# IDENTIFYING MOVEMENT PATTERNS

**from large scale Wifi-based location data**
A case study of the TU Delft

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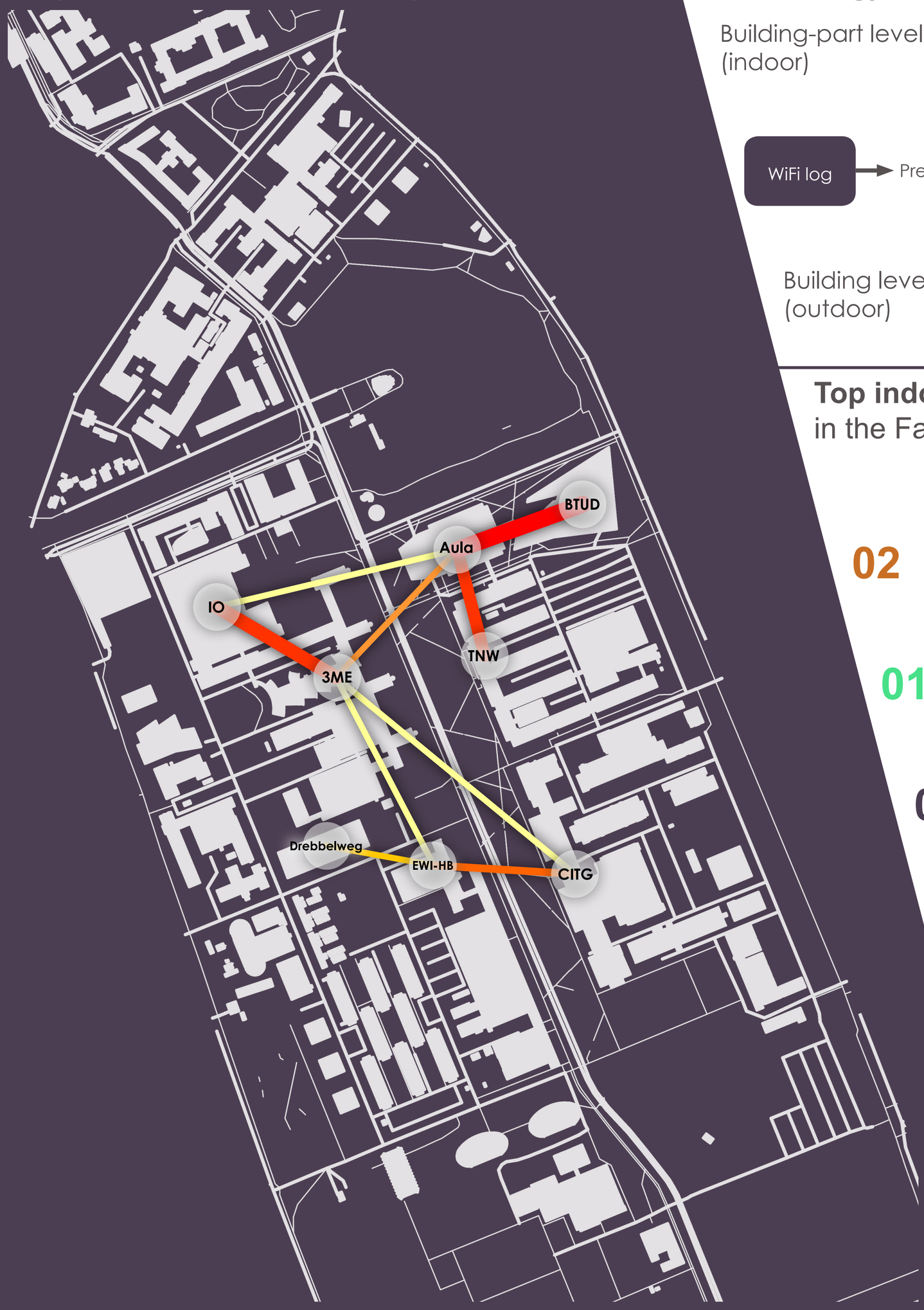
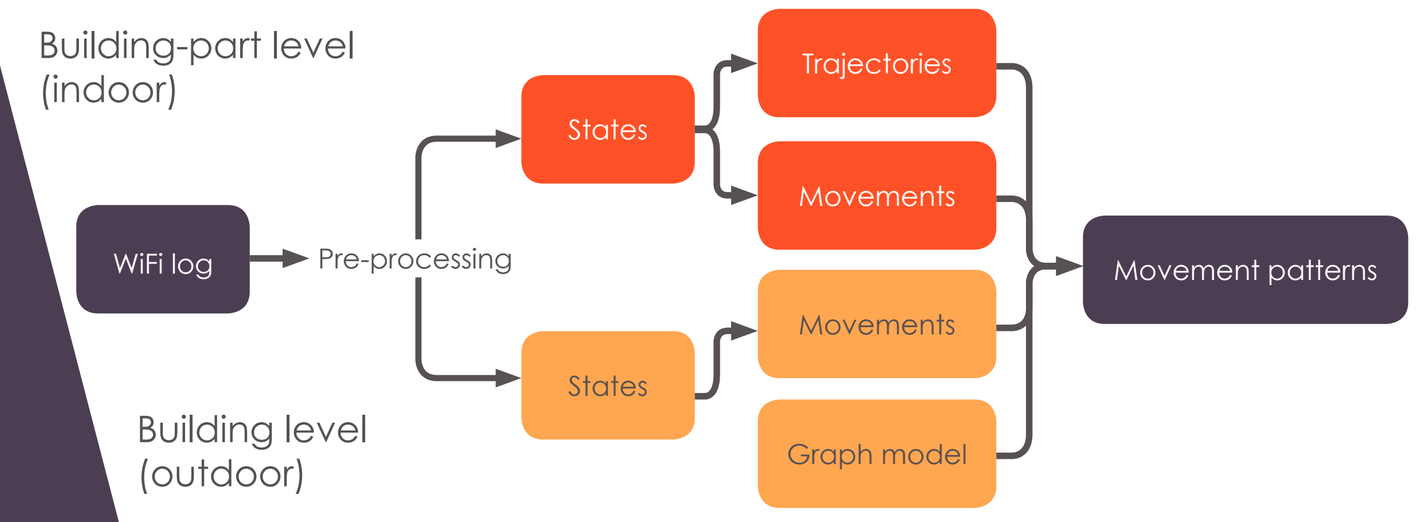
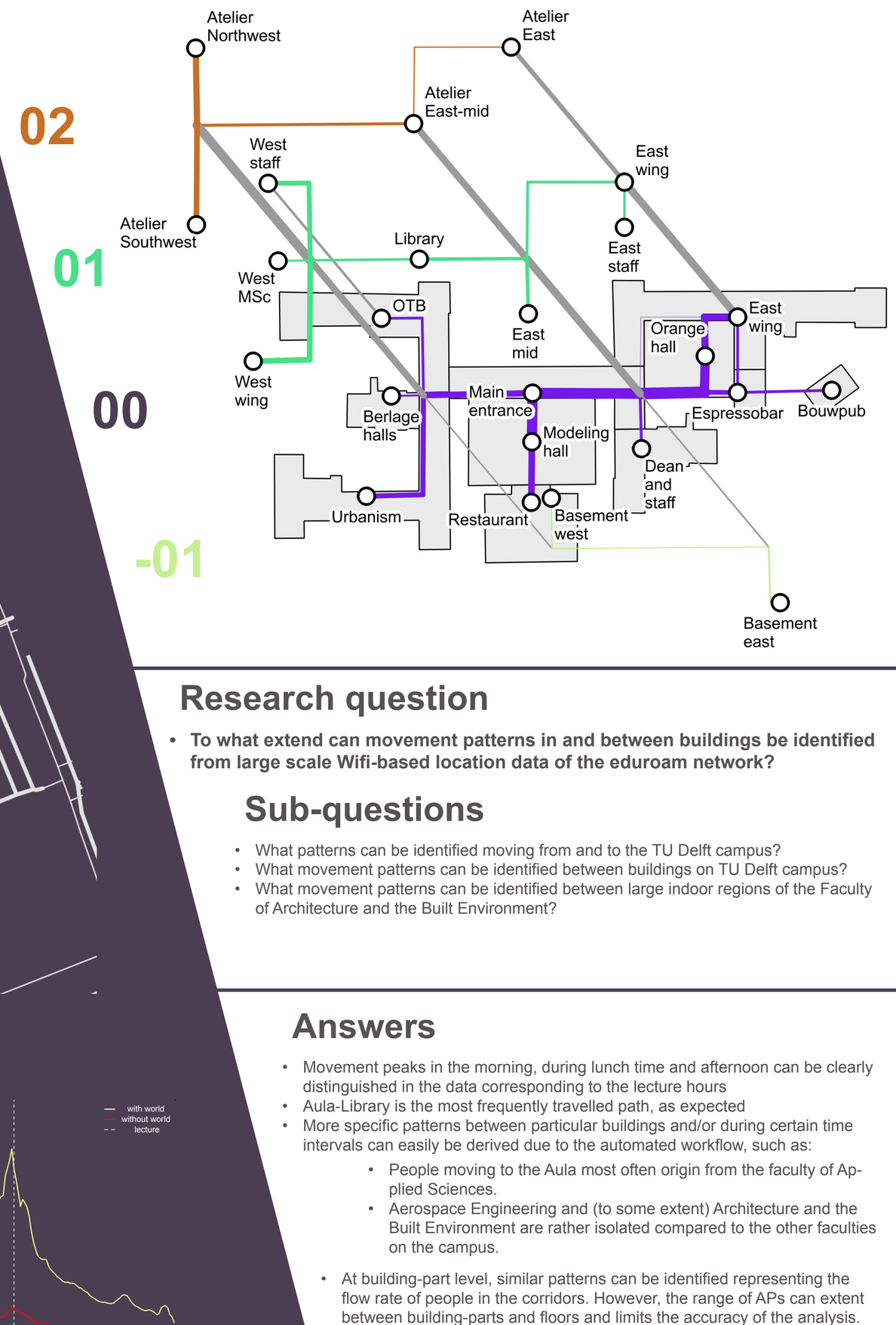
## Top movements on the campus




