



# 《Professional Reading and Writing》 How to use Latex

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- LaTeX is a typesetting system based on T<sub>E</sub>X

## Original intention

- Let researchers get rid of the tedious format adjustments and focus on the paper itself.

- Designed by Donald E. Knuth (Gartner, Donald Knuth) in 1977
- Composed of three Greek letters, pronounced "Tech" (Tek)
- It was originally used for digital printing equipment in the publishing industry
  - The version number after the 3rd edition is getting closer and closer to  $\pi$ , the current version is 3.1415926
- Very stable, Gartner offers a reward for anyone who finds a bug in TEX

# History-Donald E. Knuth (Gartner)

- Author of "The Art of Computer Programming"
- Fellow of the National Academy of Sciences
- Fellow of the American Academy of Engineering
- Fellow of the American Academy of Arts and Sciences
- Professor of Computer Science at Stanford University (When he is 30 years old)
- The youngest Turing Award winner (When he is 36 years old)

<http://www-cs-faculty.stanford.edu/~knuth/>





# History-Latex

- Pronounced as "Lay-Tech"
- Developed by the computer scientist Lamport in the early 1980s
- LaTeX is a simpler language developed on the basis of Plain TeX
- Provides pre-defined professional page settings
- Generate book-quality prints in a short time
- Can also be used to generate vector graphics



# Compared with MS Word

	Microsoft® Word	LaTeX
Type	Word processing tool	Professional typesetting software
Small document	Easy to use, intuitive	Easy to use
	What you see is what you get	What you see is what you think, what you think is what you get
Large documents (multiple images)	Advanced functions are not easy to master	Difficult to advance, but generally not needed
	Handling long documents requires extensive experience	Basically the same as short document processing
Ease of use and beauty	Spend a lot of time adjusting the format	Don't worry about the format, focus on the content
	Formula typography is unsatisfactory	Especially good at formula typesetting
Academic characteristics	Additional tools needed to manage literature	Seamlessly compatible with document management tools
Compatibility	Binary format, poor compatibility	Text file, easy to read and stable
Price	Paid commercial license	Free to use



# Disadvantages of LATEX

1. Getting started is not as easy as MS Word
  - But once and for all
2. It takes time to redesign the entire layout by yourself
  - But we don't have the need for design and typesetting



# Preparation

- TEX set
  - Windows: **CTeX**, MiKTeX,
  - Linux: teTeX
  - Cross-platform : TeX Live, MacTeX, ConTeXt
- Editor
  - Windows: **WinEdt**, TeXnicCenter, MeWa, WinShell, BakoMa TeX, Inlage,...
  - Linux: Gedit LaTeX Plugin, Gummi, Winefish, Kile, ...
  - Cross-platform : LyX, Texmaker, AUCTEX, TeXlipse, TeXworks, ...
- Installation suggestion CTeX+WinEdt10.2
  - Detailed installation tutorial: search for "Ctex WinEdt"



# helloworld

- An Example: helloworld

```
\documentclass{article}
\author{fool}
\title{My First \LaTeX Article}
\begin{document}
\maketitle
Wow! This is my FIRST \LaTeX Article!

Hello World!
\end{document}
```

My First  $\LaTeX$  article

fool

October 12, 2018

Wow! This is my FIRST  $\LaTeX$  Article!  
Hello World!





# Overall framework

- Constitution:

**.cls (e.g., IEEETran.cls) (Periodicals, conference templates, provided by the official)**

**.tex (main file)**

**.bib ( Reference documents )**

**.fig (eps, pdf, png, jeg...) ( Picture )**



# Overall framework

## Step 1: load the template, for example :

```
\documentclass[conference]{IEEEtran.cls}
```

keyword

Specify a journal or conference, single/double column and font size, if not specified, the default will be used

Journals/Conferences  
Provided template



```
%\documentclass[journal,11pt,draftcls,onecolumn]{IEEEtran}  
  
\documentclass[journal,10pt,twocolumn,twoside]{IEEEtran}  
  
%
```



# Overall framework

## Step 2: Add header files, for example :

keyword

```
\usepackage{psfig}
\usepackage{algorithm}
\usepackage{algorithmic}
\usepackage{graphicx}
\usepackage{amsmath}
\usepackage{booktabs}
\usepackage{subfigure}
\usepackage{cases}
```

