Part II
Listing

Listing 1. Preamble[a]

[a]Check the documentation portion of the source file, `ccool.dtx`, for exhaustive settings

```
%     \usepackage{amsmath, amsthm, commath}
%     \usepackage[T1]{fontenc}% \char`[
%
```

Listing 2. Separators

x @ y
x % y @ z
x & y
x & y
x & y & z
x, y & z
x, y & z

Listing 3. Hello, world!

{H}.{e}.{l}.{l}.{o}, [world!]

Listing 4. Listing 3 read from file.

{H}.{e}.{l}.{l}.{o}, [world!]

Listing 5. Probability space

Let $\{\Omega, \mathcal{F}, \mathcal{P}\}$ denote the probability space, where $\mathcal{F} \subset 2^\Omega$.

Listing 6. Listing 5 read from file.

$\Omega\ \mathcal{F}\ \mathcal{P}$

Listing 7. Mittelwertsatz für n Variable

Theorem 1 (Mittelwertsatz für n Variable) *Es sei $n \in \mathbb{N}$, $D \subseteq \mathbb{N}^n$ eine offene Menge und $f \in C^1(D, \mathbb{R})$. Dann gibt es auf jeder Strecke $[x_0, x] \subset D$ einen Punkt $\xi \in [x_0, x]$, so dass gilt*

$$\frac{f(x) - f(x_0)}{x - x_0} = \operatorname{grad} f(\xi)^\top$$

(Check: $\mathbb{N}$, ξ)

Listing 8. Listing 7 read from file.

$\mathbb{N}$ $\mathbb{R}$ D C^1 $[x_0, x]$

Listing 9. Excerpt from a thesis[7]

The CUSUM statistic process and the corresponding one-sided CUSUM stopping time are defined as follows:

Definition 1 *Let $\lambda \in \mathcal{R}$ and $\nu \in \mathcal{R}^+$. Define the following processes:*

1. $u_t(\lambda) = \lambda\xi_t - \frac{1}{2}\lambda^2 t$; $m_t(\lambda) = \inf_{0\leq s\leq t} y_s(\lambda)$.
2. $y_t(\lambda) = m_t(\lambda) - u_t(\lambda) \geq 0$, *which is the CUSUM statistic process.*
3. $T_c(\lambda, m) = \inf\,[t \geq 0;\ y_t(\lambda) \geq m]$, *which is the CUSUM stopping time.*

(Check: λ, y)