Front page. Original text: Thomas Balser. Corrected text: Thomas Balser Applied Mathematics 60 ECTS Points.
Page 30. Original text:

$$E[X_k^2|\mathcal{F}_{k-1}] = Var[\Delta X_k|\mathcal{F}_{k-1}] + (S_{k-1} + E[\Delta X_k|\mathcal{F}_{k-1}])^2 \tag{1}$$

and use the following estimate from (3.52)

$$X_{k-1}^2 \leq c_{SR} E[\Delta X_k^2|\mathcal{F}_{k-1}] \tag{2}$$

and (3.57)

$$E[\Delta X_k^2|\mathcal{F}_{k-1}] \leq Var[\Delta X_k|\mathcal{F}_{k-1}](1 + c_{MVT}(0)). \tag{3}$$

Corrected text:

$$E[S_k^2|\mathcal{F}_{k-1}] = Var[\Delta S_k|\mathcal{F}_{k-1}] + (S_{k-1} + E[\Delta S_k|\mathcal{F}_{k-1}])^2 \tag{4}$$

and use the following estimate from (3.52)

$$S_{k-1}^2 \leq c_{SR} E[\Delta S_k^2|\mathcal{F}_{k-1}] \tag{5}$$

and (3.57)

$$E[\Delta S_k^2|\mathcal{F}_{k-1}] \leq Var[\Delta S_k|\mathcal{F}_{k-1}](1 + c_{MVT}(0)). \tag{6}$$

Page 31. Original text:

$$\begin{aligned}(1-\delta)Var[\Delta S_k|\mathcal{F}_{k-1}] &\geq E[\Delta S_k^2] - E[\Delta S_k|\mathcal{F}_{k-1}]^2 - \delta Var[\Delta S_k|\mathcal{F}_{k-1}] \\ &\geq Var[\Delta S_k|\mathcal{F}_{k-1}](1 + c_{MVT}(0)) - E[\Delta S_k|\mathcal{F}_{k-1}]^2 - \delta Var[\Delta S_k|\mathcal{F}_{k-1}].\end{aligned} \tag{7}$$

Corrected text:

$$\begin{aligned}(1-\delta)Var[\Delta S_k|\mathcal{F}_{k-1}] &\geq E[\Delta S_k^2|\mathcal{F}_{k-1}] - E[\Delta S_k|\mathcal{F}_{k-1}]^2 - \delta Var[\Delta S_k|\mathcal{F}_{k-1}] \\ &\geq Var[\Delta S_k|\mathcal{F}_{k-1}](1 + c_{MVT}(0)) - E[\Delta S_k|\mathcal{F}_{k-1}]^2 - \delta Var[\Delta S_k|\mathcal{F}_{k-1}].\end{aligned} \tag{8}$$

Page 34. Original text:
The Cauchy-Schwarz inequality and Proposition 5 imply that

$$\begin{aligned}E[(X_k^*\Delta S_k)^2] &\leq E[\frac{Var[W_k^x|\mathcal{F}_{k-1}]}{Var[\Delta S_k^x|\mathcal{F}_{k-1}]} E[\Delta S_k^2|\mathcal{F}_{k-1}]] \\ &\geq \frac{1}{c} E[E[(W_k^x)^2|F_{k-1}] \frac{Var[\Delta S_k^2|\mathcal{F}_{k-1}]}{Var[\Delta S_k|\mathcal{F}_{k-1}]}] \\ &\geq \frac{1}{c}(1 + c_{MVT}(0)) E[(W_k^x)^2] < \infty\end{aligned} \tag{9}$$

Corrected text:
The Cauchy-Schwarz inequality and Proposition 3 imply that

$$\begin{aligned}E[(X_k^*\Delta S_k)^2] &\leq E[\frac{Var[W_k^x|\mathcal{F}_{k-1}]}{Var[\Delta S_k^x|\mathcal{F}_{k-1}]} E[\Delta S_k^2|\mathcal{F}_{k-1}]] \\ &\leq \frac{1}{c} E[E[(W_k^x)^2|F_{k-1}] \frac{Var[\Delta S_k^2|\mathcal{F}_{k-1}]}{Var[\Delta S_k|\mathcal{F}_{k-1}]}] \\ &\leq \frac{1}{c}(1 + c_{MVT}(0)) E[(W_k^x)^2] < \infty\end{aligned} \tag{10}$$

Page 35. Original text: We have already showed that $V^v(\varphi) = \overline{V}(\varphi)$ in the previous paragraphs and so by (136)...
Corrected text: We have already showed that $V^v(\varphi) = \overline{V}(\varphi)$ in the previous paragraphs and so by (3.83)...