

# Curriculum Vitae of Francesco Corman, Ph.D.

## PERSONAL INFORMATION

Name **PROF. DR. CORMAN FRANCESCO, PH.D**  
Address Institute for Transport planning and Systems  
Swiss Federal Institute of Technology ETH Zurich  
HIL F 13.1  
Stefano-Francini-Platz 5  
8093 Zürich  
Switzerland  
Telephone +41 774717899  
E-mail [francesco.corman@ivt.baug.ethz.ch](mailto:francesco.corman@ivt.baug.ethz.ch) <http://francescocorman.eu>  
Nationality **Italian, Belgian**  
Gender **Male**

## WORK EXPERIENCE

- Aug 2017 – current  
**Professor of Transport Systems**  
**Associate professor 2023-current; AP-TT 2017-2022**  
Swiss Federal institute of Technology, ETH Zurich  
Main activities and research interests Analytics, optimization and control in transport systems, focusing on operations, public transport, logistics systems
- Sept 2016 – July 2017  
**Senior Data Scientist**  
IBM The Netherlands, Global Business Services  
Main activities and research interests Advanced analytics and Optimization approaches for production, logistics, customer service and maintenance problems, proving quickly added value to customers
- January 2013– Sept 2016  
**Assistant Professor**  
Transport Engineering & Logistics, Delft University of Technology, The Netherlands  
Main activities and research interests Acquired and managed 8 research projects, 100+ kEuro as principal investigator, 10+MEuro as co-applicant; International cooperation, 6 research grants; Dissemination of research results at 20+ conferences and workshops for academia and practitioners; 50+ scientific publications.  
Managing 4 Researchers and PhDs, Coaching 20+applied projects per year, teaching four courses in two engineering master programs.  
Research on Railways (planning, technologies, reliability, control, delays, maintenance, equity); Multimodal freight logistics, Mathematical Optimization.
- January 2013-Sept 2016  
**Staff Member**  
The Dutch Research School in Transport, Infrastructure and Logistics – TRAIL  
Main activities Research Program Management and Coordination; Railway transportation
- January 2013– Sept 2016  
**Guest Professor**  
Center for industrial management, KU Leuven, Belgium  
Main activities International cooperation, 1 research grant; Supervising a PhD, Teaching 1 course

- February 2011 – Dec 2012
    - Name of employer
  - Main activities and research interests
- Post-Doctoral Researcher**  
 Center for industrial management, KU Leuven, Belgium  
 Acquired, contributed and managed 6 projects of 300+ kEuro  
 Designed master programs, 3 courses in railway, transit, supply chain:  
 Developed international collaborations; 10+ conferences, 20+ Scientific papers  
 Research on design, operations, control of railways & multimodal transport.
- January 2007 – Dec 2010
    - Name of employer
  - Main activities and interests
- Ph.D. Researcher**  
 Transport & Planning Dept, Delft University of Technology, The Netherlands  
 Optimization of railway traffic control, signaling technologies, capacity analysis, simulation, scheduling and planning. 20+ scientific papers
- October 2006 – Dec 2006
    - Name of employer
    - Main activities
- Researcher, Software Developer**  
 ROMA TRE University, Rome, Italy  
 Optimization of railway traffic control
- EDUCATION**
- January 2007 – Dec 2010
- Doctoral Degree (Ph.D.).** Delft University of Technology  
 Dissertation Title: "Real-time Railway Traffic Management: Dispatching in complex, large and busy railway networks".
- October 2004 – Decr 2006
    - Notes
  - Principal subjects covered
- Master's degree** in Management & Automation Engineering, Roma TRE University **cum Laude**. Dissertation Title: "Routing and scheduling trains in real-time"  
 Winner of 2006 AIRO award for best thesis in Operations Research field  
 Winner of 2006 Galluzzi Prize for best thesis in Engineering  
 Winner of 2006/2007 Accenture- best thesis prize in Management Engineering  
 Operations Research, Project Management, Control, Telecommunications
- October 2001 – Sept 2004
  - Principal subjects covered
- Bachelor Degree** in Computer Science Engineering, Roma TRE University  
 Operations Research, Computer science, Control & Telecommunication System
- PROJECT COORDINATION, CONTRIBUTION AND MANAGEMENT (SELECTION)**
- Simulation of logistics system performance.** 40KCHF. Siemens
- e-bike City – DBAUG Lighthouse.** 250 KCHF. ETH Zurich
- Technological development of the railway system 2050.** 77 KCHF. Federal office for Transport BAV. 2021.
- A reinforcement learning approach for enhancing urban mobility by considering reaction of travelers to unreliable public transport,** Swiss government excellence, recipient Mariana de Almeida Costa 90 KCHF, 2021-2022
- Passenger-Oriented Railway Traffic Management and Smart Passenger Information Provision.** 232 kCHF ETH Postdoctoral fellowship, recipient Yongqiu Zhu. 2021-2023
- RailPower!** 333 kCHF, 2020-2024, SBB ETH Mobility initiative, funding ETH foundation.
- Innovative measures to maximize capacity utilization of the transport network**  
 Funding: SBB Research Lab, University of St Gallen. 150 kCHF, 2020-2021
- Passenger-centric optimization of public transport operations under disruptions.** Funding: NWO Rubicon, Recipient Xiaojie Luan. 200 KEur, 2020-2022
- NCCR Automation Dependable Ubiquitous Automation,** total 26 MCHF, 2020-2024

**Calibration model for train motion formulas**, 46 kCHF, SBB, 2019-2020

**eco4.0 (Real time optimization of train operations with focus on energy efficient traction Traktionsbasierte energieorientierte Echtzeitfahrplanoptimierung)**, 224 kCHF, of which 74 from Federal office for transport BAV, 2019-2020

**Future Traffic Control beyond modes**, 80 KCHF, SBB Forschungsfonds, 2019-2020

**DADA Dynamic data driven Approaches for stochastic Delay propagation Avoidance in railways** 1.3 MCHF 2019-2024. SNSF Eccellenza

**OMISM: On board Monitoring for Integrated Systems Understanding & Management Improvement in Railways**. 380 kCHF, 2018-2022, SBB ETH Mobility initiative, funding ETH foundation.

**Dynamic scheduling of mobile workforce**, 2018-ongoing, funding Logobject AG Zurich

**SMARTIES: New generation of railway traffic management systems**. 280 kCHF, 2018-2022, SBB ETH Mobility initiative, funding ETH foundation.

**Train rescheduling models for recovery phase of disruption management**. Funding: Chinese academy of science. recipient: Yihui Wang, 2018-2019

**Energy-Efficient Autonomous Driving Trains**. Funding: NWO Rubicon scheme, Recipient Pengling Wang. 200 KEur, 2018-2020

**Trans ITS: Public Transport Passenger Flows in the Era of ITS**. Management Committee, Working Group. EU COST (TU1004). 530 kEuro. 2013-2015

**ITT - Inter Terminal Transport**: Advanced transport solutions for container transport between multiple terminals. Funding: Port of Rotterdam 2013

**ERTMS Capacity Study**: Capacity assessment of advanced signaling system on the Dutch Railway Network. Funding: Dutch Parliament, 120 kEuro, 2012

**ONTIME: Optimal Networks for Train Integration Management across Europe** -. 19 practitioners & academic partners. Funding: EU-FP7, 7.8 MEuro. 2013-2015

**Passenger flows**: Dynamic train traffic control models with passenger choices. Funding: State Key Laboratory of Rail Traffic Control and Safety, Beijing. 2013

**ACM - Railway Market determination**: Competition and dominant positions in railway passenger and freight market. Dutch competition authority. 60 kEuro.

**Integrated train & traffic control**: Models for energy efficient railway traffic control. State Key Laboratory of Rail Traffic Control and Safety, Beijing. 2015

**National Data Warehouse**: Assessing quality requirements for data collection on the road network of the Netherlands. Dutch Ministry of Transport, 2011

**Adifo NV**: Process optimization in the animal feed and food industry. Funding: IWT/KMO, 2011-2012

**Punch Telematix / Trimble**: Integrated solution for front end and back end truck navigation. Funding: IWT/O&O, 2011-2012

**MobiRoute- Mobility and Routing**: Multimodal Robust Routing Planner: KULeuven ICRI, U Gent; Be-Mobile, DUO. Funding: IWT/IBBT, 2011-2012

**TRACS**: Tracing Condition Status: modelling failures in railway transport infrastructures. Funding: TUDelft, Cohesion program. 50kEuro, 2016

**iCAVE**: integrated cooperative automated vehicle. Funding: STW, Perspectief scheme, 4MEuro, 2016

**Complexity in Sychromodal Networks**. Preparatory grant, NWO: CWI, TNO, port

of Amsterdam

**COMET-PS, Complexity in Sychromodal transport networks.** NWO/TNO, CWI, TNO, Port of Amsterdam

**ACADEMIC ACTIVITY  
(SELECTION)**

**General organizer** for the hEART Conference 2023 - Zürich.

**General organizer** for the STRC Conference 2022 - Ascona.

**Track organizer** for the Applied Machine Learning Days – 2022 Lausanne.

**Vice president of the International Association for Railway Operations Research – IAROR**

**Committee member**, in professorial search committee for "human centric mobility", EPFL Lausanne, 2021.

**General organizer** for the NextRail 2019 conference – Zurich 09.2019.

**Event Organizer:** Current challenges for Logistics, ETH Zurich 05.2019

**Event Organizer:** Transport systems in the digital revolution, ETH Zurich, 03. 2018

**General organizer and program chair** for the 6<sup>th</sup> International Conference on Computational Logistics – ICCL 2015, Delft.

**Program committee member** for conferences:

ATMOS11: Algorithms for Transportation Modelling Optimization, 2011;

3<sup>rd</sup> MT-ITS and 4<sup>th</sup> MT-ITS: Modeling and Technology for ITS, 2013, 2015;

ICSNC: IEEE Conference on Networking, Sensing and Control, 2014;

TRISTAN 2016; TSL Workshop 2017, EWGT 2018, RTDM 2018, ICCL 2018;

RailNorrköping 2019, EWGT 2020 Railways 2020, hEART 2020

Session Organizer at EURO 2013, July 2013.

**General coordinator and Chair** for the Informs- Railway Application Section (RAS) Problem Solving Competition, 2015 and 2016.

Committee member, Reviewer and Evaluator, Transportation Science and Logistics (TSL) Best PhD Thesis award, Informs, 2015

Evaluator, HKSTS Gordon Newell prize, 2019

Committee member, LITRA Informationsdienst für den öffentlichen Verkehr award

Invited **plenary speaker** at major events and conferences:

Incomplete information in railways- 7<sup>th</sup> International Symposium on railway operations research, Beijing Jiaotong November 2020

DACH transport conference, Dornbirn (prof.Gronalt) 2019

Integrated operations and maintenance scheduling, Smart Maintenance Days 2018

Routing vehicles and passengers in public transport networks. Swiss OR Days 2018.

Routing & scheduling in transit networks. Transport summit, DTU Copenhagen 2018.

Strategic Interactions in Microscopic Delay Management - 4<sup>th</sup> International Symposium on railway research, Beijing Jiaotong October 2017

Using Wheel impact Load Detectors for condition-based maintenance of railway wheels, 4<sup>th</sup> Int. Symposium on Railway Research -Beijing Jiaotong Oct 2017

Optimizing trains or passengers? Dagstuhl seminar Algorithmic Methods for Optimization in Public Transport, April 2016

Passenger assignment in railway networks; COST, Paris May 2015

**SUPERVISION ,  
LEADERSHIP, MANAGEMENT**

**Guest Editor:**

Transportation Res C (Advanced artificial intelligence, optimization and control for railway transport)

IEEE Open Journal of ITS (Robustness and resilience of transport networks to disruptions)

Journal of Rail Transport Planning and Management (Practical value of Railway Operations Research)

Journal of Advanced Transportation (Simulation and Optimization for Railway Operations Management)

Transportation Res E (Computational Logistics at Work)

Transportation Res C (Integrated railway optimization model and algorithms)

Public Transport: Planning and Operations (Modeling and technologies for ITS)

Lecture Notes in Computer Science (proceedings of ICCL 2015 Conference)

**Associate Editor**, Open Journal on Intelligent Transportation Systems (IEEE)

**Associate Editor**, journal of Urban Rail Transit (Springer)

**Associate Editor**, journal of Smart and Resilient Transportation (Emerald Press)

**Editorial Adv Board**, Journal of Rail Transport Planning and Management (Elsevier)

**Editorial Adv Board**, Transportation Research, Part E (Elsevier)

**Editorial Adv Board**, International Journal of Railway Research (IUST)

**Editorial Adv Board**, Transportation section, Sustainability (MDPI) 2018-2020

**Editorial Board**, International Journal of Rail Transportation

**Editorial Board**, Frontiers in Future Transportation

National Representative for the Netherlands (MC), EU COST TUD1004 TransITS: Modelling Public Transport Passenger Flows in the Era of ITS.

Committee Member of the AR030 Railroad Operating Technologies, Transportation Research Board 2015-2021

Founding member of the Center for Sustainable Future Mobility, ETH Zurich

Committee Member of the ABJ80 Statistical Methods, Transportation Research Board 2020-2024

Friend of Transportation Research Board Committees:

AR010 Intercity Passenger Rail

AT045 Intermodal Freight Transport

AT050 Intermodal Freight Terminal Design and Operation

Inform Member

Staff member and alumnus of The Netherlands Research School in Transport Infrastructure and Logistics –TRAIL

Member of the Transport Institute at Delft University of Technology, editor of the transport blog for the faculty of mechanical engineering

Initiator, organizer and manager of a research exchange program between TUDelft Transport Institute and **Beijing Jiaotong University**: supervision of two researchers from each side; obtained grants for two PhD students.

Founding Member and coordinator of the Chapter of The Italian Operation Research Society: Optimization in Public Transport and Shared Mobility (AIRO-OPTSM).

External Expert, mobility, InCube ETH Entrepreneur, 1<sup>st</sup> place, ETH-MIT challenge 2018  
ETH Risk Center, Member

External Expert, scientific advisory committee. for the Swiss Federal Statistical Office (BFS/OFS), for Mobility

Member of the steering committee, project SmartRail 4.0

Member of the scientific board (Wissenschaftsrat) VSS Schweizerischer Verband der Strassen- und Verkehrsfachleute

Member, UITP and part of the academic network

Member VÖV

Fellow of the institution of Railway Signalling Engineers, IRSE

**AWARDS, NOMINATIONS,  
POSITIONS IN APPEAL**

Nomination for the ALEA Award 2020 – The Art of leadership Award, ETH Zurich.

