COVID-19 related

Research Activities

Lab Smart Public Transport

TU Delft

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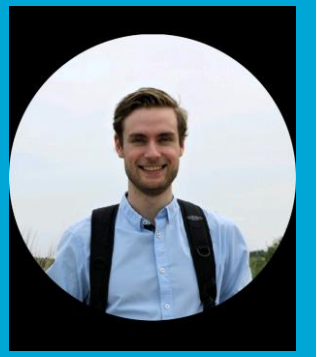
Lab webinar, July 1 2020

Embed time elapse



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State-of-affairs and an outlook

Openbaar vervoer en deelmobiliteit in en na de coronacrisis

Als één modaliteit te lijden heeft onder de coronacrisis, dan is het wel het openbaar vervoer. Want hoe moet dat, veilig afstand houden in de trein, tram, metro of bus? Welke maatregelen zijn nodig? En wat zal het effect zijn op deelmobiliteit en Mobility as a Service?

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How to make PT safe and health? Synthesis and research challenges

COVID-19 and public transportation: current assessment, prospects and research needs

- **COVID-19 effects and new rules for the use of PT**
  - The emergence of physical distancing
  - The use of face masks
  - Hygiene, sanitization and ventilation
- **Economic and social effects of the COVID-19 outbreak in PT**
  - Financial adversity
  - Social equity
  - Sustainable mobility
- **The way forward: Policy directions and a research agenda**
  - Public health considerations in public transportation planning
  - Accommodating physical distancing regulations

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Travel patterns survey

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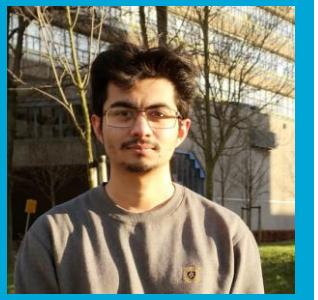
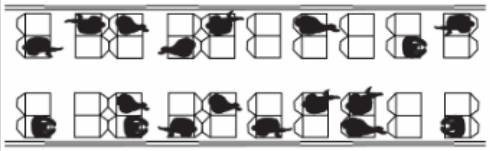
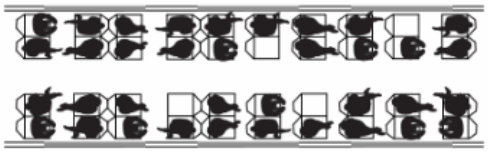
▲ Een reiziger met een mondkapje op station Den Haag Centraal. De NS heeft opgeroepen om niet met de trein te reizen als dit niet strikt noodzakelijk is om zo de verspreiding van het coronavirus tegen te gaan. © ANP

NS gaat testen of reiziger zich vooraf wil aanmelden voor treinreis

NS en de TU Delft starten een groot onderzoek naar de gevolgen van de coronacrisis op het reisgedrag van Nederlanders. Ook start er een proef met looproutes en stickers in treinen en wordt de bereidheid van reizigers zich vooraf aan te melden gepeild.

Trade-offs between crowding and perceived risk



	Train Option 1	Train Option 2
On-board crowding after everyone has boarded but before you board		
Waiting time on the platform	**25 minutes**	**12 minutes**
Infection rate	**1 person per 1000 is infected** (the current infection rate is about 1 person per 1000; on 15 april it was 4,3 persons per 1000)	
Travel time	**40 minutes**	

Rank the following options with the most preferred option at the top.

