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Alexander M. Powell*, Department of Mathematics, Vanderbilt University, Nashville, TN 37240, and **Anneliese H. Spaeth**, Department of Mathematics, Huntingdon College, Montgomery, AL 36106. *Nonnegativity constraints for structured complete systems.*

We investigate nonnegativity as an obstruction to various forms of structured completeness in L_p spaces. For example, we prove that if each element of a system of functions in L_p is pointwise nonnegative, then the system cannot be an unconditional basis or unconditional quasibasis (unconditional Schauder frame) for L_p . In particular, in L_2 this precludes the existence of nonnegative Riesz bases and frames. On the other hand, there exist pointwise nonnegative conditional quasibases in L_p , and there also exist pointwise nonnegative exact systems and Markushevich bases in L_p . (Received July 18, 2017)