**Abstract Colloquium:**

**“Evidence Logic: Mathematical Structure and Applications”**

Evidence Logic (EL) is an extension of Classical Logic whose languages , for any stipulation of predicate symbols and any , are equipped with the following:

* + 1. an Evidence Space of evidence values  
       such that
    2. the atomic formulas are, for any -ary predicate symbol and any terms and for any in ,

and

where the former asserts that there is evidence at level confirming while the latter asserts that there is evidence at level refuting .

Semantically, in any model of each -ary predicate symbol is interpreted by a pair each coordinate of which is a partial function from to .

To overview the mathematical structure of the Boolean Algebra of Sentences (BAS) and the Topological Space of Models (TSM) of any EL language , we will briefly discuss them in terms of the languages for decidable stipulating proposition symbols, constant symbols, and unary predicate symbols:

THEOREM. The BAS of has order basis  
where is the order type of the Natural Numbers, , and the are the Stirling Numbers of the Second Kind (i.e., is the number of ways of partitioning a -element set into exactly non-empty subsets).

Finally, from the epistemological perspective of Explorationism, we will overview applications of EL in the two areas (1) Artificial Intelligence and (2) improved conflict resolution and mutual understanding in social milieu of the Global Village, the latter involving joint work with my colleague Judith Puncochar.