

3rd International Conference on

Driver Distraction and Inattention

September 4-6, 2013 Gothenburg, Sweden

FINAL PROGRAM

Venue: Lindholmen Conference Centre, Lindholmspiren 3, Lindholmen Science Park, Gothenburg

Phone number to Visitor Centre, Lindholmen Science Park: +46 (0)31 764 70 00

Web: www.distractionconference.com

Welcome to the 3rd International Conference on Driver Distraction and Inattention (DDI2013),

featuring: keynote speakers, plenary sessions, and presentations on theory, measurement, effects, crash risk and prevention/mitigation. It includes special symposia on current research and mitigation challenges, and brings together basic and applied research, the latest policy developments, priorities for research and countermeasure development - and more!

Prof Michael A. Regan, PhD Prof Trent W. Victor, PhD

UNSW SAFER
Australien Sweden



Co-Chairs

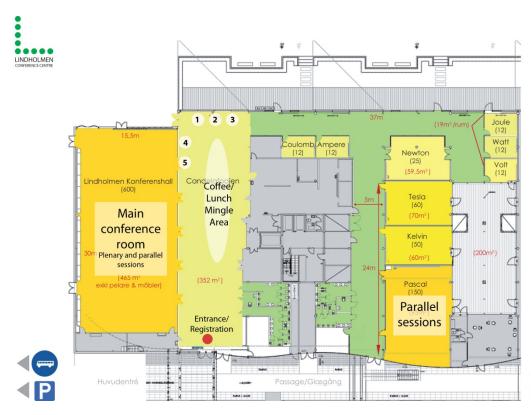
Organising Committee



Lindholmen Conference Centre – Session rooms

Plenary and parallel sessions: ROOM A / Lindholmen Conference Hall

Parallel sessions: ROOM B / Pascal





	09.00-10.00	Registration & Mingling, Coffee & Sandwich			
DAY 1	10.00-10.45	PLENARY SESSION - ROOM A			
WEDNES		Welcome addresses			
DAY	10.45-12.00	Keynote Speaker 1: Prof Charles Spence, University of Oxford, UK: "Driving by the seat of your pants! A multisensory approach to capturing driver attention"			
	12.00-13.00	Lunch & Exhibition			
SEPTEMBER 4 th	13.00-14.30	Session 1: Attentional Mechanisms I Session 2: Measurement I			
	PARALLEL SESSIONS	ROOM A		ROOM B	
	14.30-15.00	Coffee, Cake & Exhibition			
	15.00-16.30	Session 3: Attentional Mechani	sms II	Session 4: Measurement II	
	PARALLEL SESSIONS	ROOM A		ROOM B	
	16.30-16.35	Short Break			
	16.35-17.35	Special Symposium 1: Internati	onal Harmo	onized Approaches to Limiting Distraction	
		Panelists & Discussion ROOM A			
	17.35-17.40 Wrap Up Day 1 – ROOM A				
	19.30	Conference Dinner at River Café Restaurant on the pier: Dinner & Entertainment			
	08.00-08.30	Registration, Mingling & Coffee			
DAY 2	08.30-09.45	PLENARY SESSION - ROOM A			
		Welcome address and Keynote Speaker 2: Prof Heikki Summala, University of Helsinki,			
THURS	00 45 40 45	Finland: "Visual guidance, anticipation, and distraction in car driving"			
DAY	09.45-10.15	Coffee, Sandwich & Exhibition			
	10.15-12.00 PARALLEL SESSIONS	Session 5: Mobile Phone Distraction I	Session 6: HMI Design ROOM B		
SEPTEMBER 5 th	TANALLE SESSIONS	ROOM A			
	12.00-13.00	Lunch			
	12.15-12.45	Video Presentation by Prof John	Senders, U	niversity of Toronto, Canada. ROOM A	
	13.00-14.30	Session 7: Mobile Phone		: Measurement III	
	PARALLEL SESSIONS	Distraction II ROOM A	ROOM B		
	14.30-15.00	Coffee, Cake & Exhibition			
	15.00-16.30	Session 9: Mobile Phone	Session 1	0: Measurement IV	
	PARALLEL SESSIONS	Distraction III ROOM A	ROOM B		
		NOONA			
	16.30-16.35	Short Break			
	16.35-17.15	Special Symposium 2: Stephanie Binder Memorial Lecture: Dr. Johan Engström:			
	PLENARY SESSION	"US-EU collaboration towards a common conceptualization and taxonomy of driventinattention" - ROOM A			
	17.15-17.20	Wrap Up Day 2 - ROOM A			
17.30-18.30 Technical Tour 1: VTI's simulator SIM4 Address: Regnbågsgatan 1 (walkin Technical Tour 2: Smart Eye (17.30 & 18.30) Address: Första Långgatan 28					