Patent Application (Hinterlegungbeschreibung): Nold M, Corman F (2019)  
Schienenverkehrdirektwarnsystem. Eidgenössisches Institut für Geistiges Eigentum;  
Aktenzeichen: bo/01376/19.

(supervision) Zhu; Winner of **2nd place for the best young research 2021, at the International conference for Railway modeling and Analysis – RailBeijing**

(supervision) Luan; Winner of **3rd place for the best young research 2021, at the International conference for Railway modeling and Analysis – RailBeijing**

(supervision) Leng; Winner of **3rd place for the best paper 2020, in the student paper competition organized by the Railway Application Section, INFORMS**

(supervision) Benefits of a dynamic impact zone when dealing with train conflict, S. Van Thielen; Winner of **2nd place for the best paper 2017, in the student paper competition organized by the Railway Application Section, INFORMS**

Anna Valicek Award, Winner, for the paper **Metaheuristics for efficient aircraft scheduling and re-routing at busy terminal control areas**, coauthored by Samà, D'Ariano, Pacciarelli, AGIFORS oct 2016

Best Paper award for **Stochastic prediction of train delays with dynamic Bayesian networks**, coauthored by Kecman, Peterson, Joborn, CASPT 2015

Nominated (top 5) for best paper award for **Train Delay and Passenger Travel Time Minimization in Real-Time Railway Traffic Management**, CASPT 2015

Grant for research, international mobility and international collaboration, State Key Laboratory of Railway Control and Safety, Beijing, China, 2015; and 2013

(supervision) Optimization and equity in railway transport systems, X. Luan, Winner of **2nd place for the best paper 2014, in the student paper competition organized by the Railway Application Section, INFORMS**

Grant for research, international mobility, funding **EU COST STSM**, University of Luxembourg, optimization in sensor location and ITS, 2014

The article **A tabu search algorithm for rerouting trains during rail operations**. Transp Res B is within the Top 3 articles for citations in that journal, in 2009-2013, top article in the railway domain

The article **Bi-objective conflict detection and resolution in railway traffic management**. Transp Res C is within the Top 7 articles for citations in Elsevier Transportation journals, in 2012-2013, top article in the railway domain

Interviewed for a NWO-STW VENI Grant proposal, the most prestigious personal funding scheme for young researchers in the Netherland, 2013

Nominated (top 6) for best paper award for **“Railway line capacity consumption of different railway signalling systems under scheduled and disturbed conditions”** 5th ISROR – RailCopenhagen, 2013

Nominated (top 5) for the best paper award for **“Stochastic shortest path with correlation effects”** at the Vervoer Logistieke Werkdagen, Venlo, 2012

Ranked winner, grant “Rita Levi Montalcini” Italian Research Council, 2017

Eligible candidate for an assistant professor in Intelligent Networks, Center for Industrial Management, KULeuven, 2012

Recipient of an assistant professorship (tenure track) in Transport and Logistics, Maritime and Transport Technology, TUDelft, 2012

*Grant for Post-Doctoral research 3 years, awarded by the FWO –Research*

Foundation Flanders, 2012

Nominated (top 5) for the EDDA Award for the best PhD Thesis in operations research, the *Association of the European Operational Research Societies 2012*

Nominated (top5) for the best paper award for “**Dispatching trains during seriously disrupted traffic situations**”, 8th IEEE ICNSC Conference, 2011

Best Paper award for the work “**A tabu search algorithm for rerouting trains during rail operations**”, by the Railway Application Section, INFORMS, 2007

Best master’s thesis in operations research, AIRO, Italian Association for Operations Research, 2007

Best master’s thesis prize in management engineering, Accenture, 2006

Galluzzi Prize for best thesis in Engineering, University “Roma TRE”, 2006

Teaching assistant fellowship, by University of Rome “Roma TRE”, 2005

#### POST DOCS AND EARLY CAREER RESEARCHERS

**Supervisor** (ETH Zurich) on:

Analytics for transit passengers, funding ETH: **A.D. MARRA**

Artificial Intelligence for railway traffic, funding ESKAS-Swiss Excellence: **M. COSTA**

Smart railway optimization and information provision, funding ETH: **Y. ZHU**

Stochastic prediction of railway operations, funding SNF: **P. HUANG**

Incorporating Agent based models in railway traffic operation, funding ETH: **N. LENG**

Passenger Centric Railway optimization, funding ETH, NWO Rubicon+ETH: **X LUAN**

Spatial planning and transport implications, funding ETH: **M. SOLTANIEHHA**

Stochastic optimization of railway operations, funding SNF: **A. TRIVELLA**

Online optimization for quantitative logistics, funding ETH: **J. DECERLE**

Energy efficient train operations, funding SCCER+ETH: **V. DE MARTINIS**

Energy efficient automated train operations, funding NWO Rubicon+ETH : **P. WANG**

#### PHD STUDENTS

**Daily Supervisor, Promotor** (ETH Zurich) on:

Optimization in mobility systems, funding ETH: **V. KLASOVITÁ**

Control in transit networks, funding NCCR+ETH, **F. FUCHS**

Optimization in railway systems, funding ETH, **J. TREPAT BORECKA**

Stochastic railway traffic management, funding ETH+SNF **M. JUSUP**

Information-mediated control of transit networks, funding NCCR+ETH **M. RAHIMI**

Energy efficiency of innovative railway systems, funding ETH+BAV: **M. NOLD**

Stochastic prediction of railway operations, funding SNF: **T. SPANNINGER**

Integrated maintenance and management of railways, funding ETH: **T-H. YAN**

Practical Automated Railway Scheduling – Exploiting Decomposition, Infeasibilities and Recurrent Situations, funding ETH: **F. LEUTWILER, defended on 10.10.2022**

Quantification And Prediction Of Variability In Public Transport Operations, funding ETH: **B. BÜCHEL, defended on 09.07.2021**

Tracking Passengers To Analyse Travel Behaviour During Public Transport Disturbances, funding ETH: **A.D. MARRA, defended on 12.07.2021**

The role of information to passengers in public transport disruptions, funding ETH+CSC: **N. LENG, defended on 02.09.2020**

**Daily Supervisor and Co-promotor** (TUDelft) on:

Railway wheel defect identification, funding Iranian Ministry of Science: **ALEMI**, defended on 20.01.2019

Container transport inside the port area and to the hinterland, funding Chinese

Ministry of Science, **HU**, Defended on 01.07.2019

Traffic Management Optimization of Railway Networks, funding Chinese Ministry of Science, **LUAN**, Defended on 01.07.2019

**Co-promotor** (KULeuven) on

Conflict Prevention Strategies for real-time railway traffic management, funding Infrabel: **VAN THIELEN**. Defended on 20.12.2018

Member of the Doctoral Examination Committee for projects on:

Delay prediction **COULAUD** (Université Paris-Saclay)

Public transport demand and supply management under uneven passenger distributions, **PEFTITSI** (KTH Stockholm)

Dynamic Vehicle Routing, **TSCHERNUTTER** (ETH Zurich)

Passenger Train delay Prediction using Machine Learning Methods.

**LAPAMONPINO** (University of Illinois at Chicago)

Controllability of complex flow networks, **MAZUR** (Uni Luxembourg)

Energy efficient Train timetabling, **SCHEEPMAKER** (TUDelft)

Optimization and equilibrium problems with discrete choice models. **BORTOLOMIOL** (EPFL)

Parallel approaches for railway traffic management. **JOSYULA** (Blekinge Institute of Technology)

Synchronization control of perturbed passenger and freight operations. **QU** (TUDelft)

Demand-responsive Disruption Management in Mass Transit Systems – An Agent-Based Simulation Model to Assess Disruptions and Resilience-Enabling

Rescheduling Measures. **BLUME** (ETH Zürich)

Combinatorial optimization for integrating rolling stock management and railway traffic scheduling in passenger stations. **KAMENGA** (University Gustave Eiffel, Lille)

Real-time rescheduling of trains to smooth traffic flows. **GALAPITAGE** (University of South Australia)

Max-plus modeling of traffic on passenger railway lines with a junction: fundamental diagram and dynamic control, **SCHANZENBÄCHER** (École des Ponts ParisTech)

Measuring, Predicting and Controlling Disruption Impacts for Urban Public Transport, **YAP** (TUDelft)

Timetable integration in public transport planning, **FONSECA** (DTU)

Towards Mobility-as-a-Service: a cross-case analysis of public authorities' roles in the development of ICT-supported integrated mobility scheme, **AUDOUIN** (EPFL)

Short-turning Trains during Full Blockages in Railway Disruption Management, **GHAEMI** (TUDelft)

Integration of Passenger demand in railway timetable rescheduling, **BINDER** (EPFL)

Robust Railway Timetabling, **DEWILDE** (KULeuven);

Decentralized traffic control, **RINALDI** (KULeuven)

Algorithms for job shop rerouting, **SAMÀ** (Uni Roma Tre)

Management and supervision of project for **exchange PhD Students:**

Reliability in railway traffic, **KHARKEABADI** (Iranian Ministry of Railways), 2013

Optimization models for railway control, **SAMÀ** (Roma TRE), 2014

Reliability & Disruptions in High Speed railways, **XU** (Southwest Jiaotong), 2015

Multi scale train routing and timetabling, **LIAO** (Beijing Jiaotong), 2018

Capacity Estimation for High Speed Railways, **LI** (Tongji Shanghai), 2018

Integrated Rolling stock management, **HONG** (Beijing Jiaotong), 2018

Passenger centric railway traffic, **LONG** (Beijing Jiaotong), 2019

Social routing in public transport, **EIKENBROEK** (U Twente), 2020

Optimization in network design **CAZZARO** (DTU Copenhagen), 2021



Robust Transit Operations Planning **GONG** (Beijing Jiaotong) 2022  
Prediction of public transport operations **GALLO** (University Genova), 2022  
Information for Transit Assignment **BRESCIANI MIRISTICE** (Sapienza Rome), 2022

**MASTER STUDENTS  
SUPERVISION**

**ETH Zurich**

Descriptive dynamics of online workforce scheduling problem. M. Uhlmann  
Integration of Disruptions in Railway Planning, F. Fuchs (exchange to TUDelft)  
**LITRA Prize for best master thesis in public transport in Switzerland, 2022;**  
**ASCE best master thesis;**

**Willi Studer prize for best student in RE&IS**

Benders cuts for Railway Traffic Management, G. Bonet Filella  
Benchmarking algorithms for energy efficient train operations, M. Muggli  
Railway energy simulation, for peak optimization, D. Sanchez

**LITRA prize for best master thesis in public transport in Switzerland 2021**

Estimating realized railway capacity, J. Lordieck

**Willi Studer prize for best student in RE&IS;**

**ETH Culmann Preis**

Realized public transport usage during COVID, L. Sun

Equity in traffic routing, X. Sun

Communication of bus arrival time predictions to users, S. Fischer

Pedestrian management at crowded events, M. Nehmiz

Long distance mode detection in tracking, O. Schweizer

Loading prediction in bus systems, L. Jamar

Agent Based modelling of information dissemination in disruption, A. Scherer

Signalanalyse des Schwingweges von Schienen, S Pletscher

Evaluation of energy systems for railways, D Trachsel

Evaluation of energy systems for railways, J Meyer

Alternative approaches for timetabling long distance train traffic, J Amstutz

**Willi Studer prize for best student in RE&IS;**

**LITRA prize for best master thesis in public transport in Switzerland 2019**

Influential variables for short term passenger forecasts at train stations. J Weibel

**VSS prize 2020**

Passenger interaction towards railway delays, K. Gysin, July 2018

Mikrosimulation von Shared Space auf Hauptverkehrsachsen, T. Schmid, Feb 2018

**Willi Studer prize for best student in RE&IS;**

**VSS prize 2017.**

The role of alternative routes in pedestrian transport, A. Weber, Feb 2018

Passenger flows at train stations, A. Lunardi, March 2018

**TUDelft**

Synchromodal network design and operations, A. Pouliazi, July 2016

Passenger-oriented transit control, A. Gavriilidou, Sept 2016

Container Storage Optimization at ECT, M. Vester, June 2016

Human factors in container transportation, port of Rotterdam, R de Jong, Sept 2016

Maintenance for offshore structures, TOTAL, R. Haans, March 2016

Dynamic multimodal freight assignment models, FloraHolland, Z. Chen, Dec 2015

Operations management, GE Healthcare V Knops, August 2015

Equity in Air traffic operations, M. Tripathy, August 2015

Public Transport with automated Vehicles, K Winter, August 2015 (cum laude)

Rail freight terminal design, EMO terminals, L. Van De Water, July 2015

Maintenance of tram systems, HTM The Hague, S. Kraijema, June 2015

Logistic distribution networks design, Heineken R. van Blijenburgh, March 2015  
 Capacity assessment for light rail, HTM The Hague, T. Jongerius, December 2014  
 Dynamic Railway Traffic management, NS, N. de Vries, May 2014  
 Inter Terminal Transport, port of Rotterdam, H. Schröer, February 2014  
 Inter Terminal Transport, port of Rotterdam, F. Nieuwkoop, October 2013

**KULeuven**

Flexible Railway Timetables, A. Clijsters, Sept. 2013  
 Railway Simulation, S. Gijzenbergh, July 2013, **TML Thesis Prize 2013**  
 Ridesharing models, P. Boyen, J. Broekhoven, July 2012

**Università di Pisa (remote)**

Online scheduling of mobile workforce, M. Minafi Varkiani, Sept– Dec 2019

**Università Napoli (exchange)**

Multimodal traffic control, A. Romano, July-Sept 2019

**Roma Tre University (exchange)**

Stochastic energy efficient train driving, D. Palandra, March-September 2021  
 Performance of railways in bottlenecks and disruptions, F. Bigi, July-Sept 2019  
 Passenger flows in delayed railway networks, E. Gadaleta, July-Sept 2019  
 Models for energy efficient railway traffic scheduling, A. Montalto April-July 2018  
 Degradation trending and scheduling maintenance, G. Centulio, June-Sept 2016  
 Passenger flow optimization in railways; A. Marra, June-August 2015  
 Job shop rerouting heuristics, A. Toli, Sept-Dec 2014  
 Job shop models for train rerouting, G. Zaninotto Oct-Dec 2013  
**Operation Research Society (AIRO) Best master thesis award 2013**  
 Passenger flows models in railways, F. Sabene, May-August 2013

