Meeting: 999, Nashville, Tennessee, SS 4A, Special Session on Universal Algebra and Lattice Theory

999-03-239 **Chihiro Oshima*** (`coshima@tamiu.edu`), 5201 University Blvd, Laredo, TX 78041. *Concepts in universal algebra on propositional logic.*

For subuniverses or congruences of an inifnitary algebra we introduce an infinitary propositional calculus whose models are precisely the subuniverses or congruences. We have infinitary propositional versions of characterization theorems of Horn logic. One new result concerning a algebraic closure property is that a strict Horn class of propositional structures forms an algebraic lattice. We also introduce a topology of models of propositional language and prove that the compactness under this topology is equivalent to the compactness of propositional calculus. (Received August 24, 2004)