Insert eps picture

Insert pseudo code

Insert mathematical  
formula

Insert table



# Overall framework

**Step 3: The file starts with**

`\begin{document}`

**and ends with**

`\end{document}`

**Add your paper content in between**

# Paper structure

## a. Title :

**`\title{-----}`**

## b. Author information :

```
\author{Feng~Shan, Junzhou~Luo, Weiwei~Wu, Xiaojun~Shen  
\IEEEcompsocitemizethanks{  
\IEEEcompsocthanksitem F. Shan, J. Luo and W. Wu are with School of  
Computer Science and Engineering, Southeast University, Nanjing, Jiangsu, P. R.  
China (Emails: \{shanfeng,jluo,weiweiwu\}@seu.edu.cn).  
\IEEEcompsocthanksitem X. Shen is with School of Computing and Engineering,  
University of Missouri - Kansas City, MO, USA (Email: shenx@umkc.edu).}
```



# Paper structure

## c. Abstract:

**`\begin{abstract}.....\end{abstract}`**

## d. Keyword :

**`\begin{IEEEkeywords}`**

**`\end{IEEEkeywords}`**



# Paper structure

## e. Text

The main text is generally composed of "Introduction", "Related Works" "Overview", "Method", "Results", "Conclusion" and other parts.

You can create a .tex file for each section

On the one hand, the main file (main.tex) is not too bloated, on the other hand, it is convenient for other authors to modify the paper



# Paper structure

`\input{}` is used to load the .tex file you created

`\label{}` is the name of the file (user-defined)

```
\input{intro}  
\label{secIntroduction}  
  
\input{related_work}  
\label{secRelatedWork}  
  
\input{overview}  
\label{secOverview}  
  
\input{vertex_classification}  
\label{secVertexC}  
  
\input{subneighborhood_searching}  
\label{secSubS}  
  
\input{mls}  
\label{secMLS}|  
  
\input{result}  
\label{secResult}  
  
\input{conclusion}  
\label{secCon}
```



# Paper structure

## f. Acknowledgement

`\section*{Acknowledgment}`

`\section*{Acknowledgements}`

The authors would like to thank the anonymous referees and guest editors for their constructive comments and valuable suggestions which have helped improve the quality and presentation of the paper.

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# Paper structure

Format used for references

## g. References

`\bibliographystyle{IEEEtran}`

`\bibliography{mesh_denoising.bib}`

Add references

You can put the references in the .bib file,  
not the main file.



# Paper structure

## h. Personal profile

```
\begin{IEEEbiography} [ {\includegraphics[width=1in, height=1.25in, clip, keepaspectratio] {Shan. jpg}} ]
```

.....

```
\end{IEEEbiography}
```

```
\begin{IEEEbiography}[{\includegraphics[width=1in,height=1.25in,clip,keepaspectratio]{Shan.jpg}}]{Feng Shan} (M'17) received the Ph.D. degree in computer science from Southeast University, Nanjing, China, in 2015. He is currently an Assistant Professor with the School of Computer Science and Engineering, Southeast University. He was a Visiting Scholar with the School of Computing and Engineering, University of Missouri-Kansas City, Kansas City, MO, USA, from 2010 to 2012. His research interests include the areas of energy harvesting, wireless power transfer, swarm intelligence, and algorithm design and analysis.
```

```
\end{IEEEbiography}
```



# Paper structure

---

**i. Appendix**

**\appendices**



# Paper structure

1. `\documentclass[conference]{IEEEtran.cls}`
2. `usepackage{algorithm}`
3. `\title{-----}`
4. `\begin{document}`
5. `\author{Feng~Shan}`
6. `\begin{abstract}.....\end{abstract}`
7. `\begin{IEEEkeywords}...\end{IEEEkeywords}`
8. `\section{...} \section{...}...\section{...}`
9. `\section*{Acknowledgment}`
10. `\bibliographystyle{IEEEtran}`
11. `\bibliography{truncation.bib}`
12. `\end{document}`



# Basic grammar

- Space: Consecutive spaces are considered to be only one, use `~` to indicate a space
- Some special symbols cannot be used directly :
  - `$ & % # _ { }` should be written as `\$ \& \% \# \_ \{ \}`
- Line break: `\\`
- Paragraph: a blank line after the text is a sign of the end of the paragraph
- Comment: All text after `%` is a comment, which is an invalid sentence
- LaTeX commands: start with `\` :
  - `\section{first paragraph}`
  - `\emph{emphasize}`