	08.00-08.30	Registration, Mingling & Coffee		
DAY 3	08.30-09.45	PLENARY SESSION - ROOM A		
FRIDAY		Welcome address and Keynote Speaker 3: Dr. Asaf Degani, General Motors R&D, Israel "Distraction, Inattention, and Monitoring: Some Observations from Aviation Research"		
SEPTEMBER	09.45-10.15	Coffee, Sandwich & Exhibition		
6 th	10.15-11.45 PARALLEL SESSIONS	Session 11: Prevention- and Mitigation Technology ROOM A	Session 12: Driver Characteristics ROOM B	
	11.45-12.30	Lunch & Exhibition		
	12.30-13.30 PARALLEL SESSIONS	Session 13: Public Policy ROOM A	Session 14: Theory, Definition and Modelling ROOM B	
	13.30-13.45	Coffee, Cake & Exhibition Special Symposium 3: Priorities for Research and Countermeasures ROOM A Closing remarks - ROOM A		
	13.45-14.45 PLENARY SESSION			
	14.45-15.00			

PROGRAI	M: DAY 1 – Wednesday, September 4, 2013
09.00-10.00	Registration & Mingling, Coffee & Sandwich
10.00-10.45 ROOM A	PLENARY SESSION – ROOM A Welcome addresses Anna Nilsson-Ehle, SAFER Mats Viberg, First Vice President and deputy executive officer, Chalmers University of Technology Trent Victor, SAFER, Co-Chair Michael Regan, UNSW, Co-Chair Lisa Knutsson, SAFER Opening speech: Lars Tysklind, Member of Parliament
10.45-12.00 ROOM A	Keynote Speaker 1: Prof Charles Spence, University of Oxford, UK: "Driving by the seat of your pants! A multisensory approach to capturing driver attention" Chair: Michael Regan
12.00-13.00	Lunch & Exhibition
13.00-14.30 ROOM A	PARALLEL SESSIONS Session 1: Attentional Mechanisms I
	 08-P What drives off-road glance durations during multitasking – capacity, practice or strategy? R Broström¹, M Ljung Aust¹, L Wahlberg² & L Källgren² ¹Volvo Car Corporation, Sweden ²Swedish National Road and Transport Research Institute (VTI), Sweden • 03-O The Cell Phone Paradox: How do we explain the Differences between Simulator and Naturalistic Driving Research? J Hickman & R Hanowski Virginia Tech Transportation Institute, USA • 07-O Inhibition of Return Prevails in In-Car Visual Search when Interrupted by Driving T Kujala University of Jyväskylä, Finand • 24-O Enhanced Lane Keeping during Driver Distraction: the Effect of Lead Car Presence N Merat & N Forbes University of Leeds, UK
ROOM B	 18-P Do drivers prioritise primary driving tasks over secondary tasks within driving simulators? A comparison of simulators of varying fidelity R A Donkor, G E Burnett & S Sharples University of Nottingham, UK 20-P Spontaneous vs. gaze shift-induced blinks for assessing driver drowsiness/inattention by Electrooculography P Ebrahim^{1,2}, W Stolzmann¹ & B Yang²
14.30-15.00	Coffee, Cake & Exhibition

