

# Bruce Mehler

## List of Publications by Year in descending order

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104  
papers

3,096  
citations

201674

27  
h-index

197818

49  
g-index

107  
all docs

107  
docs citations

107  
times ranked

2246  
citing authors

#	ARTICLE	IF	CITATIONS
1	Interdependence in Vehicle-Pedestrian Encounters and its Implications for Vehicle Automation. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 4122-4134.	8.0	9
2	Speeding behavior while using adaptive cruise control and lane centering in free flow traffic. Traffic Injury Prevention, 2022, 23, 85-90.	1.4	12
3	Evaluating the Associations between Forward Collision Warning Severity and Driving Context. Safety, 2022, 8, 5.	1.7	6
4	Driver-Pedestrian Perceptual Models Demonstrate Coupling: Implications for Vehicle Automation. IEEE Transactions on Human-Machine Systems, 2022, 52, 557-566.	3.5	7
5	Non-Driving-Related Task Engagement: The Role of Speed. Safety, 2022, 8, 34.	1.7	0
6	Characterizing driver speeding behavior when using partial-automation in real-world driving. Traffic Injury Prevention, 2022, 23, S167-S173.	1.4	2
7	Unsupervised fNIRS feature extraction with CAE and ESN autoencoder for driver cognitive load classification. Journal of Neural Engineering, 2021, 18, 036002.	3.5	10
8	Patterns in transitions of visual attention during baseline driving and during interaction with visual manual and voice-based interfaces. Ergonomics, 2021, 64, 1429-1451.	2.1	3
9	Driver behavior and the use of automation in real-world driving. Accident Analysis and Prevention, 2021, 158, 106217.	5.7	15
10	Disengagement from driving when using automation during a 4-week field trial. Transportation Research Part F: Traffic Psychology and Behaviour, 2021, 82, 400-411.	3.7	17
11	A model for naturalistic glance behavior around Tesla Autopilot disengagements. Accident Analysis and Prevention, 2021, 161, 106348.	5.7	19
12	Visual attention and steering wheel control: From engagement to disengagement of Tesla Autopilot. Proceedings of the Human Factors and Ergonomics Society, 2021, 65, 1390-1394.	0.3	12
13	Glanceable, legible typography over complex backgrounds. Ergonomics, 2020, 63, 864-883.	2.1	3
14	Rapid holistic perception and evasion of road hazards.. Journal of Experimental Psychology: General, 2020, 149, 490-500.	2.1	31
15	Driver-initiated Tesla Autopilot Disengagements in Naturalistic Driving. , 2020, , .		17
16	MIT-AVT Clustered Driving Scene Dataset: Evaluating Perception Systems in Real-World Naturalistic Driving Scenarios. , 2020, , .		7
17	MIT Advanced Vehicle Technology Study: Large-Scale Naturalistic Driving Study of Driver Behavior and Interaction With Automation. IEEE Access, 2019, 7, 102021-102038.	4.2	130
18	Editorial: Psychophysiological Contributions to Traffic Safety. Frontiers in Human Neuroscience, 2019, 13, 410.	2.0	2

