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J. Scott Carter and **Masahico Saito*** (`saito@math.usf.edu`). *Algebraic Structures Derived from Foams.*

Foams are surfaces with branch lines at which three sheets merge. They have been used in the categorification of quantum knot invariants and in physics. The 2D TQFT of surfaces, on the other hand, is characterized by means of Frobenius algebras, where saddle points correspond to multiplication and comultiplication. In this talk, we explore algebraic operations that branch lines derive under TQFT. In particular, we point out that Lie bracket and bialgebra structures can be found in infinitely many examples. Relations to the original Frobenius algebra structures are discussed both algebraically and diagrammatically. Foam skein modules of 3-manifolds are defined. (Received August 30, 2009)