# LaTeX Book Sample

Edited by John Smith

December 3, 2021

### **Preface**

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

# Contents

Pr	eface		i				
1	The	first chapter	1				
	1.1	The first section	1				
		1.1.1 A sub section	1				
	1.2	The second section	2				
		1.2.1 A sub section	2				
	1.3	The third section	3				
		1.3.1 A sub section	3				
2	The	second chapter	4				
	2.1	The first section	4				
		2.1.1 A sub section	4				
	2.2	The second section	5				
		2.2.1 A sub section	5				
$\mathbf{A}$	This	his is the first appendix					
	A.1	A sub section	6				
	A.2	A sub section	7				
$\mathbf{B}$	This	his is the second appendix					
	B.1	A sub section	8				
	B.2	A sub section	8				
Re	eferei	nces	9				
In	dex		10				

## Chapter 1

## The first chapter

### 1.1 The first section

LaTeX is a high-quality typesetting system; it includes features designed for the production of technical and scientific documentation. LaTeX is the de facto standard for the communication and publication of scientific documents.

#### 1.1.1 A sub section

LaTeX is not a word processor! Instead, LaTeX encourages authors not to worry too much about the appearance of their documents but to concentrate on getting the right content. For example consider this document:

$$\sin^2 \theta + \cos^2 \theta = 1. \tag{1.1}$$

LaTeX is based on the idea that it is better to leave document design to document designers, and to let authors get on with writing documents. So, in LaTeX you would input this document as: ⇒

$$a = b + c \tag{1.2}$$

$$= d + e. (1.3)$$

Assuming that the disturbance errors of f and  $u_{N,0}$  are  $\tilde{f}$  and  $\tilde{u}_{N,0}$  respectively, the error of the numerical solution  $u_N$  is  $\tilde{u}_N$ .

An example of the \cite command to cite within the book:

This statement requires citation [1] and [2, 3, 4]

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy

dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

### 1.2 The second section

LaTeX is a high-quality typesetting system; it includes features designed for the production of technical and scientific documentation. LaTeX is the de facto standard for the communication and publication of scientific documents.

#### 1.2.1 A sub section

LaTeX is not a word processor! Instead, LaTeX encourages authors not to worry too much about the appearance of their documents but to concentrate on getting the right content. For example consider this document:

LaTeX is based on the idea that it is better to leave document design to document designers, and to let authors get on with writing documents. So, in LaTeX you would input this document as:  $\Rightarrow$ 

Assuming that the disturbance errors of f and  $u_{N,0}$  are  $\tilde{f}$  and  $\tilde{u}_{N,0}$  respectively, the error of the numerical solution  $u_N$  is  $\tilde{u}_N$ .

**Definition 1.1.** This is a definition environment.

**Lemma 1.1.** This is a lemma environment.

**Theorem 1.1.** This is a theorem environment.

**Proposition 1.1.** This is a proposition environment.

**Theorem 1.2** (Mass-energy). This is a theorem environment.

*Proof.* This is a proof environment.

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy

1.3 The third section 3

dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

### 1.3 The third section

LaTeX is a high-quality typesetting system; it includes features designed for the production of technical and scientific documentation. LaTeX is the de facto standard for the communication and publication of scientific documents.

#### 1.3.1 A sub section

LaTeX is not a word processor! Instead, LaTeX encourages authors not to worry too much about the appearance of their documents but to concentrate on getting the right content. For example consider this document:

LaTeX is based on the idea that it is better to leave document design to document designers, and to let authors get on with writing documents. So, in LaTeX you would input this document as:  $\Rightarrow$ 

Assuming that the disturbance errors of f and  $u_{N,0}$  are  $\tilde{f}$  and  $\tilde{u}_{N,0}$  respectively, the error of the numerical solution  $u_N$  is  $\tilde{u}_N$ .

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

## Chapter 2

## The second chapter

### 2.1 The first section

LaTeX is a high-quality typesetting system; it includes features designed for the production of technical and scientific documentation. LaTeX is the de facto standard for the communication and publication of scientific documents.

#### 2.1.1 A sub section

LaTeX is not a word processor! Instead, LaTeX encourages authors not to worry too much about the appearance of their documents but to concentrate on getting the right content. For example consider this document:

LaTeX is based on the idea that it is better to leave document design to document designers, and to let authors get on with writing documents. So, in LaTeX you would input this document as: ⇒

$$\begin{cases}
-\frac{\mathrm{d}^2 u}{\mathrm{d}x^2} + \frac{\mathrm{d}u}{\mathrm{d}x} = \pi^2 \sin(\pi x) + \pi \cos(\pi x), & x \in [0, 1], \\
u(0) = 0, & u(1) = 0.
\end{cases}$$
(2.1)

Assuming that the disturbance errors of f and  $u_{N,0}$  are  $\tilde{f}$  and  $\tilde{u}_{N,0}$  respectively, the error of the numerical solution  $u_N$  is  $\tilde{u}_N$ .

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

2.2 The second section 5

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

### 2.2 The second section

LaTeX is a high-quality typesetting system; it includes features designed for the production of technical and scientific documentation. is the de facto standard for the communication and publication of scientific documents.

#### 2.2.1 A sub section

LaTeX is not a word processor! Instead, LaTeX encourages authors not to worry too much about the appearance of their documents but to concentrate on getting the right content. For example consider this document:

LaTeX is based on the idea that it is better to leave document design to document designers, and to let authors get on with writing documents. So, in LaTeX you would input this document as:  $\Rightarrow$ 

Assuming that the disturbance errors of f and  $u_{N,0}$  are  $\tilde{f}$  and  $\tilde{u}_{N,0}$  respectively, the error of the numerical solution  $u_N$  is  $\tilde{u}_N$ .

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

## Appendix A

## This is the first appendix

### A.1 A sub section

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy

A.2 A sub section 7

dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

### A.2 A sub section

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

## Appendix B

## This is the second appendix

### B.1 A sub section

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

### B.2 A sub section

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

## References

- [1] Robert A Adams and John J F Fournier. Sobolev spaces. Elsevier, 2003.
- [2] Jie Shen. Efficient spectral-Galerkin method I. Direct solvers of second- and fourth-order equations using Legendre polynomials. SIAM J. Sci. Comput., 15(6):1489–1505, 1994.
- [3] Eitan Tadmor. A review of numerical methods for nonlinear partial differential equations. Bull. Amer. Math. Soc., 49(4):507–554, 2012.
- [4] L. N. Trefethen and J. A. C. Weideman. The exponentially convergent trapezoidal rule. SIAM Rev., 56(3):385–458, 2014.

# Index

fox, 6 LaTeX, 5