Multivariate stochastic orders and the principle of transfers

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In this talk it will be demonstrated how functional analytic tools from duality theory can be used to give interesting characterizations of stochastic order relations for discrete distributions in terms of mass transfer principles. A general result for a large class if integral stochastic orders will be derived, and it will be shown that this applies to many important examples of multivariate stochastic orders like usual stochastic order, convex order, supermodular order, directional convex order, orthant orders and others.