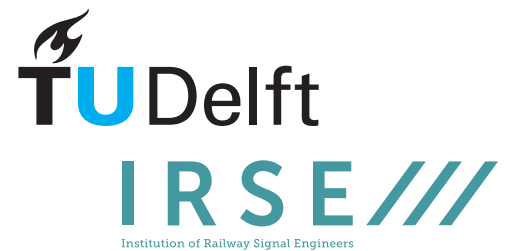
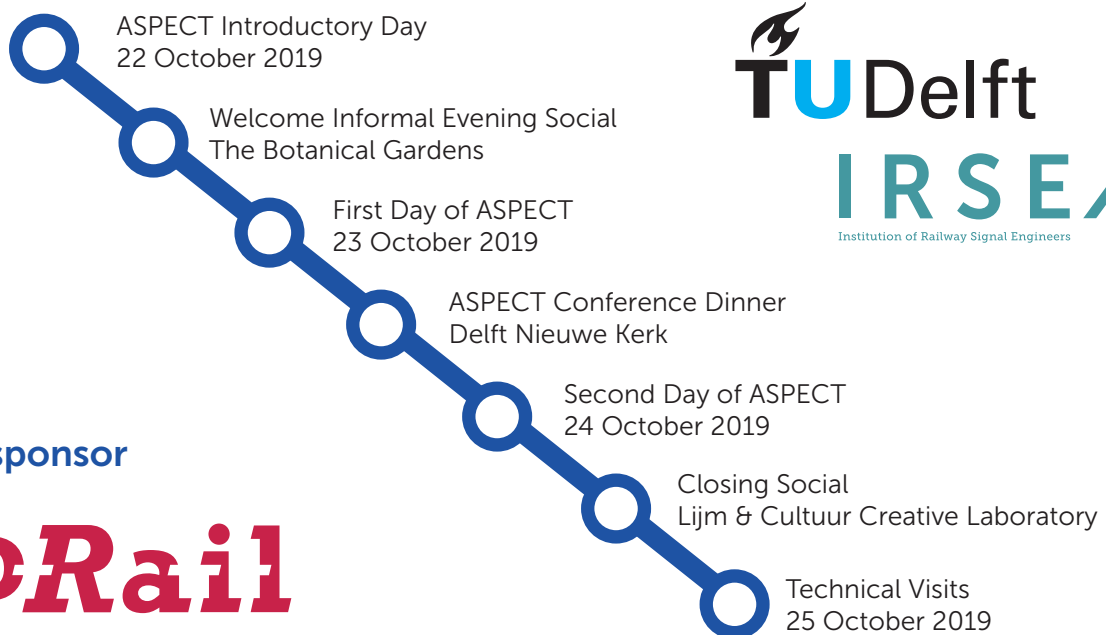


ASPECT 2019 ///

Institution of Railway Signal Engineers | Delft University of Technology | IRSE Nederland

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Tuesday 22 October Introductory Day

