Dag Haugland - Publication list

Journal publications

[1] Haugland,D., Å.Hallefjord, H.Asheim (1988): Models for petroleum field exploitation, *European Journal of Operational Research*, 37, 1, pp.58-72.

[2] Haugland,D., S.W.Wallace (1988): Solving many linear programs that differ only in the righthand side, *European Journal of Operational Research*, 37, 3, pp.318-324.

[3] Haugland,D., K.Jörnsten, E.Shayan (1991): Modelling petroleum fields with movable platforms, *Applied Mathematical Modelling*, 15, pp.33-39.

[4] Foulds,L.R., D.Haugland, K.Jörnsten (1992): A bilinear approach to the pooling problem, *Optimization*, 24, pp.165-180.

[5] Haugland,D., J.G.Heber, J.H.Husøy (1997): Optimization Algorithms for ECG Data Compression, *Medical & Biological Engineering & Computing*, 35, 420-424.

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[7] Ho,S.C., D.Haugland (2004): A tabu search heuristic for the vehicle routing problem with time windows and split deliveries, *Computers & Operations Research*, 31, 12, pp.1947-1964.

[8] Haugland,D., S.Storøy (2006): Local Search Methods for l1-Minimization in Frame Based Signal Compression, *Optimization and Engineering*, 7, 1, pp.81-96.

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[10] Yuan,D., J.Bauer, D.Haugland (2008): Minimum-energy broadcast and multicast in wireless networks: An integer programming approach and improved heuristic algorithms, *Ad Hoc Networks*, 6, 5, pp.696-717.

[11] Bauer,J., D.Haugland, D.Yuan (2008): Analysis and Computational Study of Several Integer Programming Formulations for Minimum-Energy Multicasting in Wireless Ad Hoc Networks, *Networks* 52, 2, pp.57-68.

[12] Bauer,J., D.Haugland, D.Yuan (2009): New results on the time complexity and approximation ratio of the Broadcast Incremental Power algorithm, *Information Processing Letters*, 109, 12, pp.615–619.

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[14] Bauer, J., K.Altinkemer, D.Haugland (2010): Center-oriented algorithms for the minimum energy broad and multicast problem in wireless ad hoc networks, *Electronic Commerce Research and Applications*, 9, 3, pp.228–236.

[15] Borraz-Sánchez,C., D.Haugland (2011): Minimizing fuel cost in gas transmission networks by dynamic programming and adaptive discretization, *Computers & Industrial Engineering*, 61, pp.364–372.

[16] Ho,S.C., D.Haugland (2011): Local search heuristics for the probabilistic dial-a-ride problem, *OR Spectrum*, 33, 4, pp.961–988.

[17] Yuan,D., D.Haugland (2012): Dual decomposition for computational optimization of minimum-power shared broadcast tree in wireless networks, *IEEE Transactions on Mobile Computing*, 11(12), pp.2008–2019.

[18] Alfaki,M., D.Haugland (2013): Strong formulations for the pooling problem, *Journal of Global Optimization*, 56, 3, pp.897–916, doi: 10.1007/s10898-012-9875-6.

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[22] Haugland,D. (2015): The computational complexity of the pooling problem, to appear in *Journal of Global Optimization*, doi: 10.1007/s10898-015-0335-y.

Book chapters and publications at conferences with full paper review

[23] Bjørstad,H., D.Haugland, R.Helming (1991): A stochastic model for gasoline blending, in M.Breton and G.Zaccour: *Advances in operations research in the oil and gas industry*, Editions Technip, Montréal, Canada, pp.21-32, ISBN 2-7108-0610-X.

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[25] Nygaard,R., D.Haugland (1997): Multiple error measures in ECG data compression, in *Proceedings of Norwegian Signal Processing Symposium (NORSIG)*, Tromsø, Norway, pp. 134-139, May 1997.