# Section

- in article:
  - \section{section name}
  - \subsection{subsection name}
  - \subsubsection{subsubsection name}





---

# Mathematical Formula

---



# Mathematical formula-category

## a. In line

where  $p_i = (x_i, v_i)$  is a vertex of an oriented  
the size number of  $S$ , and  $(x_{cp} - x_i) \times v_i$  is the  
of two vectors. Eq. 10 can be easily solved by s

## b. Between lines (with serial number)

compromise between the two different objectives can  
be achieved by seeking the minimum of energy

$$\min_{N'} \int_{\Omega} (N' - N) dudv + \lambda \int_{\Omega} \Phi(N') dudv, \quad (1)$$

where the first term considers the resemblance with  
the original normal field while the second term mea-

## c. Between lines (no serial number)

matrix with values as

$$L_{ij} = \begin{cases} 1, & i = j, \\ -w_{ij}, & e_{ij} \in E, \\ 0, & otherwise. \end{cases}$$

be changed to a sparse linear sy  
/  $N$  which can be solved more



# Mathematical formula-insert

- In-line formula(inline mode)
  - $( \dots )$
  - $\begin{math} \dots \end{math}$
  - $\$ \dots \$$
- Interline formula(display mode)
  - $\begin{equation} \dots \end{equation}$
  - $[ \dots ]$
  - $\begin{displaymath} \dots \end{displaymath}$
  - $\$ \$ \dots \$ \$$



# Use examples to illustrate the difference between the two formulas

## Input

I know that you know  $1+1=2$ , but I know  $2-1=1$ , which you don't know. Now look at it  $2-1=1$  I DO know more than you

## Output

I know that you know  $1 + 1 = 2$ , but I know  $2 - 1 = 1$ , which you don't know. Now look at it

$$2 - 1 = 1$$

I DO know more than you.



# Fractions, subscripts and square roots

## Input

```
$$\frac{2011}{2012}, x_1, x_2, \ldots, x_n, a^2+b^2=c^2, \\ x_1^2+x_2^2+\ldots+x_n^2=r^{100}, \sqrt{x+1}, \\ \sqrt[3]{x^2+1}$$
```

## Output

$\frac{2011}{2012}, x_1, x_2, \dots, x_n, a^2 + b^2 = c^2, x_1^2 + x_2^2 + \dots + x_n^2 = r^{100}, \sqrt{x+1}, \sqrt[3]{x^2+1}$



# Trigonometric function

## Input

`$$\sin x, \cos x, \tan x, \arctan x, \sinh x, \cosh x,`  
`\max x, \min x, \ln x, \log x, \log_2 x.$$`

## Output

$\sin x, \cos x, \tan x, \arctan x, \sinh x, \cosh x, \max x, \min x, \ln x, \log x, \log_2 x.$



# Summation, limit and integral

## Input

$\lim_{n \rightarrow \infty} a_n = 1, \sum_{n=1}^{\infty} n = 5050, \int_a^b f(x) \mathrm{d}x = I$

## Output

$$\lim_{n \rightarrow \infty} a_n = 1, \sum_{n=1}^{\infty} n = 5050, \int_a^b f(x) \mathrm{d}x = I$$


$$\begin{aligned}
& \text{\textbackslash times, \textbackslash div, } a < b, b = c, c \text{\textbackslash neq} d, d > e, \\
& e \text{\textbackslash geq} f, f \text{\textbackslash leq} g \\
& \text{\textbackslash alpha, \textbackslash beta, \textbackslash gamma, \textbackslash delta, \textbackslash epsilon, \textbackslash varepsilon, \textbackslash xi, \textbackslash pi} \\
& \text{\textbackslash rho, \textbackslash sigma, \textbackslash eta, \textbackslash theta, \textbackslash phi, \textbackslash varphi, \textbackslash omega} \\
& |A|, \text{\textbackslash|A|}, \text{\textbackslash vec}\{a\}, \text{\textbackslash overrightarrow}\{AB\}, \text{\textbackslash tilde}\{x\}, \\
& \text{\textbackslash widetilde}\{xyz\}, \text{\textbackslashmathrm}\{\sin\}
\end{aligned}$$
$$a \times b, c \div d, a < b, b = c, c \neq d, d > e, e \geq f, f \leq g$$
$$\alpha\beta\gamma\delta\epsilon\xi\pi\rho\sigma\eta\theta\phi\varpi\omega, |A|, \|A\|, \vec{a}, \overrightarrow{AB}, \tilde{x}, \widetilde{xyz}, \sin$$