**Beijing Jiaotong University (Exchange)**

High speed railway delays, Jingwen Guo, March 2015  
 Optimization and equity in railway transport systems, X. Luan, March 2014;  
**Winner of 2<sup>nd</sup> place for the best paper 2014, in the student paper competition organized by the Railway Application Section, INFORMS**

**BACHELOR STUDENTS SUPERVISION (selection)**

Predicting Train Delays by means of Time Series Analysis. Fiona Arnet, 2022.  
**LITRA Prize for best bachelor thesis in Public Transport 2022**

**TEACHING ACTIVITY**

2021-onwards	<b>Advisory Board Member, master of advanced study in mobility of the future, ETH Zurich.</b>
2019-onwards	<b>Deputy Director, certificate of advanced studies in transport engineering, ETH Zurich.</b>
2019-onwards	<b>Master of advanced studies in spatial planning, lecturer, ETH Zurich.</b>
2018- 2022	<b>Deputy Director of studies, Master Course Spatial Development and Infrastructure Systems (RE&amp;IS); ETH Zurich.</b>
2017- onwards	<b>Course coordinator, lecturer, Public Transport Design and Operations, Public Transport and Railways; Transport Systems; ETH Zurich.</b>
2018	Attendance of the “Teaching at ETH: Committed and skilled”, Continuing education programme for Assistant Professors

- University Teaching Qualification**, TUDelft, 2015.
- 2017 **Guest lecturer, Beijing Jiaotong University** Railway Traffic management
  - 2011-2013 **Member of the Permanent Education Committee (POC)** for Master in Traffic, Logistics and Intelligent Transportation System, KULeuven
  - 2014-2016 **Coordinator** for the faculty of mechanical engineering: Interdisciplinary project, Transport, Infrastructure and Logistics Master, TUDelft
  - 2013-2016 **Lecturer, Course coordinator:** Introduction to Transport Engineering and Logistics; Quantitative Methods for logistics (TUDelft)
  - 2012- 2016 **Lecturer, Teaching Assistant:** Masterclass Transport Engineering & Logistics, Control of Intelligent Transport Infrastructure, Introduction to TIL; Bachelor End Project. Mechanical Engineering & Transport, Infrastructure and Logistics Master (TUDelft)
  - 2014 **Guest Lecturer**, Intelligent Transportation System; Traffic Planning and Management; Transport and Mobility, University of Luxembourg
  - 2011/12 - 2015/16 **Course coordinator, Guest Lecturer, Teaching Assistant:** Public Transport Model and Operations; Integrated Practicum on Logistic Organization of Public Transport; Supply Chain Engineering. Master in Traffic, Logistics and Intelligent Transportation System , KULeuven
    - 2010 Teaching Assistant Verkeerskunde Basis, Master in Civil Engineering, KULeuven
    - 2008-2010 Teaching assistant: Design and Control of Public Transport Systems; Railway Traffic Management, Master in Transport and Planning, Master in Transportation Infrastructure and Logistics, TUDelft
    - 2005 Teaching assistant, Lab teacher: Automatic Control 1, Automation Network and Systems (Bachelor degree in Informatics Engineering), Roma Tre University

**PERSONAL SKILLS**

MOTHER TONGUE

**Italian, Near-Native in French**

**English**

Reading	Writing	Verbal
Excellent	Excellent	Excellent

**Dutch**

Reading	Writing	Verbal
Proficient	Fair	Good

**Spanish**

Reading	Writing	Verbal
Good	Fair	Fair

**German**

Reading	Writing	Verbal
Good	Fair	Fair

SOCIAL AND ORGANIZATIONAL SKILLS

Good relation and communication skills acquired in several months of team working  
 Capability to manage and organize activities, people, resources, acquired by periods of responsibility in work management and organization;  
 active participation in PhD Society Leuven; YoungDelft  
 Mentor and coach within PhD Startup and TUDelft Graduate school

TECHNICAL SKILLS AND COMPETENCES

Excellent knowledge of Java, C++/C, C#, simulations, parallel computing, Matlab, PHP, Python, Linux, SPSS Modeler, R, MS Windows, Office suite

ARTISTIC SKILLS  
AND COMPETENCES

Sport: Trekking/Hiking, Cycling  
Hobbies: Photography, Graphic arts

# PUBLICATION LIST

## PHD THESIS

F. Corman (2010). **Real-time Railway Traffic Management: Dispatching in complex, large and busy railway networks**. PhD Thesis, TRAIL Thesis Series 2010/14. Defended on 10/12/2010. Promoter: Prof.Dr.-Ing I.A. Hansen, Transport and Planning Department, Delft University of Technology.

## BIBLIOMETRICS

ISI web of science: h-index 28; 2410 citations  
Scopus: h-index: 33; 3268 citations  
Google scholar: h-index 38; 5100 citations  
(10.12.2022)  
100+ scientific articles in 10 year research.  
Currently about 700+ citations/year in Google scholar

## PUBLICATIONS IN JOURNALS OR BOOKS WITH IMPACT FACTOR

87. Leutwiler F., Bonet Filella G., Corman F. (2022) Accelerating logic-based Benders Decomposition for Railway Rescheduling by exploiting similarities in delays. *Computers and Operations Research* <https://doi.org/10.1016/j.cor.2022.106075>  
Impact Factor: 5.159
86. Bonet Filella G., Trivella A., Corman F. (2022) Modeling soft unloading constraints in the multi-drop container loading problem. *European Journal of Operational Research* <https://doi.org/10.1016/j.ejor.2022.10.033>  
Impact Factor: 6.363
85. Marra A.D., Corman F. (2022) How different network disturbances affect route choice of public transport passengers. A descriptive study based on tracking. *Expert Systems with Applications* <https://doi.org/10.1016/j.eswa.2022.119083>  
Impact Factor: 8.665
84. Ahmed S.S, Corman F., Anastasopoulos P.C. (2022) Accounting for unobserved heterogeneity and spatial instability in the analysis of crash injury-severity at highway-rail grade crossings: A random parameters with heterogeneity in the means and variances approach. *Analytic Methods in Accident Research*. <https://doi.org/10.1016/j.amar.2022.100250>  
Impact Factor: 14.556
83. Wang P., Zhu Y, Corman F. (2022) Passenger-Centric Periodic Timetable Adjustment Problem for the Utilization of Regenerative Energy. *Computers and Industrial Engineering* <https://doi.org/10.1016/j.cie.2022.108578>  
Impact Factor: 7.18
82. Fuchs F., Trivella A., Corman F. (2022) Enhancing the interaction of railway timetabling and line planning with infrastructure awareness. *Transportation Research, Part C*. <https://doi.org/10.1016/j.trc.2022.103805>  
Impact Factor: 9.022
81. Wang P. Jeiziner A., Luan X., De Martinis V., Corman F. (2022) An Experimental Analysis of Hierarchical Rail Traffic and Train Control in a Stochastic Environment. *Journal of Advanced Transportation* <https://doi.org/10.1155/2022/8674538>.  
Impact Factor: 2.47
80. Rahimi M., Büchel B., Corman F. (2022) Evaluating The Effects Of Disruptions On Travelers' Behavior In A Multimodal Network Utilizing Agent-Based Simulation. *Transportation Research Record* 10.1177/03611981221094005  
Impact Factor: 1.560
79. Blume S., Corman F., Sansavini G. (2022) Bayesian Origin-Destination Estimation in Networked Transit Systems using Nodal In- and Outflow Counts. *Transportation Research, Part B* 161. 60-94 <https://doi.org/10.1016/j.trb.2022.04.006>  
Impact Factor: 5.596
78. Leutwiler F., Corman F. (2022) A logic-based Benders decomposition for microscopic railway timetable planning. *European Journal of Operational Research* <https://doi.org/10.1016/j.ejor.2022.02.043>  
Impact Factor: 5.334
77. Cazzaro D., Trivella A., Corman F., Pisinger D. (2022) Multi-scale optimization of the design of offshore wind farms. *Applied Energy* <https://doi.org/10.1016/j.jrtpm.2022.100312>

Impact Factor: 9.746

76. Luan X., Corman F. (2022) Passenger-oriented traffic control for rail networks: an optimization model considering crowding effects on passenger choices and train operations. *Transportation Research. Part B.* <https://doi.org/10.1016/j.trb.2022.02.008>  
Impact Factor: 5.596
75. Wang P., Besinovic N., Goverde R.M.P., Corman F. (2021) Improving the Utilization of Regenerative Energy and Shaving Power Peaks by Railway Timetable Adjustment. *IEEE transactions on ITS.* Doi: 10.1109/TITS.2022.3145390  
Impact Factor: 6.492
74. Büchel B., Corman F. (2022) What do we know when? Modeling Predictability of transit operations. *IEEE Transactions on ITS.* Doi:10.1109/TITS.2022.3145243  
Impact Factor: 6.492
73. Landgraf M., Zeiner M., Knabl D., Corman F. (2022) Assessment of environmental impacts and associated costs: Railway turnouts in Austria. *Transportation Research, Part D.* <https://doi.org/10.1016/j.trd.2021.103168>  
Impact Factor: 5.495
72. Huang P., Spanniger T., Corman F. (2022) Enhancing the Understanding of Train Delays with Delay Evolution Pattern Discovery: A Clustering and Bayesian Network Approach. *IEEE Transactions on ITS.* 10.1109/TITS.2022.3140386  
Impact Factor: 6.492
71. Marra A.D., Sun L., Corman F. (2021) The impact of COVID-19 pandemic on public transport usage and route choice: Evidences from a long-term tracking study in urban area. *Transport Policy* <https://doi.org/10.1016/j.tranpol.2021.12.009>  
Impact Factor: 4.674
70. Büchel B., Corman F. (2021) Modeling conditional dependencies for bus travel time estimation. *Physica A: Statistical Mechanics and its Applications.* <https://doi.org/10.1016/j.physa.2021.126764>  
Impact Factor: 3.263
69. Büchel B., Marra A.D., Corman F. (2021) COVID-19 as a window of opportunity for cycling: Evidence from the first wave. *Transport Policy* <https://doi.org/10.1016/j.tranpol.2021.12.003>  
Impact Factor: 4.674
68. Leng N., Corman F. (2021) Communicating delays and adjusted disposition timetables: modelling and evaluating the impact of incomplete information to passengers. *Expert Systems with Applications.* <https://doi.org/10.1016/j.eswa.2021.116265>  
Impact Factor: 6.954
67. Rahimi M., Corman F. (2021) Modeling and quantifying interaction of information and capacity in public transport disruptions. *Journal of Advanced Transportation* <https://doi.org/10.1155/2021/5398316>  
Impact Factor: 2.419
66. Hong X., Meng L., Long S., D'Ariano A., Veelenturf L.P., Corman F. (2021) Robust Capacitated Train Rescheduling with Passenger Reassignment under Stochastic Disruptions *Transportation Research Record.* <https://doi.org/10.1177/03611981211028594>  
Impact Factor: 1.029
65. Long S., Luan X., Corman F. (2021) Passenger-oriented rescheduling of trains and rolling stocks for handling large passenger demand: linearized models with train capacity constraint. *Transportmetrica B.* <https://doi.org/10.1080/21680566.2021.1932638>  
Impact Factor: 3.364
64. Trivella A., Pisinger D., Koza D., Corman F. (2021) The multi-commodity network flow problem with soft transit time constraints: Application to liner shipping. *Transportation Research, Part E* <https://doi.org/10.1016/j.tre.2021.102342>  
Impact Factor: 5.326
63. Corman F., Trivella A., Keyvan-Ekbatani M. (2021) Stochastic process in railway traffic flow: models methods and implications. *Transportation Research Part C* 128 <https://doi.org/10.1016/j.trc.2021.103167>  
Impact Factor: 5.775
62. Huang P., Li Z., Wen C., Lessan J., Corman F., Fu L. (2021) Modeling train timetables as images: a cost-sensitive deep learning framework for delay propagation pattern recognition *Expert Systems with Applications*, 114996, ISSN 0957-4174, <https://doi.org/10.1016/j.eswa.2021.114996>

Impact Factor: 6.954

61. Hong X., Meng L., Corman F., Veelenturf L.P., Long S., D'Ariano A. (2021) Integrated Optimization of Capacitated Train Rescheduling and Passenger Reassignment under Disruptions. *Transportation Research Part C* 125, 103025.  
<https://doi.org/10.1016/j.trc.2021.103025>  
Impact Factor: 5.775
60. Liao Z., Li H., Miao J., Corman F. (2020) Railway Capacity Estimation Considering Vehicle Circulation: Integrated Timetable and Vehicles Scheduling on Hybrid Time-space Networks *Transportation Research Part C* <https://doi.org/10.1016/j.trc.2020.102961>  
Impact Factor: 5.775
59. Marra A.D., Corman F. (2020) Determining an efficient and precise choice set for public transport based on tracking data. *Transportation Part A* 142, 168-186  
<https://doi.org/10.1016/j.tra.2020.10.013>  
Impact Factor: 5.021
58. Büchel B., Spanninger T., Corman F. (2020) Empirical dynamics of railway delay propagation identified during the large-scale Rastatt disruption. *Scientific Reports* 10, 18584  
<https://doi.org/10.1038/s41598-020-75538-z>  
Impact Factor: 4.576
57. Long S., Meng L., Luan X., Trivella A., Miao J., Corman F. (2020) A Stochastic Programming Approach for Scheduling Extra Metro Trains to Serve Passengers from Uncertain Delayed High-Speed Railway Trains. *Journal of Advanced Transportation*  
<https://doi.org/10.1155/2020/8894174>  
Impact Factor: 1.983
56. Luan X., De Schutter B., Meng L., Corman F. (2020) Decomposition and distributed optimization of real-time traffic management for large-scale railway networks. *Transportation Research, Part B* 141, 72-97 <https://doi.org/10.1016/j.trb.2020.09.004>  
Impact Factor: 4.796
55. Marra A.D., Corman F. (2020) From Delay to Disruption: the Impact of Service Degradation on Public Transport Network. *Transportation Research Record* 2674 (10) 886-897  
<https://doi.org/10.1177/0361198120940989>  
Impact Factor: 1.029
54. Wang P., Trivella A., Goverde R.M.P., Corman F. (2020) Train Trajectory Optimization for reliable On-time Arrival under Parametric Uncertainty. *Transportation Research Part C* 19, 102680 <https://doi.org/10.1016/j.trc.2020.102680>  
Impact Factor: 5.775
53. Leng N., Liao Z., Corman F. (2020) The role of timetable, rolling stock rescheduling and information strategies to passengers in public transport disruptions. *Transportation Research Record* 2674(9): 135-147. <https://doi.org/10.1177/0361198120927000>  
Impact Factor: 1.029
52. Yan T.H., Corman F. (2020) Assessing and Extending Track Quality Index for Novel Measurement Techniques in Railway. *Transportation Research Record* 2674 (8), 24-36.  
<https://doi.org/10.1177/0361198120923661>  
Impact Factor: 1.029
51. Büchel B., Corman F. (2020) Meaningful Modeling Of Section Bus Running Times By Time Varying Mixture Distributions Of Fixed Components. *Transportation Research Record* 2674 (8) pp 626-637. <https://doi.org/10.1177/0361198120918576>  
Impact Factor: 1.029
50. Leng N., Corman F. (2020) The role of information to passengers in public transport disruptions: an agent-based simulation approach. *Transportation Research, Part A* 133 pp 214-235. <https://doi.org/10.1016/j.tra.2020.01.007>  
Impact Factor: 5.021
49. Corman F. (2020) Strategic interactions between rescheduling train traffic and routing passengers in microscopic delay management. *Transportation Science* 54 (3) pp 785-822.  
DOI: 10.1287/trsc.2020.0979  
Impact Factor: 3.310
48. Long S., Meng L., Miao J., Hong X, Corman F. (2020) Synchronizing last trains of urban rail transit system to better serve passengers from late night trains of high-speed railway lines. *Networks and Spatial Economics* 20, pp 599-633 doi 10.1007/s11067-019-09487-0.  
Impact Factor: 2.084