15.00-16.30	PARALLEL SESSIONS
ROOM A	Session 3: Attentional Mechanisms II
	 28-P Towards understanding mobile device use in Commercial Motor Vehicle Drivers: Do drivers interact as a drowsiness countermeasure? L M Toole, R J Hanowski, T L Smith-Jackson & W W Winchester III Virginia Tech Transportation Institute, USA 92-P Analysis of the role of inattention in road crashes based on naturalistic on-board safety monitoring data J Engström¹, J Werneke², J Bärgman², N Nguyen³ & B Cook³
	SALER Vehicle and Traine Salety centre at chainers, Sweden
ROOM B	 23-P How do you assess the distraction of in-vehicle information systems? A comparison of occlusion, lane change task and medium-fidelity driving simulator methods G Burnett¹, N Neila², E Crundall¹, D Large¹, G Lawson¹, L Skrypchuk² & S Thompson² ¹University of Nottingham, UK ²Jaguar Land Rover Ltd, UK • 71-P A Smart Driving Smartphone Application: Real-World Effects on Driving Performance and Glance Behaviours S Birrell^{1,2}, M Fowkes² & P Jennings¹ ¹University of Warwick, UK ²MIRA Ltd, UK • 10-O Performance assessment under visual, cognitive and manual secondary task load - How to interpret Lane Change Task (LCT) results A K Huemer & M Vollrath Technische Universität Braunschweig, Germany • 95-O Distraction and driving: results from the epidemiology task of the ATLAS project: a case-control responsibility study of traffic crash injured drivers interviewed at the emergency room S Bakiri, C Galéra, L Orriols, M Laborey, B Contrand, R Ribéreau-Gayon, L-R Salmi, C Gabaude, A Fort, B Maury, C Lemercier, M Cours, MP Bouvard & E Lagarde
16.30-16.35	Université Bordeaux Segalen, France Short Break
16.350-17.35	Special Symposium 1: International Harmonized Approaches to Limiting Distraction
ROOM A	Moderators: Peter Burns (Canada), Ruggero Ceci (Sweden) Panelists: Chris Monk (NHTSA), Scott Pennock (ITU), Michiaki Sekine (NTSEL - Japan), and Christian Heinrich (Daimler)
17.35-17.40 ROOM A	Wrap Up Day 1: Trent Victor, Michael Regan & Lisa Knutsson
19.30	Conference Dinner at River Café Restaurant on the pier Address: Dockpiren Eriksberg, <u>www.rivercafe.se</u> Dinner & Entertainment

08.30-09.45 ROOM A	DI FALA DV CECCIONI DOGALA
08.30-09.45 ROOM A	PLENARY SESSION – ROOM A
	Welcome address and Keynote Speaker 2: Prof Heikki Summala, University of Helsinki, Finland: "Visual guidance, anticipation, and distraction in car driving" Chair: Trent Victor
09.45-10.15	Coffee & Sandwich & Exhibition
10.15-12.00	PARALLEL SESSIONS
ROOM A	Session 5: Mobile Phone Distraction I
	 56-P Impact of Texting on Young Drivers' Behaviour and Safety on Motorways by the Use of a Driving Simulator G Yannis, A Laiou, P Papantoniou & C Gkartzonikas National Technical University of Athens, Greece 68-P Cell Phone Conversation and Automobile Crashes: Relative Risk is Near 1 Not 4 R A Young Wayne State University School of Medicine, USA 30-P Does phone interface type influence the distracting effects of text messaging in tunnels? K L Young¹, C M Rudin-Brown², C Patten³, R Ceci^{3,4}, & M G Lenné¹ ¹Monash University Accident Research Centre, Monash University, Australia ²Human Factors North, Inc., Canada ³Swedish National Road and Transport Research Institute (VTI), Sweden ⁴Swedish Transport Administration, Sweden 33-O Understanding driver self-regulating behavior: how does phone use influence vehicle control in real world? M Dozza¹, J Sayer² & C Flannagan² ¹Chalmers University of Technology, Sweden ²University of Michigan Transportation Research Institute, USA
ROOM B	Session 6: HMI Design
ROOM B	 05-P Roadside Advertising Affects Driver Attention and Road Safety L Herrstedt, P Greibe & P Andersson Trafitec, Denmark 06-P Can You Ignore It? – Effects of Album Artwork on Driver Distraction A Lasch¹ & T Kujala² ¹Nokia Gate5 GmbH, Germany ²University of Jyväskylä, Finland 22-P Measuring the distraction of alternative list-scrolling techniques when using touchscreen displays in vehicles D R Large, G E Burnett, E Crundall, G Lawson & S-A De-Kremer University of Nottingham, UK 82-P The impact of interface modality on police officers' visual behaviour when using an in-vehicle system A J Filtness, E Mitsopoulos-Rubens & M G Lenné Monash University Accident Research Centre (MUARC), Australia 79-O The Impact of Typeface Design in a Text-Rich Automotive User Interface Driver Distraction B Mehler¹, B Reimer¹, N Chahine², V Levantovsky², S Matteson² & D Gould² ¹MIT AgeLab & New England University Transportation Center, USA
12.00-13.00	Lunch