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[28] Nygaard,R., J.H.Husøy, D.Haugland (1998): Compression of image contours using combinatorial optimization, in *Proceedings of International Conference on Image Processing (ICIP)* pp. 266-270, Chicago, Illinois, USA.

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[30] Nygaard,R., J.H.Husøy, D.Haugland, S.O.Aase (1999): Signal compression by piecewise linear non-interpolating approximation, in *Proceedings of International Conference on Acoustics, Speech, and Signal Proceedings (ICASSP)* pp. 1273-1276 Phoenix, Arizona, USA.

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[33] Haugland,D. (2007): Flow allocation in a model for regularity analysis of gas transportation systems, in T.Aven and J.E.Vinnem (eds.): *Risk, Reliability and Societal Safety*, Taylor & Francis Group, London, pp.527-533.

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[35] Frimannslund,L., D.Haugland (2008): Line pack management for improved regularity in pipeline gas transportation networks, In Martorell et al. (eds): *Safety, Reliability and Risk Analysis: Theory, Methods and Applications.* Taylor & Francis Group, London, ISBN 978-0-415-48513-5.

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[40] Haugland,D., S.C.Ho, (2010): Feasibility testing for dial-a-ride problems, *Lecture Notes in Computer Science*, 6124, pp.170–179.

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[47] Haugland,J.K., D.Haugland (2012): Computing the Optimal Layout of a Wind Farm. In *Norsk informatikkonferanse NIK 2012*, ISSN: 1892-0713, Akademika forlag, Trondheim, Norway, 2012.

[48] Haugland,D. (2014): The hardness of the pooling problem. In Casado,L.C., García,I., Hendrix,E.M.T.: *Proceedings of the XII global optimization workshop.* Universidad de Almería 2014. ISBN 978-84-16027-57-6, pp. 29–32.

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[50] Klein,A., D.Haugland, J.Bauer, M.Mommer (2015): An Integer Programming Model for Branching Cable Layouts in Offshore Wind Farms, *Advances in Intelligent Systems and Computing*, 359, 1, pp.27–36.

[51] Haugland,D., E.M.L.Hendrix (2015): On a pooling problem with fixed network size, *Lecture Notes in Computer Science*, 9335, pp.328-342.

Talks at conferences

- Haugland,D. (1986): Sorting the possible righthand sides when finding the expected recourse cost. Presented at the International Conference on Stochastic Programming, Prague, Czechoslovakia, 1986.

- Haugland,D. (1987): Petroleum field optimization. Presented at the Fourth EURO Summer Institute, Turku, Finland, 1987.

- Haugland,D. (1988): Models for petroleum field exploitation. Presented at the 18th Annual International Mathematical Programming Conference (MUGI 18), Rome, Italy.

- Haugland,D. (1990): The contaminated minimum cost flow problem. Presented at Mathematical Programming in Decision an Planning, Sønderborg, Denmark.

- Haugland,D. (1991): Computing globally optimal solutions to pooling problems. Presented at the 21st Annual International Mathematical Programming Conference (MUGI 21), Budapest, Hungary, 1991.

- Haugland,D. (1993): Management problems in mobile telecommunications networks. Presented at SNF Telecommunication Research Conference, Solstrand, Norway, November 18-18, 1993.

- Haugland,D. (1994): Global optimization of quadratically constrained problems. Presented at the 15th International Symposium on Mathematical Programming, Ann Arbor, Michigan, USA, August 15-19, 1994.

- Haugland,D. (1996): Compressing data by shortest path methods. Presented at the International Symposium on Operations Research, Technical University of Braunschweig, Germany, September 3-6, 1996. Full paper in U.Derigs et al.(eds.): *Operations Research Proceedings 1996*, Springer, Berlin, Germany, pp.145-150, 1997.

- Haugland,D. (2000): Vector approximation by optimal basis selection. Presented at the Fourth Latin-Iberoamerican Conference on Operations Research, Mexico City, Mexico, September 4-8, 2000.

