

NEWSLETTER

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RESEARCH CENTRE FOR TERRITORY TRANSPORTS AND ENVIRONMENT

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RECENT PUBLICATIONS

- Altieri, M, Raskova, E, Costa, Á (2022) 'Differences in railway strategies: The empirical case of private, public-owned, and third-sector railways in Tokyo', *Research in Transportation Business & Management*, 100787. DOI: 10.1016/j.rtbm.2022.100787
- Alves, C, Rienda IC, Vicente, A, Vicente, E, Gonçalves, C, Candeias, C, Rocha, F, Lucarelli, F, Pazzi, G, Kováts, N, Hubai, K, Pio, C, Tchepel, O (2021) 'Morphological properties, chemical composition, cancer risks and toxicological potential of airborne particles from traffic and urban background sites', *Atmospheric Research* 264, 105837. DOI: 10.1016/j.atmosres.2021.105837
- Biolini, S, Antunes, AP, Cattaneo, M, Malighetti, P, Paleari, S (2021) 'Integrated flight scheduling and fleet assignment with improved supply-demand interactions', *Transportation Research Part B: Methodological* 149, 162-180. DOI: 10.1016/j.trb.2021.05.001
- Biolini, S, Jacquillat, A, Cattaneo, M, Antunes, AP (2021) 'Airline Network Planning: Mixed-integer non-convex optimization with demand-supply interactions', *Transportation Research Part B: Methodological* 154, 100-124. DOI: 10.1016/j.trb.2021.09.003
- Costa, Á, Cruz, CO, Sarmento, JM, Faria e Sousa, V (2022) 'Impact of alternative concession models on the economic efficiency of road concessions', *Case Studies on Transport Policy*. DOI: 10.1016/j.cstp.2022.03.016
- Costa, Á, Cruz, CO, Sarmento, JM, Faria e Sousa, V, 'Empirical Analysis of the Effects of Ownership Model (Public vs. Private) on the Efficiency of Urban Rail Firms', *Sustainability* 13 (23), 13346. DOI: 10.3390/su132313346
- Delgado, EJ, Barbosa-Póvoa, AP, Antunes, AP (2021) 'Intermodal Terminal Planning under Decentralized Management: Optimization Model for Rail-Road Terminals and Application to Portugal', *Future Transportation* 1(3), 533-558. DOI: 10.3390/futuretransp1030028
- Frade, I, Ribeiro, A, Dias, D, Tchepel, O (2021) 'Bike sharing systems implementation impact on emissions, for cyclist preferred routes in urban areas', *International Journal of Sustainable Transportation*. DOI: 10.1080/15568318.2021.1949076
- Golalikhani, M, Oliveira, BB, Carravilla, MA, Oliveira, JF, Antunes, AP (2021) 'Carsharing: a review of academic literature and business practices toward an integrated decision-support framework', *Transportation Research Part E: Logistics and Transportation Review* 149, 102280. DOI: 10.1016/j.tre.2021.102280

EDITORIAL

Dear Reader,

This is likely to be my last editorial as CITTA Director, as my date of retirement is approaching.

Still, it's more important to think about the future, and the near future in particular, than to attempt to make now a critical balance of the past, which wouldn't be able to change or correct anything in that very past. We all know that some distance is always required to make such critical exercises worthwhile. But that distance is not yet there. This is not to say that I won't always be available to share my thoughts or management experience with my fellow colleagues and researchers if they want this and find it useful.

FCT has recently announced that the next evaluation exercise of all R&D centres will start in the final trimester of this year. The panels' visits to the centres are scheduled for mid-2023. To my knowledge this is the first time FCT starts an evaluation process well before the end of the on-going financial cycle. The measure is obviously positive and should be applauded. It will allow, in principle, a smoother and continual transition to the next financial cycle. Having said that, it took me a bit by surprise, I must confess.

In these circumstances, the current CITTA board should step down as soon as possible, in order to open the subsequent electoral process that will legitimate the new management team. Surely, one of the new board's main tasks, in the short run, will be the careful preparation of the centre's pluriannual evaluation application. I'm totally confident that within CITTA's Scientific Council a new team will emerge in a natural way, combining experience with innovation and the fair representation of the different interests, and of the different institutions involved, which, all together, are the key ingredients for a smooth and auspicious transition.

The energy-climate crisis, the covid years, and now this unthinkable and outrageous, to say the least, war in Europe, targeting entire cities, food and production chains, have been showing to a wider range of different publics how dependent we are on our natural and built environment. Our cities and our transport systems are now part of the day-to-day news and, for the first time, at the centre stage of the political debate. For good and bad reasons, the societal value of research on spatial planning and transports has never been so high and is likely to remain so in the coming years, if not decades. Surely, we are going to see a continuous flow of new and renewed research themes and topics, able to attract financial resources to sustain and develop further a research centre like CITTA.

I would like to take this opportunity to deeply thank my colleagues of the management board for all the support I received, namely: from António Pais Antunes, the vice-director, who made the collaboration with Coimbra University and the Coimbra researchers be so pleasurable and sound so easy and cooperative; from Paulo Conceição, the CITTA Secretary, who was always there with his quiet efficiency and intelligence; from Isabel Vazquez with her critical focus and friendly eye; from António Couto with his reflexive and thoughtful posture; and, finally, from Joana Bailão, our Secretary, with her joyful and resourceful attitude, always.

My most sincere thanks also go to all my CITTA colleagues and senior researchers, and more specifically to all those working under the umbrella of the RG1, to Sílvia Sousa and Vitor Oliveira for producing this newsletter, and to my past and present PhD students, that made this adventure of creating and maturing an R&D Centre in the fields of spatial planning and transports such a challenging and gratifying venture.