- Train Option 1
- Train Option 2
- I will not make this trip by train

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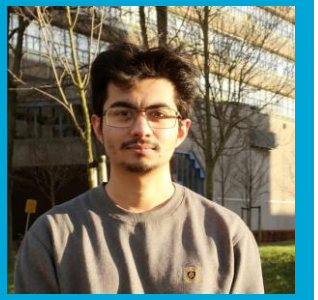
Trade-offs between crowding and perceived risk



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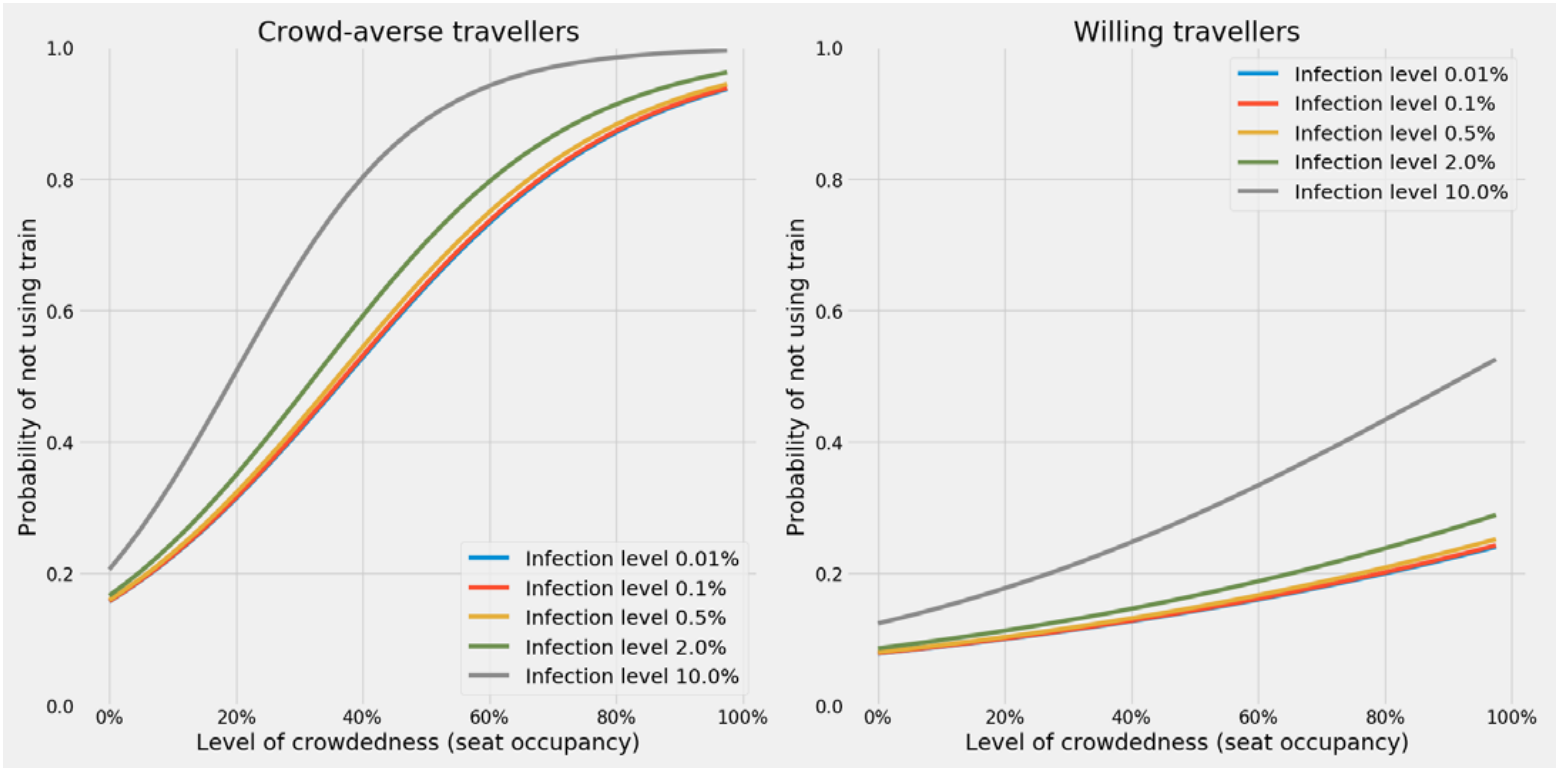