47. Sessa P.G., De Martinis V., Corman F. (2019) Filtering approaches for online train motion estimation with onboard power measurements. *Computers aided Civil and Infrastructure Engineering*. 35 (5) p 415-429 doi 10.1111/mice.12514  
Impact Factor: 6.208
46. Alemi A., Corman F., Pang Y., Lodewijks G. (2019) Evaluation of influential parameters contributing to reconstruction of railway wheel defect signal. *Journal of Rail and Rapid Transit* 234 (9) pp 1005-1016 doi 10.1177/0954409719882828  
Impact Factor:0.857
45. Hu Q., Wiegmans B., Corman F., Lodewijks G. (2019) Critical Literature Review into Planning of Inter-Terminal Transport: in Port Areas and the Hinterland. *Journal of Advanced Transportation* doi 10.1155/2019/9893615  
Impact Factor: 1.102
44. Marra A.D., Becker H., Axhausen K.W., Corman F. (2019) Developing a passive GPS tracking system to study long-term travel behavior. *Transportation Research Part C* 104, 348-368 <https://doi.org/10.1016/j.trc.2019.05.006>  
Impact Factor: 4.334
43. Hu Q., Wiegmans B., Corman F., Lodewijks G. (2019) Integration of Inter-terminal Transport and Hinterland Rail Transport. *Flexible Services and Manufacturing* 31 807-831  
<https://doi.org/10.1007/s10696-019-09345-8>  
Impact Factor: 2.346
42. Alemi A., Corman F., Pang Y., Lodewijks G. (2019) Reconstruction of an informative railway wheel defect signal from wheel–rail contact signals measured by multiple wayside sensors *Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit* 223(1) 49–62 DOI: 10.1177/0954409718784362  
Impact Factor:0.857
41. Corman F., Kecman P. (2018) Stochastic prediction of train delays in real-time using Bayesian networks. *Transportation Research, Part C*, 95, 599-615  
<https://doi.org/10.1016/j.trc.2018.08.003>  
Impact Factor : 4.334
40. Luan X., Wang Y., De Schutter B., Meng L., Lodewijks G., Corman F. (2018) Integration of Real-time Traffic Management and Train Control for Rail Networks. Part I: optimization problems and solution approaches *Transportation Research, Part B*, 115: 41-71.  
<https://doi.org/10.1016/j.trb.2018.06.006>  
Impact Factor 4.822
39. Luan X., Wang Y., De Schutter B., Meng L., Lodewijks G., Corman F. (2018) Integration of Real-time Traffic Management and Train Control for Rail Networks. Part II: Extensions towards energy efficient train operations *Transportation Research, Part B*, 115: 72-94  
<https://doi.org/10.1016/j.trb.2018.06.011>  
Impact Factor 4.822
38. D'Ariano A., Corman F., Fujiyama T., Meng L., Pellegrini P. (2018) Simulation and Optimization for Railway Operations Management, editorial, *Journal of Advanced Transportation* <https://doi.org/10.1155/2018/4896748>.  
Impact Factor 1.012
37. De Martinis V., Corman F. (2018) Data-driven perspectives for energy efficient railway operations: current practices and future opportunities. *Transportation Research, Part C*, 95, 679-697 <https://doi.org/10.1016/j.trc.2018.08.008>  
Impact Factor 4.334
36. Van Thielen S., Corman F., Vansteenwegen P. (2018) Considering a dynamic impact zone for real-time railway traffic management. *Transportation Research, Part B*. 111, 39–59 doi: 10.1016/j.trb.2018.03.003  
Impact Factor: 4.822
35. Hu Q., Corman F., Wiegmans B., Lodewijks G. (2018) A tabu search algorithm to solve the integrated planning of container on an inter terminal network connected with a hinterland rail network. *Transportation Research C* 91, pp 15-36 <https://doi.org/10.1016/j.trc.2018.03.019>  
Impact Factor: 4.334
34. De Martinis V., Toletti A., Corman F., Weidmann U.A., Nash A. (2018) Feedforward tactical optimization for energy efficient operation of freight trains: the Swiss case. *Transportation Research Record* <http://journals.sagepub.com/doi/abs/10.1177/0361198118776508>  
Impact Factor 0.522



33. Luan X., De Schutter B., Corman F., Lodewijks G. (2018) Integrating Dynamic Signalling Commands Under Fixed-Block Signalling Systems Into Train Dispatching Optimization Models. *Transportation Research Record* <https://doi.org/10.1177/0361198118791628> Impact Factor 0.522
32. Samà M., D'Ariano A., Corman F., Pacciarelli D. (2018) Coordination of scheduling decisions in the management of airport airspace and taxiway operations *Transportation Research, Part A* 114 (B) pp 398-411 [doi.org/10.1016/j.tra.2018.01.028](https://doi.org/10.1016/j.tra.2018.01.028) Part B: 398-411 Impact Factor 3.489
31. Corman F., Quaglietta E., Goverde R.M.P. (2018) Automated real-time railway traffic control: An experimental analysis of reliability, resilience and robustness. *Transportation Planning and Technology* 41(4), pp. 421-447 [doi:10.1080/03081060.2018.1453916](https://doi.org/10.1080/03081060.2018.1453916) Impact factor: 0.512
30. Meng L., Corman F., Zhou X., Tang T. (2018) Special Issue on Integrated optimization models and algorithms in rail planning and control. *Transportation Research, Part C* 88, pp 87-90 <https://doi.org/10.1016/j.trc.2018.01.003> Impact Factor 4.334
29. D'Ariano A., Meng L., Centulio G., Corman F. (2018) Integrated stochastic optimization approaches for tactical scheduling of trains and railway infrastructure maintenance. *Computers & Industrial Engineering* <https://doi.org/10.1016/j.cie.2017.12.010>. Impact Factor: 2.859
28. Negenborn R.R., Corman F. (2017) Editorial: Computational logistics at work. *Transportation Research, Part E* 105 pp 149-151 [10.1016/j.tre.2017.07.002](https://doi.org/10.1016/j.tre.2017.07.002) Impact factor: 3.791
27. Samà M., D'Ariano A., Corman F., Pacciarelli D. (2017) Metaheuristics for efficient aircraft scheduling and re-routing at busy terminal control areas. *Transportation Research Part C* 80 pp 485-511 [10.1016/j.trc.2016.08.012](https://doi.org/10.1016/j.trc.2016.08.012). Impact factor: 4.334
26. Xu P., Corman F., Peng Q., Luan X. (2017) A train rescheduling model integrating speed management for disruption management of high-speed traffic under a quasi-moving block system. *Transportation Research, Part B*. 104, pp 638-666 [doi 10.1016/j.trb.2017.05.008](https://doi.org/10.1016/j.trb.2017.05.008) Impact Factor 4.822
25. Xu P. Corman F., Peng Q., Luan X. (2017) Timetable Rescheduling Approach and Transition Phases for High-Speed Railway Traffic During Disruptions. *Transportation Research Record* 2607 pp 82-92 <https://doi.org/10.3141/2607-11> Impact Factor 0.544
24. Kraijema S., Corman F., Godjevac M., Lodewijks G. (2017) Optimizing preventive maintenance policy: a data-driven application for a light rail braking system. *Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability*. 231 (5), pp 534-545 [doi 10.1177/1748006X17712662](https://doi.org/10.1177/1748006X17712662) Impact Factor: 1.084
23. Shakibayi M, Sheikholeslami A., Corman F., Shafahi Y. (2017) An integrated rescheduling model for minimizing train delays in the case of line blockage. *Operations Research – An International Journal*. [doi 10.1007/s12351-017-0316-7](https://doi.org/10.1007/s12351-017-0316-7) Impact Factor: 0.600
22. Luan X., Miao J., Meng L., Corman F., Lodewijks G. (2017) Integrated Optimization on Train Scheduling and Preventive Maintenance Time Slots Planning. *Transportation Research Part C* 80 pp 329-359 [10.1016/j.trc.2017.04.010](https://doi.org/10.1016/j.trc.2017.04.010) Impact Factor: 4.334
21. Luan X., Meng L., Corman F. (2017) Non-discriminatory train dispatching in a rail transport market with multiple competing and collaborative train operating companies, *Transportation Research, Part C* 80 pp 148-174 [doi 10.1016/j.trc.2017.04.011](https://doi.org/10.1016/j.trc.2017.04.011) Impact Factor: 4.334
20. Shakibayi M., Sheikholeslami A., Corman F. (2017) A simulation based optimization approach to train rescheduling problem. *Scientia Iranica*, [doi: 10.24200/sci.2017.4186](https://doi.org/10.24200/sci.2017.4186) Impact Factor: 1.025
19. Corman F., D'Ariano A., Marra A.D., Pacciarelli D., Samà M. (2016) Integrating Train Scheduling and Delay Management in Real-time Railway Traffic. *Transportation Research Part E*, 105, pp 213-239 [doi:10.1016/j.tre.2016.04.007](https://doi.org/10.1016/j.tre.2016.04.007) Impact factor: 3.791

18. Samà M., D'Ariano A., Corman F., Pacciarelli D. (2016) A variable neighbourhood search for fast train scheduling and routing during disturbed railway traffic situations. *Computers and Operation Research* 78 (C) pp 480-499, doi:10.1016/j.cor.2016.02.008  
Impact Factor: 2.454
17. Alemi A., Corman F., Lodewijks G. (2015) Condition monitoring approaches for the detection of railway wheel defects. *Journal of Rail and Rapid Transit*, 231(8), pp. 961 – 981  
<https://doi.org/10.1177/0954409716656218>  
Impact Factor:0.857
16. Xin J., Negenborn R.R., Corman F., Lodewijks G. (2015) Control of interacting machines in automated container terminals using a sequential planning approach for collision avoidance. *Transportation Research Part C* 60, 377–396 <https://doi.org/10.1016/j.trc.2015.09.002>  
Impact factor: 4.334
15. Corman F., Viti F., Negenborn R.R. (2015) Equilibrium models in multi-modal container transport systems, *Journal of Flexible Services and Manufacturing* 29(1), pp 125-153. doi: 10.1007/s10696-015-9224-4  
Impact Factor: 1.872
14. Corman F., Quaglietta E. (2015) Closing the loop in railway traffic control: framework design and impacts on operations. *Transportation Research C*. 54, pp 15-39  
doi: 10.1016/j.trc.2015.01.014  
Impact factor: 4.334.
13. Corman F., Meng L., (2015) A Review of Online Dynamic Models and Algorithms for Railway Traffic Control. *IEEE Transactions on ITS*, 16 (3) pp 1274 - 1284  
doi: 10.1109/TITS.2014.2358392  
Impact factor: 3.064
12. Viti F., Rinaldi M., Corman F., Tampère C. (2014) Assessing partial observability in network sensor location problems. *Transportation Research, Part B* 70, pp 65-89  
doi: 10.1016/j.trb.2014.08.002  
Impact factor: 4.822.
11. Dollevoet T.A.B., Corman F., D'Ariano A., Huisman D. (2014) An iterative optimization framework for delay management and train scheduling, *Journal of Flexible Services and Manufacturing*, 26 (4), pp 490-515. Doi 10.1007/s10696-013-9187-2  
Impact Factor: 1.872.
10. Corman F., D'Ariano A., Pacciarelli D., Pranzo M. (2014) Dispatching and coordination in multi-area railway traffic management. *Computers and Operations Research* (44), 146-160  
doi 10.1016/j.cor.2013.11.011.  
Impact Factor: 2.454.
9. Corman F., D'Ariano A., Hansen I.A. (2014) Evaluating disturbance robustness of railway schedules, *Journal of ITS*, 18(1), pp 106-120. doi 10.1080/15472450.2013.801714  
Impact Factor : 1.514.
8. Larsen R., Pranzo M., D'Ariano A., Corman F., Pacciarelli D. (2014) Susceptibility of Optimal Train Schedules to Stochastic Disturbances of Process Times, *Journal of Flexible Services and Manufacturing*, 26(4),pp 466-489  
Impact Factor: 1.872
7. Corman F., D'Ariano A., (2012) Assessment of advanced dispatching measures for recovering disrupted railway situations. *Transportation Research Record: Journal of the Transportation Research Board*. 2289/2012.  
Impact Factor: 0.556:
6. Corman F., D'Ariano A., Pacciarelli D., Pranzo M. (2012) Bi-objective conflict detection and resolution in railway traffic management. *Transportation Research Part C* 20 (1) pp 79-94.  
Impact Factor: 4.334
5. Corman F., D'Ariano A., Pacciarelli D., Pranzo M. (2012) Optimal inter-area coordination of train rescheduling decisions. *Transportation Research Part E* 48 (1), pp-71-88.  
Impact Factor: 3.791
4. Corman F., D'Ariano A., Pranzo M., Hansen I A. (2011) Effectiveness of dynamic reordering and rerouting of trains in a complicated and densely occupied station area. *Transportation Planning and Technology* 34 (4), 341-362.  
Impact Factor: 0.627. 1
3. Corman F., D'Ariano A., Pacciarelli D., Pranzo M. (2010) M. A tabu search algorithm for

rerouting trains during rail operations. *Transportation Research Part B*, Vol 44, 1, 175-192  
Impact Factor:4.822;

