

# Andreas Hegyi

## List of Publications by Year in descending order

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Version: 2024-02-01

62  
papers

2,109  
citations

430754

18  
h-index

289141

40  
g-index

62  
all docs

62  
docs citations

62  
times ranked

1227  
citing authors

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 1  | Model predictive control for optimal coordination of ramp metering and variable speed limits. Transportation Research Part C: Emerging Technologies, 2005, 13, 185-209.                | 3.9 | 470       |
| 2  | Optimal Coordination of Variable Speed Limits to Suppress Shock Waves. IEEE Transactions on Intelligent Transportation Systems, 2005, 6, 102-112.                                      | 4.7 | 322       |
| 3  | Freeway traffic estimation within particle filtering framework. Automatica, 2007, 43, 290-300.   | 3.0 | 177       |
| 4  | Integrated macroscopic traffic flow, emission, and fuel consumption model for control purposes. Transportation Research Part C: Emerging Technologies, 2013, 31, 158-171.              | 3.9 | 123       |
| 5  | SPECIALIST: A dynamic speed limit control algorithm based on shock wave theory. , 2008, , .  |     | 106       |
| 6  | Resolving freeway jam waves by discrete first-order model-based predictive control of variable speed limits. Transportation Research Part C: Emerging Technologies, 2017, 77, 405-420. | 3.9 | 91        |
| 7  | A Predictive Traffic Controller for Sustainable Mobility Using Parameterized Control Policies. IEEE Transactions on Intelligent Transportation Systems, 2012, 13, 1420-1429.           | 4.7 | 75        |
| 8  | Variable speed limit control for steady and oscillatory queues at fixed freeway bottlenecks. Transportation Research Part B: Methodological, 2014, 70, 340-358.                        | 2.8 | 67        |
| 9  | Considerations for model-based traffic control. Transportation Research Part C: Emerging Technologies, 2013, 35, 1-19.   | 3.9 | 49        |
| 10 | Hierarchical ramp metering in freeways: An aggregated modeling and control approach. Transportation Research Part C: Emerging Technologies, 2020, 110, 1-19.                           | 3.9 | 46        |
| 11 | Parallelized Particle and Gaussian Sum Particle Filters for Large-Scale Freeway Traffic Systems. IEEE Transactions on Intelligent Transportation Systems, 2012, 13, 36-48.             | 4.7 | 43        |
| 12 | Bayesian neural networks for the prediction of stochastic travel times in urban networks. IET Intelligent Transport Systems, 2011, 5, 259-265.   | 1.7 | 37        |
| 13 | Distributed Controller Design Approach to Dynamic Speed Limit Control against Shockwaves on Freeways. Transportation Research Record, 2008, 2086, 93-99.                               | 1.0 | 36        |
| 14 | Model Predictive Control Approach for Recovery from Delays in Railway Systems. Transportation Research Record, 2002, 1793, 15-20.  | 1.0 | 35        |
| 15 | Definition of a merging assistant strategy using intelligent vehicles. Transportation Research Part C: Emerging Technologies, 2017, 82, 161-179.                                       | 3.9 | 34        |
| 16 | Analysis of Traffic Performance of a Merging Assistant Strategy Using Cooperative Vehicles. IEEE Transactions on Intelligent Transportation Systems, 2015, 16, 2094-2103.              | 4.7 | 32        |
| 17 | A method to optimize evacuation instructions. OR Spectrum, 2011, 33, 595-627.  | 2.1 | 24        |
| 18 | Motorway ramp-metering control with queuing consideration using Q-learning. , 2011, , .  |     | 23        |

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 19 | Integrated Predictive Control of Freeway Networks Using the Extended Link Transmission Model. IEEE Transactions on Intelligent Transportation Systems, 2016, 17, 65-78.                            | 4.7 | 23        |
| 20 | Validation of an extended discrete first-order model with variable speed limits. Transportation Research Part C: Emerging Technologies, 2017, 83, 1-17.  | 3.9 | 22        |
| 21 | A Hierarchical Control Framework for Coordination of Intersection Signal Timings in All Traffic Regimes. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 1815-1827.             | 4.7 | 18        |
| 22 | Model Predictive Control for Multi-Class Traffic Flows. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 25-30.  | 0.4 | 17        |
| 23 | A cooperative system based variable speed limit control algorithm against jam waves - an extension of the SPECIALIST algorithm. , 2013, , .  |     | 17        |
| 24 | Efficient Freeway MPC by Parameterization of ALINEA and a Speed-Limited Area. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 16-29.  | 4.7 | 17        |
| 25 | New Extended Discrete First-Order Model to Reproduce Propagation of Jam Waves. Transportation Research Record, 2016, 2560, 108-118.  | 1.0 | 14        |
| 26 | Linear MPC-Based Urban Traffic Control Using the Link Transmission Model. IEEE Transactions on Intelligent Transportation Systems, 2020, 21, 4133-4148.  | 4.7 | 13        |
| 27 | Distributed Controller Design for Dynamic Speed Limit Control Against Shock Waves on Freeways. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 14060-14065. | 0.4 | 12        |
| 28 | Analysis of traffic performance of a ramp metering strategy using cooperative vehicles. , 2013, , .  |     | 11        |
| 29 | Improving the road network performance with dynamic route guidance by considering the indifference band of road users. IET Intelligent Transport Systems, 2015, 9, 897-906.                        | 1.7 | 11        |
| 30 | Design analysis of a decentralized equilibrium-routing strategy for intelligent vehicles. Transportation Research Part C: Emerging Technologies, 2019, 103, 308-327.                               | 3.9 | 11        |
| 31 | An Extended Linear Quadratic Model Predictive Control Approach for Multi-Destination Urban Traffic Networks. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 3647-3660.         | 4.7 | 11        |
| 32 | Influencing route choice in traffic networks: A model predictive control approach based on mixed-integer linear programming. , 2008, , .   |     | 9         |
| 33 | Blocking roads to increase the evacuation efficiency. Journal of Advanced Transportation, 2012, 46, 282-289.   | 0.9 | 9         |
| 34 | Coordinated Ramp Metering Based on On-Ramp Saturation Time Synchronization. Transportation Research Record, 2015, 2484, 50-59.   | 1.0 | 9         |
| 35 | Linear Quadratic MPC for Integrated Route Guidance and Ramp Metering. , 2015, , .  |     | 9         |
| 36 | A Comparison of Freeway Work Zone Capacity Prediction Models. Procedia, Social and Behavioral Sciences, 2011, 16, 419-429.   | 0.5 | 7         |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 37 | Vehicle Class-Specific Route Guidance of Freeway Traffic by Model-Predictive Control. Transportation Research Record, 2012, 2324, 53-62.  | 1.0 | 7         |
| 38 | Analysis of Driver Response and Traffic Evolution under Variable Speed Limit Control. Transportation Research Record, 2015, 2490, 1-10.   | 1.0 | 7         |
| 39 | SPECIALIST-RM; Integrated variable speed limit control and ramp metering based on shock wave theory. , 2011, , .  |     | 6         |
| 40 | Integrated Variable Speed Limit and Ramp Metering Control Against Jam Waves -- A COSCAL v2 Based Approach. , 2015, , .  |     | 6         |
| 41 | Intersection Control and MFD Shape: Vehicle-Actuated versus Back-Pressure Control. IFAC-PapersOnLine, 2016, 49, 153-158.  | 0.5 | 6         |
| 42 | Policy-Based, Service Level-Oriented Route Guidance in Road Networks. Transportation Research Record, 2012, 2278, 115-124.  | 1.0 | 5         |
| 43 | On a spatiotemporally discrete urban traffic model. IET Intelligent Transport Systems, 2014, 8, 219-231.  | 1.7 | 5         |
| 44 | Introduction to the Special Section on ITSC'05. IEEE Transactions on Intelligent Transportation Systems, 2007, 8, 1-3.  | 4.7 | 4         |
| 45 | Efficient Model Predictive Control for Variable Speed Limits by Optimizing Parameterized Control Schemes. , 2015, , .   |     | 4         |
| 46 | Freeway Traffic Management and Control. , 2017, , 1-28.   |     | 4         |
| 47 | Robust optimization of evacuation instructions, applied to capacity, hazard pattern, demand, and compliance uncertainty. , 2011, , .  |     | 3         |
| 48 | Optimized Speed Trajectories for Cyclists, Based on Personal Preferences and Traffic Light Information-A Stochastic Dynamic Programming Approach. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 777-793. | 4.7 | 3         |
| 49 | Model-based Control of Intelligent Traffic Networks. , 2010, , 277-310.   |     | 3         |
| 50 | Variable analysis for freeway work zone capacity prediction. , 2010, , .  |     | 2         |
| 51 | Service level-oriented route guidance in road traffic networks. , 2011, , .   |     | 2         |
| 52 | Ex-ante data analysis approach for assessing the effect of variable speed limits. , 2014, , .   |     | 2         |
| 53 | An overview of speed control approaches to improve freeway traffic flow. , 2014, , .  |     | 2         |
| 54 | On-ramp Selection Methodology for Coordinated Ramp Metering Schemes. , 2015, , .  |     | 2         |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 55 | Introduction to the Special Issue on the 16th IEEE International Conference on Intelligent Transportation Systems (ITSC'13). IEEE Transactions on Intelligent Transportation Systems, 2015, 16, 417-418.              | 4.7 | 2         |
| 56 | Effects of Dynamic Speed Limits on a Dutch Freeway. Transportation Research Record, 2016, 2560, 87-96.  | 1.0 | 2         |
| 57 | Optimal Control of Freeway Networks with Bottlenecks and Static Demand. Transportation Research Record, 2005, 1925, 29-37.  | 1.0 | 1         |
| 58 | Dynamic lane separation to prevent blocking back - A comparison of two dynamic lane separation controllers. , 2012, , .   |     | 1         |
| 59 | Control of day-to-day route choice in traffic networks with overlapping routes. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 556-561.                                       | 0.4 | 0         |
| 60 | 2013 IEEE Intelligent Transportation Systems Conference - Report: Future of Transport Discussed in Stately Dutch Heritage Site [Conference Report]. IEEE Intelligent Transportation Systems Magazine, 2014, 6, 76-79. | 2.6 | 0         |
| 61 | Urban Storage Space Selection Method for Integrated Control on a Freeway Bottleneck. Transportation Research Record, 2016, 2554, 89-100.  | 1.0 | 0         |
| 62 | Freeway Traffic Management and Control. , 2019, , 167-193.  |     | 0         |