Smart cards and contact graphs

Re-designing service capacity

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Re-designing service capacity

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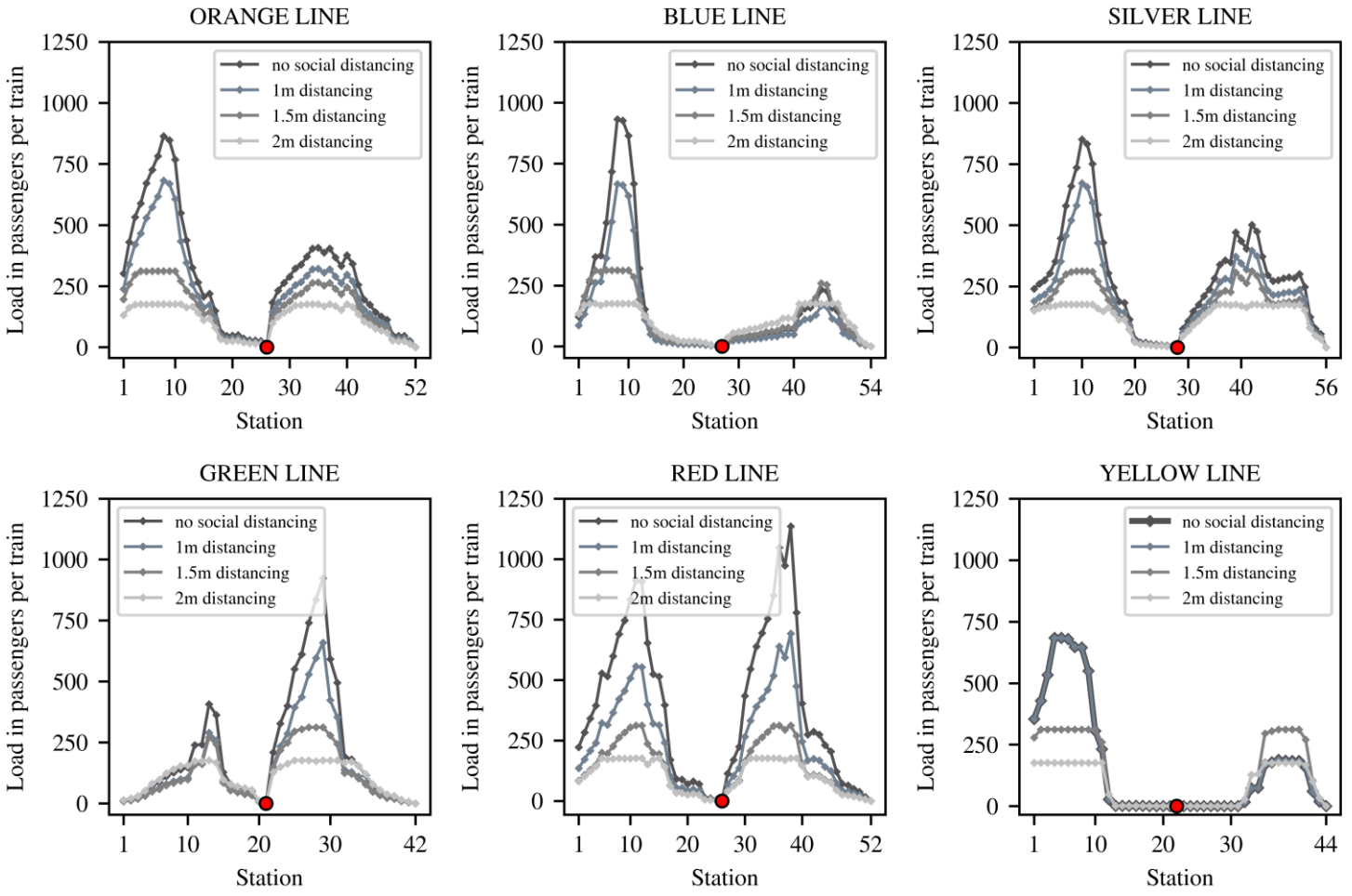

