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#### PAPER

## Stochastic Process I by MIT

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#### Abstract

Learn how to model stock price by Stochastic Process I.

Motivation: You can also have some paragraphs start with bold face.

Key words:

### 1. Why are we learning this?

### content

1.1. A subsection A numbered list:

- 1) First point
- 2) Second point
  - Subpoint

A bullet list:

- First point
- Second point

#### 1.2. Notes

#### 2. A2 Intro

Content

### 3. A3 Intro

here is the example of equation

$$E=mc^2$$

An inline equation: y = ax + b

An equation with a label for cross-referencing:

$$\int_{0}^{r_2} F(r, \varphi) dr d\varphi = 1 \tag{1}$$

### 4. A4 Intro

The code below creates a figure. The code is included in the output because echo=TRUE.

plot(1:10,main="Some data",xlab="Distance (cm)", ylab="Time (hours)")

### Some wide data

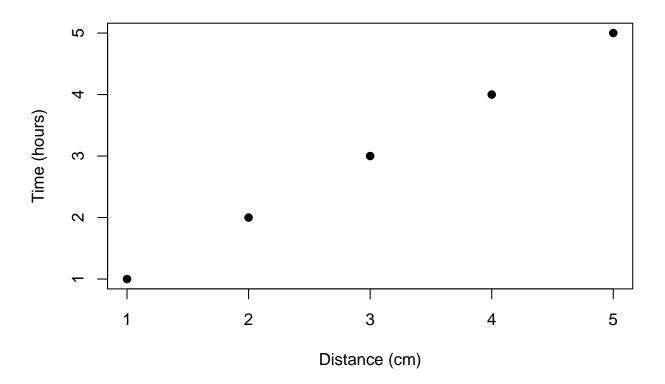


Fig. 2. This is a wide figure.

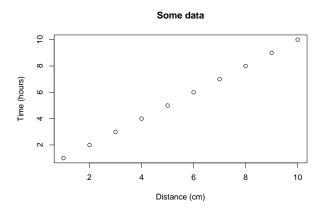


Fig. 1. This is the first figure.

### 5. A5 Intro

5.1. Generate a table using xtable

You can reference this figure as follows: Fig. 1.

### 4.1. Figures spanning two-columns

Figures can span two columns be setting fig.env="figure\*". Reference to second figure: Fig. 2

```
df = data.frame(ID=1:3,code=letters[1:3])
# Creates tables that follow OUP guidelines
# using xtable
library(xtable)
print(xtable(df,caption="This is a xtable table.",
             label="tab:tab1"),
      comment=FALSE,caption.placement="top")
```

Table 2. This is a kable table.

ID	code	
1	a	
2	b	
3	$\mathbf{c}$	

Table 1. This is a xtable table.

	ID	code
1	1	a
2	2	b
3	3	c

5.3. Table spanning two columns

Tables can span two columns be setting table.envir = "table\*" in knitr::kable.

You can reference this table as follows: Table 2.

You can reference this table as follows: Table 1.

### 5.2. Generate a table using kable

Table 3. This is a wide kable table.

ID	code1	code2	code3	code4	code5
1	a	d	g	j	m
2	b	e	h	k	n
3	$\mathbf{c}$	f	i	1	О

### 6. Cross-referencing sections

You can cross-reference sections and subsections as follows: Section  $\ref{eq:section}$  and Section 1.1.

**Note:** the last section in the document will be used as the section title for the bibliography.

For more portable and flexible referencing of sections, equations, figures and tables, use bookdown::pdf\_document2 with YAML header option base\_format: rticles::oup\_article.

### 7. A6 Intro

### A. Section title of first appendix

blabla

# A.1. Subsection title of first appendix and so on....

### 8. Competing interests

There are no competing interest.

### 9. Author contributions statement

AA did all the work. The others are just freeloaders.