

# Inductively generated formal topologies and their applications

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By using some simple applications like basic guidelines (see [1] and [2]) we recall the notions of formal topology [3] and inductively generated formal topology [4,5], study their properties [6], introduce new structures [7] and propose a constructive approach to the definition of the cover relation and the positivity predicate based on a game-semantical interpretation [5].

## References

- [1] Boniolo G., Valentini S., Vagueness, Kant and Topology, to appear
- [2] Andreatta D., Topologia formale e motori di ricerca, tesi di laurea (relatore Valentini S.), lavoro nell'ambito del progetto Miur 40/di Marco Gori "Intelligent techniques for web-page scoring".
- [3] Sambin G, Some points in formal topology, *Theor. Comput. Sci.* 305(1-3): 347-408 (2003).
- [4] Coquand T, Sambin G., Smith J., Valentini S., Inductively generated formal topologies, *Annals of Pure and Applied Logic* 124 (2003) pp. 71-106.
- [5] Berardi S., Valentini S., Between formal topology and game theory: an explicit solution for the conditions for an inductive generation of formal topologies, to appear
- [6] Maietti M.E., Valentini S., A structural investigation on formal topology: coreflection of formal covers and exponentiability, *J. Symbolic Logic* 69 (2004), no. 4, 967-1005
- [7] Maietti M.E., Valentini S., Relative formal topologies, to appear