0800: REGISTRATION

0900: WELCOME AND
PRESIDENT'S ADDRESS

George Clark, President, IRSE

LEVEL CROSSINGS

*No barriers to level crossings
with ERTMS*

Maarten Bartholomeus, ProRail,
Netherlands

*Clarifying design guidelines of level
crossing logic*

Akimasa Okada,
East Japan Railway Company, Japan

*Obstacle detector for level crossing
using infrared cameras*

Ryuta Nakasone,
Railway Tech Research Institute, Japan

RESILIENCE

Getting it right ... the earlier the better

Keith Upton, SNC-Lavalin Atkins, UK

*Resilience – it's about more than
just technology*

Disney Schembri, Siemens, UK

*Building a resilient railway through
its workforce*

Prerna Sharma, Siemens, UK

Novel design development approach

Shivani Singh, SNC-Lavalin Atkins, India

IMPLEMENTATION

*Integration facilities, off-site testing
to increase resilience*

Alessandra Scholl Sternberg, Siemens, UK

*Why brownfield resignalling projects
always require a transition state*

Nick Terry, The Shard Group, Australia

DIGITALISATION AND
MAINTENANCE

*Oh, cyber security doesn't affect me ...
right? Integration and cyber security*

Colin Hamilton-Williams,
SNC-Lavalin Atkins, UK

*From data to diagnosis: point condition
monitoring through machine learning*

Richard Parkinson, Balfour Beatty, UK

MODELLING
AND MODERNISATION

*Taking a legacy interlocking to
the era of IOT*

Bob Janssen, Siemens, Netherlands

*Victoria Line – 50 years
of resilience (so far)*

Ian Jones, Siemens, UK

*What building a model taught me about
resilience and building real railways*

Aaron Sawyer, SNC-Lavalin Atkins, UK

*Basic study of a train control system
integrating operational & security control*

Yoichi Sugiyama, Railway Technical
Research Institute, Japan

1800: NETWORKING EVENT

Wednesday 23 October ASPECT Day One

0830: REGISTRATION

0900: WELCOME
AND KEYNOTE ADDRESS

Karel Van Gils, Innovations Director, ProRail, Netherlands

ERTMS

*ETCS Hybrid Level 3: simulation based
assessment for the Dutch railway network*
Joost Jansen, TU Delft, Netherlands

*The wait for ERTMS – keeping
conventional systems safe*

Harm van Dijk, Movares, Netherlands

Overview of ETCS Level 3 impediments

Maryam Akbari, University of Twente,
Netherlands

SAFETY

Misuse of safety cases

Ello Weits, Movares, Netherlands

Does SIL live up to expectations?

Roger Short, Retired, UK

*Train control uncertainty treatment and
safety assurance shifting to automation*

Fei Yan, Beijing Jiaotong University, China

CBTC AND METRO

*Resilience improvement of CBTC systems
on metro lines*

Ian Thompson, IMT Engineering, UK

*Building resilience into urban rail
transport systems*

Pierre Dersin, Alstom, France

*Delivering capacity and service resilience
from modern CBTC systems*

Phil Dubery, CPC Systems, UK

SYSTEMS

*Business continuity management in
railway signalling*

Wim Coenraad, Movares, Netherlands

*Providing resilience as the
goalposts move*

Ian Jones, Siemens, UK

*Whole-railway approach to planning for
things that probably won't happen*

Andrew Love, SNC-Lavalin Atkins, UK

CYBER-RESILIENCE

*Evaluating the impact of cyber security
and safety with human factors*

Eylem Thron, Ricardo Rail, UK

*Data resilience: protection of a CBTC
system from hackers*

Henry Cheung, IRSE, Hong Kong

*Developing cyber-resilience together:
Industry cooperation for more security*

Alexander Patton, Siemens, UK

STANDARDISATION

*How the EULYNX data prep standard can
improve railway robustness*

Bob Janssen, EULYNX, Netherlands

Moving safely towards IP for signalling

João Martins, EFACEC, Portugal

Development of IP interlocking in Korea

Kyung Hwan Hwang, Rail Signal Research
Association, South Korea

1715: CLOSE

1900: CONFERENCE DINNER

ASPECT 2019 Organising Committee

George Clark, Transport for London
Rob Goverde, TU Delft
Wim Coenraad, Movares
Tom Spronk, Terra Solutions BV
Wendi Mennen, Incensio BV

Arjan Mann, Siemens
Robert Cooke, Land Transport Authority
Nevin Reddy, Bechtel
Graham Hill, Alstom
Martin Fenner, SNC-Lavalin Atkins

Thursday 24 October

ASPECT Day Two

Friday 25 October

Technical visits

Rail Center Amersfoort



The Rail Center is a unique place in the Netherlands where the railway industry comes together.

Through training services, and by offering the railway industry a place for testing and analysis, innovation, and knowledge sharing, the Railcenter supports improvements for a safer and more reliable railway system. The training centre is located at the iconic Wagenwerkplaats in Amersfoort, which served an industrial rail complex for nearly a century.

In this unique location you will visit some of the test and training facilities and we will show some of the latest innovations in Digital Signalling and new methods in maintaining infrastructure.