13.00-14.30	PARALLEL SESSIONS
ROOM A	Session 7: Mobile Phone Distraction II
	 32-P Effects of Cell Phone Conversations and Device Manipulation on Objective Measures of Driving Performance J R Sayer, S Bao & D Funkhouser University of Michigan Transportation Research Institute, USA 55-P Impact of mobile phone use and music on driver behaviour and safety by the use of a driving simulator G Yannis, E Papathanasiou, E Postantzi & E Papadimitriou National Technical University of Athens, Greece 34-O Different Ways to Compensate Distraction while Using a Hands-Free Telephone in a Vehicle A Landau, B Metz & A Neukum Würzburger Institut für Verkehrswissenschaften (WIVW) GmbH, Germany 41-O Deciding to be distracted: Drivers' strategic choices to interact with the mobile phone V Huth, H Tattegrain, Y Sanchez & C Brusque IFSTTAR-LESCOT, France
200142	Session 8: Measurement III
ROOM B	 12-P A holistic approach for measuring Driver Distraction and Inattention M Ganzhorn, F Diederichs & H Widlroither Fraunhofer IAO & University of Stuttgart IAT, Germany 67-P Drowsy Driving Increases Severity of Safety-Critical Events and Is Decreased by Cell Phone Conversation R A Young
	 Wayne State University School of Medicine, USA 75-P Development of a Protocol to Classify Drivers' Emotional Conversation G M Fitch¹, R Hanowski¹, G Burnett² & D Crundall² ¹Virginia Tech Transportation Institute, USA ²University of Nottingham, UK 48-O Influence of psychological flow on the management of cognitive secondary tasks while driving: an approach comparing subjective and objective mental effort measurement C Gabaude¹, V Rolland^{1,2}, A Carrotte^{1,2}, C Jallais¹, A Fort¹, B Baracat³ & G A Michael² ¹Université de Lyon, France ²Université Lyon 2, France ³CUFR Jean-François-Champollion, France
14.30-15.00	Coffee, Cake & Exhibition
15.00-16.30	PARALLEL SESSIONS
ROOM A	 76-P Effect of phone conversations on tactical components of the driving task M-P Bruyas, A Fort & V Lancelle IFSTTAR - TS2 - LESCOT, France 81-O When do drivers use their mobile phone? M Christoph & N van Nes SWOV – Institute for Road Safety Research, the Netherlands 93-O The Impact of Hand-Held and Hands-Free Cell Phone Use on Driving Performance and Safety-Critical Event Risk G M Fitch, F Guo, Y Yang, S Soccolich, M Perez, R Hanowski, J Hankey &T Dingus Virginia Tech Transportation Institute, USA 62-O Dialling, texting, and reading in real world driving: When do drivers choose to use mobile phones? E Tivesten^{1,2} & M Dozza² Volvo Car Corporation, Sweden Chalmers University of Technology, Sweden

ROOM B	Session 10: Measurement IV
	 73-P Estimating Visual Demands in Road Traffic Environments T Sato¹, M Akamatsu¹, A Tanaka², J Hatada², Y Denda² & T Ishii³ ¹National Institute of Advanced Industrial Science and Technology (AIST), Japan ²Marketing Strategy Division, Clarion Co., Ltd., Japan ³Hitachi, Ltd., Design Division, Japan 78-P Using smart materials to monitor physiological signals of driver's inattention H De Rosario¹¹³, J Solaz¹, P Gameiro² & L Costa² ¹Instituto de Biomecánica de Valencia, Spain ²Borgstena Group Portugal LDA, Portugal ³CIBER de Bioingeniería, Biomateriales y Nanomedicina (CIBER-BBN), Spain 46-O Modifying the Lane Change Task – How does increased unpredictability of lane changes affect performance? T Petzoldt, L Graichen & J F Krems Chemnitz University of Technology, Germany 90-O A method for extracting data for quantification of comfort zone boundaries for intersection J Bärgman¹, J Werneke¹ & K Smith² ¹Chalmers University of Technology, Sweden ²Department of Operations Research, Naval Postgraduate School, USA
16.30-16.35	Short Break
16.35-17.20	PLENARY SESSION – ROOM A
ROOM A	Special Symposium 2: Stephanie Binder Memorial Lecture: Dr Johan Engström: "US-EU collaboration towards a common conceptualization and taxonomy of driver inattention" Co-Chairs: Chris Monk, Trent Victor & Michael Regan
17.15-17.20 ROOM A	Wrap Up Day 2: Trent Victor, Michael Regan & Lisa Knutsson
17.30-18.30	Technical Tour 1: VTI simulator SIM4 Address: Regnbågsgatan 1 (walking distance) Technical Tour 2: Smart Eye (17.30 & 18.30) Address: Första Långgatan 28B (ferry)