2. Corman F., D'Ariano A., Pacciarelli D., Pranzo M. (2009) Evaluation of green wave policy in real-time railway traffic management. *Transportation Research Part C*, Vol. 17, 6, 607-616.  
Impact Factor: 4.334;
1. D'Ariano A., Corman F., Pacciarelli D., Pranzo M. (2008) A Reordering and local rerouting strategies to manage train traffic in realtime. *Transportation Science*, Vol. 42, 4, pp. 1–15.  
Impact Factor: 3.753;

## **PUBLICATIONS IN PEER-REVIEWED, INTERNATIONAL JOURNALS OR BOOKS**

37. Lapamonpinyo P., Derrible S., Corman F. (2022) Real-Time Passenger Train Delay Prediction using Machine Learning: A Case Study with Amtrak Passenger Train Routes. *IEEE Open Journal on ITS*. Doi: 10.1109/OJITS.2022.3194879
36. Corman F., Henken J. (2022) Estimating aggregate railway performance from realized empirical data: literature review, a test case and a research roadmap. *Journal of Rail Transport Planning and Management*. <https://doi.org/10.1016/j.jrtpm.2022.100316>
35. Spanninger T., Trivella A., Büchel B., Corman F. (2022) A Review of Train Delay Prediction Approaches. *Journal of Rail Transport Planning and Management*. <https://doi.org/10.1016/j.jrtpm.2022.100312>
34. Nold M., Huggenberger T., Corman F. (2022) Der Einfluss der Traktionskomponentenverluste auf den Energieverbrauch von Zugfahrten. *Schweizer Eisenbahn Revue* 2/2022.
33. Nold M., Corman F. (2021) Dynamic train unit coupling and decoupling at cruising speed: systematic classification, operational potentials and research agenda *Journal of Rail Transport Planning & Management* 18 100241 <https://doi.org/10.1016/j.jrtpm.2021.100241>
32. Lordieck J., Corman F. (2021) Infrastructural, decisional and organizational barriers to use mode shift to handle disruptions in freight transport: literature and expert survey *Open IEEE Journal of ITS*, ISSN: 2687-7813 [doi.org/10.1109/OJITS.2021.3057481](https://doi.org/10.1109/OJITS.2021.3057481)
31. Decerle J., Corman F. (2020) Freight Pickup and Delivery with Time Windows, Heterogeneous Fleet and Alternative Delivery Points. In: Neufeld J.S., Buscher U., Lasch R., Möst D., Schönberger J. (eds) *Operations Research Proceedings 2019*. *Operations Research Proceedings (GOR (Gesellschaft für Operations Research e.V.))*. Springer, Cham. [https://doi.org/10.1007/978-3-030-48439-2\\_46](https://doi.org/10.1007/978-3-030-48439-2_46)
30. Corman F. (2021) Railway traffic management. In: Vickerman, Roger (eds.) *International Encyclopedia of Transportation* vol 5. pp. 678-683. United Kingdom: Elsevier Ltd.
29. Trivella A., Wang P., Corman F. (2020) The impact of wind on energy-efficient train control. *Euro Journal on Transportation And Logistics* <https://doi.org/10.1016/j.ejtl.2020.100013>
28. Büchel B., Corman F. (2020) Statistical Modelling of Bus Travel Time Variability: A Literature Review. *Frontiers in Built Environment*. <https://doi.org/10.3389/fbuil.2020.00070>
27. Meng L., Corman F. (2020) Editorial: Special Issue on Practical Value of Railway Operations Research. *Journal of Rail Transport Planning & Management* <https://doi.org/10.1016/j.jrtpm.2020.100179>
26. Sessa P.G., De Martinis V., Bomhauer-Beins A., Weidmann U., Corman F. (2020) A Hybrid stochastic approach for offline train trajectory reconstruction. *Public transport*. <https://doi.org/10.1007/s12469-020-00230-4>
25. Amstutz J., Fuchs F., Corman F. (2019) Entscheidungsunterstützung für die agile und integrierte Planung von Angebotskonzepten *ETR SWISS* 2/2019
24. Van Thielen S., Corman F., Vansteenwegen P. (2019) Towards a conflict prevention strategy applicable for real-time railway traffic management. *Journal of Rail Transport Planning & Management* <https://doi.org/10.1016/j.jrtpm.2019.07.001>
23. Cuneo V., Nigro M., Carrese S., Ardito C. F., Corman F. (2018) Risk Based, Multi Objective Vehicle Routing Problem For Hazardous Materials: A Testcase In Downstream Fuel Logistics. *Transportation Research Procedia* 30 43-52 <https://doi.org/10.1016/j.trpro.2018.09.006>
22. Corman F., Negenborn R.R. (2018) Intermodal freight transport networks under uncertainty: examples in/from mainports in the Netherlands. *Transportation Research Board, Newsletter*
21. Hu Q., Corman F., Wiegman B. (2018) Inter Terminal Transport in port areas around the globe. *Advancements in Civil Engineering and Technology*, 1-2, Crimson Publishing DOI: 10.31031/ACET.2018.01.000506

20. Corman F., Negenborn R.R. (2017) Accessibility of Ports and Networks. In Ports and Networks: Strategies, Operations and Perspectives. Geerlings, Kuipers, Zuidwijk (eds), Edwar Elgar Publishers
19. Samà M., D'Ariano A., Corman F., Pacciarelli D. (2017) Coordination of scheduling decisions in the management of airport airspace and taxiway operations. *Transportation Research Procedia* 23 pages 242-262 doi: 10.1016/j.trpro.2017.05.015
18. Quaglietta E., Corman F., Goverde R.M.P. (2015) ON-TIME: A Closed-Loop Real-Time Traffic Control Framework in a Realistic Railway Environment, *Problemy Kolejnictwa – Railway Reports*. Vol 58, Issue 168, pp 39-46 ISSN 0552-2145
17. Albrecht T., Corman F. (2015) Special issue on intelligent transportation systems Editorial. *Public Transport*, doi: 10.1007/s12469-015-0117-4
16. TransITS consortium (2015) Transit Assignment in railway optimization models, in Gentile, Viti, Leurent *TransITS: Passenger Assignment in the era of ITS*.
15. Negenborn R.R., Schott D.L., Corman F. (2015) Port Equipment and Technology, *Encyclopedia of Marine and Offshore Engineering*
14. Corman F., Xin J., Negenborn R.R., D'Ariano A., Samà M., Toli A., Lodewijks G. (2015) Optimal scheduling and routing of free-range AGVs at large-scale automated container terminals. *Periodica Polytechnica Transportation Engineering*, Budapest.
13. Samà M., Meloni C., D'Ariano A., Corman F. (2015) A multi-criteria decision support methodology for real-time train scheduling *Journal of Rail Transport Planning and Management* 5(3) 146-162
12. Corman F., D'Ariano A., Pacciarelli D. (2014) Rescheduling, Book chapter in *Railway Timetable and Traffic*, second edition, editors: Hansen and Pachel. Eurail Press
11. Quaglietta E., Corman F., Goverde R.M.P. (2013) Stability analysis of railway dispatching solutions under a stochastic and dynamic environment, *Journal of Rail Transport Planning & Management*. 3(4) p 137-149. doi 10.1016/j.jrtpm.2013.10.009
10. Goverde R.M.P., Corman F., D'Ariano A., (2013) Railway line capacity consumption of different railway signalling systems under scheduled and disturbed conditions, *Journal of Rail Transport Planning & Management*. 3(3) 78-94 doi 10.1016/j.jrtpm.2013.12.001
9. Kecman P., Corman F., D'Ariano A., Goverde, R.M.P. (2013) Rescheduling models for railway traffic management in large-scale networks. *Public Transport: Planning & Operations* 5 (1-2) 95-123.
8. Corman F., D'Ariano A., Hansen I.A., Pacciarelli D. (2011) Optimal multi-class rescheduling of railway traffic, *Journal of Rail Transport Planning & Management* (1) 14-24,
7. Corman F., D'Ariano A., Pacciarelli D., Pranzo M. (2011) Optimal inter-area coordination of train rescheduling decisions. *Journal of Transportation and Traffic Theory, Procedia Social and Behavioral Sciences* Vol 17, 2011, pp 58-81, Elsevier.
6. Corman F., D'Ariano A., Pacciarelli D., Pranzo M. (2010) Centralized versus distributed systems to reschedule trains in two dispatching areas. *Public Transport: Planning and Operations* 2 (3), 219-247.
5. Corman F., D'Ariano A., Pacciarelli D., Pranzo M. (2010) Railway dynamic traffic management in complex and densely used networks. *Intelligent Infrastructures* (eds: Negenborn, Lukszo, Hellendoorn). *Intelligent Systems, Control and Automation: Science and Engineering XXI* ISBN: 978-90-481-3597-4 Springer.
4. Corman F., D'Ariano A., Hansen I.A. (2010) Disruption handling in large railway networks, In Ning, Brebbia, Tomii (Eds), *WIT Transactions of the Built Environment* 114, pp 629-640, WIT Press, UK.  
3 Citations in ISI
3. Corman F., Goverde R.M.P., D'Ariano A. (2009) Rescheduling dense train traffic over complex station interlocking areas. *Robust and Online Large-Scale Optimization* (eds: Ahuja, Moehring, Zaroliagis). *Lecture notes in computer Science* 2009, XVIII, ISBN: 978-3-642-05464-8. Springer.
2. Wegele S., Corman F., D'Ariano A. (2008) Comparing the effectiveness of two real-time train rescheduling systems in case of perturbed traffic conditions. In J. Allan, E. Arias, C.A. Brebbia, C.J. Goodman, A.F. Rumsey, G. Sciutto and N. Tomii (Eds.), *WIT Transactions on*

The Built Environment 103 535–544, WIT Press.

1. Republished in Timetable planning and information quality. WIT Press, UK, 2010.

## CONFERENCE PROCEEDINGS WITH REVIEW

166. Spanninger T., Büchel B., Corman F. (2023) Real-time Train Delay Predictions with Inhomogeneous Markov Chains. Transportation Research Board Annual Meeting.
165. Yan T-H., De Almeida Costa M., Corman F. (2023) Developing and Extending Status Prediction Models for Railway Tracks Based on On-Board Monitoring Data. Transportation Research Board Annual Meeting.
164. Ahmed S.S., Corman F., Anastasopoulos P. (2023) Addressing unobserved heterogeneity and spatial instability in the analysis of highway-rail grade crossing crashes: A random parameters with heterogeneity in means and variances approach. Transportation Research Board Annual Meeting.
- Lapamonponyo P., Derrible S., Corman F. (2023) Enhancing Operational Resilience of Rail Transport using Machine Learning. Transportation Research Board Annual Meeting.
163. De Almeida Costa M., Marra A.D., Corman F. (2022) Understanding Public Transport Commuting Trips from GPS Tracking Data. STRC 2022, Ascona.
162. Nold M., Corman F., (2022) The role of dynamic component losses for energy-efficient train control. STRC 2022, Ascona.
161. Yan T.-H., Corman F. (2022) The Development of a Status Prediction Model for Railway Tracks from On-Board Monitoring Data. STRC 2022, Ascona.
160. Trepát Borecka J., Corman F. (2022) Studying Complexity of Decomposition in Railway Traffic Planning. STRC 2022, Ascona.
159. Spanninger T., Corman F. (2022) Train delay predictions based on Bayesian networks with adaptive dependency structures. STRC 2022, Ascona.
158. Marra A.D., Corman F. (2022) Observing the effects of different disturbances on route choice in public transport. STRC 2022, Ascona.
157. Huang P., Corman F. (2022) A graph attention network model discerning the importance of train events for train delay propagation. STRC 2022, Ascona.
156. Gallo F., Sacco N., Corman F. (2022) On predicting urban transit crowding levels using Markov Random Fields. STRC 2022, Ascona.
155. Jusup M., Corman F. (2022) Real-time train rescheduling viewed as multi-agent reinforcement learning system. STRC 2022, Ascona.
154. Ahmed S.S., Corman F., Anastasopoulos P. (2022) Accounting for unobserved heterogeneity and spatial instability in the analysis of crash injury-severity at highway-rail grade crossings: A random parameters with heterogeneity in the means and variances approach. 9th Annual International Conference on Engineering
153. Trivella A., Corman F. (2022) An analysis of power peaks in stochastic models of railway traffic. hEART 2022 Leuven.
152. Spanninger T., Corman F. (2022) Dependencies in railway operations: Schedule versus reality and resulting prediction difficulties. 15th International Conference on Advanced Systems in Public Transport – CASPT Tel Aviv, 2023
151. Büchel B., Corman F. (2022) Why probabilistic transit travel time predictions lead to better decisions 15th International Conference on Advanced Systems in Public Transport – CASPT Tel Aviv, 2023
- 150 Fuchs F., Trivella A., Corman F. (2022) Enhancing the Interaction of Railway Timetabling and Line Planning with Infrastructure Awareness. 15th International Conference on Advanced Systems in Public Transport – CASPT Tel Aviv, 2023
- 149 Marra A.D., Sun L., Corman F. (2022) Observing public transport travel choices during COVID-19 pandemic from GPS-based tracking. 15th International Conference on Advanced Systems in Public Transport – CASPT Tel Aviv, 2023
148. Corman F., Trivella A., Keyvan-Ekbatani M. (2022) Stochastic process in railway traffic flow: models methods and implications. ISTTT 24 Beijing.
147. Rahimi M., Büchel B., Corman F. (2022) Evaluating The Effects Of Disruptions On Travelers' Behavior In A Multimodal Network Utilizing Agent-Based Simulation. TRB Conference

