

Analyzing Crowdsourced Indoor Route Descriptions to Facilitate Indoor Navigation

You are kindly invited to the public defense of
Zhicheng Zhan

Tuesday, June 25 at 10:00 (Brussels time)

UGent, Campus Sterre, Krijgslaan281, 9000 Ghent
Lecture room 2.4 at S8 building

Or follow the livestream via:

<https://tinyurl.com/5xtazc2h>

After the defense, you are welcome to attend the reception. Please confirm your attendance before 18th June 2024 by email: zhicheng.zhan@ugent.be



Summary

Indoor navigation poses a major challenge for people navigating through complex buildings. Currently, it is difficult for indoor navigation applications to provide route descriptions that match human perceptions of indoor environments, which can lead to high cognitive load or failed wayfinding for users while navigating. Crowdsourced indoor route descriptions that incorporate human perceptions of indoor routes have the potential value to improve indoor navigation. This study investigated computational methods for analyzing crowdsourced human indoor route descriptions to facilitate the automatic generation of human-perceived indoor route guidance. Three studies were conducted to investigate the alignment, visualization and aggregation of indoor route descriptions. These studies laid the foundation for automatic generation of human-perceived indoor route guidance for indoor navigation systems and improved the usability of SoleWay, a crowdsourced indoor navigation system.

About the Author

Zhicheng Zhan was born in 1994 in Jiangxi Province, China. He completed his B.Sc. degree in Geographic Information System from Beijing Normal University in 2016, followed by his M.Sc. degree in Cartography and Geographic Information Science from Beijing Normal University in 2019. In September 2019, he was awarded a scholarship by the China Scholarship Council to pursue a PhD degree and joined the CartoGIS research group at the Department of Geography, Ghent University as a PhD student. His main research focus is analyzing crowdsourced human indoor route descriptions for improving indoor navigation. This research involves geotext processing, geographic information visualization and spatial cognition. During his PhD program, he published two papers as first author in peer-reviewed journals.

Venue

Lecture room 2.4 at S8 building,
Ghent University, Campus Sterre,
Krijgslaan281, 9000 Ghent



Scan QR code below for indoor
route guidance



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