Noord-Zuid Lijn (North-South Line)



The Amsterdam Metro is a mixed rapid transit and light rail system serving Amsterdam and extending to the surrounding municipalities of Amstelveen, Diemen and Gader Amstel.

The network is owned by the City of Amsterdam and operated by municipal public transport company Gemeentelijk Vervoerbedrijf (GVB), which also operates trams, free ferries and local buses. The metro system consists of five routes and serves 58 stations, with a total length of 52.2km (32.4 miles).

The fifth route, Route 52, running from the northern to the southern borough, came into operation on 21 July 2018. In this technical visit you will enter the system, and visit the equipment rooms. Furthermore some interesting stories on building the line and the commissioning of the CBTC signalling on the line will be explained.

0830: COFFEE

0900: PERFORMANCE

Closer running: magic capacity potion or poison?

Felix Schmid, University of Birmingham, UK

Arrival time robustness of eco driving strategies under two ATP systems

Jan Hoogenraad, Spoorgloren, Netherlands

Improved system modelling for better railway performance

Arco Sierts, InteVice, Netherlands

0900: HUMAN FACTORS

Operational and human factors testing to commission ERTMS in Denmark

Amanda Elliott, Innovace Designs, UK

Driving efficiency and resilience to human error in signalling data

Dominic Taylor, Sysra, UK

The art of interrogation

Alexandra McGrath, VicTrack, Australia

DESIGN RESILIENCE

ROCC and Role: Implementation of operational control centres for resilience

Victor Abbott, Jacobs, Australia

Rail's particular challenge with resilience

Alexandra McGrath, VicTrack, Australia

Fallback systems and resilience in India

Ganesh Kumar Dwivedy, Indian Railways, India

MAINTENANCE

Adaptive real-time fault diagnosis for track circuits

Xigao Liu, Beijing Hollysys, China

Video track inspector

Joost van Kalsbeek, Strukton Rail, Netherlands

Rail yards, a challenge through growth and changed landscape

Folkert Bouma, ProRail, Netherlands

INNOVATION AND FUTURE DEVELOPMENT (1)

Study of vehicle communication-based train control (VBTC)

Ying Lin, Hollysys, China

Valise – video balise for dependable train positioning

Richard Shenton, RDS International, UK

Development trends and direction of train control systems

Fei Yan, Beijing Jiaotong University, China

ARCHITECTURE

A fair signalling architecture

André Radomiak, Alstom, Belgium

Scalable and relocatable interlocking device

Natsuki Terada, Railway Technical Research Institute, Japan

Architecting railway systems for resilience

Luke Church, Thales, UK

INNOVATION AND FUTURE DEVELOPMENT (2)

Virtualising control centres: can cloud computing deliver increased resilience?

Matthew Slade, CPC Systems, UK

Exploring virtual coupling: operational principles and capacity analysis

Egidio Quaglietta, TU Delft, Netherlands

Digital systems - transforming rail transport in Sydney

Stephen Lemon, Transport for NSW, Australia

1700: CLOSING ADDRESS

George Clark, President, IRSE

1730: CONFERENCE SOCIAL

PRICING

The main ASPECT Conference comprises two days of papers and includes the three conference socials. In addition there is the option to also attend the Introductory Day on 22 October. The pricing breakdown is shown in the table opposite.

For all delegates, there is the option to add one of the technical visits available on Friday 25 October, this will be at an additional cost of €30 for all delegates. These are limited in capacity and therefore if one particular visit is of interest we recommend early booking.

All payments must be in Euros and payment will be accepted online using major credit/debit cards or by bank transfer.

If you book and are unable to attend, a refund will not be possible, but you may transfer your booking to a colleague – please contact registration@aspect2019.nl if this is required.

Full price rates	Introductory Day 22 October	ASPECT Conference 23-24 October
IRSE Member	€250	€900
Younger (under 35) or Retired Member	€125	€450
Non-Member	€300	€1040

Online booking at aspect2019.nl
Book soon, almost sold out!