- Haugland,D. (2001): An edge-traversal algorithm for the subspace selection problem, Presented at the Seventh Meeting of the Nordic Section of the Mathematical Programming Society, Copenhagen, Denmark, November 15-17, 2001.

- Haugland,D. (2002): Node coloring with minimum edge weights. Presented at the International Symposium on Combinatorial Optimisation (CO'2002), Paris, France, April 8-10, 2002.

- Haugland,D. (2003): Local search methods for the subset selection problem with minimum unit norm. Presented at the 15th International Symposium on Mathematical Programming, Copenhagen, Denmark, August 18-22, 2003.

- Haugland,D. (2004): Heuristics for the subspace selection problem. Presented at the European Chapter of Combinatorial Optimization (ECCO XVII), Beirut, Lebanon, June 24-26, 2004.

- Haugland,D. (2004): Heuristics for the probabilistic dial-a-ride problem. Presented at the Ninth Meeting of the Nordic Section of the Mathematical Programming Society, Norrköping, Sweden, October 22-23, 2004.

- Haugland,D. (2005): Cut and Steiner tree formulations for minimum-energy problems in wireless ad hoc networks. Presented at Optimization Days, Montréal, Canada, May 9-11, 2005.

- Haugland,D. (2006): Approximation algorithms for the minimum energy broadcast problem. Presented at the Tenth Meeting of the Nordic Section of the Mathematical Programming Society, Copenhagen, Denmark, April 21-22, 2006.

- Haugland,D. (2007): A bidirectional greedy heuristic for the subspace selection problem. Presented at the International Workshop on Engineering Stochastic Local Search Algorithms, Brussels, Belgium, September 6-8, 2007.

- Haugland,D. (2007): Flow and cut models for the minimum energy multicast problem in ad hoc wireless networks. Presented at INFORMS Annual Meeting, Seattle, Washington, USA, November 4-7, 2007.

- Haugland,D. (2008): Models and solution methods for the pooling problem. Presented at Energy, Natural Resources and Environmental Economics Workshop, Bergen, Norway, May 15-16, 2008.

- Haugland,D. (2008): Neighborhoods and local search methods for subset selection problems. Presented at the 18th Triennial Conference of the International Federation of Operational Research Societies, Sandton, South Africa, July 14-18, 2008.

- Haugland,D. (2008): Improved time complexities of algorithms for the directional minimum energy broadcast problem. Presented at Modelling, Computation and Optimization in Information Systems and Management Sciences (MCO'08), Metz, France and Luxembourg, Luxembourg, September 8-10, 2008.

- Haugland,D. (2010): Methods for Flow Graph Selection in Integral Network Coding. Presented at the Sixth Advanced International Conference on Telecommunications, Barcelona, Spain, May 10-14, 2010.

- Haugland,D. (2010): Feasibility testing for dial-a-ride problems. Presented at the Sixth International Conference on Algorithmic Aspects in Information and Management, Weihai, China, July 19–21, 2010.

- Haugland,D. (2010): Solving the Pooling Problem with LMI Relaxations. Presented at Toulouse Global Optimization Workshop, Toulouse, France, August 31 – September 3, 2010.

- Haugland,D. (2011): The maximum flow problem with minimum lot sizes. Presented at the 2nd International Conference on Computational Logistics, Hamburg, Germany, September 19–22, 2011.

- Haugland,D. (2013): New lower and upper bounding techniques for the pooling problem. Presented at The Fourth International Conference on Continuous Optimization (ICCOPT 2013), Lisbon, Portugal, July 29 – August 1, 2013.

- Haugland,D. (2014): The Pooling Problem - Applications, Complexity and Solution Methods. Invited talk at *Applications of Optimization – Best Practice and Challenge, Sixth annual workshop of the Danish OR Society*, Copenhagen, June 2nd, 2014.

- Haugland,D. (2014): The Hardness of the Pooling Problem. Presented at Málaga Global Optimization Workshop, Málaga, Spain, September 1 – September 4, 2014.