Jesper Larsen - DTU Orbit (04/03/2019)
Larsen, Jesper
jesla@dtu.dk
Department of Management Engineering - Professor/head of division
Transport DTU
Management Science
Operations Research

Research outputs:

A matheuristic for the driver scheduling problem with staff cars
Govinda Raja Perumal, S. S., Larsen, J., Lusby, R. M., Riis, M. & Sørensen, K. 2018
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018

A matheuristic for the driver scheduling problem with staff cars
Research output: Research › Report – Annual report year: 2018

Assignment of Pregnant Women to Midwives
Research output: Research › Report – Annual report year: 2018

A Survey on Robustness in Railway Planning
Research output: Research - peer-review › Journal article – Annual report year: 2018

Considering passenger and operator inconvenience in the scheduling of large railway projects
Research output: Research › Report – Annual report year: 2018

Equidistant representations: connecting coverage and uniformity in biobjective optimization
Kidd, M. P., Lusby, R. M. & Larsen, J. 2018
Research output: Research - peer-review › Paper – Annual report year: 2018

Passenger- and operator-oriented scheduling of large railway projects
Kidd, M. P., Lusby, R. M. & Larsen, J. 2018
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018

Planning and scheduling operating rooms for elective and emergency surgeries with uncertain duration
Research output: Research - peer-review › Journal article – Annual report year: 2018

Rolling Stock Scheduling with Maintenance Requirements at the Chinese High Speed Railway
Research output: Research - peer-review › Sound/Visual production (digital) – Annual report year: 2018

Tramp ship routing and scheduling with voyage separation requirements
Larsen, J., Lusby, R. M. & Vilhelmsen, C. 2018
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018
A Branch-and-Price algorithm for railway rolling stock rescheduling
Research output: Research - peer-review › Journal article – Annual report year: 2017

Tramp ship routing and scheduling with voyage separation requirements
Research output: Research - peer-review › Journal article – Annual report year: 2017

Tramp ship routing and scheduling with voyage separation requirements
Larsen, J., Lusby, R. M. & Vilhelmsen, C. 2017
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018

A Benders Decomposition-Based Matheuristic for the Cardinality Constrained Shift Design Problem
Research output: Research - peer-review › Journal article – Annual report year: 2016

A heuristic and hybrid method for the tank allocation problem in maritime bulk shipping
Research output: Research - peer-review › Journal article – Annual report year: 2016

Airport operations management
Research output: Research - peer-review › Editorial – Annual report year: 2016

An adaptive large neighborhood search procedure applied to the dynamic patient admission scheduling problem
Lusby, R. M., Schwierz, M., Range, T. M. & Larsen, J. 2016 In : Artificial Intelligence in Medicine. 74, p. 21-31
Research output: Research - peer-review › Journal article – Annual report year: 2016

An applied optimization based method for line planning to minimize travel time
Research output: Research › Report – Annual report year: 2016

A new approach to the Container Positioning Problem
Research output: Research - peer-review › Journal article – Annual report year: 2015

Finding equidistant nondominated points for biobjective mixed integer programs
Research output: Research › Report – Annual report year: 2016

Joint overbooking and seat allocation for fare families
Hjorth, R., Fig, T., Bondoux, N. & Larsen, J. 2016 14 p.
Research output: Research - peer-review › Report – Annual report year: 2016

Planning of Midwives
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2017

A Benders decomposition-based Matheuristic for the Cardinality Constrained Shift Design Problem
Research output: Research › Report – Annual report year: 2015
Aircraft Stand Allocation with Associated Resource Scheduling
Research output: Research - peer-review › Report – Annual report year: 2015

A New Approach to the Container Positioning Problem
Research output: Research › Report – Annual report year: 2015

An integrated rolling stock planning model for the Copenhagen suburban passenger railway
23 p.
Research output: Research - peer-review › Journal article – Annual report year: 2016

Research output: Research › Report – Annual report year: 2015

An optimization based method for line planning to minimize travel time
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Mitigation of airspace congestion impact on airline networks
Vaaben, B. V. & Larsen, J. 2015 In : Journal of Air Transport Management. 47, p. 54-65
Research output: Research - peer-review › Journal article – Annual report year: 2015