Paulo Pinho

RECENT PUBLICATIONS

Golalikhani, M, Oliveira, BB, Carravilla, MA, Oliveira, JF, Antunes, AP (2021) 'Carsharing: a review of academic literature and business practices toward an integrated decision-support framework', *Transportation Research Part E: Logistics and Transportation Review* 149, 102280. DOI: 10.1016/j.tre.2021.102280

Gonçalves, C, Rienda, IC, Pina, N, Gama, C, Nunes, T, Tchepel, O, Alves, C (2021) 'PM10-bound sugars: chemical composition, sources and seasonal variations', *Atmosphere* 12(2), 194. DOI: 10.3390/atmos12020194

Hasselwander, M, Bigotte, JF, Antunes, AP, Sigua, RG (2022) 'Towards sustainable transport in developing countries: preliminary findings on the demand for mobility-as-a-service (MaaS) in Metro Manila', *Transportation Research Part A: Policy and Practice* 155, 501-518. DOI: 10.1016/j.tra.2021.11.024

Hasselwander, M, Bigotte, JF, Fonseca, M (2021) 'Understanding platform internationalisation to predict the diffusion of new mobility services', *Research in Transportation Business & Management*, 100765. DOI: 10.1016/j.rtbm.2021.100765

Hasselwander, M, Tamagusko, T, Bigotte, JF, Ferreira, A, Mejia, A, Ferrante, EJS, 'Building back better: The COVID-19 pandemic and transport policy implications for a developing megacity'. *Sustainable Cities and Society* 69, 102864. DOI: 10.1016/j.scs.2021.102864

Ibraeva, A, Van Wee, B, Correia, G, Antunes, AP (2021) 'Longitudinal macro-analysis of car use changes resulting from a TOD-type project: the case of Metro do Porto (Portugal)', *Journal of Transport Geography* 92, 103036. DOI: 10.1016/j.jtrangeo.2021.103036

Januário, JF, Costa, Á, Cruz, CO, Sarmento, JM, Faria e Sousa, V (2021) 'Transport infrastructure, accessibility, and spillover effects: An empirical analysis of the Portuguese real estate market from 2000 to 2018', *Research in Transportation Economics* 90, 101130. DOI: 10.1016/j.retrec.2021.101130

Jorge, D, Antunes, AP, Ramos, TRP, Barbosa-Póvoa AP (2022) 'A Hybrid Metaheuristic for Smart Waste Collection Problems with Workload Concerns', *Computers and Operations Research* 137, 105518. DOI: 10.1016/j.cor.2021.105518

Jorge, D, Ribeiro, NA, Antunes, AP (2021) 'Towards a decision-support tool for airport slot allocation: Application to Guarulhos (Sao Paulo, Brazil)', *Journal of Air Transport Management* 93, 102048. DOI: 10.1016/j.jairtraman.2021.102048

Luz, LM, Antunes, AP, Caldeirinha, V, Caballe-Valls, J, Garcia-Alonso, L (2021) 'Cruise destination characteristics and performance: Application of a concept model to the North Atlantic Islands of Macaronesia', *Research in Transportation Business & Management*. DOI: 10.1016/j.rtbm.2021.100747

Pinto, N, Antunes, AP, Roca, J (2021) 'A cellular automata model for integrated simulation of land use and transport interactions', *International Journal of Geo-Information* 10, 149. DOI: 10.3390/ijgi10030149

RESEARCH GROUP 3

Despite the perturbations provoked by the covid-19 pandemic on the activity of CITTA's Transport Analysis and Planning (TAP) group, we were able to continue the research projects and PhD theses where we were involved in without any noticeable decline in our usual performance levels, as well as to launch some new ones. In particular, I highlight the completion of projects ASAP (Airport Slot Allocation Processes: Advances in Current Guidelines and Practices) and Driving2Driverless (Urban and Regional Transport Management under a Scenario of Shared Electric Fully Automated Mobility) already in 2022, and the start of project STREETS4ALL (Dynamic and Equitable Reallocation of Urban Street Space). Recently, two PhD theses were submitted by junior members of the group (Anna Ibraeva and Melissa Gama), respectively focusing on transit-oriented development and flood emergency logistics. They will be defended in the next weeks. Four others are expected to be finished until the end of this year.

Based on these projects and theses, as well as on several other activities, 22 articles co-authored by TAP group members were published in international peer-reviewed journals since the beginning of 2021. This means that our publication rate keeps being remarkable, particularly taking into account that the group currently integrates only seven researchers holding a PhD. An important aspect to emphasize is that a significant part of the articles appear on leading Transport journals, such as *Transportation Research A, B, C and E, Journal of Transport Geography, International Journal of Sustainable Transportation or Research in Transportation Economics*.

Just by looking into the titles of the articles, it is possible to understand what are the main research themes pursued by the TAP group. Urban transport and mobility certainly have enticed a great deal of attention, as made clear by our work on transit-oriented development, car- and bike-sharing, mobility-as-a-service and the transport impacts of covid-19 in megacities. However, in recent years, interurban transport became increasingly more present in the group (and, indeed, is now dominant). From aviation (airlines and airports) to rail, road and even maritime transport, all modes have been under research in studies that have addressed infrastructure and/or service-related problems.

At this point, it is not possible to ascertain which stream (urban or interurban transport) will prevail in the long term. In recent years, the search for new, more sustainable urban transport solutions has certainly benefited from better funding opportunities and has motivated strong efforts from the research community. But interurban transport continues to pose great challenges. This is particularly true in Portugal, where key decisions concerning our airports and railways remain to be made and are critical for the development of the country.

António Pais Antunes