# Matrix

## Input

```
\begin{equation}
\left(
\begin{array}{ccc}
a_{11} & a_{12} & a_{13} \\
a_{21} & a_{22} & a_{23} \\
a_{31} & a_{32} & a_{33}
\end{array}
\right)
\end{equation}
```

## Output

$$\begin{pmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{pmatrix} \quad (1)$$



# Piecewise function

## Input

```
\begin{equation}
\chi_A(x)=
\left\{
\begin{array}{ll}
1, & x \in A \\
0, & x \notin A
\end{array}
\right.
\end{equation}
```

## Output

$$\chi_A(x) = \begin{cases} 1, & x \in A \\ 0, & x \notin A \end{cases} \quad (3)$$



# Figure, table, document algorithm



# What image formats are supported

- ps:** PostScript. Launched by Adobe, it is a page description language. Independent of equipment, it can comprehensively process text and images, and is good at describing vector graphics.
- eps:** Encapsulated PostScript. Encapsulated PostScript is a subset of PostScript. Each eps file has only one page. Images in eps format are most compatible with LATEX.
- pdf:** Portable Document Format
- Non-vector graphics: jpg, png, bmp, ...:** Various other image formats, also supported by LATEX

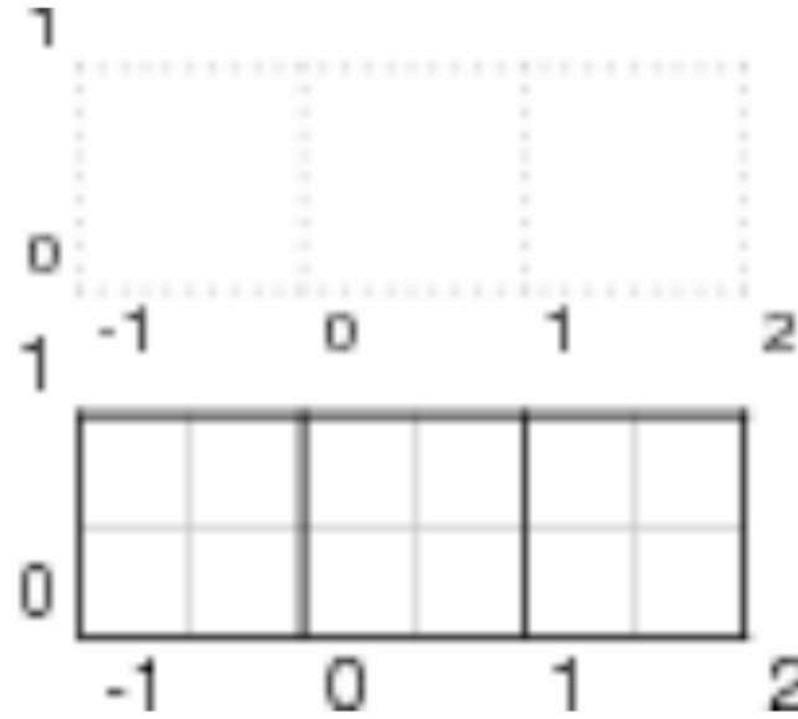
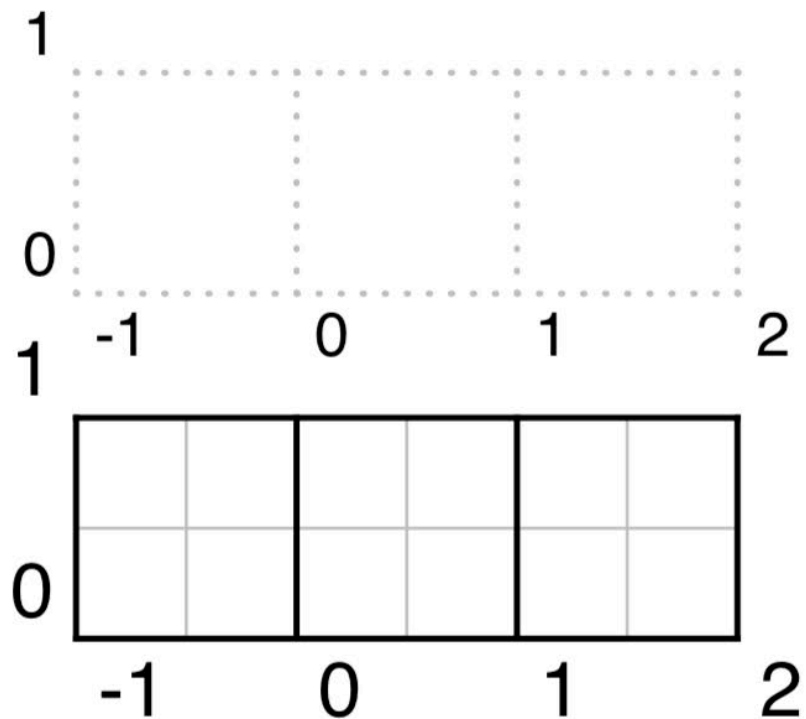
# Insert jpg image