Reactive Robustness and Integrated Approaches for Railway Optimization Problems
Research output: Research › Ph.D. thesis – Annual report year: 2015

Simultaneously Recovering Rolling Stock Schedules and Depot Plans Under Disruption
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Solving the selective multi-category parallel-servicing problem
Research output: Research - peer-review › Journal article – Annual report year: 2013

Tramp Ship Routing and Scheduling - Models, Methods and Opportunities
Research output: Research › Report – Annual report year: 2015

A Branch-and-Price Framework for Railway Rolling Stock Rescheduling During Disruptions
Research output: Research › Report – Annual report year: 2014

A column generation approach for solving the patient admission scheduling problem
Research output: Research - peer-review › Journal article – Annual report year: 2013

A Heuristic and Hybrid Method for the Tank Allocation Problem in Maritime Bulk Shipping
The Tank Allocation Problem in Bulk Shipping
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2013

A column generation-based heuristic for rostering with work patterns
Research output: Research - peer-review › Journal article – Annual report year: 2011

The Home Care Crew Scheduling Problem: Preference-based visit clustering and temporal dependencies
Research output: Research - peer-review › Conference article – Annual report year: 2012

Optimisation-Based Solution Methods for Set Partitioning Models
Research output: Research › Ph.D. thesis – Annual report year: 2011

A multilevel variable neighborhood search heuristic for a practical vehicle routing and driver scheduling problem
Research output: Research - peer-review › Journal article – Annual report year: 2011

An IP Framework for the Crew Pairing Problem Using Subsequence Generation
Research output: Research › Report – Annual report year: 2011

Improved exact method for the double TSP with multiple stacks
Lusby, R. M. & Larsen, J. 2011 In : Networks. 58, 4, p. 290-300
Research output: Research - peer-review › Journal article – Annual report year: 2011

Models for the discrete berth allocation problem: A computational comparison
Research output: Research - peer-review › Journal article – Annual report year: 2011

Railway Track Allocation: Models and Methods
Research output: Research - peer-review › Journal article – Annual report year: 2010

Routing trains through railway junctions: A new set-packing approach
Research output: Research - peer-review › Journal article – Annual report year: 2011

Subsequence Generation for the Airline Crew Pairing Problem
Research output: Research › Report – Annual report year: 2011

The vehicle routing problem with time windows and temporal dependencies
Dohn, A. H., Rasmussen, M. S. & Larsen, J. 2011 In : Networks. 58, 4, p. 273-289
Research output: Research - peer-review › Journal article – Annual report year: 2011
An Exact Method for the Double TSP with Multiple Stacks
Research output: Research - peer-review › Journal article – Annual report year: 2010

An Integrated Approach to the Ground Crew Rostering Problem with Work Patterns
Research output: Research › Report – Annual report year: 2010

Disruption Management - Foreword
Research output: Research - peer-review › Journal article – Annual report year: 2010

Disruption management in the airline industry-Concepts, models and methods
Research output: Research - peer-review › Journal article – Annual report year: 2010

Solving the Airline Crew Pairing Problem using Subsequence Generation
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Solving the Airline Crew Pairing Problem using Subsequence Generation
Rasmussen, M. S., Lusby, R. M., Ryan, D. M. & Larsen, J. 2010
Research output: Research › Conference abstract for conference – Annual report year: 2010

The dynamic multi-period vehicle routing problem
Research output: Research - peer-review › Journal article – Annual report year: 2010

The Home Care Crew Scheduling Problem: Preference-Based Visit Clustering and Temporal Dependencies
Research output: Research › Report – Annual report year: 2010

A multi-level variable neighborhood search heuristic for a practical vehicle routing and driver scheduling problem
Research output: Research › Report – Annual report year: 2009

An Exact Method for the Double TSP with Multiple Stacks
Research output: Research - peer-review › Report – Annual report year: 2009

A Set Packing Inspired Method for Real-Time Junction Train Routing
Research output: Research › Report – Annual report year: 2009

Models for the Discrete Berth Allocation Problem: A Computational Comparison
Research output: Research › Report – Annual report year: 2009
Railway Track Allocation: Models and Methods
Research output: Research - peer-review › Report – Annual report year: 2009

Rolling Stock Recovery Problem
Research output: Research › Report – Annual report year: 2009

Solving the Airline Crew Pairing Problem using Subsequence Generation
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

