

0.1 Monte Carlo Radiation Transport

Blah blah blah.. background information in a section with equations and a reference to MCNP [?]. Also we used the `\gls{}` command to write MCNP. Now we will also refer to Equation (1) without having to actually type out the word “Equation” by using `\cref{}`. We can do the same for referring to Section 0.1.1 that appears below this. Also try clicking on the section number in the last sentence.

$$FOM = \frac{1}{R^2 t_{proc}} \quad (1)$$

Equation (2) is an example using split equations.

$$\begin{aligned} \sigma_x^2 &= \frac{\sum (x_i - \bar{x})^2}{N - 1} \\ \sigma_{\bar{x}}^2 &= \frac{\sigma_x^2}{N} \end{aligned} \quad (2)$$

0.1.1 Variance Reduction

Below is an example figure with a caption (see Figure 0.1). Here is an example list:

1. first
 - sublist using bullets
 - another item
2. second

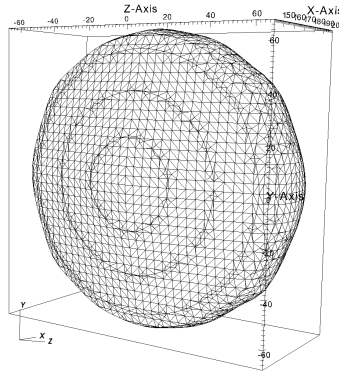


Figure 0.1: Here is a super long description and caption for this image. It is probably something we don't want to be fully written out in the list of figures at the beginning of the document. So we can use a shortened caption in square brackets in the text. It won't appear here, but that is what goes in the list.

Here is an example table to appear in list of tables (see Table 0.1). It also uses `\num{}` and `\SI{ }{ }` for formatting the numbers. The table includes a mix of standard table formatting such as the vertical bar `|` and `\hline` and `\cline` as well as fancier formatting from

booktabs package such as `\toprule`, `\midrule`, and `\bottomrule`. Play around with formatting to see what you like best.

Table 0.1: Example Table

A	B	Some numbers
Joe	Smoe	98.34%
Lisa	Pisa	1×10^{10}
Hannah	Banana	0.005
Tom	Thompson	0.5 cm
Woah merged cells!		so cool
XY	we can merge rows too	omg
	and rotate the text!	how cool