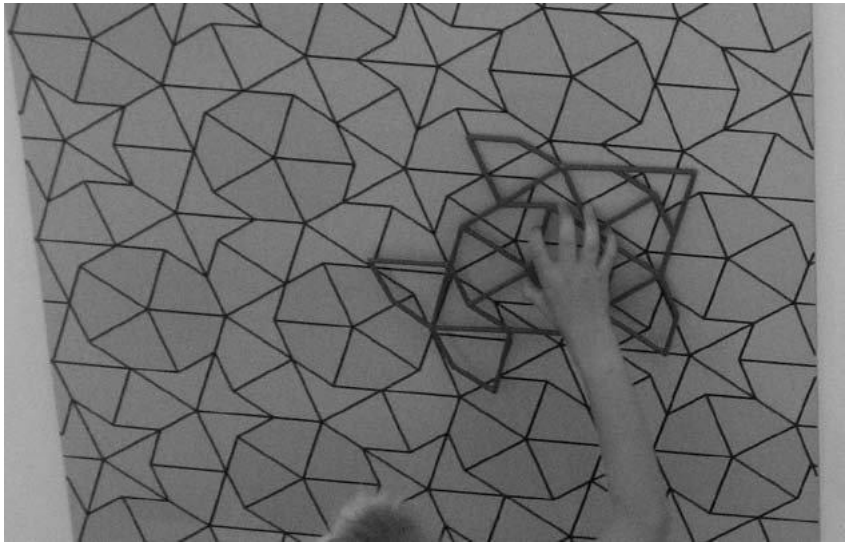

Mehmet Tolga Ccedilezik, "Pierre LEcuyer"

Staffing Multiskill Call Centers via Linear Programming and Simulation.

The main objective of this paper is to propose a feasible, model free estimator of the predictive density of integrated volatility. In this sense, we extend recent papers by Andersen et al. [Andersen, T.G., Bollerslev, T., Diebold, F.X., Labys, P., 2003. Modelling and forecasting realized volatility. Econometrica 71, 579–626], and by Andersen et al. [Andersen, T.G., Bollerslev, T., Meddahi, N., 2004. Analytic evaluation of volatility forecasts. International Economic Review 45, 1079–1110; Andersen, T.G., Bollerslev, T., Meddahi, N., 2005. Correcting the errors: Volatility forecast evaluation using high frequency data and realized volatilities. Econometrica 73, 279–296], who address the issue of pointwise prediction of volatility via ARMA models, based on the use of realized volatility. Our approach is to use a realized volatility measure to construct a non parametric (kernel) estimator of the predictive density of daily volatility. We show that, by choosing an appropriate realized measure, one can achieve consistent estimation, even in the presence of jumps and microstructure noise in prices. More precisely, we establish that four well known realized measures, i.e. realized volatility, bipower variation, and two measures robust to microstructure noise, satisfy the conditions required for the uniform consistency of our estimator. Furthermore, we outline an alternative simulation based approach to predictive density construction. Finally, we carry out a simulation experiment in order to assess the accuracy of our estimators, and provide an empirical illustration that underscores the importance of using microstructure robust measures when using high frequency data.