146. Huang P, Zhu Y., Wen C., Corman F. (2022) A Data-Driven Decision-Making Model for Train Operations in Merging-Line Stations. TRB Conference
145. Jusup M., Corman F. (2021) A Review of Real-time Railway and Metro Rescheduling Models using Learning Algorithms. STRC 2021
144. Marra A.D., Corman F. (2021) Deep learning for route choice in public transport. STRC 2021
143. Bonet Filella G., Trivella A., Corman F. (2021) Models and methods for the multi-drop container loading problem with soft unloading constraints. International Conference on Computational Logistics – ICCL2021
142. Leng N., Luan X., Meyer de Freitas L., Blum S., Graffagnino T., Bützberger P., Bischoff J., Corman F. (2021) A framework coupling passenger demand, railway operation simulations and optimization, to study rail networks considering the actual demand on the trains. Rail Beijing
141. Yan T-H., Corman F. (2021) How well do train drivers estimate track conditions? A case study analysing Driver Response Failures. Rail Beijing
140. Huang P., Corman F. (2021) Bayesian network models with enhanced understanding of delay propagation patterns for train delay prediction. Rail Beijing
139. Zhu Y., Wang P., Corman F. (2021) A Deep Reinforcement Learning Framework for Delay Management with Passenger Re-routing. Rail Beijing. Best paper award
138. Luan X., Sun X., Corman F. (2021) Inequity averse optimization of railway traffic management considering passenger route choice and Gini coefficient. Rail Beijing
137. Luan X., Corman F. (2021) Passenger-oriented traffic management for railway networks: an integrated supply-demand approach based on a discrete choice model. Rail Beijing Selected in the top 10 papers
136. Corman F., Henken J. (2021) Estimating aggregate railway performance from realized empirical data. Rail Beijing Selected in the top 10 papers
135. Jusup M., Trivella A., Corman F. (2021) A Review of Real-time Railway and Metro Rescheduling Models using Learning Algorithms. Reinforcement Learning for Intelligent Transportation Systems Workshop 2021 (RL4ITS), International Joint Conference on Artificial Intelligence (IJCAI)
134. Büchel B., Corman F. (2021) Probabilistic Bus Delay Predictions with Bayesian Networks. IEEE ITSC Conference 2021
133. Büchel B., Spanninger T., Corman F. (2021) Modeling Evolutionary Dynamics of Railway Delays with Markov Chains. MT ITS 2021
132. Spanninger T., Büchel B., Corman F. (2021) Probabilistic Predictions of Train Delay Evolution. MT ITS 2021
131. Rahimi M., Ghandeharioun Z., Kouvelas A., Corman F. (2021) Multi-modal management actions for public transport disruptions: an agent-based simulation. MT ITS 2021
130. Lapamonpinyo P., Corman F., Derrible S. (2021) Passenger Train Delay Prediction Modelling with Weather Information Using Machine Learning INSTR 2020 conference
129. Marra A.D., Corman F. (2021) To which extent reliability of public transport affects transit route choice models of passengers? INSTR 2020 conference, Stockholm/ Online.
128. Büchel B., Corman F. (2021) Estimating Transit Segment Running Time Distributions. INSTR 2020 conference, Stockholm/ Online.
127. Spanninger T., Trivella A., Corman F. (2021) Approaches for real-time train delay prediction. Heart 20 Conference
126. Hong X., Meng L., Long S., D'Ariano A., Veelenturf L.P., Corman F. (2021) Robust Capacitated Train Rescheduling with Passenger Reassignment under Stochastic Disruptions Annual Meeting of the Transportation Research Board of the national academies.
125. Wang P., Besinovic N., Goverde R.M.P., Corman F. (2021) Periodic Timetable Adjustment for the Utilization of Regenerative Energy and Power Peak Shaving Annual Meeting of the Transportation Research Board of the national academies
124. Hong X., Meng L., Zhang P., Zhao F., D'Ariano A., Veelenturf L.P., Corman F. (2020) Timetable Rescheduling with Reassignment of Rolling Stocks and Passengers under

Disruptions. 23rd IEEE International Conference on Intelligent Transportation Systems (ITSC), Rhodes/virtual conference.

123. Leng N., Corman F. (2020) How the issue time of information affects passengers in public transport disruptions: an agent-based simulation approach ANT Conference (virtual)
122. Trivella A., Corman F., Koza D., Pisinger D. (2020) The multi-commodity network flow problem with soft transit time constraints. EWGT Conference Cyprus.
121. Rahimi M., Corman F. (2020) Quantifying the direct and indirect effect of the disruption in public transport on passengers' behavior by using a multi-agent simulation. STRC, Ascona.
120. Marra A.D., Corman F. (2020) How much do transit passengers rely on online information? A revealed preference approach based on tracking. STRC, Ascona.
119. Leng N., Corman F. (2020) The role of incomplete information to passengers in real-time railway traffic control. STRC, Ascona.
118. Spaninger T., Trivella A., Corman F. (2020) Approaches for real-time train delay prediction. STRC, Ascona.
117. Luan X., Corman F. (2020) Passenger-oriented rescheduling of trains and rolling stocks for urban rail transit networks STRC, Ascona.
116. Nash A., Sauter-Servaes T., Corman F. (2020) Public transport priority in 2020: Lessons from Zurich. Transportation research Arena 2020, Helsinki, Finland. (Conference cancelled)
115. Hong X., Meng L., Corman F., D'Ariano A., Veleenturf L., Long S. (2020) Robust Capacitated Train Rescheduling with Passenger Reassignment under Stochastic Disruptions. Transportation Research Board Meeting, Washington DC.
114. Decerle J., Corman F. (2020) The alternative pickup and delivery problem. Transportation Research Board Meeting, Washington DC.
113. Yan T.-H., Corman F. (2020) Assessing and Extending Track Quality Index for Novel Measurement Techniques in Railway. Transportation Research Board Meeting, Washington DC.
112. Liao Z., Miao J., Li H., Corman F. (2020) Multi-Objective Capacity Estimation on Railway Networks: A Timetable Saturation Approach Based on Time-Space Networks. Transportation Research Board Meeting, Washington DC.
111. Büchel B., Corman F. (2020) Meaningful Modeling Of Section Bus Running Times By Time Varying Mixture Distributions Of Fixed Components. Transportation Research Board Meeting, Washington DC.
110. Marra A.D., Corman F. (2020) From Delay to Disruption: the Impact of Service Degradation on Public Transport Network. Transportation Research Board Meeting, Washington DC.
109. Leng N., Liao Z., Corman F. (2020) The role of timetable, rolling stock rescheduling and information strategies to passengers in public transport disruptions Transportation Research Board Meeting, Washington DC.
108. Long S., Meng L., Wang Y., Miao J., Li T., Corman F. (2019) A Train Rescheduling Optimization model with considering the Train Control for A High-Speed Railway Line under Temporary Speed Restriction. IEEE ITSC Conference, Auckland.
107. Trivella A., Wang P., Corman F. (2019) Train trajectory optimization in the presence of external factors: The example of wind. hEART 2019 Budapest.
106. Marra A.D., Corman F. (2019) From delay to disruption: the impact of service degradation on public transport network. hEART19, Budapest
105. Corman F., Henken J., Keyvan-Ekbatani M. (2019) Macroscopic Fundamental Diagram for railways – are we there yet? Proceedings of the MT ITS Krakow, Poland.
104. Fuchs F., Corman F. (2019) An open toolbox for integrated optimization of public transport. MT ITS Krakow, Poland.
103. Trivella A., Corman F. (2019) Modeling uncertainty dynamics in public transport networks STRC, Ascona.
102. Büchel B., Corman F. (2019) Bus Running Time Distributions on a Section Level STRC, Ascona.
101. Marra A.D., Corman F. (2019) Analyzing the impact of different degrees of disruptions in multimodal public transport STRC, Ascona.
100. Liao Z., Miao J., Wang Y., Li H., Corman F. (2019) Estimating the Capacity of Railway

Lines Considering EMU Circulation: A Lagrangian Decomposition-based Approach. Proceedings of The international Conference on Railway Operations Modeling and Analysis Railnorrköping.

99. Hao W., Meng L., Corman F., Long S. (2019) A train timetabling and stop planning optimization model with passenger demand. Proceedings of The international Conference on Railway Operations Modeling and Analysis Railnorrköping
98. Zhao J., Li H. Meng L., Corman F. (2019) An Optimization Model for Rescheduling Trains to Serve Unpredicted Large Passenger Flow. Proceedings of The international Conference on Railway Operations Modeling and Analysis Railnorrköping
97. Hong X., Meng L., Corman F., D'Ariano A., Veelenturf L.P., Long S. (2019) Robust Capacitated Train Rescheduling with Passenger Reassignment under stochastic disruption duration. Proceedings of The international Conference on Railway Operations Modeling and Analysis Railnorrköping
96. Luan X., De Schutter B., van den Boom T., Meng L., Lodewijks G., Corman F. (2019) Distributed optimization approaches for the integrated problem of real-time railway traffic management and train control. Proceedings of The international Conference on Railway Operations Modeling and Analysis Railnorrköping
95. Büchel B., Partl T., Corman F. (2019) The Disruption at Rastatt and its Effects on the Swiss Railway System. Proceedings of The international Conference on Railway Operations Modeling and Analysis Railnorrköping. Selected in the top 6 papers.
94. Vansteenwegen P., Van Thielen S., Corman F. (2019) A conflict prevention strategy for large and complex networks in real-time railway traffic management. Proceedings of The international Conference on Railway Operations Modeling and Analysis Railnorrköping
93. De Martinis V., Corman F. (2019) Online calibration of train motion models: towards the era of bespoke control solutions. Proceedings of The international Conference on Railway Operations Modeling and Analysis Railnorrköping
92. Wang P., Trivella A., Corman F. (2019) Train Trajectory Optimization with Consideration of Human Operator Needs and Parametric Uncertainties. Proceedings of The international Conference on Railway Operations Modeling and Analysis Railnorrköping
91. Leutwiler F., Corman F. (2019) A Survey on Decomposition Principles and Methods for the Problem of Railway Traffic Management. Proceedings of The international Conference on Railway Operations Modeling and Analysis Railnorrköping
90. Corman F., Bosina E., Meeder M., Thurau J., Giacomini C., Longo G., Lunardi A. (2019) Making Great A Connection Terminal: Interactions Between Rail Schedule And Terminal Layout Improvement. Transportation Research Board Meeting
89. Long S., Meng L., Corman F. (2019) Optimizing Schedule of extra metro trains to serve delayed passengers from high-speed trains. Transportation Research Board Meeting
88. Cuneo V., Nigro M., Carrese S., Ardito C. F., Corman F. (2018) Risk Based, Multi Objective Vehicle Routing Problem For Hazardous Materials: A Testcase In Downstream Fuel Logistics. Proceedings of the EURO Mini Conference on "Advances in Freight Transportation and Logistics", Padova.
87. Hao W., Meng L., Veelenturf L., Long S., Corman F., Xiaoyong N. (2018) Optimal reassignment of passengers to trains following a broken train. International Conference on Intelligent Rail Transportation (ICIRT 2018), Singapore, December 12-14, 2018
86. Sessa P.G., De Martinis V., Corman F. (2018) A Hybrid Dynamic-Kinematic EKF for Train Trajectory Estimation. IEEE Conference on ITS, Maui.
85. Corman F. (2018) Strategic interactions between minimization of train delays and passenger assignment in Microscopic Railway Delay Management CASPT 2018 – Conference on advanced systems for Public Transport
84. Van Thielen S., Corman F., Vansteenwegen P.(2018) Exploring the dynamic impact zone for conflict prevention in real-time railway traffic management CASPT 2018 - Conference on advanced systems for Public Transport
83. Marra A.D., Becker H., Axhausen, K.W., Corman F. (2018) Passive tracking of passengers to analyse public transport mobility in case of disturbances. CASPT/Transit Data 2018
82. Sessa P.G., De Martinis V., Bomhauer-Beins A., Weidmann U., Corman F.(2018) Hybrid stochastic approaches for train trajectory reconstruction. CASPT 2018



81. Leng N., De Martinis V., Corman F. (2018) Agent-based simulation approach for disruption management in rail schedule CASPT 2018, Conference on advanced systems for Public Transport
80. Luan X., De Schutter B., van Den Boom T., Corman F., Lodewijks G. (2018) Distributed optimization method for real-time railway traffic management. IFAC CTS Symposium.
79. Luan X., De Schutter B., Corman F., Lodewijks G. (2018) Integrating Dynamic Signalling Commands Under Fixed-Block Signalling Systems Into Train Dispatching Optimization Models. Proceedings of the Transportation Research Board Meeting, Washington DC
78. De Martinis V., Toletti A., Corman F., Weidmann U.A., Nash A. (2018) Feedforward tactical optimization for energy efficient operation of freight trains: the Swiss case. Proceedings of the Transportation Research Board Meeting, Washington DC
77. Hu Q., Corman F., Wiegmans B., Lodewijks G. (2018) Optimization of Inter-modal Rail Transport within a Port Area and reaching the hinterland. Proceedings of the Transportation Research Board Meeting, Washington DC
76. Samà M., Corman F., D'Ariano A., Pacciarelli D. (2017) Coordination of scheduling decisions in the management of airport airspace and taxiway operations. Proceedings of ISTTT 22, Chicago, USA
75. Hu Q., Wiegmans B., Corman F., Lodewijks G. (2017) Optimization of Inter-modal Rail Transport in a Port Area. Proceedings of ICCL 2017, Southampton, UK.
74. D'Ariano A., Pacciarelli D., Samà M., Corman F. (2017) Microscopic Delay Management: Minimizing Train Delays and Passenger Travel Times during Real-Time Railway Traffic Management, Proceedings of the 5th International Conference on Models and Technologies for Intelligent Transportation Systems, MT-ITS 2017, (pp. 1–6), 26–28 June 2017, Naples, Italy.
73. Centulio G., Meng L., D'Ariano A., Corman F. (2017) Robustness and stability of integrated stochastic optimization approaches for scheduling trains and railway infrastructure. 2<sup>nd</sup> European Conference on Stochastic Optimization, Roma
72. Corman F., D'Ariano A., Samà M., Pacciarelli D. (2017) Strategic interactions in passenger-oriented railway traffic control, Swiss Transport Research Conference, Ascona.
71. De Martinis V., Corman F., Toletti A., Weidmann U.A. (2017) How to make freight trains more energy-efficient during operation? Swiss Transport Research Conference, Ascona.
70. Samà M., D'Ariano A., Pacciarelli D., Corman F. (2017) Real-time near-optimal train scheduling and routing in complex railway networks. TSL society Conference .
69. D'Ariano A., Corman F., Samà M., Pacciarelli D. (2017) Microscopic Delay Management: Minimizing Train Delays and Passenger Travel Times during Real-Time Railway Traffic Control. 5<sup>th</sup> IEEE Conference on Models and technologies for ITS, Naples.
68. Luan X., Corman F., Wang Y., Meng L., Lodewijks G. (2017) Integrated Optimization of Traffic Management and Train Control for rail networks Proceedings of ISROR 17 – Raillille
67. Qu W., Corman F., Lodewijks G. (2017) The Real Time Traffic Control with Mixed Passenger and Freight Flows. Proceedings of ISROR 17 – Raillille
66. Van Thielen S., Corman F., Vansteenwegen P. (2017) An efficient heuristic for real-time train rescheduling and local rerouting. Proceedings of ISROR 2017 - Raillille.
65. Xu P., Corman F., Peng Q., Luan X. (2017) A Timetable Rescheduling Approach And Transition Phases For High-Speed Railway Traffic During Disruptions. Annual meeting of the transportation research Board, Washington DC.
64. Tripathy M., Samà M., Corman F., Lodewijks G. (2016) Impact of collaborative decision making in optimized air traffic control: a game theoretical approach. Proceedings of ICCL 2016, Lisbon, Portugal.
63. Luan X., Corman F., Lodewijks G. (2016) Integrated Optimization of Traffic Management and Train Control. Proceedings of hEART symposium, Delft, The Netherlands
62. Hu Q., Luan X., Corman F., Lodewijks G. (2016) A tabu search algorithm for inter-terminal container transport. Proceedings of IFAC Symposium on Control in Transportation Systems (CTS) , Istanbul, Turkey
61. Xu P., Corman F., Peng Q. (2016) Analyzing Railway Disruptions and Their Impact to Delayed Traffic in Chinese High-Speed Railway. Proceedings of IFAC Symposium on Control in Transportation Systems (CTS) Istanbul, Turkey