#	ARTICLE	IF	CITATIONS
19	Predicting road scenes from brief views of driving video. <i>Journal of Vision</i> , 2019, 19, 8.	0.3	13
20	Acceptance of Vehicle Automation: Effects of Demographic Traits, Technology Experience and Media Exposure. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2019, 63, 2066-2070.	0.3	27
21	Driving Simulator Validation for In-Vehicle Human Machine Interface Assessment. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2019, 63, 2104-2108.	0.3	4
22	The relative impact of smartwatch and smartphone use while driving on workload, attention, and driving performance. <i>Applied Ergonomics</i> , 2019, 75, 8-16.	3.1	36
23	The effects of age, interface modality, and system design on drivers'™ attentional demand when making phone calls while driving on a limited-access highway. <i>Transportation Research Part F: Traffic Psychology and Behaviour</i> , 2019, 60, 536-548.	3.7	4
24	Learning to Use In-Vehicle Technologies: Consumer Preferences and Effects on Understanding. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2018, 62, 1589-1593.	0.3	22
25	An Applied Driving Evaluation of Electrodermal Potential as a Measurement of Attentional State. , 2018, , 321.		0
26	Assessing Driving Simulator Validity: A Comparison of Multi-Modal Smartphone Interactions across Simulated and Field Environments. <i>Transportation Research Record</i> , 2018, 2672, 164-171.	1.9	10
27	Cognitive Load Estimation in the Wild. , 2018, , .		86
28	Changes in driver glance behavior when using a system that automates steering to perform a low-speed parallel parking maneuver. <i>Transportation Research Part F: Traffic Psychology and Behaviour</i> , 2018, 58, 629-639.	3.7	5
29	Investigating the correspondence between driver head position and glance location. <i>PeerJ Computer Science</i> , 2018, 4, e146.	4.5	7
30	Comparing the demands of destination entry using Google Glass and the Samsung Galaxy S4 during simulated driving. <i>Applied Ergonomics</i> , 2017, 58, 25-34.	3.1	20
31	Considering visual-manual tasks performed during highway driving in the context of two different sets of guidelines for embedded in-vehicle electronic systems. <i>Transportation Research Part F: Traffic Psychology and Behaviour</i> , 2017, 47, 23-33.	3.7	6
32	Revisiting Radio Tuning: A Secondary Analysis Comparing Glance Behavior Across Five Vehicles. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2017, 61, 1924-1928.	0.3	1
33	Differentiating Cognitive Load Using a Modified Version of AttenD. , 2017, , .		5
34	What's in a Name. , 2017, , .		42
35	What Can Be Predicted from Six Seconds of Driver Glances?. , 2017, , .		36
36	Case Study of Today's™ Automotive Dealerships: Introduction and Delivery of Advanced Driver Assistance Systems. <i>Transportation Research Record</i> , 2017, 2660, 7-14.	1.9	42

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37	Class half-full: On-road glance metrics differentiate crashes from near-crashes in the 100-Car data. Accident Analysis and Prevention, 2017, 107, 48-62.	5.7	49
38	Linking the Detection Response Task and the AttenD Algorithm Through Assessment of Human-Machine Interface Workload. Transportation Research Record, 2017, 2663, 82-89.	1.9	7
39	Advanced Driver Assistance Systems (ADAS): A Consideration of Driver Perceptions on Training, Usage & Implementation. Proceedings of the Human Factors and Ergonomics Society, 2017, 61, 1954-1958.	0.3	11
40	It's All in the Timing: Using the Attend Algorithm to Assess Texting in the Next Naturalistic Driving Database. , 2017, , .		13
41	Does order matter? Investigating the effect of sequence on glance duration during on-road driving. PLoS ONE, 2017, 12, e0171730.	2.5	3
42	Evaluating Demands Associated with the Use of Voice-Based In-Vehicle Interfaces. Proceedings of the Human Factors and Ergonomics Society, 2016, 60, 2083-2087.	0.3	2
43	Effects of a Voice Interface on Mirror Check Decrements in Older and Younger Multitasking Drivers. Proceedings of the Human Factors and Ergonomics Society, 2016, 60, 16-20.	0.3	5
44	Behavioral Impact of Drivers' Roles in Automated Driving. , 2016, , .		21
45	Reductions in self-reported stress and anticipatory heart rate with the use of a semi-automated parallel parking system. Applied Ergonomics, 2016, 52, 120-127.	3.1	23
46	Relationships Between Older Drivers' Cognitive Abilities as Assessed on the MoCA and Glance Patterns During Visual-Manual Radio Tuning While Driving. Journals of Gerontology - Series B Psychological Sciences and Social Sciences, 2016, 73, gbw131.	3.9	2
47	Distinguishing patterns in drivers' visual attention allocation using Hidden Markov Models. Transportation Research Part F: Traffic Psychology and Behaviour, 2016, 43, 90-103.	3.7	30
48	Exploring Generalizability of Field Experiment Radio Tasks with Naturalistic Driving Data. , 2016, , .		4
49	Sensation Seeking and Drivers' Glance Behavior while Engaging in a Secondary Task. Proceedings of the Human Factors and Ergonomics Society, 2016, 60, 1864-1868.	0.3	7
50	Multi-modal demands of a smartphone used to place calls and enter addresses during highway driving relative to two embedded systems. Ergonomics, 2016, 59, 1565-1585.	2.1	34
51	A field study on the effects of digital billboards on glance behavior during highway driving. Accident Analysis and Prevention, 2016, 88, 88-96.	5.7	29
52	Utilising psychophysical techniques to investigate the effects of age, typeface design, size and display polarity on glance legibility. Ergonomics, 2016, 59, 1377-1391.	2.1	31
53	Multi-modal assessment of on-road demand of voice and manual phone calling and voice navigation entry across two embedded vehicle systems. Ergonomics, 2016, 59, 344-367.	2.1	55
54	Impact of Repeated Exposure to a Multilevel Working Memory Task on Physiological Arousal and Driving Performance. Transportation Research Record, 2015, 2518, 46-53.	1.9	4

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55	Effects of age and smartphone experience on driver behavior during address entry. , 2015, , .		3
56	An on-road study involving two vehicles. , 2015, , .		6
57	Comparing the Relative Impact of Smartwatch and Smartphone Use While Driving on Workload, Attention, and Driving Performance. Proceedings of the Human Factors and Ergonomics Society, 2015, 59, 1602-1606.	0.3	10
58	Exploring new qualitative methods to support a quantitative analysis of glance behavior. , 2015, , .		4
59	User Perceptions Toward In-Vehicle Technologies: Relationships to Age, Health, Preconceptions, and Hands-On Experience. International Journal of Human-Computer Interaction, 2015, 31, 667-681.	4.8	10
60	Analysis of Drivers' Head and Eye Movement Correspondence: Predicting Drivers' Glance Location Using Head Rotation Data. , 2015, , .		5
61	A Pilot Study Measuring the Relative Legibility of Five Simplified Chinese Typefaces Using Psychophysical Methods. , 2014, , .		4
62	The sensitivity of different methodologies for characterizing drivers' gaze concentration under increased cognitive demand. Transportation Research Part F: Traffic Psychology and Behaviour, 2014, 26, 227-237.	3.7	113
63	The MIT AgeLab n-back. , 2014, , .		9
64	A Simulation Study Examining Smartphone Destination Entry while Driving. , 2014, , .		8
65	Assessing the impact of typeface design in a text-rich automotive user interface. Ergonomics, 2014, 57, 1643-1658.	2.1	33
66	Effects of an 'Expert Mode' Voice Command System on Task Performance, Glance Behavior & Driver Physiology. , 2014, , .		30
67	Classifying driver workload using physiological and driving performance data. , 2014, , .		121
68	Drivers' and non-drivers' performance in a change detection task with static driving scenes: is there a benefit of experience?. Ergonomics, 2014, 57, 998-1007.	2.1	19
69	Relationship between Drivers' Self-Reported Health and Technology Perceptions Across the Lifespan. , 2014, , .		1
70	A study of young adults examining phone dialing while driving using a touchscreen vs. a button style flip-phone. Transportation Research Part F: Traffic Psychology and Behaviour, 2014, 23, 57-68.	3.7	33
71	Comparing the Demands of Destination Entry using Google Glass and the Samsung Galaxy S4. Proceedings of the Human Factors and Ergonomics Society, 2014, 58, 2156-2160.	0.3	15
72	Brief Report: Examining Driving Behavior in Young Adults with High Functioning Autism Spectrum Disorders: A Pilot Study Using a Driving Simulation Paradigm. Journal of Autism and Developmental Disorders, 2013, 43, 2211-2217.	2.7	72

