Oleksii Mostovyi* (oleksii.mostovyi@uconn.edu), University of Connecticut, Department of Mathematics, 196 Auditorium Road, Storrs, CT 06269-3009. A second-order expansion of the value function in the problem of optimal investment in incomplete markets.

In the framework of incomplete financial market where the stock price dynamics is modeled by a continuous semi-martingale, an explicit quadratic expansion for the power investor’s value function and a first-order expansion for the corresponding optimal wealth process - seen as a function of the underlying market price of risk process - are provided. An example illustrating the result is also given. The talk is based on the joint work with Kasper Larsen and Gordan Zitkovic. (Received July 16, 2016)