1106-06-1175 **Bernd S. W. Schroeder*** (bernd.schroeder@usm.edu), Department of Mathematics, The University of Southern Mississippi, 118 College Drive, #5045, Hattiesburg, MS 39406. *Every Order-Preserving Self-Map of the L^p Unit Ball has a Fixed Point.*

In this talk, we will prove that every order-preserving self-map of the unit ball in L^p has a fixed point. The proof is surprisingly simple, as we merely need to establish that the L^p unit ball is chain-complete and dismantlable (via comparative retractions).

To date, the use of order-theoretical techniques in L^p spaces has been limited to many results and examples that employ the usual Abian-Brown iteration: For an order-preserving operator T, if there is a function f with $f \leq Tf$, then (transfinite) iteration of the operator either terminates in a fixed point, or, there is no fixed point above f.

Despite its simplicity, the result discussed in this talk is order-theoretically more subtle than the Abian-Brown iteration. In some ways, the author considers the result as a "theorem in need for an application." (Received September 11, 2014)