Spreading in ride-pooling

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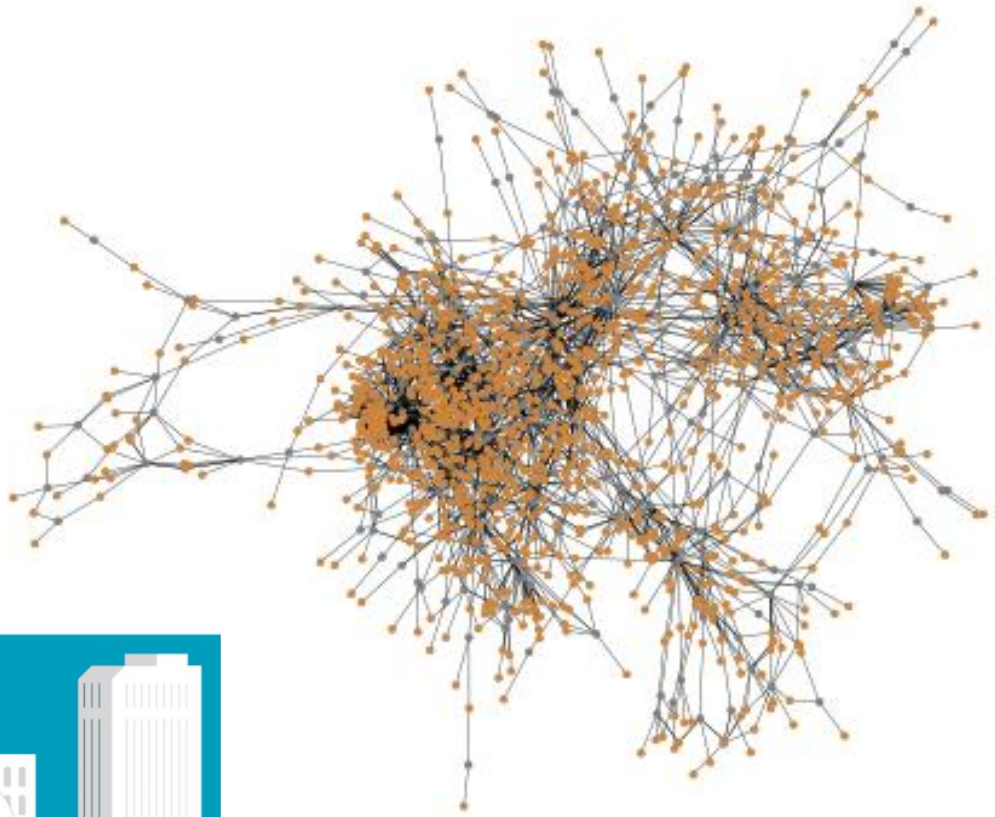

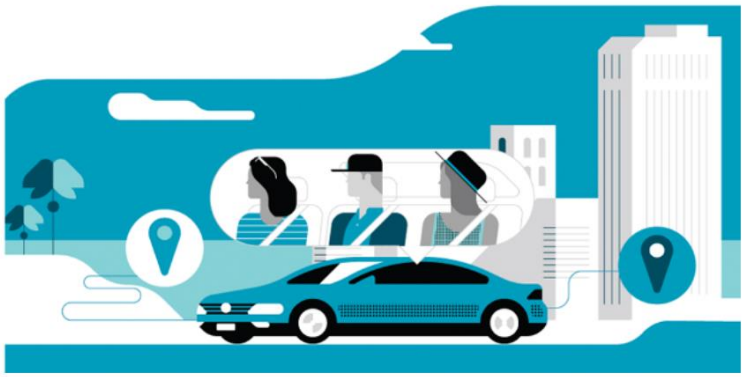

When sharing is not always caring: On the spreading processes in ride-sharing networks

