

## Colloquium

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Friday, October 2, 2015 at 3 pm in Bell Hall 143

### Generalized Trigonometric functions and bases in $L^p$ space

Generalized trigonometric functions  $\sin_p$  and  $\cos_p$  generalize the familiar trigonometric functions and coincide with them when  $p = 2$ , and otherwise have important similarities to and differences from their classical counterparts. As will be shown they play an important part in both the theory of the  $p$ -Laplacian and that of the Hardy operator. Particular attention is paid to the basis properties of the analogues of the sine functions in the context of Lebesgue spaces.