The Dynamic Multi-Period Vehicle Routing Problem
Research output: Research - peer-review › Report – Annual report year: 2009

The Vehicle Routing Problem with Time Windows and Temporal Dependencies
Research output: Research - peer-review › Report – Annual report year: 2009

The Vehicle Routing Problem with Time Windows and Temporal Dependencies
Rasmussen, M. S., Dohn, A. H. & Larsen, J. 2009
Research output: Research › Conference abstract for conference – Annual report year: 2009

Vehicle routing with cross-docking
Research output: Research - peer-review › Journal article – Annual report year: 2009

Green Wave Traffic Optimization - A Survey
Research output: Research › Report – Annual report year: 2008

The Home Care Crew Scheduling Problem
Research output: Research - peer-review › Article in proceedings – Annual report year: 2008

The Home Care Crew Scheduling Problem
Research output: Communication › Journal article – Annual report year: 2008

Airline Disruption Management - Perspectives, Experiences and Outlook
Research output: Research - peer-review › Journal article – Annual report year: 2007
A Hub Location Problem with Fully Interconnected Backbone and Access Networks
Research output: Research - peer-review › Journal article – Annual report year: 2007

Solving the Dial-a-Ride Problem using Genetic Algorithms
Research output: Research - peer-review › Journal article – Annual report year: 2007

On the vehicle routing problem with time windows
Research output: Research › Ph.D. thesis – Annual report year: 2006

Finding the best visualization of an ontology
Fabritius, C., Madsen, N., Clausen, J. & Larsen, J. 2006 In : Journal of the Operational Research Society. 57, 12, p. 1482-1490
Research output: Research - peer-review › Journal article – Annual report year: 2006

Forretningstid + it + matematik = effektivitet
Research output: Communication › Journal article – Annual report year: 2006

Lagrangian duality applied to the vehicle routing problem with time windows
Research output: Research - peer-review › Journal article – Annual report year: 2006

Proceedings of the 1st Nordic Optimization Symposium - 10th Nordic MPS meeting, Copenhagen 2006
Research output: Research › Report – Annual report year: 2006

Recent Advances in the Vehicle Routing Problem with Time Windows
Research output: Research › Article in proceedings – Annual report year: 2006

Robustness and Recovery in Train Scheduling - a simulation study from DSB S-tog a/s
Research output: Research › peer-review › Conference article – Annual report year: 2006

Routing Trains Through Railway Junctions: A New Set Packing Approach
Lusby, R., Larsen, J., Ryan, D. & Ehrgott, M. 2006 Informatics and Mathematical Modelling, Technical University of Denmark, DTU.
Research output: Research › peer-review › Conference article – Annual report year: 2006

An exact algorithm for Aircraft Landing Problem
Wen, M., Larsen, J. & Clausen, J. 2005
Research output: Research › peer-review › Report – Annual report year: 2005

Disruption Management in the Airline Industry - Concepts, Models and Methods
Clausen, J., Larsen, A. & Larsen, J. 2005
Research output: Research › peer-review › Report – Annual report year: 2005
The Vehicle Routing Problem with Time Windows
Research output: Research - peer-review ▶ Book chapter – Annual report year: 2005

Using Heuristics to Solve the Dedicated Aircraft Recovery Problem
Research output: Research - peer-review ▶ Journal article – Annual report year: 2005

Airline Disruption Management - Perspectives, Experiences and Outlook
Research output: Research ▶ Report – Annual report year: 2004

Finding the best visualization of an ontology
Fabritius, C. V., Madsen, N. L., Clausen, J. & Larsen, J. 2004
Research output: Research ▶ Report – Annual report year: 2004

Refinements of the column generation process for the Vehicle Routing Problem with Time Windows
Research output: Research - peer-review ▶ Journal article – Annual report year: 2004

Solving the Dial-a-Ride Problem using Genetic algorithms
Research output: Research ▶ Report – Annual report year: 2004

BORNHOLM '02 - Nordic Summer Course on Applied Optimization and Modelling
Research output: Research ▶ Book – Annual report year: 2002

Disruption Management for an Airline - Rescheduling of aircraft
Research output: Research - peer-review ▶ Article in proceedings – Annual report year: 2002

