

Preparing a one column paper with LaTeX

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ABSTRACT: Authors submitting papers for the ITA WTC2027 Antwerp proceedings must use this $\text{\LaTeX}$ template to ensure consistency and proper formatting for direct reproduction by the publisher. Do not modify the class file under any circumstances, as this ensures consistent formatting across all submissions. To maintain uniform style throughout the volume, all papers must be prepared strictly in accordance with the formatting instructions provided below. Paper lengths must not exceed 8 pages. Authors are encouraged to type directly into the template without modifying any of the preset commands. Please note that figures and tables should be designed with clarity in mind, as the publisher will reduce the final camera-ready copy to 75% of its original size. The abstract should be written as a single paragraph and not exceed 350 words.

1 GENERAL INSTRUCTIONS

1.1 Page layout

The page setup is configured for an A4 page size (21×29.7 cm), with text fitting precisely within the designated type area of 15.0×24.0 cm. The required margin settings are shown in Table 1 and are already correctly configured in the class file WTC2027.cls.

Table 1. Margin settings for A4 page size.

Margin Setting	A4 Page Size (cm)
Top	2.5
Bottom	3.0
Left	3.0
Right	3.0
All other	0.0

1.2 Type font, type size and spacing

The document automatically utilises Times New Roman for all standard text. Regular paragraphs are set to an 11-point font size with 12-point line spacing. Tables, figure captions, and the reference section utilise a smaller 10-point font size with 11-point line spacing.

Parameters used in equations must be italicised (except for standard functions like $\log$, $\sin$, $\cos$, $\ln$, $\max$, etc.). Latin names of species and genera, as well as the titles of journals and books, should also be italicised. Never use bold fonts except to denote vectors in mathematics. Never underline text. Never use letterspacing and never use more than one space in succession.

1.3 Paragraph indentation

The first line of text immediately following any heading is not indented. All subsequent paragraphs are automatically indented by 4 mm. These are all handled automatically by the class file.

1.4 Headings

Use standard L^AT_EX sectioning commands to structure your paper. Primary headings (`\section{}`) will automatically render in ALL CAPS using 11 pt font. Secondary headings (`\subsection{}`) and tertiary headings (`\subsubsection{}`) will automatically render flush-left in italics using sentence case. Authors are discouraged from using heading levels beyond tertiary. The spacing above and below each heading level is summarised in Table 2.

Table 2. Heading settings.

Heading Level	Text Format	Spacing Before/Above	Spacing After/Below
1st level (primary)	ALL CAPS	24 pt	12 pt
2nd level (secondary)	Sentence case, italicized	18 pt	6 pt
3rd level (tertiary)	Sentence case, italicized	12 pt	0 pt

1.4.1 Tertiary Heading Example

This paragraph demonstrates the style and layout of a tertiary heading (Level 1.1.1). As noted in the guidelines, these headings automatically render flush-left in italics using sentence case.

While fourth-level headings (such as 1.1.1.1) are technically permitted by the system, their use is not appreciated or recommended. Authors are strongly encouraged to use bulleted lists or inline bold text instead to keep the document hierarchy clean.

1.5 Listings

To list facts, use the standard `\begin{itemize}`(bulleted) or `\begin{enumerate}`(numbered) environments.

1.6 Equations

Equations should be entered using the `\begin{equation}` environment. They are automatically aligned with the left margin. Equations are numbered consecutively, with the number automatically placed between parentheses at the right margin. Refer to equations by these numbers in the text, for example:

$$K_t = \left(1 - \frac{R^2 \tau}{c_a + \nu \tan \delta}\right)^4 k_1 \quad (1)$$

where c_a = interface adhesion; δ = friction angle at interface; and k_1 = shear stiffness number

1.7 Tables

Locate tables close to their first reference in the text and number them consecutively. The required font size for tables is 10pt, it is already configured in the class file. Type the caption *above* the table using `\caption{}`. Use horizontal rules only (`\toprule`, `\midrule`, `\bottomrule` from the `booktabs` package); do not include vertical lines. Avoid abbreviations in column headings. Explanations should be given in the table heading or at the foot of the table, not within the table itself. Refer to Tables 1 and 2.

1.8 Figures

Always place the caption *underneath* the figure using `\caption{}`. The class file automatically sets captions to 10 pt on 11 pt line spacing. Leave approximately two lines of space between the figure caption and the text below it.

To keep the project repository organised, authors must place all graphics, diagrams, and photos inside the `images/` folder of their project directory. When loading an image, use the relative path, for example: `\includegraphics{Figure 1. Typical Figure}`.