RESERVE PAPERS

For the ASPECT conference a number of reserve papers have been selected and their authors will be invited to include their papers within the conference proceedings. In case of an author being unavailable to present their paper, reserve papers may be selected to be presented in their place at the conference.

EXHIBITION

Alongside the conference papers being delivered on 23-24 October, ASPECT will feature an exhibition of products and services from large and small suppliers. The exhibition will take place in the foyer of the Aula venue, outside the conference auditorium, where refreshments will be served, and the session breaks and lunches will give good opportunities for delegates to explore the exhibition and network with each other.

If you are interested to know more about exhibiting at ASPECT to make the most of this cost-effective and targeted opportunity, please do email exhibition@aspect2019.nl to discuss the options. Demand for exhibition space is limited and so it is advisable to contact us soon to reserve your space.

TECHNICAL VISITS

No personal protective equipment is required for these technical visits. Transport to and from Delft (pick up at the Aula) for these visits will be provided, and technical visits will end around 14:00. Delegates are able to bring luggage to the Aula to be taken along on the bus, and delegates are able to leave the visits and continue their journey independently at the end of the visits or return on the bus to Delft. Both venues are within walking distance of a railway station with direct connections to Schiphol airport. Further details will be provided with joining instructions.

VENUE

ASPECT 2019 will be hosted by the Delft University of Technology in the town of Delft in The Netherlands. Delft is easily accessible by train from Rotterdam and Amsterdam. Directions to evening socials will be provided for delegates in advance of the event, these are all within Delft. Travel to and from Technical Visits will be provided from Delft.

ACCOMMODATION

Delft has a range of accommodation to suit all tastes and budgets, so no group reservation has been made, but a range of recommended hotels can be found at aspect2019.nl.

TOURISM

For more information about what Delft has to offer during your stay, activities to consider whilst in the country or more details on the cultural offerings www.delft.com can be a good place to start.

SPONSORSHIP

We have a range of sponsorship packages available for ASPECT 2019, if your company is interested in sponsoring then please email us at sponsors@aspect2019.nl for further details.

SOCIAL EVENTS

All social events are included for delegates of the main ASPECT conference. For delegates wishing to attend the Introductory Day only then the Informal Social on Tuesday 22 October is included in that rate. Extra tickets can be purchased for all socials to allow delegates to bring guests – please see the booking site for further details.

- Tuesday 22 October: After the Introductory Day, a networking drinks reception will be held. We welcome delegates from the Introductory Day to join to continue discussions from the day's papers, along with delegates from the main ASPECT conference to join for networking.
- Wednesday 23 October: The ASPECT Conference Dinner will be held at Delft's Nieuwe Kerk.
- Thursday 24 October: An informal social will be held after the formal close of ASPECT 2019 at the Lijm & Cultuur Creative Laboratory giving delegates the chance to network over drinks and food. We welcome all ASPECT delegates to join this event, whether attending the technical visits the day after or not.

DELFT UNIVERSITY OF TECHNOLOGY

Delft University of Technology (TU Delft) was founded in 1842 and has over 2,500 staff members and 25,000 students divided over eight faculties. It is one of the top ranked world universities, including the field of Transportation Science & Technology. Within TU Delft, the Digital Rail Traffic Lab is dedicated to resilient railway traffic systems.

IRSE NETHERLANDS SECTION

In 2007, the IRSE international convention was held in the Netherlands. This event was the basis for launching the IRSE Dutch section. Thanks to a devoted committee and long-term support from IRSE HQ, the Netherlands section has grown from 70 to 230 members in 10 years, a milestone we celebrated in 2018. Our mission is to bring people and knowledge together in the fields of railway signalling, control, and telecoms. One of the ways we do this is by arranging around 10 events each year, which consist of presentations and discussions on a specific topic, technical site visits, and social events.

EXCHANGE RATES

For reference, the exchange rates for Euros (correct on 9 October 2019 according to www.xe.com) are:
1 EUR = 1.61 AUD = 1.08 USD = 0.89 GBP.