UCLA **Fall 2016**
MGMT 239C **Prof. Mikhail Chernov**

Empirical Asset Pricing
Problem Set 6
due 12 hours before the class

Problems

1. Estimate a GARCH and EGARCH models of equity returns. Comment on the parameters and the models' ability to match the data. What happens if you re-run these every quarter?

2. Plot implied volatility smiles from the SVJ model, where V is ARG(1). Figure out how to price options – we covered some of the relevant elements in class. The classic papers for this are Heston (RFS, 1993); Bates (RFS, 1996); and Duffie, Pan, and Singleton (ECMA, 2000). They use continuous-time formulation, but option pricing is really the same once you know the CGF, or CF. Report which parameters are central to generating smiles and how the smiles change in SVJ and the nested SV models with time horizon.