60. Samà M., D'Ariano A., Pacciarelli D., Corman F. (2016) Lower and upper bound algorithms for the real-time train scheduling and routing problem in a railway network Proceedings of IFAC Symposium on Control in Transportation Systems (CTS), Istanbul, Turkey
59. Rinaldi M., Corman F., Viti F. (2016) Network observability information maximization through ad-hoc route enumeration approaches. Proceedings of the 9<sup>th</sup> TRISTAN symposium, Aruba.
58. Alemi A., Corman F., Lodewijks G. (2016) Monitoring of the railway wheel wear by means of the Wheel Impact Load Detector. Proceedings of The Third International Conference on Railway Technology, Cagliari, Italy.
57. Samà M., D'Ariano A., Toli A., Pacciarelli D., Corman F. (2015) Metaheuristics for real-time near-optimal train scheduling and routing, Proceedings of IEEE ITSC Conference 2015, Canaria.
56. Corman F., Pacciarelli D., Samà M., D'Ariano A. (2015) Railway Traffic Control with minimization of passengers' discomfort. Proceedings of ICCL - International conference on computational Logistics, Delft, the Netherlands
55. Qu W., Corman F., Lodewijks G. (2015) A review of real time railway traffic management during disturbances. Proceedings of ICCL - International conference on computational Logistics, Delft The Netherlands
54. Hu Q., Corman F., Lodewijks G. (2015) A Review of Intermodal Rail Freight Bundling Operations. Proceedings of ICCL - International conference on computational Logistics, Delft, The Netherlands
53. Corman F., Xin J., Toli A., Samà M., D'Ariano A., Lodewijks G., Negenborn R.R. (2015) Optimizing hybrid operations at large-scale automated container terminals. Proceedings of MTITS 2015, Budapest.
52. Samà M., D'Ariano A., Toli, A. Pacciarelli. D. Corman F. (2015) A variable neighborhood search for optimal scheduling and routing of take-off and landing aircraft. Proceedings of MTITS 2015, Budapest.
51. Viti F., Rinaldi M., Cantelmo G., Corman F. (2015) Improving the efficiency and reliability of demand estimation from traffic counts using information on network observability. Proceedings of 6<sup>th</sup> INSTR conference, Nara, Japan.
50. Corman F., Quaglietta E., Goverde R.M.P. (2015) An experimental analysis of reliability resilience and robustness in closed loop railway traffic control. Proceedings of 6<sup>th</sup> INSTR conference, Nara, Japan.
49. Jongerius T., Corman F., Lodewijks G. (2015) A flexible simulation model for light-rail operations Proceedings of CASPT 2015 Conference, Rotterdam, The Netherlands
48. Corman F., D'Ariano A., Pacciarelli D., Sabene F., Samà M. (2015) Train Delay and Passenger Travel Time Minimization in Real-Time Railway Traffic Management. Proceedings of CASPT 2015 Conference, Rotterdam, The Netherlands
47. Kecman P., Corman F., Peterson A., Joborn M. (2015) Stochastic prediction of train delays with dynamic Bayesian networks. Proceedings of CASPT 2015 Conference, Rotterdam, The Netherlands.
- Best paper award.**
46. Rinaldi M., Corman F., Viti F. (2015) Assessing the effect of route information on network observability applied to sensor location problems. Proceedings of the Euro Working Group on Transportation – EWGT, Delft, The Netherlands
45. Guo J., Meng L., Kecman P., Corman F. (2015) Modeling delay relations based on historical train monitoring data: a Chinese high-speed railway case. Proceedings of the 6<sup>th</sup> ISROR – RailTokyo Tokyo, Japan
44. Kecman P., Corman F., Meng L. (2015) Train delay evolution as a stochastic process. Proceedings of the 6<sup>th</sup> ISROR – RailTokyo Tokyo, Japan
43. Luan X., Corman F., Meng L. (2015) Train Dispatching Models with Consideration of Train Equity: A Chinese High-speed Railway Case. Proceedings of the 6<sup>th</sup> ISROR – RailTokyo Tokyo, Japan
42. Samà M., Meloni C., D'Ariano A., Corman F. (2015) A multi-criteria practical decision support tool for real-time train rescheduling Proceedings of the 6<sup>th</sup> ISROR – RailTokyo Tokyo, Japan
41. Schroer H., Corman F., Duinkerken M.B., Negenborn R.R., Lodewijks G. (2014) Evaluation of Interterminal Transport Configurations at Rotterdam Maasvlakte using discrete event simulation Proceedings of WSC14 - Winter Simulation Conference 2014, Savannah, USA,.

40. Viti F., Corman F. (2014): A joint day-to-day mode and within day departure time choice model for the analysis of dynamic ridesharing. Proceedings of the 5th International Symposium on Dynamic Traffic Assignment, Salerno, Italy
39. Nieuwkoop F., Corman F., Negenborn R.R., Duinkerken M.B., van Schuylenburg M., Lodewijks G. (2014) Decision support for Configuration Determination in Inter Terminal Transport System Design. Proceedings of the 11th IEEE ICNSC conference, Miami, USA
38. Goverde R.M.P, Corman F., D'Ariano A., (2014) Investigation on the capacity consumption at Dutch railways for various signalling systems and traffic conditions, Proceedings of the 93rd Transportation Research Board (TRB), Washington DC, US.
37. Corman F., Meng L. (2014) A review of online dynamic models and algorithms for railway traffic rescheduling. Proceedings of the 93rd Transportation Research Board (TRB), Washington DC, US.
36. Corman F., Quaglietta E. (2014) Closing the loop in railway traffic management. Proceedings of the 93rd Transportation Research Board (TRB), Washington DC, US.
35. Quaglietta E., Corman F., Goverde R.M.P. (2013) Stability and quality evaluation of optimal railway dispatching plans under perturbed conditions. Proceedings of the 3rd Conference MT ITS, Dresden, Germany.
34. Corman F., Sabene F., Pacciarelli D., Samà M., D'Ariano A. (2013) Railway Traffic Control with minimization of passengers' discomfort. Proceedings of the 3rd Conference MT ITS, Dresden, Germany.
33. Quaglietta E., Corman F., Goverde R.M.P. (2013) Impact of a stochastic and dynamic setting on the stability of railway dispatching solutions. Proceedings of the 16th International IEEE ITSC Conference, The Hague, The Netherlands.
32. Viti F., Corman F. (2013) Equilibrium and sensitivity analysis of dynamic ridesharing. Proceedings of the 16th International IEEE ITSC Conference, The Hague, the Netherlands.
31. Viti F., Rinaldi M., Corman F. (2013) Quantifying partial observability in network sensor location problems, proceedings of hEART - 2nd Symposium of the European Association for Research in Transportation, Stockholm, Sweden.
30. Meng L., Corman F. (2013) A review of online dynamic models and algorithms for railway traffic control. Proceedings of the First IEEE International Conference on Intelligent Rail Transportation - IEEE-ICIRT, Beijing, China.
29. Quaglietta E., Corman F., Goverde, R.M.P. (2013) Stability analysis of railway dispatching solutions under a stochastic and dynamic environment, Proceedings of the 5th international Seminar on Railway Operation Modelling and Analysis, Copenhagen Denmark.
28. Goverde R.M.P., Corman F., D'Ariano A., (2013) Railway line capacity consumption of different railway signalling systems under scheduled and disturbed conditions, Proceedings of the 5th int Seminar on Railway Operation Modelling and Analysis, Copenhagen Denmark.
27. Rinaldi M., Corman F., Viti F. (2013) A Null-Space Metric For The Analysis Of Partial Network Observability In Sensor Location Problems, Proceedings of the 92nd annual meeting of the Transportation Research Board (TRB), Washington DC, US.
26. Viti F., Corman F., Tampère C. (2012) Ridesharing: equilibrium model and case studies, Proceedings of the 17th International HKSTS Conference, Hong Kong.
25. Corman F., Viti F., Tampère C., Cattrysse D. (2012) Reliable routing in stochastic networks, Proceedings of the 5th INSTR conference, Hong Kong.
24. Viti F., Corman F. (2012) An approach to the sensor location problem for measuring network variability. Proceedings of the 5th INSTR conference, Hong Kong.
23. Kecman P., Corman F., D'Ariano A., Goverde R.M.P. (2012) Rescheduling models for network-wide railway traffic management. Proceedings of the 12th conference on Advanced systems for Public Transport (CASPT 12), Santiago, Chile.
22. Larsen R. Pranzo M., Corman F., D'Ariano A., Pacciarelli D. (2012) Robustness of Optimal Train Schedules to Stochastic Disturbances of Process Times. Proceedings of the Int. Conf. on Applied Mathematical Optimization and Modelling-APMOD Paderborn, Germany.
21. Corman F., D'Ariano A., Dollevoet T., Huisman D. (2012) A bi-level optimization framework for delay management and train scheduling. Proceedings of the Int. Conference on Applied Mathematical Optimization and Modelling- APMOD Paderborn, Germany
20. Corman F., D'Ariano A., (2012) Assessment of advanced dispatching measures for recovering disrupted railway situations, Proceedings of the 91st annual meeting of the

transportation research board (TRB), Washington DC, US.

19. Corman F., D'Ariano A., Pacciarelli D., Pranzo M. (2011) A bilevel rescheduling framework for optimal inter-area train coordination, Proceedings of the 11th Workshop on Algorithmic Approaches for Transportation Modelling, Optimization, and Systems, ATMOS Saarbrücken, Germany.
18. Corman F., D'Ariano A., Pacciarelli D., Pranzo M. (2011) Optimal inter-area coordination of train rescheduling decisions. 19th International Symposium of Transportation and Traffic Theory, Berkeley, US.
17. Corman F. D'Ariano A., Hansen I.A. (2011) Evaluating disturbance robustness of dispatching measures, Proceedings of the 2nd International Conference on Modeling and Technology for ITS, Leuven, Belgium.
16. Corman F., D'Ariano A., Hansen I.A. (2011) Intelligent Network Traffic Management in Emergency Situations, Proceedings of the 9th World Congress on Railway Research, Lille, France.
15. Corman F., D'Ariano A., Hansen I.A., Pacciarelli D., Pranzo M. (2011) Dispatching trains during seriously disrupted traffic situations, proceedings of the 8th IEEE International Conference on Network, Sensors and Control, Delft, The Netherlands.
14. Corman F., D'Ariano A., Hansen I.A., Pacciarelli D. (2011) Optimal multi-class rescheduling of railway traffic, In proceedings of the 4th international Seminar on Railway Operation Modelling and Analysis, Roma, Italy.
13. Corman F., D'Ariano A., Pacciarelli D., Pranzo M. (2010) Bi-objective conflict detection and resolution: Minimizing train delays and maximizing passenger connections, Proceedings of the 11th TRAIL Congress, Rotterdam, The Netherlands.
12. Corman F., D'Ariano A., Hansen I.A. (2010) Disruption handling in large railway networks, Proceedings of the 12th International Conference on Computer System Design and Operation in the Railway and other Transit Systems, Comrail XII, Beijing, China.
11. Corman F., D'Ariano A., Pacciarelli D., Pranzo M. (2010) Bi-objective conflict detection and resolution in railway traffic management, Proceedings of the 7th Triennial Symposium on Transportation Analysis, TRISTAN VII, Tromsø, Norway.
10. Corman F., D'Ariano A., Longo G., Medeossi G. (2010) Robustness and delay reduction of advanced train dispatching solutions under disturbances, Proceedings of the 12th World Conference on Transport Research, Lisbon, Portugal.
9. Corman F., D'Ariano A., Pacciarelli D., Pranzo M. (2009) Centralized versus distributed railway traffic control. Proceedings of the 11th international Conference on Advanced Systems for Public Transport (CASPT09): Hong Kong, China.
8. Corman F., D'Ariano A., Pacciarelli D., Pranzo M. (2009) Optimization and coordination in real-time railway traffic management. Proceedings of the First International Conference on Models and Technologies for Intelligent Transportation Systems: Rome, Italy.
7. Corman F., D'Ariano A., Pranzo M., Hansen I.A. (2009) Effectiveness of dynamic reordering and rerouting of trains in a complicated and densely occupied station area. Proceedings of the 3rd International Seminar on Railway Operation Modelling and Analysis: Zurich, Switzerland.
6. D'Ariano A., Corman F., Hansen I.A. (2008) Evaluating the performance of an advanced train dispatching system. Proceedings of the International Conference on Infrastructure Systems: Rotterdam, The Netherlands.
5. Wegele S., Corman F., D'Ariano A. (2008) Comparing the effectiveness of two real-time train rescheduling systems in case of perturbed traffic conditions. Proceedings of the 11th International Conference on Computer System Design and Operation in the Railway and Other Transit Systems, Comrail XI, Toledo, Spain
4. Corman F., D'Ariano A. (2008) Existing and future approaches on railway traffic control from an agent-based perspective. Conference proceedings 10th TRAIL congress: Delft, TRAIL Research School.
3. Corman F., D'Ariano A., Pacciarelli D., Pranzo M. (2008) Evaluation of green wave policy in real-time railway traffic management. Proceedings of the 10th International Conference on Applications of Advanced Technologies in Transportation: Athens, Greece.
2. D'Ariano A., Corman F., Hansen I.A. (2008) Railway traffic optimization by advanced scheduling and rerouting algorithms. Proceedings of 8th World Congress of Railway Research: Seoul, Korea.