## Methodology




## Top indoor movement
in the Faculty of Architecure and the Built Environment



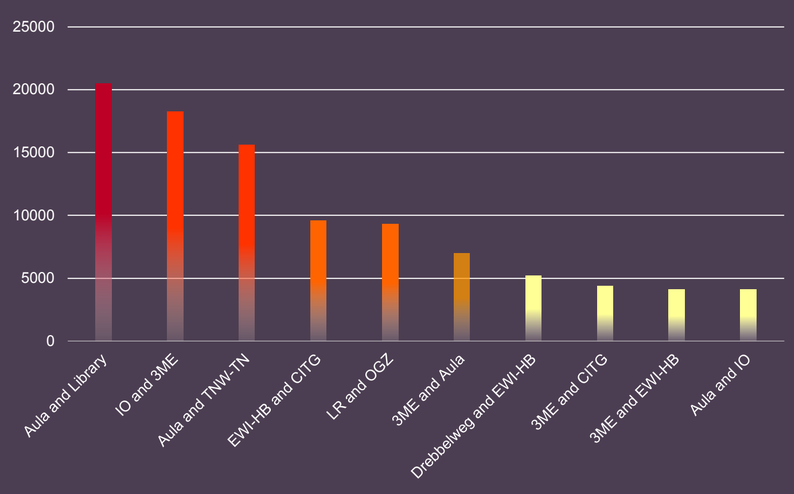

## Research question

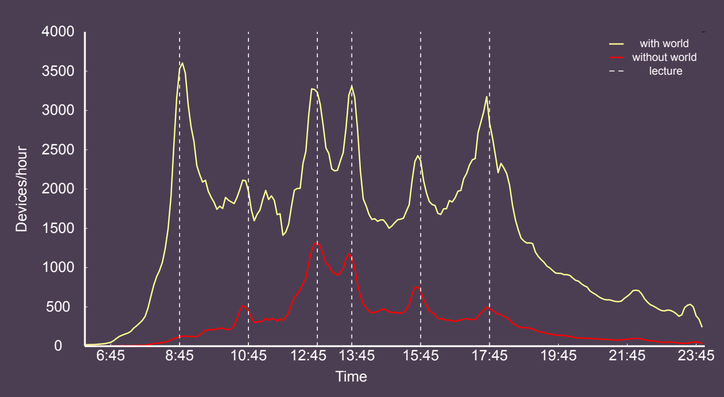
- **To what extend can movement patterns in and between buildings be identified from large scale Wifi-based location data of the eduroam network?**

## Sub-questions

- What patterns can be identified moving from and to the TU Delft campus?
- What movement patterns can be identified between buildings on TU Delft campus?
- What movement patterns can be identified between large indoor regions of the Faculty of Architecture and the Built Environment?

## Movement on weekdays




## Answers

- Movement peaks in the morning, during lunch time and afternoon can be clearly distinguished in the data corresponding to the lecture hours
- Aula-Library is the most frequently travelled path, as expected
- More specific patterns between particular buildings and/or during certain time intervals can easily be derived due to the automated workflow, such as:
  - People moving to the Aula most often origin from the faculty of Applied Sciences.
  - Aerospace Engineering and (to some extent) Architecture and the Built Environment are rather isolated compared to the other faculties on the campus.
- At building-part level, similar patterns can be identified representing the flow rate of people in the corridors. However, the range of APs can extent between building-parts and floors and limits the accuracy of the analysis.

Geomatics Synthesis Project

TU Delft