Introduktion til Operationsanalyse
Larsen, J. 2002 In : ORbit : medlemsblad for Dansk Selskab for Operationsanalyse . 1, 1, p. 4-6
Research output: Communication ▶ Journal article – Annual report year: 2002

Speeding up the solution process for the Vehicle Routing Problem with Time Windows using structural information
Larsen, J. 2002
Research output: Research ▶ Report – Annual report year: 2002

Staff Scheduling within the Retail Business in Denmark
Research output: Research ▶ Article in proceedings – Annual report year: 2002

Disruption management
Research output: Research ▶ Journal article – Annual report year: 2001

Disruption management - operations research between planning and execution
Research output: Research › Report – Annual report year: 2001

**Lagrangean Duality Applied on Vehicle Routing with Time Windows - Experimental Results**
Research output: Research › Report – Annual report year: 2001

**Using heuristics to solve the dedicated aircraft recovery problem**
Research output: Research › Report – Annual report year: 2001

**Using Parallel Computers to solve the Vehicle Routing Problem with Time Windows**
Larsen, J., Clausen, J. & Madsen, O. B. G. 2000 Informatics and Mathematical Modelling, Technical University of Denmark, DTU.
Research output: Research - peer-review › Report – Annual report year: 2000

**Parallelization of the Vehicle Routing Problem with Time Windows**
Research output: Research › Ph.D. thesis – Annual report year: 1999

**Experiments with the auction algorithm for the shortest path problem**
Research output: Research - peer-review › Journal article – Annual report year: 1999

**Solutions to the Solomon Test-sets for the Vehicle Routing Problem with Time Windows**
Research output: Research - peer-review › Report – Annual report year: 1999

**Speeding up column generation in VRPTW**
Research output: Research › Article in proceedings – Annual report year: 1999

**A note on the practical performance of the auction algorithm for the shortest path**
Larsen, J. 1998 In : Ricerca Operativa. 28, 87, p. 23-31
Research output: Research - peer-review › Journal article – Annual report year: 1998

**A parallel approach to the stable marriage problem**
Research output: Research › Article in proceedings – Annual report year: 1997

Projects:

**Integrated optimization of vehicle and driver scheduling in public transport**
Industrial PhD
01/01/2017 → 31/12/2019
Project: PhD

**Modeller og Metoder for optimaliseringssproblemer med kombineret resourceplanlægning og skedulering**
Dohn, A. H., Clausen, J., Larsen, J., Rönqvist, M. & van den Akker, J. M.
DTU-lønnen stipendie
01/12/2006 → 01/09/2010
Project: PhD
Udvikling af optimeringsmodeller og løsningsmetoder til ruteplanlægning inden for trampfart
Vilhelmsen, C., Larsen, J., Pisinger, D., Andersson, H. & Oliveria, J. F. D.
Technical University of Denmark
01/01/2010 → 19/12/2014
Project: PhD

Beslutningsstøtte til genopretning ved uregelmæssigheder i togdrift
ErhvervspHd-ordningen VTU
01/10/2005 → 22/04/2009
Project: PhD

Managing Cyber Risk and Security in the Global Supply Chain
Sepúlveda Estay, D. A., Larsen, J., Khan, O., Oehmen, J., Urciuoli, L. & Wieland, A.
Technical University of Denmark
01/11/2014 → 16/04/2018
Project: PhD

Dynamic University Timetabling
Lindahl, M., Stidsen, T. J. R., Herold, M. B., Ho, S. C., Kristiansen, S., Sørensen, M., Larsen, J., Berghe, G. V. & Hasle, G.
Industrial PhD
01/02/2014 → 18/05/2017
Project: PhD

Integrated Optimisation of Vehicle Resources in Urban Rail Transport Systems
Industrial PhD
01/08/2012 → 23/03/2017
Project: PhD

Optimal Aircraft Gate Assignment on a Strategic, Tactical and Operational Level
ErhvervspHd-ordningen VTU
01/10/2010 → 26/05/2014
Project: PhD

Sustainable Disruption Management
ErhvervspHd-ordningen VTU
01/11/2009 → 04/04/2013
Project: PhD

PARELLELIZATION OF THE VEHICLE ROUTING PROBLEM WITH TIME WINDOWS
Larsen, J. & Clausen, J.
Forskningsrådsfinansiering
01/01/1998 → 30/09/1999
Project: PhD

