1084-06-125 **Sándor Jenei*** (jenei@ttk.pte.hu), Institute of Mathematics and Informatics, University of Pécs, Ifjúság u. 6., Pécs, 7624, Hungary. *Classification Results on Residuated Lattices.*

Ward and Dilworth, to investigate ideal theory of commutative rings with unit, introduced residuated lattices in the 30s of the last century. Examples of residuated lattices include Boolean algebras, Heyting algebras, MV-algebras, BL-algebras, and lattice-ordered groups; a variety of other algebraic structures can be rendered as residuated lattices. Ono introduced substructural logics; they encompass classical logic, intuitionistic logic, relevance logics, many-valued logics, mathematical fuzzy logics, linear logic and their non-commutative versions. The theory of substructural logics has put all these logics, along with many others, under the same motivational and methodological umbrella. Residuated lattices, being the algebraic counterpart of substructural logics just like Boolean algebras are for classical logic, have been the key component in this remarkable unification. Applications of substructural logics and residuated lattices span across proof theory, algebra, and computer science.

In this talk classification results on residuated lattices will be surveyed ranging from Hölder's precursor via Aczél, Clifford, Mostert, and Shields to the most recent ones.

Supported by the OTKA-76811 grant, the SROP-4.2.1.B-10/2/KONV-2010-0002 grant, and the MC ERG grant 267589. (Received August 28, 2012)