1067-05-1499 **Wei-Tian Li*** (li37@mailbox.sc.edu), Department of Mathematics, University of South Carolina, 1523 Greene Street, Columbia, SC 29208. *Poset-Free Families in Boolean Lattices.*

The poset-free family problem original stems from the well-know Sperner's Theorem. The theorem states what is the maximum size of a chain-free family, that is a family of subsets such that no one is included in another, in the Boolean lattice.

Lubell, Yamamoto, Meschalkin individually used a similar idea of counting full chains that intersect the family to prove the Sperner's Theorem, which is now called LYM inequality.

In the talk, we will see how to modify this idea and use it to find the maximum size of the poset-free families for some special posets.

This is a joint work with Jerrold R. Griggs and Linyuan Lu. (Received September 21, 2010)