

# An algebraic approach to temporal logics

Zoltan Esik

*University of Szeged and University Rovira i Virgili, Tarragona  
Hungary/Spain*

We associate a modal operator with each language belonging to a given class of regular tree languages and use pseudovarieties of tree automata closed under the cascade product to give an algebraic characterization of the expressive power of the resulting logic. We exhibit several applications to CTL-like logics.