

- LUCIANA GARBAYO, *Dependence logic & medical guidelines disagreement: an informational (in)dependence analysis*.

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Medical guidelines disagreement is a more general problem in medical decision science whereas medical experts hold true distinct guidelines for diagnostic and/or treatment for same patient profiles. Such state of affairs is associated with disagreement in the interpretation of the body of science that supports guidelines for diagnostic and/or treatment decisions by different accredited medical societies. In order to better support medical decision making and augment clinical decision support, a formal semantics of such disagreement has been first suggested with a path to reason with partially contradictory information using natural language processing techniques, while distinguishing formally disagreement from contradictions with propositional calculus and lattice theory (1). This account has been further developed with sheaves, to provide a computational topological treatment for the representation of multiple sources of information and data transformation with mappings (2). In order to enrich this logical notion of disagreement with informational (in)dependence (43), plural states S are considered for multiple forms of interactions between agents, dependent and independent variables and guidelines statements, while a team semantics is explored, within a dependence logic platform.

[1] WLODEK ZADROZNY, HOSSEIN HEMATIALAM, LUCIANA GARBAYO, *Towards Semantic Modeling of Contradictions and Disagreements: A Case Study of Medical Guidelines*, **ACS Anthology 12th International Conference on Computational Semantics (IWCS-2017)** (France), IWCS, 2017.

[2] WLODEK ZADROZNY, LUCIANA GARBAYO, *A Sheaf Model of Contradictions and Disagreements: Preliminary Report and Discussion*, **International Symposium of Artificial Intelligence and Mathematics** (Fort Lauderdale), (First Last and First2 Last2, editors), ISAIM, 2018.

[3] PIETRO GALLIANI, JOUKO VNNEN, *On Dependence Logic*, **Name of proceedings** (Address of meeting), (First Last and First2 Last2, editors), vol. X, Publisher, 2013 pp. X–XX. arXiv:1305.5948