

From True and False to JSL: An Adventure in Logic

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Abstract

This talk is meant to be an adventure beginning with the foundations of bivalent logic and building to our latest progress on seven-valued JainaSyadLogic (JSL). We will begin by defining logical connectives, and use these to build well-formed formulae. Then, we will state a few examples of theorems in this logical system, possibly showing their formal, syntactic proofs and how these differ from semantic proofs. This will allow us to introduce the modal operators, which are written \Box and \Diamond . After showing the modal logic axioms which allow for the construction of well-formed formulae in this new system, we will give a brief discussion of the motivation for JSL. Finally, the talk will conclude with the current results in JSL and our outlook for future results.