vehicle Routing Problems*, 19th Triennial Conference of the International Federation of Operational Research Societies (IFORS2011), Melbourne, 10-15 July, 2011.

Hasle G., C. Schulz: *How to program efficient optimization algorithms on Graphics Processing Units - The Vehicle Routing Problem as a case study.* Seminar (invited talk) at the University of Newcastle, Australia, July 6 2011.

Gendreau M., T. Vidal, T.G. Crainic, N. Lahrichi, W. Rei. *A hybrid genetic algorithm for multi-depot and periodic vehicle routing problems*. ROUTE 2011, Sitges, May 31-June 3, 2011

Schulz C., G. Hasle: *Neighborhood Evaluation on GPU for the DCVRP - Discrete optimization needs heterogeneous computing.* Invited talk at ROUTE 2011, Sitges, Spain, June 1 2011.

Dullaert W., Bräysy O. *Optimization of distribution planning & collaborative distribution.* National Seminar on Future of Distribution Planning. Antwerp, Belgium, May 18th, 2011.

Gendreau M. *New developments in Integrative Cooperative Search for rich vehicle routing problems.* 3rd Collab workshop, Oslo, Norway, May 10-12, 2011.

Luong T-V, N. Melab, E-G Talbi. *Advances in Metaheuristics on GPU.* 3rd Collab workshop, Oslo, Norway, May 10-12, 2011.

Bräysy O. *Real-life case studies on transport and workforce optimization.* 3rd Collab workshop, Oslo, Norway, May 10-12, 2011.

Røpke S. *Parallel large neighborhood search.* 3rd Collab workshop, Oslo, Norway, May 10-12, 2011.

Jianyong J., A. Løkketangen, T. G. Crainic. *A parallel multi-neighborhood cooperative Tabu search for Capacitated Vehicle Routing Problem*. 3rd Collab workshop, Oslo, Norway, May 10-12, 2011.

Hagen T. R. *Accelerated Computing - Trends and Development Strategies* 3rd Collab workshop, Oslo, Norway, May 10-12, 2011.

Riise A. *Heterogeneous computing for the surgery scheduling problem.* 3rd Collab workshop, Oslo, Norway, May 10-12, 2011.

Schulz C. *GPU based Local Search for the DCVRP.* 3rd Collab workshop, Oslo, Norway, May 10-12, 2011.

Smedsrud M. *Real world newspaper distribution.* 3rd Collab workshop, Oslo, Norway, May 10-12, 2011.

Hasle G. *Introduction and discussion.* Intro 3rd Collab workshop, Oslo, Norway, May 10-12, 2011.

Hasle G., Schulz C., Hagen T. R.: *"The Beach Law" does not hold any more - Discrete optimization needs heterogeneous computing.* Invited talk (seminar) at CORAL, Aarhus School of Business and Social Sciences, Aarhus, Denmark, March 16 2011.

Gendreau M., T.G. Crainic, N. Lahrichi, W. Rei, G.C. Crişan, T. Vidal. *An integrative cooperative search framework for solving rich combinatorial problems*, seminar, Instituto de Computação, Universidade Federal Fluminense, March 1st, 2011.

2010

Schulz C., Hasle G., Kloster O., Riise A., Smedsrud M.: ***Parallel local search for the CVRP on the GPU.*** Talk at The 3rd International Conference on Metaheuristics and Nature Inspired Computing (META'10), Djerba, Tunisia, October 28 2010.

Gendreau M.: ***Hot topics in vehicle routing and related subjects.*** LANCS Initiative Advisory Boards Meeting London, UK, May 18-19, 2010.

Hasle G.: ***Vehicle Routing in Practice.*** Invited plenary talk at The EURO Working Group on Locational Analysis XVIII (EWGLA 2010), Naples, Italy April 28-30 2010.

Hasle G..: ***Media Product Distribution.*** 1st COLLAB Workshop, Asker, Norway, April 12-14, 2010.

Hasle G..: ***Parallel VRP.*** 1st COLLAB Workshop, Asker, Norway, April 12-14, 2010.

Hasle G..: ***The COLLAB Project.*** 1st COLLAB Workshop, Asker, Norway, April 12-14, 2010.

Hasle G..: ***1st COLLAB Workshop - Introduction.*** 1st COLLAB Workshop, Asker, Norway, April 12-14, 2010.

Smedsrud M.: ***Parallelization of Spider Planner.*** 1st COLLAB Workshop, Asker, Norway, April 12-14, 2010.

Schulz C.: ***Parallel Solver for Vehicle Routing Problems.*** 1st COLLAB Workshop, Asker, Norway, April 12-14, 2010.

Riise A.: ***Parallel Local Search for Permutations.*** 1st COLLAB Workshop, Asker, Norway, April 12-14, 2010.

Hagen T.R.: ***Parallel and Heterogeneous Computing.*** 1st COLLAB Workshop, Asker, Norway, April 12-14, 2010.

Løkketangen A.: ***Some thoughts on parallelization and optimization.*** 1st COLLAB Workshop, Asker, Norway, April 12-14, 2010.

Reinholz A.: ***Rich Vehicle Routing Problems –Challenges and Prospects in Exploring the Power of Parallelism.*** 1st COLLAB Workshop, Asker, Norway, April 12-14, 2010.

Bräysy O.: ***Optimization Challenges in Communal Sector.*** 1st COLLAB Workshop, Asker, Norway, April 12-14, 2010.

Luong T V, N. Melab, E-G Talbi: ***Metaheuristics on GPU.*** 1st COLLAB Workshop, Asker, Norway, April 12-14, 2010.

Gendreau M., T. G. Crainic, G. C. Crisan, N. Lahrichi, W. Rei and T. Vidal: ***An Integrative Cooperative Search approach for rich vehicle routing problems.*** 1st COLLAB Workshop Asker, Norway, April 12-14, 2010

2009

Crainic T. G., C. Crisan, M. Gendreau, N. Lahrichi, W. Rei, T. Vidal: ***Applying the Multi-thread Integrative Cooperative Metaheuristic Optimization Approach: A Case Study Using Rich Vehicle Routing Problems.*** Invited talk at the DOMinant Workshop, Molde, Norway, September 20-22, 2009.

Zhang C: ***A dynamic decomposition method for the unique shortest path routing problem.*** Invited talk at the DOMinant Workshop, Molde, Norway, September 18, 2009.

Reinholz A.: ***An Integrated Modeling and Optimization Approach for Practice-Oriented Vehicle Routing Problems - Challenges and Prospects in the Context of Parallelism.*** Invited talk at SINTEF ICT, Oslo, Norway, June 19, 2009.

Lahrichi N., T. G. Crainic, C. Crisan, M. Gendreau, W. Rei: ***Multi-thread Cooperative Optimization for Rich VRP.*** CORS/INFORMS Meeting Toronto, Canada, June 14-17, 2009.

Popular science dissemination

2012

Tønseth S.: ***Rute-esset – Dette er en verdensrekord – i ruteplanlegging.*** Popular science article including interview with Geir Hasle. Gemini no 1, SINTEF/NTNU February 2012. http://www.ntnu.no/gemini/2012-01/26-29.htm (in Norwegian).

Tønseth S.: ***Matematikk gir mer effektive avisbud.*** Popular science article including interview with Geir Hasle. http://www.forskning.no/artikler/2012/februar/313511

2011

Hasle G., J. Røislien: ***Ruteplanlegging***. TV interview in NRK's popular science series on mathematics Siffer 10:10. First broadcast 2011-11-13.