## Input

```
\begin{figure}[h]  
    \centering  
    \includegraphics[width=0.3\textwidth,angle=20]{jpg_figure}  
\end{figure}
```



# Vector vs Non-vector



# Figure

\begin{figure}

Occupy a single column

smoothing is applied to the detail-suppressed normal field obtained in the previous stage to give an guidance normal field for the next shape recovery stage.

## 4.3 Joint Weighted Least Squares

By performing WLS again but with the original normal field  $N$  with a shape constraint and the normal field  $N''$  of  $L_0$  gradient minimization, which is called joint WLS, we can finally obtain a base normal field  $N'''$ , followed by a subtraction operation to acquire the detail normal field.

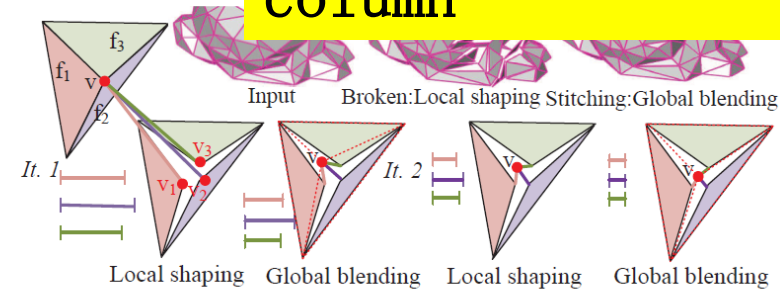
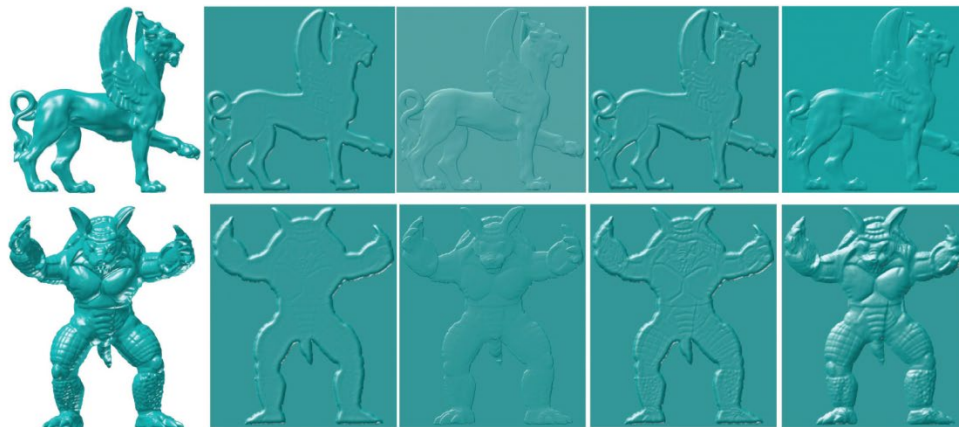


Fig. 6. Illustration of SfG [30] by giving results from real data (the top row) and schematic diagrams (the bottom row): local shaping and global blending. In the top row,

an input, and the decomposed base and detail normal maps as inputs. Compared to the original geometry (the leftmost one), we can see our bas-relief modeling scheme with the two decomposed normal maps outperforms the other two in detail preservation.



\begin{figure\*}

Occupy double column



# Figure

Occupy a single column

```
\begin{figure} [htbp]
\centering
\includegraphics[width=0.5\linewidth]{images/1-
ring/1-ring.eps}
\caption{1-ring face.} \label{fig:1-ring}
\end{figure}
```

Occupy double column

```
\begin{figure*} [htbp]
\centering
\includegraphics[width=1.0 \linewidth]{images/1-
ring/1-ring.eps}
\caption{1-ring face.} \label{fig:1-ring}
\end{figure*}
```



# Figure

```
\begin{figure} [htbp]  
\end{figure}
```

The location where the picture may be placed. This optional parameter item can be any combination of the following letters.

