

# Paper Template for INTERSPEECH

Name of author

Address - Line 1

Address - Line 2

Address - Line 3

email@address

## Abstract

For your paper to be published in the conference proceedings, you must use this document as both an instruction set and as a template into which you can type your own text. If your paper does not conform to the required format, you will be asked to fix it.

Please do not reuse your past papers as a template. To prepare your paper for submission, please always download a fresh copy of this template from the conference website and please read the format instructions in this template before you use it for your paper.

Conversion to PDF may cause problems in the resulting PDF or expose problems in your source document. Before submitting your final paper in PDF, check that the format in your paper PDF conforms to this template. Specifically, check the appearance of the title and author block, the appearance of section headings, document margins, column width, column spacing, and other features such as figure numbers, table numbers and equation number. In summary, you must proofread your final paper in PDF before submission.

The maximum number of pages is 5. The 5<sup>th</sup> page may be used exclusively for references. The references should begin on an earlier page immediately after the Acknowledgements section, and continue onto the 5<sup>th</sup> page. If no space is available on an earlier page, then the references may begin on the 5<sup>th</sup> page.

Index terms should be included as shown below.

**Index Terms:** zero-resource speech challenge, unsupervised learning, speech recognition

## 1. Introduction

This template can be found on the conference website. Templates are provided for Microsoft Word®, and L<sup>A</sup>T<sub>E</sub>X. However, we highly recommend using L<sup>A</sup>T<sub>E</sub>X when preparing your submission. Information for full paper submission is available on the conference website.

## 2. Page layout and style

Authors should observe the following rules for page layout. A highly recommended way to meet these requirements is to use a given template (LibreOffice, Microsoft Word or L<sup>A</sup>T<sub>E</sub>X) and check details against the corresponding example PDF file. Given templates, Microsoft Word® or L<sup>A</sup>T<sub>E</sub>X, can be adapted/imported easily in other software such as LibreOffice, Apple Pages, LuaL<sup>A</sup>T<sub>E</sub>X, and XeL<sup>A</sup>T<sub>E</sub>X, but please be careful to match the layout of the provided PDF example.

### 2.1. Basic layout features

- Proceedings will be printed in DIN A4 format. Authors must submit their papers in DIN A4 format.

- Two columns are used except for the title section and for large figures that may need a full page width.
- Left and right margin are 20 mm each.
- Column width is 80 mm.
- Spacing between columns is 10 mm.
- Top margin is 25 mm (except for the first page which is 30 mm to the title top).
- Bottom margin is 35 mm.
- Text height (without headers and footers) is maximum 235 mm.
- Headers and footers must be left empty.
- Check indentations and spacings by comparing to this example file (in PDF).

#### 2.1.1. Headings

Section headings are centered in boldface with the first word capitalized and the rest of the heading in lower case. Sub-headings appear like major headings, except they start at the left margin in the column. Sub-sub-headings appear like sub-headings, except they are in italics and not boldface. See the examples in this file. No more than 3 levels of headings should be used.

### 2.2. Text font

Times or Times Roman font is used for the main text. Font size in the main text must be 9 points, and in the References section 8 points. Other font types may be used if needed for special purposes. It is VERY IMPORTANT that while making the final PDF file, you embed all used fonts!

L<sup>A</sup>T<sub>E</sub>X users: users should use Adobe Type 1 fonts such as Times or Times Roman. These are used automatically by the INTERSPEECH.v2.sty style file. Authors must not use Type 3 (bitmap) fonts.

### 2.3. Figures

All figures must be centered on the column (or page, if the figure spans both columns). Figure captions should follow each figure and have the format given in Figure 1.

Figures should be preferably line drawings. If they contain gray levels or colors, they should be checked to print well on a high-quality non-color laser printer.

Graphics (i.e., illustrations, figures) must not use stipple fill patterns because they will not reproduce properly in Adobe PDF. Please use only SOLID FILL COLORS.

Figures which span 2 columns (i.e., occupy full page width) must be placed at the top or bottom of the page.

here is a picture

Figure 1: *Schematic diagram of speech production.*

## 2.4. Tables

An example of a table is shown in Table 1. The caption text must be above the table.

Table 1: *This is an example of a table*

Ratio	Decibels
1/10	−20
1/1	0
2/1	≈ 6
3.16/1	10
10/1	20
100/1	40
1000/1	60

## 2.5. Equations

Equations should be placed on separate lines and numbered. Examples of equations are given below. Particularly,

$$x(t) = s(f_{\omega}(t)) \quad (1)$$

where  $f_{\omega}(t)$  is a special warping function

$$f_{\omega}(t) = \frac{1}{2\pi j} \oint_C \frac{\nu^{-1k} d\nu}{(1 - \beta\nu^{-1})(\nu^{-1} - \beta)} \quad (2)$$

A residue theorem states that

$$\oint_C F(z) dz = 2\pi j \sum_k \text{Res}[F(z), p_k] \quad (3)$$

Applying (3) to (1), it is straightforward to see that

$$1 + 1 = \pi \quad (4)$$

Finally we have proven the secret theorem of all speech sciences. No more math is needed to show how useful the result is!