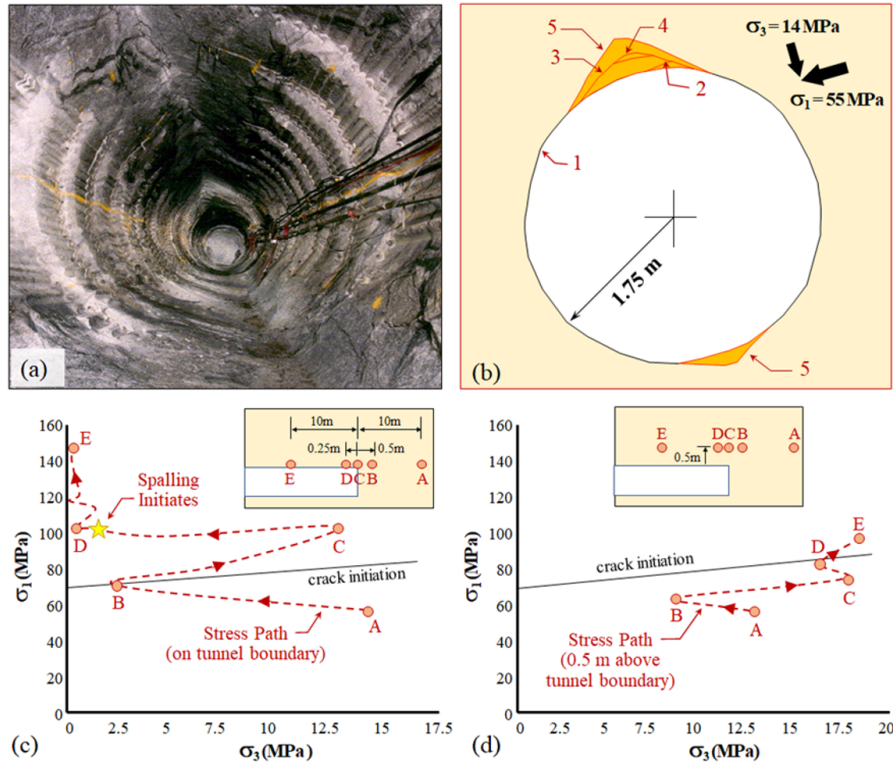


Figure 1. Caption of a typical figure.

To ensure high-quality reproduction in the digital PDF proceedings, adhere to these resolution guidelines:

- Use a minimum of 300 DPI for all photographic images.
- Use a minimum of 600 DPI for diagrams, charts, and figures containing embedded text or fine lines.
- Ensure that all text within figures remains completely legible when reduced to 75% zoom, maintaining a minimum 9-point font size.

2 REFERENCES

2.1 Reference Styles within text

For citing references within the text, use `\autocite{}` for parenthetical citations or inline narrative citations. For two authors, the class file automatically separates names with '&'; for three or more authors, the first author is followed by 'et al.'. Examples:

- In-text narrative example: (Muir Wood 2000) (Loganathan & Poulos 1998) (De Backer et al. 2018)
- Parenthetical example at the end of a sentence: (Muir Wood 2000; Loganathan & Poulos 1998; De Backer et al. 2018)

2.2 References at the end of the paper

At the end of the paper, all references are printed automatically in alphabetical order under REFERENCES using `\printbibliography`. The reference list is automatically set in small text (10 pt on 11 pt) with a 4.0 mm hanging indent. If several works by the same author are cited, entries will be listed chronologically within the same author group. See REFERENCES section below.

3 PREFERENCES, SYMBOLS AND UNITS

Consistency of style is very important. Note the spacing, punctuation, and caps in all the examples below.

- References in the text: Figure 1, Figures 2-4, 6, 8a, b (not abbreviated)
- References between parentheses: (Fig. 1), (Figs 2-4, 6, 8a, b) (abbreviated)
- USA / UK / The Netherlands instead of U.S.A. / U.K. / Netherlands / the Netherlands
- Author & Author 1989 instead of Author and Author 1989
- (Author 1989a, b, Author & Author 1987) instead of (Author, 1989a,b; Author and Author, 1987)
- (Author et al. 1989) instead of (Author, Author & Author 1989)
- Use the following style: (Author, in press); (Author, in prep.); (Author, unpubl.); (Author, pers. comm.)

Always use the official SI notations:

- kg / m / kJ / cm *instead of* kg. (Kg) / m. / kJ. (KJ) / cm.;
- 20° 16' 32'' SW *instead of* 20° 16' 32'' SW
- 0.50 *instead of* 0,50 (*used in French text*); 9000 *instead of* 9,000 *but if more than* 10,000: 10,000 *instead of* 10000
- ^{14}C *instead of* C¹⁴ / C-14 and BP / BC / AD *instead of* B.P. / B.C. / A.D.
- e.g. / i.e. *instead of* e.g., / i.e.,

ACKNOWLEDGMENTS

Remember, the ITA WTC scientific program is not a venue for commercial sales pitches or promotional content. Such activities are more appropriately directed to the Trade Exhibition. Papers may present innovations, but must not be commercially driven. Submissions not meeting this standard will be returned. Sponsorship acknowledgments at the end of a paper are welcome.

REFERENCES

- De Backer, Hans et al. (Jan. 2018) "Combining Bored Tunnels: Optimal Construction Order of Multiple Independent Shield-Driven Tunnels". In: *IABSE Symposium Report*, S33–17.
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