**h(**here**)**

Current position. Place the graphic in the text of the text where the graphic environment is given. If there are not enough pages left on this page, this parameter will have no effect.

**t(**top**)**

Top. Place the graphic at the top of the page.

**b(**bottom**)**

Bottom. Place the graphic at the bottom of the page.

**p(**page**)**

Floating page. Place the graphic on a page that allows floating objects.

# Figure-Add a subtitle to the subfigure

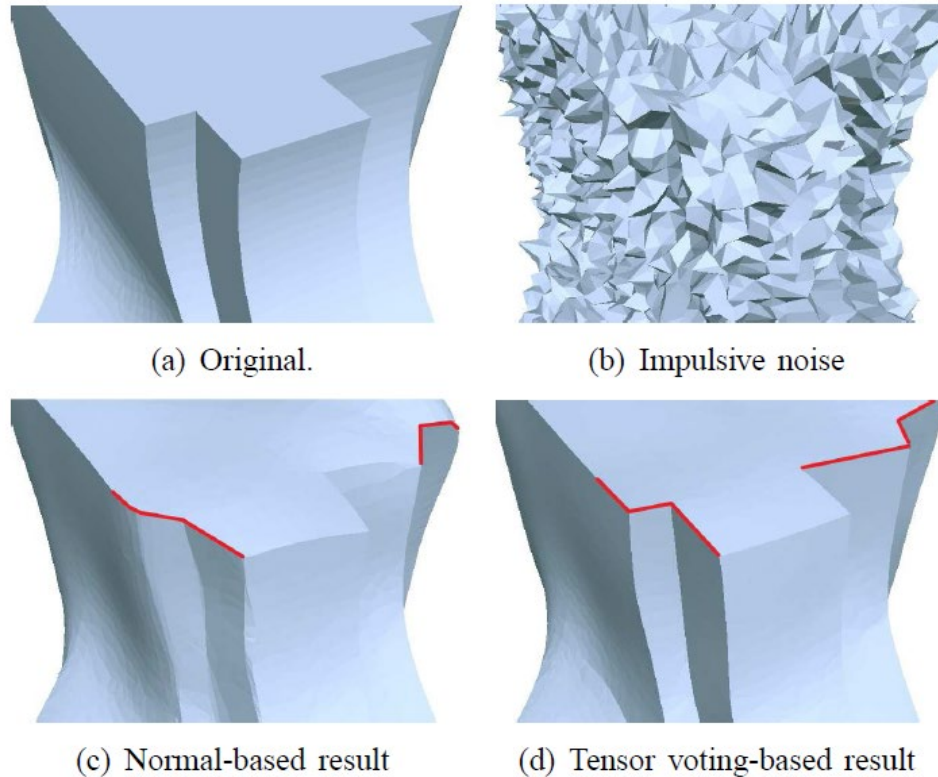


Fig. 7. Tensor voting based clustering leads to better result than normal-based method in the presence of large scale of noise. The model is added by impulsive noise with  $\sigma_E = 0.7$ . Red lines in (c), (d) mean detected sharp



# Figure-Add a subtitle to the subfigure

```
\begin{figure} [t]
  \centering
  \subfigure[Original.]{ \label{f:c_c:a}
    \includegraphics[width=0.45
\linewidth]{fig/clustering_com/f_original.eps}}
  \subfigure[Impulsive noise]{ \label{f:c_c:b}
    \includegraphics[width=0.45
\linewidth]{fig/clustering_com/F_noise.eps}}
  \subfigure[Normal-based result]{ \label{f:c_c:c}
    \includegraphics[width=0.45
\linewidth]{fig/clustering_com/F_normal.eps}}
  \subfigure[Tensor voting-based result]{ \label{f:c_c:d}
    \includegraphics[width=0.45
\linewidth]{fig/clustering_com/F_four.eps}}
  \caption{Tensor voting based clustering lead}
  \label{fig:c_c}
\end{figure}
```



# Table

## Input

```
\begin{tabular}{l|l}  
Name & score \\  
\hline  
You & 100 \\  
Me & 59  
\end{tabular}
```

In the alignment, l=left, r=right, and c=center represent left-justified, right-justified and centered respectively.