**KEYNOTE  
SEMINARS**

**LECTURES,**

1. D'Ariano A., Corman F., Pacciarelli D., Pranzo M. (2006) Real-time train conflict detection and resolution: Global sequencing and local rerouting. Conference proceedings 9th TRAIL congress, Delft
41. Corman F. (2022) Railway traffic control room, and room for control. How to get the best out of your transport network? University of Gent, VAIA, onTrack Lab
40. Corman F. (2022) Passenger-oriented railway traffic planning and management. Informs Railway Applications Section Webinar.
39. Nold M., Corman F. (2022) ÖV der Zukunft Überall, jederzeit, nahtlos und komfortabel. Ringvorlesung Mobilität <https://www.research-collection.ethz.ch/handle/20.500.11850/531133>
38. Corman F., Leng N. (2020) Communicating railway delays and adjusted timetables: the role of incomplete information to passengers in railway operations 7th Int. Symposium on Railway Operations Research -Beijing Jiaotong Nov.2020
37. Corman F. (2020) Disruption in public transport networks: University of Montréal
36. Corman F. (2019) Post finance Kader Anlass: digitalization in mobility
35. Corman F. (2019) A digital railway system – and what it means for operators and users. ETH Risk Seminar
34. Corman F. (2019) NUS university Singapore
33. Corman F. (2019) HK City university
32. Corman F. (2019) IBM Research Singapore.
31. Corman F. (2019) ETH Mobility week: critical thinking night
30. ATO Tag 2019, SBB Zürich 2019
29. DACH transport conference, Dornbirn (prof.Gronalt) 2019
28. Passenger oriented railway traffic management, TRANS-FORM final workshop, EPFL Lausanne 2019
27. Disruptions in public transport and railway networks, NYU, 2019
26. Disruptions management in railway networks, State University of New York at Buffalo, 2019
25. Railway traffic management in the era of data driven approaches, University of Waterloo, 2019
24. Modelling transport disruptions, UCL London, 2019
23. Modelling transport disruptions, University of Leeds, 2019
22. Routing and scheduling trains, Newcastle University , 2019
21. Strategic interactions in disruptions in public transport systems, Uslar Seminar on integrated optimization 2018.
20. Integrated operations and maintenance scheduling, Smart Maintenance Days 2018
19. Strategic interactions in public transport networks, UNSW Sydney 2018.
18. Energy efficient train operations, University of South Australia, 2018.
17. Routing vehicles and passengers in public transport networks. Swiss OR Days 2018.
16. Routing & scheduling in transit networks. Transport summit, DTU Copenhagen 2018.
15. Strategic interactions in public transport networks, DTU ManCopenhagen 2018.
14. Control in public transport networks. UNI Luxembourg February 2018
13. Routing in transit networks. MIT Transit lab January 2018.
12. Strategic Interactions in Microscopic Delay Management - 4<sup>th</sup> International Symposium on railway research, Beijing Jiaotong October 2017
11. Using Wheel impact Load Detectors for condition-based maintenance of railway wheels, 4<sup>th</sup> Int. Symposium on Railway Research -Beijing Jiaotong Oct 2017

10. Optimizing trains or passengers? Dagstuhl seminar Algorithmic Methods for Optimization in Public Transport, April 2016
9. Railway traffic models, Dr. Xin, Zhengzhou University, March 2016
8. Railway traffic models, Prof Meng Beijing Jiaotong University, March 2016
7. Railway traffic models, Prof Anderson, Linkoping University, February 2016
6. Logistics control, Prof Gronalt, BOKU Universität, Vienna, 2015
5. Railway traffic control, Prof Tomii, RTRI Japan, Aug 2015
4. Passenger assignment in railway networks; COST, Paris May 2015
3. Distributed control strategies for transport networks, iCore, Paris. May 2015
2. Control in multi-stakeholders problems, rear-admiral Visser, Rotterdam 2014
1. Equity in railway traffic control, Prof Vansteenwegen, KU Leuven Dec 2014

## SELECTED CONFERENCE PRESENTATIONS

28. Corman F., Luan X., De Martinis V. (2018) Model-based and data-driven approaches for railway traffic management and energy efficient operations. AIRO Optimization and Decision Sciences Conference Taormina, Italy
27. Zimmermann M., Dertimanis V., Chatzi E., Corman F. (2018) Estimation track condition based on axle box accelerations of revenue trains. 4th International Conference on Railway Technology: Research, Development and Maintenance
26. Van Thielen S., Corman F., Vansteenwegen P. (2018) Effects of introducing a control delay in real-time railway traffic management EURO 2018 Valencia.
25. Van Thielen S., Corman F., Vansteenwegen P. (2017) Benefits of a dynamic impact zone when dealing with train conflict, INFORMS Annual Meeting  
**second place winner at RAS student paper competition 2017, Houston, USA**
24. Toletti A., De Martinis V., Corman F., Weidmann U.A. (2017) Boosting the Resource Conflict Graph approach to train rescheduling with column-and-row generation, AIRO / Optimization and Decision Sciences Conference, Sorrento, Italy.
23. Corman F. (2016) Optimizing trains or passengers? Dagstuhl seminar Algorithmic Methods for Optimization in Public Transport, Dagstuhl, Germany
22. Van Thielen S., Corman F., Vansteenwegen P. (2016) A new heuristic for real-time train rescheduling and local rerouting . EURO 2016 Poznan.
21. Samà M., D'Ariano A., Pacciarelli D., Corman F. (2015) Real-time near-optimal train scheduling and routing in complex railway networks AIRO 2015. Pisa
20. Corman F., Viti F., Negenborn R.R. (2014) Equilibrium models in multi-modal container transport systems. LOGMS conference, Rotterdam the Netherlands
19. Luan X., supervised by Corman F., Meng L. (2014) A balanced train dispatching model toward reducing train delays and inequity of competitors. INFORMS Annual Meeting  
**Second Prize Winner at RAS Student Paper Competition 2014:San Francisco, USA**
18. Samà M., Zaninotto G., D'Ariano A., Pacciarelli D., Corman F.(2014) A hybrid metaheuristic for re-scheduling and re-routing in public transport AIRO 2014. Como
17. D'Ariano A., Corman F., Pacciarelli D., Sabene F., Samà M. (2014) Minimization of passengers' travel time in railway traffic control. AIRO 2014 Como.
16. Pacciarelli D., Corman F., Sabene F., D'Ariano A., Samà M. (2014) Minimization of passengers' travel time in railway traffic control. IFORS 2014 Barcelona
15. Nieuwkoop F., Corman F., Negenborn R.R., Lodewijks G. (2013) Determining Inter Terminal Transport Configurations at Maasvlakte 1 and 2 by Integer Programming. Proceedings of the 20<sup>th</sup> Vervoerlogistieke Wekdagen (VLW), Venlo ,the Netherlands.
14. Corman F., Dollevoet T.A.B., D'Ariano A., Huisman D. (2013) An iterative optimization framework for delay management and train scheduling. 26<sup>th</sup> European Conference on Operational Research – XXVI EURO INFORMS, Rome, Italy.
13. Rinaldi M., Corman F., Viti F. (2013) A new metric for partial observability solutions to sensor location problems. 26<sup>th</sup> European Conference on Operational Research – XXVI EURO INFORMS, Rome, Italy.
12. Corman F., Viti F., Tampère C., Cattrysse D. (2012) Stochastic Shortest Paths with

correlation effects, 19th Vervoerlogistieke Werkdagen (VLW), Venlo, The Netherlands.

11. D'Ariano A., Corman F., Pacciarelli D., Pranzo M. (2011) A bilevel rescheduling framework for optimal inter-area train coordination, AIRO 2011, Brescia, Italy.
10. Pacciarelli D., Corman F., D'Ariano A., Pranzo M. (2011) Minimization of delay propagation in multi-area railway traffic control, Melbourne, Australia
9. Corman F., D'Ariano A., Pacciarelli D., Pranzo M. (2010) Dispatching and coordination in real-time railway traffic management, presented at the XXIV European Conference on Operational Research, EURO XXIV, Lisbon, Portugal.
8. D'Ariano A., Corman F., Pacciarelli D., Pranzo M. (2009) Impact of rescheduling trains with transfer connections in disturbed traffic conditions, AIRO 2009 Siena, Italy.
7. Pranzo M., Corman F., D'Ariano A., Pacciarelli D. (2009) Impact of rescheduling trains with transfer connections in disturbed traffic conditions. EURO 2009. Bonn, Germany.
6. D'Ariano A., Corman F., Pacciarelli D., Pranzo M. (2008) Evaluation of green-wave policy in real-time railway traffic management. INFORMS Annual Meeting: Washington, USA.
5. Pacciarelli D., Corman F., D'Ariano A., Pranzo M. (2008) Evaluation of green-wave policy in real time railway traffic management. IFORS: Sandton, South Africa.
4. Pacciarelli D., Corman F., D'Ariano A., Pranzo M. (2008) A tabu search algorithm for Real-time railway traffic optimization. 12th EWGT: Ischia, Italy.
3. D'Ariano A., Corman F., Pacciarelli D., Pranzo M. (2007) A tabu search algorithm for a short-term train rerouting problem. 1st Annual ARRIVAL workshop: Utrecht.
2. Corman F., D'Ariano A., Pacciarelli D., Pranzo M. (2007) A tabu search algorithm for rerouting trains during rail operations. INFORMS Annual Meeting, **First Prize Winner at RAS Student Paper Competition 2007: Seattle, USA.**
1. D'Ariano A., Corman F., Pacciarelli D., Pranzo M. (2006) Modeling reordering and local rerouting strategies to solve train conflicts during rail operations. INFORMS Annual Meeting, **Second Prize Winner at RASIG Student Paper Competition 2006: Pittsburgh, USA.**

## ARTICLES IN MAGAZINES AND PROJECTS REPORTS (SELECTION)

Nold M., Büchel B., Leutwiler F., Lotz S., Marra A.D., Corman F. (2022) Technologischen Weiterentwicklung des Bahnsystems 2050. BAV (in German)

Luan X., Leng N., Corman F., Meyer de Freitas L., Blum S. (2022) Innovative measures to maximize capacity utilization of the transport network considering the actual demand on the trains. SBB Research Lab

Corman F., Ghandeharioun Z., Kouvelas A., Rahimi M. (2021). Future traffic control beyond modes. SBB Research Lab

Corman F., and others (2018) The destination is the goal. ETH Globe 2018/4, pp 22-24.

Tampère C., Corman F., Himpe W. (2011). Invloed van datakwaliteit op Dynamisch Verkeersmanagement (in Dutch).

Audenaert P., Logghe S., Viti F., Corman F., et al (2011). Mobiroute project, final report.

Goverde, R.M.P., Hansen, I.A., Corman F., D'Ariano A., Trinckauf J. (2011) Innovatie op het spoor en mogelijkheden van ERTMS in Nederland (in Dutch).

Huysmans, P., Viti F., Corman F., et al (2011). Integrated solution for front end and back end truck navigation, Final report.

Europe Economics, Corman, et al (2015) Research Study: Dominant Positions in National Railway Transport Services Markets. Final Report

## REFEREE

IEEE Transactions on Intelligent Transport Systems, Transportation Research Part A, B, C, E, European Journal of Operations Research, Transportation Science, Journal of Scheduling, Transportmetrica A & B, Flexible services and manufacturing, Expert System with Applications, Journal of Algorithms and Computational Technology, Journal of Rail Transport Planning and Management, Information Systems, Computer & Operations Research, Computers & Industrial Engineering, IEEE ITS Magazine, Research in Transportation Economics, IEEE Transactions on Systems, Man and Cybernetics, Applied Mathematical Modeling, Journal of Systems Science and Systems Engineering, Transport Policy, Simulation Modeling and Practice, IET Intelligent Transport Systems, Journal of Transportation Engineering, Computer-Aided Civil and

Infrastructure Engineering, Discover Artificial Intelligence, Royal Society Open Science, EPJ Data Science, Public Transport, ITB Journal, Applied Mathematics and Computation, Journal of Railway Transport Planning and Management, Operational Research International Journal, International Journal of Production Research, International Journal of Rail Transportation, Omega, TOP-Operations Research & Decision Theory, Probabilistic Engineering Mechanics, Discrete Dynamics in Nature and Society, Discrete Event Dynamic Systems, Transportation, Transportation Research Letters, Journal of ITS, Control Engineering and Practice, Journal of Engineering Manufacture, Euro Journal of Transportation and Logistics, Journal of Advanced Transportation, Networks, Networks and Spatial Economics, Mathematical Problems in Engineering, International Journal of Simulation and Process Modelling, Tijdschrift Vervoerwetenschappen

IEEE Intelligent Transportation System conference, Annual Meeting of the Transportation Research Board, International Symposium of Transport and Traffic Theory (ISTTT), International symposium of transport reliability (INSTR), Symposium of the European Association for Research in Transportation (hEART), Modeling and Technology for Intelligent Transportation Systems (MT-ITS), Transit Data, World Conference on Transportation Research (WCTR), IFAC Conference on Manufacturing Modelling, Management and Control (MIM), International Network Optimization Conference (INOC), TRAIL congress, ODS conference, Euro Working Group on Transportation (EWGT)

Project evaluator METTRANS transportation Center University Southern California, Swiss National Science Foundation – SNSF, COST proposal evaluator EU-H2020, Czech Science Foundation, DFG German science foundation; ANR-Agence nationale de la recherche; NWO Dutch Science Foundation, FWO Flemish research foundation.  
Transportation Science & Logistics (TSL) Best PhD Thesis award, reviewer/ evaluator, Informs; HKSTS Gordon Newell Award,  
Railway Application Section student paper competition, Informs.  
Elsevier, book proposal reviewer

**LAST UPDATED:  
03 / 01 / 2023**