Disruption Management i transportsektoren
Wanscher, J., Clausen, J., Larsen, J., Stidsen, T. J. R., Davidsson, P. & Liu, R.
Forskningsrådsfinansiering
01/04/2003 → 01/07/2009
Project: PhD

Development of a Generic Performance Measurement Model in an Emergency Department
Ikke-differentiabel optimering i heltalsprogrammering
Kallehauge, B., Madsen, O. B., Larsen, J., Madsen, K., Nielsen, O. A., Lübbecke, M. & Pisinger, D.
DTU-lønnet stipendie
01/08/2000 → 22/05/2006
Project: PhD

Robustness in Railway Planning
Technical University of Denmark
01/05/2013 → 01/09/2016
Project: PhD

Models and Algorithms for the Vehicle Routing Problem with Cross Docking
Wen, M., Larsen, J., Clausen, J., Larsen, A., Hasle, G. & Nielsen, J. B.
DTU-lønnet stipendie
01/02/2006 → 24/03/2010
Project: PhD

Integreret disponering/genoppretning af togdrift
Haahr, J. T., Pisinger, D., Larsen, J., Repke, S., Huisman, D. & Borndörfer, R.
Technical University of Denmark
01/08/2012 → 11/12/2015
Project: PhD

Solving Recovery Problems using Optimisation Methods
Rasmussen, M. S., Larsen, J., Ryan, D., Larsen, A., Gustafsson, T. & Rönqvist, M.
Technical University of Denmark
01/05/2008 → 28/09/2011
Project: PhD

Vehicle routing with time windows.
Madsen, O. B., Larsen, J. & Clausen, J.
01/01/1996 → ...
Project: Research

Activities:

Tramp ship routing and scheduling with voyage separation requirements
Larsen, J. (Guest lecturer), Vilhelmsen, C. (Guest lecturer), Lusby, R. M. (Guest lecturer)
27 May 2018 → 30 May 2018
Activity: Talks and presentations › Conference presentations

ODYSSEUS (Event)
Larsen, J. (Member)
2018
Activity: Membership › Membership of committees, commissions, boards, councils, associations, organisations, or similar

Tramp ship routing and scheduling with voyage separation requirements
Larsen, J. (Guest lecturer), Vilhelmsen, C. (Other), Lusby, R. M. (Other)
17 Jul 2017
Activity: Talks and presentations › Conference presentations
Planning of Midwives
Vilhelmsen, C. (Speaker), Larsen, J. (Other)
4 Jul 2016
Activity: Talks and presentations › Conference presentations

The 9th Triennial Symposium on Transportation Analysis (Event)
Larsen, J. (Participant)
12 Jun 2016
Activity: Membership › Membership of committees, commissions, boards, councils, associations, organisations, or similar

OptALI Industry Day
Larsen, J. (Organizer)
1 Jun 2015 → 2 Jun 2015
Activity: Attending an event › Participating in or organising a conference

A heuristic and hybrid method for the tank allocation problem in maritime bulk shipping
Vilhelmsen, C. (Speaker), Larsen, J. (Other), Lusby, R. M. (Other)
6 Mar 2014
Activity: Talks and presentations › Conference presentations

The Tank Allocation Problem in Bulk Shipping
Vilhelmsen, C. (Speaker), Larsen, J. (Other), Lusby, R. M. (Other)
27 Sep 2013
Activity: Talks and presentations › Conference presentations

Routing and Scheduling in Tramp Shipping - Integrating Bunker Optimization
Vilhelmsen, C. (Speaker), Larsen, J. (Other), Lusby, R. M. (Other)
4 Sep 2013
Activity: Talks and presentations › Conference presentations

EUME Workshop on Metaheuristics (Event)
Larsen, J. (Chairman)
2012
Activity: Membership › Membership of committees, commissions, boards, councils, associations, organisations, or similar

Triennial Symposium on Transportation Analytics (Event)
Larsen, J. (Member)
2010 → …
Activity: Membership › Membership of committees, commissions, boards, councils, associations, organisations, or similar

Prizes:

Hedorfs Fonds pris for Transportforskning 2017
Jesper Larsen (Recipient), 2017
Prize: Prizes, scholarships, distinctions