& Is used to split two columns of content,

\\ is used to force a newline

\hline is used to insert the table border

Me	59
----	----

TABLE 1  
Parameters setting.

BMF	Circular	Dinosaur	Feline	Armadillo	Star	Gargoyle
$n$	8	5	5	5	20	10
BNF	Circular	Dinosaur	Feline	Armadillo	Star	Gargoyle
$\sigma_S$	0.35	0.35	0.25	0.35	0.35	0.35
$n_1$	20	10	5	20	30	10
$n_2$	10	10	5	10	20	10
$L_0F$	Circular	Dinosaur	Feline	Armadillo	Star	Gargoyle
$\beta$	0.001	0.001	0.001	0.001	0.001	0.001
$\lambda$	1	0.00001	0.0001	0.1	0.001	10
LapF	Circular	Dinosaur	Feline	Armadillo	Star	Gargoyle
$n$	50	18	50	30	10	20
APSS	Circular	Dinosaur	Feline	Armadillo	Star	Gargoyle
$MLS$	12	8	13	10	8	10
$Accr$	0.01	0.01	0.01	0.01	0.01	0.01
$n_{max}$	60	40	70	50	50	50
RGF	Circular	Dinosaur	Feline	Armadillo	Star	Gargoyle
$n$	5	5	5	5	5	5
$\sigma_r$	12	2	5	5	4	6
$\sigma_s$	0.4	0.13	0.3	0.35	0.5	0.7
Our	Circular	Dinosaur	Feline	Armadillo	Star	Gargoyle
$\sigma_s$	0.4	0.35	0.35	0.35	0.35	0.25
$n_1$	40	20	20	30	20	10
$n_2$	40	20	20	30	20	10
$ID_M$	19	13	15	17	10	10

# Table



TABLE 1  
Parameters setting.

BMF	Circular	Dinosaur	Feline	Armadillo	Star	Gargoyle
$n$	8	5	5	5	20	10
BNF	Circular	Dinosaur	Feline	Armadillo	Star	Gargoyle
$\sigma_S$	0.35	0.35	0.25	0.35	0.35	0.35
$n_1$	20	10	5	20	30	10
$n_2$	10	10	5	10	20	10
$L_0F$	Circular	Dinosaur	Feline	Armadillo	Star	Gargoyle
$\beta$	0.001	0.001	0.001	0.001	0.001	0.001
$\lambda$	1	0.00001	0.0001	0.1	0.001	10
LapF	Circular	Dinosaur	Feline	Armadillo	Star	Gargoyle
$n$	50	18	50	30	10	20
APSS	Circular	Dinosaur	Feline	Armadillo	Star	Gargoyle
$MLS$	12	8	13	10	8	10
$Accr$	0.01	0.01	0.01	0.01	0.01	0.01
$n_{max}$	60	40	70	50	50	50
RGF	Circular	Dinosaur	Feline	Armadillo	Star	Gargoyle
$n$	5	5	5	5	5	5
$\sigma_r$	12	2	5	5	4	6
$\sigma_s$	0.4	0.13	0.3	0.35	0.5	0.7
Our	Circular	Dinosaur	Feline	Armadillo	Star	Gargoyle
$\sigma_s$	0.4	0.35	0.35	0.35	0.35	0.25
$n_1$	40	20	20	30	20	10
$n_2$	40	20	20	30	20	10
$ID_M$	19	13	15	17	10	10

```
\begin{table} [!hbp]
```

```
\caption{Parameters setting.}
```

```
\begin{tabular} {|c|c|c|c|c|c|c|}
```

```
\hline
```

```
BMF & Circular & Dinosaur & Feline & Armadillo & Star & Gargoyle \\
```

```
\hline
```

```
$n$ & 8 & 5 & 5 & 5 & 20 & 10 \\
```

```
\hline
```

```
BNF & Circular & Dinosaur & Feline & Armadillo & Star & Gargoyle \\
```

```
\hline
```

```
\end{tabular}
```

```
\end{table}
```