Published on March 24, 2020

Other on-going works

- Students avoiding the peak hours
- Bike-sharing usage and capacity management (NS, Milan)
- Relations between supply and demand reduction

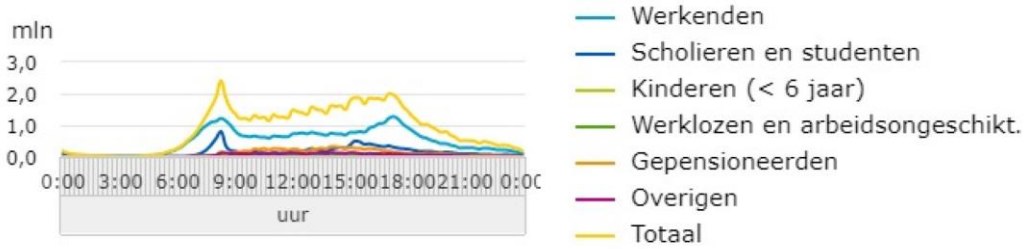

Figure 2.1: Day pattern number of movements on an average workday (CBS, 2016a)

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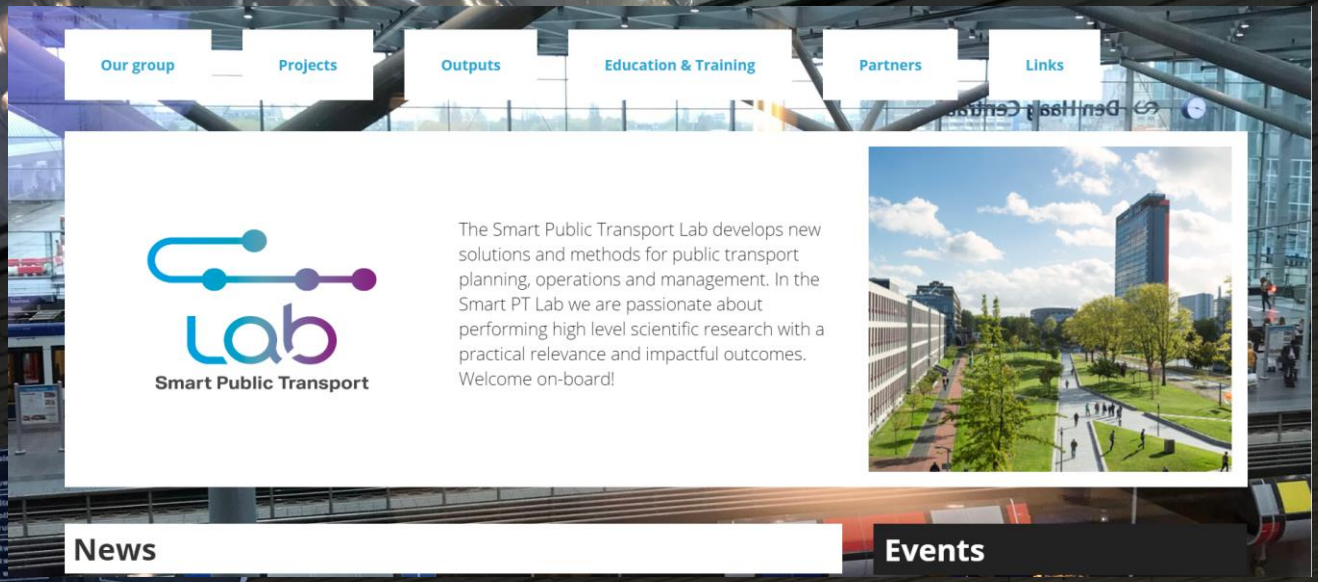

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Panchamy Krishnakumari

Virus spreading in public transport networks - the alarming consequences of the business as usual scenario

Danique Ton

The impact of the ‘intelligent lockdown’ on experiences and expectations of train travelers in the Netherlands

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