

# Spatial sensitivity of the evolutionary swarm chemistry model

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# Evolution and space

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# Spatial sensitivity of social simulation models

# Research objective

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**Contribution:**

# Evolutionary swarm chemistry settings

# Spatial generators

*Application of the **PSE diversity search algorithm** [Chérel et al., 2015] to obtain the feasible space.*

# Model implementation

Model implemented in scala: <https://github.com/JusteRaimbault/SwarmChemistrySpatialSensitivity>

Integrated into the OpenMOLE platform for **model exploration and validation** [Reuillon et al., 2013]





# Indicators and parametrisation

# Results: feasible spaces

# Results: statistical analysis

**Main results:**

**Next steps:**

**Conclusion:**



Chérel, G., Cottineau, C., and Reuillon, R. (2015).

Beyond corroboration: Strengthening model validation by looking for unexpected patterns.

*PloS one*, 10(9):e0138212.



Reuillon, R., Leclaire, M., and Rey-Coyrehourcq, S. (2013).

Openmole, a workflow engine specifically tailored for the distributed exploration of simulation models.

*Future Generation Computer Systems*, 29(8):1981–1990.