

**Problem 15.18**

$$\begin{aligned}\varphi_{S_n}(t) &= \varphi_{\xi_1 + \xi_2 + \dots + \xi_n}(t) = \varphi_{\xi_1}(t) \dots \varphi_{\xi_n}(t) \\ \varphi_{\xi_i}(t) &= \sum_{k=1}^{\infty} e^{itx_k} \cdot P(\xi = x_k) = \frac{1}{2}e^{-it} + \frac{1}{2} \cdot e^{it} = \cos(t) \\ \varphi_{S_n}(t) &= \cos^n(t)\end{aligned}$$

**Problem 11.21****Problem 11.22****Problem 11.23**

Figure 1: Zhdanov

**Problem 11.25**