How markets slowly digest supply and demand

Empirical studies of markets show that supply and demand exhibit long-term memory: new buyers and new sellers enter the market in periods, with slowly decaying autocorrelations. I will present evidence showing that “order splitting” (big players breaking up their trades into small pieces in order to disguise their intentions) rather than “herding” is the dominant cause. This implies a precise relationship connecting the power-law decay of autocorrelations of order flow to the distribution of trading volume and a certain characteristic behavior of the market impact (the price move caused by a trade). It suggests that supply and demand, which drive the basic interaction rules in economics, exhibit emergent "laws" with a universal functional form.