

Mathematics

NECESSARY AND SUFFICIENT PACKETS INSIDE EVIDENTIAL LOGIC, Mike Lemke, Don Faust\*, Northern Michigan University, Mathematics, Marquette, MI 49855 dfaust@nmu.edu

Investigations of non-classical logics, in some cases, have been tailored to knowledge representation frameworks. The adoption of such logics, as apposed to Aristotelian logic, is advantageous when certain propositions have associate confirmatory evidence in conjunction with refeuditory evidence. In particular, Don Faust elucidates one possible evidential framework for logic in his paper, "Conflict without contradiction", whereas, the introduction of confirmatory and refeuditory predicates maintaining consistency, also allow for the distinction of "absence of evidence" from the "evidence of absence." This further explication of the notion of negation strengthens the amount of knowledge that is able to be represented within a consistent logical structure. One thing that has been left to be explained is potential conventions that can be utilized when converting information from a domain into its evidential framework. An account on how to translate necessary and sufficient conditions of a proposition from a given domain into an evidential structure will be given. Such a preprocessor can help illuminate what domains are appropriate for an evidential framework and help show the utility of evidential logic.