▸ GUSTAVO DAMIANI, *Adding epistemic modalities to the hybrid logic of the hide and seek game.*
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This talk focuses on adding epistemic modalities to the Hybrid Logic of Hide and Seek $\mathcal{H}$(LHS). The game involves a *Hider* and a *Seeker* moving alternately on a graph. The Seeker aims to occupy the Hider's position, while the Hider strives to evade capture. Originally, LHS formalized these interactions using modalities and an intersection constant I, evaluated at state pairs. This framework was hybridized to include nominals for referencing specific nodes. However, it lacks mechanisms to model uncertainty regarding opponent locations. By enriching $\mathcal{H}$(LHS) with epistemic operators, we introduce reasoning about indistinguishability. This captures scenarios where players know the graph but are uncertain about the other's coordinates. We present semantics based on indistinguishability relations and discuss how this enhances the game's strategic analysis.

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[2] Katsuhiko Sano, Fenrong Liu and Dazhu Li, *Hybrid Logic of the Hide and Seek Game*, ***Studia Logica***, (2024). DOI: 10.1007/s11225-024-10149-7.

[3] Qian Chen and Dazhu Li, *Logic of the Hide and Seek Game: Characterization, Axiomatization, Decidability*, ***Dynamic Logic. New Trends and Applications (DaLí 2023)*** (Nina Gierasimczuk and Fernando R. Velázquez-Quesada, editors), vol. 14401, Springer, 2024, pp. 16–34.

[4] Wesley H. Holliday and John Perry, *Roles, Rigidity and Quantification in Epistemic Logic*, ***Johan van Benthem on Logic and Information Dynamics*** (Alexandru Baltag and Sonja Smets, editors), Springer International Publishing, Cham, 2014, pp. 591–629.