COLLOQUIUM

DEPARTMENT OF MATHEMATICS AND STATISTICS
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Metric Fixed Point Theory in Some Classical Banach Spaces

Abstract: In showing that a Banach space fails the fixed point property, one must build a closed bounded convex set and a nonexpansive mapping on the set that fails to have a fixed point. We will see that in many classical settings, the key ingredient is showing that the closed bounded convex set contains a further subset with nice geometric properties. The Banach spaces we will be interested in most are the sequence spaces c_0 and ℓ^1 and the Lebesgue space $L^1[0,1]$. In particular, we will see that $L^1[0,1]$ contains many weakly compact convex subsets that fail to have the fixed point property.

372 Science and Engineering Building
Tuesday, October 26, 2004
3:00–4:00 p.m.

(Refreshments at 2:30 p.m. in Room 368, Science and Engineering Building)

Patrick Dowling received his PhD in mathematics from Kent State University in 1986. After a post-doc at The Ohio State University, he joined the faculty at Miami University, where he is now a Professor of Mathematics.