

Accepted Manuscript

Estimating the effect of the reorganization of interactions on the adaptability of species to changing environments

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PII: S0022-5193(17)30479-4
DOI: [10.1016/j.jtbi.2017.10.016](https://doi.org/10.1016/j.jtbi.2017.10.016)
Reference: YJTBI 9240



To appear in: *Journal of Theoretical Biology*

Received date: 31 May 2017
Revised date: 9 October 2017
Accepted date: 15 October 2017

Please cite this article as: Simone Cenci, Ana Montero-Castaño, Serguei Saavedra, Estimating the effect of the reorganization of interactions on the adaptability of species to changing environments, *Journal of Theoretical Biology* (2017), doi: [10.1016/j.jtbi.2017.10.016](https://doi.org/10.1016/j.jtbi.2017.10.016)

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Highlights

- We develop a theoretical framework to study how the reorganization of interactions among a group of species within a community can facilitate its adaptation to novel environmental conditions.
- Following our theoretical framework, we introduce the concept of adaptation space of a group of species: the set of environmental conditions that can be made compatible with its persistence through the reorganization of interactions among species within the group.
- We find that the interactions in the community outside a group can act as structural constraints and be used to quantitatively compare the size of the adaptation space among different groups of species.
- We validate our framework on empirical data.

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