## 2.6. Information for Word users only

For ease of formatting, please use the styles listed in Table 2. The styles are defined in this template file and are shown in the order in which they would be used when writing a paper. When the heading styles in Table 2 are used, section numbers are no longer required to be typed in because they will be automatically numbered by Word. Similarly, reference items will be automatically numbered by Word when the “Reference” style is used.

If your Word document contains equations, you must not save your Word document from “.docx” to “.doc” because when doing so, Word will convert all equations to images of unacceptably low resolution.

## 2.7. Hyperlinks

For technical reasons, the proceedings editor will strip all active links from the papers during processing. Hyperlinks can be included in your paper, if written in full, e.g.

Table 2: *Main predefined styles in Word*

Style Name	Entities in a Paper
Title	Title
Author	Author name
Affiliation	Author affiliation
Email	Email address
AbstractHeading	Abstract section heading
Body Text	First paragraph in abstract
Body Text Next	Following paragraphs in abstract
Index	Index terms
1. Heading 1	1 <sup>st</sup> level section heading
1.1 Heading 2	2 <sup>nd</sup> level section heading
1.1.1 Heading 3	3 <sup>rd</sup> level section heading
Body Text	First paragraph in section
Body Text Next	Following paragraphs in section
Figure Caption	Figure caption
Table Caption	Table caption
Equation	Equations
• List Bullet	Bulleted lists
[1] Reference	References

“<http://www.foo.com/index.html>”. The link text must be all black. Please make sure that they present no problems in printing to paper.

## 2.8. Multimedia files

The INTERSPEECH organizing committee offers the possibility to submit multimedia files. These files are meant for audio-visual illustrations that cannot be conveyed in text, tables and graphs. Just like you would when including graphics, make sure that you have sufficient author rights to the multimedia materials that you submit for publication. The proceedings media will NOT contain readers or players, so be sure to use widely accepted file formats, such as MPEG, Windows WAVE PCM (.wav) or Windows Media Video (.wmv) using standard codecs.

Your multimedia files must be submitted in a single ZIP file for each separate paper. Within the ZIP file you can use folders and filenames to help organize the multimedia files. In the ZIP file you should include a TEXT or HTML index file which describes the purpose and significance of each multimedia file. From within the manuscript, refer to a multimedia illustration by its filename. Use short file names without blanks for clarity.

The ZIP file you submit will be included as-is in the proceedings media and will be linked to your paper in the navigation interface of the proceedings. Causal Productions (the publisher) and the conference committee will not check or change the contents of your ZIP file.

Users of the proceedings who wish to access your multimedia files will click the link to the ZIP file which will then be opened by the operating system of their computer. Access to the contents of the ZIP file will be governed entirely by the operating system of the user’s computer.

## 2.9. Page numbering

Final page numbers will be added later to the document electronically. *Don’t make any footers or headers!*

## 2.10. References

The reference format is the standard IEEE one. References should be numbered in order of appearance, for example [1], [2], [3, pp. 417–422], and [4].

## 2.11. Abstract

The total length of the abstract is limited to 200 words. The abstract included in your paper and the one you enter during web-based submission must be identical. Avoid non-ASCII characters or symbols as they may not display correctly in the abstract book.

## 2.12. Author affiliation

Please list country names as part of the affiliation for each country.

## 2.13. Submitted files

Authors are requested to submit PDF files of their manuscripts. You can use commercially available tools or for instance <http://www.pdfforge.org/products/pdfcreator>. The PDF file should comply with the following requirements: (a) there must be no PASSWORD protection on the PDF file at all; (b) all fonts must be embedded; and (c) the file must be text searchable (do CTRL-F and try to find a common word such as the). The proceedings editors (Causal Productions) will contact authors of non-complying files to obtain a replacement. In order not to endanger the preparation of the proceedings, papers for which a replacement is not provided timely will be withdrawn.

## 3. Method

Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetur adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

## 4. Experiments

Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetur adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

## 5. Results

Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetur adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

## 6. Discussion

Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetur adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

## 7. Conclusions

Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetur adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

## 8. Acknowledgements

## 9. References

- [1] S. B. Davis and P. Mermelstein, "Comparison of parametric representation for monosyllabic word recognition in continuously spoken sentences," *IEEE Transactions on Acoustics, Speech and Signal Processing*, vol. 28, no. 4, pp. 357–366, 1980.
- [2] L. R. Rabiner, "A tutorial on hidden Markov models and selected applications in speech recognition," *Proceedings of the IEEE*, vol. 77, no. 2, pp. 257–286, 1989.
- [3] T. Hastie, R. Tibshirani, and J. Friedman, *The Elements of Statistical Learning – Data Mining, Inference, and Prediction*. New York: Springer, 2009.
- [4] F. Lastname1, F. Lastname2, and F. Lastname3, "Title of your INTERSPEECH 2017 publication," in *INTER\_SPEECH 2017 – 18<sup>th</sup> Annual Conference of the International Speech Communication Association, August 20–24, Stockholm, Sweden, Proceedings*, 2017, pp. 100–104.