O = Oral Only (15 minute presentation); P = Peer-reviewed paper (20 minute presentation). Abstracts and Full Papers are included in the conference proceedings.

PROGRAI	M: DAY 3 - Friday, September 6, 2013
08.00-08.30	Registration, Mingling & Coffee
	PLENARY SESSION – ROOM A
08.30-09.45 ROOM A	Welcome address and Keynote Speaker 3: Dr. Asaf Degani, General Motors R&D, Israel "Distraction, Inattention, and Monitoring: Some Observations from Aviation Research" Chair: Trent Victor
09.45-10.15	Coffee, Sandwich & Exhibition
10.15-11.45	PARALLEL SESSIONS
ROOM A	Session 11: Prevention- and Mitigation Technology
	 02-P BikeCOM: cooperative safety application supporting cyclists and drivers at intersections P Gustafsson, J Camilo Muñoz, L Lindgren, C-N Boda & M Dozza Chalmers University of Technology, Sweden 15-P Cycling and sounds: the impact of the use of electronic devices on cycling safety A Stelling-Konczak¹, M Hagenzieker^{1, 2} & B van Wee² SWOV Institute for Road Safety Research, the Netherlands Delft University of Technology, the Netherlands 77-P The DO-IT BEST Feedback Model - Distracted Driver Behaviour Management and Prevention Before, While And After Driving
ROOM B	 44-P Effects of Anger and Sadness on the drivers' useful visual field: toward a tunnel vision phenomenon? C Jallais^{1,2}, J Roge^{1,2}, A Fort^{1,2} & C Gabaude^{1,2} ¹IFSTTAR—TS2-LESCOT, France ²Université de Lyon, France ²Université de Lyon, France • 52-P Effects of cerebral diseases on driver distraction D Pavlou¹, I Beratis², A Liozidou², N Andronas², G Yannis¹, A Economou² & S Papageorgiou² ¹National Technical University of Athens, Greece ²National and Kapodistrian University of Athens, Greece ²National and Kapodistrian University of Athens, Greece * 72-P Individual Differences in Driving-Related Multitasking S Mizobuchi^{1,2}, M Chignell^{1,2}, D Canella² & M Eizenman² ¹ Vocalage Inc., Canada ²University of Toronto, Canada * 26-O The effect of visual and cognitive distraction on the driving performance of older drivers — A driving simulator study A Cuenen¹, E M M Jongen¹, T Brijs¹, K Brijs^{1,2}, M Lutin³, K Van Vlierden¹ & G Wets¹ ¹Transportation Research Institute, Belgium ²XIOS University College, Belgium ³Jessa Hospital, Belgium
11.45-12.30	Lunch