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73	Self-reported and observed risky driving behaviors among frequent and infrequent cell phone users. <i>Accident Analysis and Prevention</i> , 2013, 61, 71-77.	5.7	71
74	Impact of age and cognitive demand on lane choice and changing under actual highway conditions. <i>Accident Analysis and Prevention</i> , 2013, 52, 125-132.	5.7	43
75	A Field Study Assessing Driving Performance, Visual Attention, Heart Rate and Subjective Ratings in Response to Two Types of Cognitive Workload. , 2013, , .		6
76	Defining workload in the context of driver state detection and HMI evaluation. , 2012, , .		10
77	A Field Study on the Impact of Variations in Short-Term Memory Demands on Driversâ€™ Visual Attention and Driving Performance Across Three Age Groups. <i>Human Factors</i> , 2012, 54, 454-468.	3.5	111
78	Exploring differences in the impact of auditory and visual demands on driver behavior. , 2012, , .		5
79	An exploratory study on the impact of typeface design in a text rich user interface on off-road glance behavior. , 2012, , .		3
80	A Driving Simulator Study Examining Phone Dialing with an iPhone vs. a Button Style Flip-Phone. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2012, 56, 2191-2195.	0.3	5
81	The Effects of Lisdexamfetamine Dimesylate on Driving Behaviors in Young Adults With ADHD Assessed With the Manchester Driving Behavior Questionnaire. <i>Journal of Adolescent Health</i> , 2012, 51, 601-607.	2.5	21
82	Are drivers aware of their behavior changes when using In-Vehicle systems. , 2012, , .		1
83	An investigation of the relationship between the driving behavior questionnaire and objective measures of highway driving behavior. <i>Transportation Research Part F: Traffic Psychology and Behaviour</i> , 2012, 15, 676-685.	3.7	84
84	Sensitivity of Physiological Measures for Detecting Systematic Variations in Cognitive Demand From a Working Memory Task. <i>Human Factors</i> , 2012, 54, 396-412.	3.5	215
85	The effects of lisdexamfetamine dimesylate on the driving performance of young adults with ADHD: A randomized, double-blind, placebo-controlled study using a validated driving simulator paradigm. <i>Journal of Psychiatric Research</i> , 2012, 46, 484-491.	3.1	51
86	The impact of cognitive workload on physiological arousal in young adult drivers: a field study and simulation validation. <i>Ergonomics</i> , 2011, 54, 932-942.	2.1	148
87	Monitoring, managing, and motivating driver safety and well-being. <i>IEEE Pervasive Computing</i> , 2011, 10, 14-21.	1.3	86
88	The impact of a naturalistic hands-free cellular phone task on heart rate and simulated driving performance in two age groups. <i>Transportation Research Part F: Traffic Psychology and Behaviour</i> , 2011, 14, 13-25.	3.7	70
89	A Pilot Investigation of the Impact of Cognitive Demand on Turn Signal Use during Lane Changes in Actual Highway Conditions across Multiple Age Groups. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2011, 55, 1874-1878.	0.3	0
90	The impact of distractions on young adult drivers with attention deficit hyperactivity disorder (ADHD). <i>Accident Analysis and Prevention</i> , 2010, 42, 842-851.	5.7	86

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91	Age and cross-cultural comparison of drivers' cognitive workload and performance in simulated urban driving. <i>International Journal of Automotive Technology</i> , 2010, 11, 533-539.	1.4	35
92	The Impact of Systematic Variation of Cognitive Demand on Drivers' Visual Attention across Multiple Age Groups. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2010, 54, 2052-2055.	0.3	31
93	Physiological Reactivity to Graded Levels of Cognitive Workload across Three Age Groups: An On-Road Evaluation. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2010, 54, 2062-2066.	0.3	15
94	The validity of driving simulation for assessing differences between in-vehicle informational interfaces: A comparison with field testing. <i>Ergonomics</i> , 2010, 53, 404-420.	2.1	134
95	Impact of Incremental Increases in Cognitive Workload on Physiological Arousal and Performance in Young Adult Drivers. <i>Transportation Research Record</i> , 2009, 2138, 6-12.	1.9	268
96	City browser. , 2009, , .		10
97	An on-road assessment of the impact of cognitive workload on physiological arousal in young adult drivers. , 2009, , .		39
98	A Comparison of the Effect of a Low to Moderately Demanding Cognitive Task on Simulated Driving Performance and Heart Rate in Middle Aged and Young Adult Drivers. , 2008, , .		6
99	Influences of anatomical differences on gender-specific book-carrying behavior. <i>Bulletin of the Psychonomic Society</i> , 1978, 11, 17-20.	0.2	10
100	Additional Findings on the Multi-Modal Demands of "Voice-Command" Interfaces. , 0, , .		2
101	Observed Differences in Lane Departure Warning Responses during Single-Task and Dual-Task Driving: A Secondary Analysis of Field Driving Data. , 0, , .		3
102	The Influence of Driver's Age on Glance Allocations during Single-Task Driving and Voice vs. Visual-Manual Radio Tuning. , 0, , .		4
103	Eye Contact between Pedestrians and Drivers. , 0, , .		16
104	Dynamics of Pedestrian Crossing Decisions Based on Vehicle Trajectories in Large-Scale Simulated and Real-World Data. , 0, , .		9