

- CAN BAŞKENT AND ROHIT PARIKH, *Towards multi-agent subset space logic*.
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Subset space logic (SSL) is a bimodal epistemic logic with a geometrical semantics as opposed to the unimodal topological models or Aumann structures [1]. The original presentation of that logic is for a single agent [5]. There have been several suggestions for multi-agent SSL in the literature [2]. What makes multi-agent version rather difficult is the fact that admissible sets are not specified in the original construction. In this work, we present a multi-agent version of SSL by making use of the knowledge structures [3]. We first extend them to a multi-modal setting then modify them for multi-agent setting. We construct a cascade of *subset structures* inductively and give the equivalence proof with the usual semantics. Furthermore, we conjecture the completeness and decidability of our axiomatic system.

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