

Rutgers-NJIT Mathematics Colloquium

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*Columbia*

**Convex Duality in  
Probability, Mathematical  
Statistics and Finance**

*Ideas and techniques from convexity and duality have played important roles in optimization, probability, mathematical statistics, and more recently in mathematical finance. We shall illustrate these ideas on two representative problems. The first is the classical hypothesis testing problem of mathematical statistics, where one tests a composite hypothesis versus a composite alternative. The second is the “partial hedging” problem of minimizing expected shortfall, from the younger field of mathematical finance. Rather unexpected, the two problems have very similar solutions.*

**Wednesday, October 27**

**4:00 pm**

**108 Hill Hall, Rutgers  
(please note special room)**