

# Michael Szell

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## Publications

53. A. Lonardi, M. Szell, C. De Bacco  
**Cohesive urban bicycle infrastructure design through optimal transport routing in multilayer networks**, *arXiv:2405.02052* (2024, submitted)
52. H. Wolf, A.R. Vierø, M. Szell  
**CoolWalks: Assessing the potential of shaded routing for active mobility in urban street networks**, *arXiv:2405.01225* (2024, submitted)
51. L.M. Aiello, A. Vybornova, S. Juhász, M. Szell, E. Bokányi  
**Urban highways are barriers to social ties**, *arXiv:2404.11596* (2024, submitted)
50. M. Coscia, C. Borgelt, M. Szell  
**Fast Multiplex Graph Association Rules for Link Prediction**, *arXiv:2211.12094* (2022, submitted)
49. L. Alessandretti, M. Szell  
**Urban Mobility**, *Compendium of Urban Complexity*, *arXiv:2211.00355*, (2022, submitted)
48. C.M. Büth, A. Vybornova, M. Szell  
**superblockify: A Python Package for Automated Generation, Visualization, and Analysis of Potential Superblocks in Cities**, *Journal of Open Source Software* 9(100), 6798 (2024)
47. A.R. Vierø, A. Vybornova, M. Szell  
**How Good Is Open Bicycle Network Data? A Countrywide Case Study of Denmark**, *Geographical Analysis* (2024, in print)
46. D. Rhoads, C. Rames, A. Solé-Ribalta, M.C. González, M. Szell, J. Borge-Holthoefer  
**Sidewalk networks: Review and outlook**, *Computers, Environment and Urban Systems* 106, 102031 (2023)
45. A.R. Vierø, A. Vybornova, M. Szell  
**BikeDNA: A Tool for Bicycle Infrastructure Data & Network Assessment**, *Environment and Planning B* 51(2), 512–528 (2024)
44. A. Battiston, L. Napoli, P. Bajardi, A. Panisson, A. Perotti, M. Szell, R. Schifanella  
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43. S.M. Breum, B. Kostic, M. Szell  
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42. P. Folco, L. Gauvin, M. Tizzoni, M. Szell  
**Data-driven micromobility network planning for demand and safety**, *Environment and Planning B* 50(8), 2087–2102 (2023)
41. L. Alessandretti, L.G. Natera Oroczo, M. Saberi, M. Szell, F. Battiston  
**Multimodal urban mobility and multilayer transport networks**, *Environment and Planning B* 50(8), 2038–2070 (2023)
40. M. Klanjčić, L. Gauvin, M. Tizzoni, M. Szell  
**Identifying urban features for vulnerable road user safety in Europe**, *EPJ Data Science* 11, 27 (2022)
39. M. Szell, S. Mimar, T. Perlman, G. Ghoshal, R. Sinatra  
**Growing urban bicycle networks**, *Scientific Reports* 12, 6765 (2022)

38. A. Vybornova, T. Cunha, A. Gühnemann, M. Szell  
**Automated Detection of Missing Links in Bicycle Networks**, *Geographical Analysis* 55(2), 239–267 (2023)
37. M. Coscia, M. Szell  
**Multiplex Graph Association Rules for Link Prediction**, *Proceedings of the International Conference on Web and Social Media (ICWSM)* 15(1), 129–139 (2021)
36. M. Schläpfer, L. Dong, K. O’Keeffe, P. Santi, M. Szell, H. Salat, S. Anklesaria, M. Vazifeh, C. Ratti, G.B. West  
**The universal visitation law of human mobility**, *Nature* 593(7860), 522–527 (2021)
35. L.G. Natera Orozco, F. Battiston, G. Iñiguez, M. Szell  
**Data-driven strategies for optimal bicycle network growth**, *Royal Society Open Science* 7:201130 (2020)
34. L.G. Natera Orozco, F. Battiston, G. Iñiguez, M. Szell  
**Extracting the multimodal fingerprint of urban transportation networks**, *Transport Findings* 13171 (2020)
33. F. Battiston, F. Musciotto, D. Wang, A.-L. Barabási, M. Szell, R. Sinatra  
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32. B. Resch, M. Szell  
**Human-Centric Data Science for Urban Studies**, *ISPRS International Journal of Geo-Information* 8, 584 (2019)
31. M. Szell, Y. Ma, R. Sinatra  
**A Nobel opportunity for interdisciplinarity**, *Nature Physics* 14, 1075–1078 (2018)
30. M. Szell  
**Crowdsourced quantification and visualization of urban mobility space inequality**, *Urban Planning* 3, 1–20 (2018)
29. S. Grauwin, M. Szell, S. Sobolevsky, P. Hövel, F. Simini, M. Vanhoof, Z. Smoreda, A.-L. Barabási, C. Ratti  
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28. Y. Holovatch, O. Mryglod, M. Szell, S. Thurner  
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25. R. Sinatra, P. Deville, M. Szell, D. Wang, A.-L. Barabási  
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24. O. Sagarra, M. Szell, P. Santi, A. Diaz-Guilera, C. Ratti  
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23. M. Szell, P. Santi, C. Ratti  
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22. M. Szell, R. Sinatra  
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21. O. Mryglod, B. Fuchs, M. Szell, Y. Holovatch, S. Thurner  
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18. P. Santi, G. Resta, M. Szell, S. Sobolevsky, S. Strogatz, C. Ratti  
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12. S. Thurner, P. Klimek, M. Szell, G. Duftschmid, G. Endel, A. Kautzky-Willer, D. Kasper  
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11. S. Thurner, P. Klimek, M. Szell, G. Duftschmid, G. Endel, A. Kautzky-Willer, D. Kasper  
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10. M. Szell, S. Thurner  
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9. M. Szell, R. Sinatra, G. Petri, S. Thurner, V. Latora  
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8. M. Szell, S. Thurner  
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7. S. Thurner, M. Szell, R. Sinatra  
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6. M. Szell  
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5. S. Thurner, M. Szell (Eds.)  
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4. M. Szell, S. Thurner  
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3. M. Szell, R. Lambiotte, S. Thurner  
**Multirelational organization of large-scale social networks in an online world**, *Proceedings of the National Academy of Sciences* 107, 13636–13641 (2010)

2. M. Szell  
**Finite Differenzen Verfahren zur numerischen Lawinensimulation**, *Diploma thesis*, Vienna University of Technology (2007)
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