

## Colloquium

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Friday, November 19, 2010 at 3pm in Bell Hall 143

### Riesz Decomposition Property in finite-dimensional vector lattices

The Riesz Decomposition Property plays a fundamental role in ordered algebraic structures, the theory of Riesz spaces and its applications. We will start from giving the necessary background, proving the theorem and providing some of its equivalents in the context of vector-lattices. In our recent research on matrix algebras with multiplicative decomposition the following question appeared: which subspaces of  $\mathbb{R}^n$  satisfy the Riesz Decomposition Property? We will address this question, provide examples, formulate a structural conjecture and prove it in some special cases.