12.30-13.30	PARALLEL SESSIONS
ROOM A	 Session 13: Public Policy 13-P Why Sweden should not do as everybody else does K Kircher, C Ahlström, N P Gregersen & C Patten Swedish National Road and Transport Research Institute (VTI), Sweden 17-P Effective Utilization of Naturalistic Data for Driver Distraction Outreach Campaigns J F Morgan, M Blanco, A Medina & R J Hanowski Virginia Tech Transportation Institute, USA 64-O Driver Distraction Research and Policy: An update from NHTSA C Monk National Highway Traffic Safety Administration (NHTSA), USA
ROOM B	 37-P Risk Factors Moderating Driving-related Distraction & Inattention in the Natural Rail Environment A Naweed^{1,2} & S Rainbird^{1,2} ¹Central Queensland University, Australia ²Cooperative Research Centre for Rail Innovation, Australia • 50-O Effects of spatial and non-spatial cognitive distraction on drivers' mental representation of spatial and situational information U Drewitz, F Lethaus & M R K Baumann DLR German Aerospace Center, Germany • 70-O Modeling Safety of Lane Change Maneuvers Based on Driver Gaze and Vehicle Operation Behavior M Mori, C Miyajima, T Hirayama, N Kitaoka & K Takeda Graduate School of Information Science, Nagoya University, Japan
13.30-13.45	Coffee & Cake & Exhibition
13.45-14.45	PLENARY SESSION – ROOM A
ROOM A	Special Symposium 3: Priorities for Research and Countermeasures Co-Chairs: Trent Victor & Michael Regan
14.45-15.00 ROOM A	Closing remarks: Trent Victor, Michael Regan, Anna Nilsson-Ehle & Lisa Knutsson

O = Oral Only (15 minute presentation); P = Peer-reviewed paper (20 minute presentation). Abstracts and Full Papers are included in the conference proceedings.

Workshop: Workshop on Naturalistic Cycling Analysis Tuesday September 3^{rd} , 2013, 13.00 - 17.45

Run by: Chalmers & SAFER

Room: Demostudion, Lindholmspiren 3, 2nd floor, Lindholmen Science Park, Gothenburg.

Ask for directions at the reception desk on the ground floor. The workshop will take place in the same building as the DDI2013, but at another venue.

Please note: Ends with a light dinner. Free of charge, pre-registration required. **Web:** www.distractionconference.com/workshops/workshop-on-naturalistic

GENERAL CONFERENCE INFORMATION

Presentations/presenters

Speakers must download their presentations 30 minutes before session in their session room with their session chair. A technician will help out if something does not work.

After the conference, we would like to publish the ppt-presentations on the web. Please leave a version for publication in PDF-format before leaving the conference.

Lunch and coffee breaks

Lunch and coffee is served in the mingle/exhibition area outside the main conference room (Room A).

Technical Tours

Join our technical tours on Thursday September 5, 2013, at 17:30! Sign up at the reception desk.

Technical Tour 1: VTI's simulator SIM4. Address: Regnbågsgatan 1 (walking distance)

Technical Tour 2: Smart Eye (17.30 & 18.30). Address: Första Långgatan 28B (ferry)

Conference Dinner

The conference dinner will take place at the "Restaurant River Café" on the north riverside in Eriksberg. River Café is located on a pier with a beautiful view over the river and city.

The conference dinner starts at 19.30 and is included in the Full Registration Ticket (not in the One Day Only Ticket or Exhibition Ticket).



Getting there: Take bus no 16 from Nordstan (Central station) to Eriksbergstorget (leaves at 19:10) or from Lindholmen (leaves at 19:17). The ferry takes you there from i.e. Lilla Bommens Hamn (leaves at 19:00) or Lindholmspiren (leaves at 19:11).

Address: Restaurant River Café, Dockpiren Eriksberg, Gotheburg. Phone: +46 (0)31 51 00 00, www.rivercafe.se

Closest bus stop: Eriksbergstorget
Closest ferry stop: Eriksbergs färjeläge

Public transport in Gothenburg

In Gotheburg, "Västtrafik" is the company which runs the public transport. In the shops "*Pressbyrån*" or "7 *Eleven*", you can by 24 hrs or 72 hrs cards, which gives you free journeys with trams and public buses. 24 hrs is SEK 75, and 72 hrs is SEK 150. There is also a 5-journey card for SEK 93. www.vasttrafik.se

Taxi

If you want to order a taxi to your hotel, the reception/Visitors Centre outside the conference venue will help you. They are open 07.30-18.00. Pick up address: Lindholmspiren 3-5 (outside the shop Pressbyrån)

Taxi Göteborg: +46 (0)31 650 000 Taxi Kurir: +46 (0)31 27 27 27

Internet access

Lindholmen Conference Centre provides a free hotspot (Wi-Fi) for visitors:

Network name: CHSRAB-C Password: ChalmersKonferens

EXHIBITORS:



Ergoneers GmbH

www.ergoneers.com



Noldus Information Technology

www.noldus.com



Smart Eye AB

www.smarteye.se

CO-ORGANISERS:



