

A multi-dimensional percolation approach to characterize sustainable mega-city regions

J. Raimbault^{1,2,*}

`juste.raimbault@polytechnique.edu`

¹Complex Systems Institute, Paris, UPS CNRS 3611 ISC-PIF

²UMR CNRS 8504 Géographie-cités

MARAMI 2018

Avignon

October 18th 2018

Networks and territories

Characterizing Road networks

Network percolation

Multidimensional percolation

→

→

Research objective :

Empirical data and variables

Experience plan

Results: endogenous mega-regions

Characterizing sustainability

Results: Pareto fronts

Implications

→

→

Developments

→

→

→

→

Related works

Raimbault, J. (2018). Calibration of a density-based model of urban morphogenesis. PloS one, 13(9), e0203516.

Raimbault, J. (2018). An Urban Morphogenesis Model Capturing Interactions between Networks and Territories. *Forthcoming in Mathematics or Urban Morphogenesis*. arXiv:1805.05195.

Raimbault, J. (2018). Caractérisation et modélisation de la co-évolution des réseaux de transport et des territoires (Doctoral dissertation, Université Paris 7 Denis Diderot). <https://halshs.archives-ouvertes.fr/tel-01857741>

Open repository at <https://github.com/JusteRaimbault/UrbanMorphology>

Acknowledgments: thanks to the *EGI* for access to the infrastructure.

Reserve Slides