# Algorithm

## Input

```
\begin{algorithm} [H]
\caption{An Algorithm}
\begin{algorithmic} [1]
\FOR{each  $i$  in  $[1,9]$ }
\STATE initialize  $T_{\{i\}}$ ;
\STATE  $T_{\{i\}}$ ;
\ENDFOR
\end{algorithmic}
\end{algorithm}
```

## Output

---

### Algorithm 1 An Algorithm

---

- 1: **for** each  $i$  in  $[1,9]$  **do**
  - 2:     initialize  $T_i$ ;
  - 3:      $T_i$ ;
  - 4: **end for**
-

# Citation of figures, tables, documents, and algorithms



- Precautions for use in the paper

Give each figure, table, and reference a name for easy reference in the article

Figure reference `\ref{figure name}`

Table reference `\ref{table name}`

Literature citation `\cite{document name}`





# Quick reference manual

---

- LATEX2 $\epsilon$  Cheat Sheet
- LATEX Mathematical Symbols



# Paper template

- IEEE
  - IEEEtran.cls
- ACM
  - acmart.cls
- Elsevier
  - elsarticle.cls
- Southeast University (Bachelor, Master, Ph.D.)  
paper template
  - seuthesis.cls



# bare\_conf.tex

```
1 \documentclass[conference]{IEEEtran}
2 \begin{document}
3 \title{Bare Demo of IEEEtran.cls for Conferences}
4 \author{\IEEEauthorblockN{Michael Shell}
5 \IEEEauthorblockA{School of Electrical and\\Computer Engineering\\
6 Georgia Institute of Technology\\
7 Atlanta, Georgia 30332--0250\\
8 Email: http://www.michaelshell.org/contact.html}
9 \and
10 \IEEEauthorblockN{Homer Simpson}
11 \IEEEauthorblockA{Twentieth Century Fox\\
12 Springfield, USA\\
13 Email: homer@thesimpsons.com}
14 \and
15 \IEEEauthorblockN{James Kirk\\ and Montgomery Scott}
16 \IEEEauthorblockA{Starfleet Academy\\
17 San Francisco, California 96678-2391\\
18 Telephone: (800) 555--1212\\
19 Fax: (888) 555--1212}}
20
21 \maketitle
22
23 \begin{abstract}
24 The abstract goes here.
25 \end{abstract}
```

# Overleaf online Latex editor

The screenshot displays the Overleaf online LaTeX editor interface. The top navigation bar includes a 'Menu' button, a file explorer showing 'main.tex', and a toolbar with icons for recompiling, saving, and sharing. The main workspace is split into two panes. The left pane, titled 'Source', shows the LaTeX source code for a document class 'conference' using 'IEEEtran'. The code defines authors Michael Shell, Homer Simpson, and James Kirk, their affiliations, and contact information. The right pane shows the rendered PDF output, titled 'Bare Demo of IEEEtran.cls for Conferences'. The PDF includes the authors' names and affiliations, an abstract, an introduction, a conclusion, an acknowledgment, and a reference list.

Menu

overleaf.com

Review Share Submit History Chat

Source Rich Text

main.tex

```
1 \documentclass[conference]{IEEEtran}
2 \begin{document}
3 \title{Bare Demo of IEEEtran.cls for
  Conferences}
4 \author{\IEEEauthorblockN{Michael Shell}
5 \IEEEauthorblockA{School of Electrical
  and\Computer Engineering\
6 Georgia Institute of Technology\
7 Atlanta, Georgia 30332--0250\
8 Email: http://www.michaelshell.org/contact.
  html}
9 \and
10 \IEEEauthorblockN{Homer Simpson}
11 \IEEEauthorblockA{Twentieth Century Fox\
12 Springfield, USA\
13 Email: homer@thesimpsons.com}
14 \and
15 \IEEEauthorblockN{James Kirk\ and
  Montgomery Scott}
16 \IEEEauthorblockA{Starfleet Academy\
17 San Francisco, California 96678-2391\
18 Telephone: (800) 555--1212\
19 Fax: (888) 555--1212}}
20
```

Bare Demo of IEEEtran.cls for Conferences

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*Abstract*—The abstract goes here.

I. INTRODUCTION

This demo file is intended to serve as a "starter file" for IEEE conference papers produced under L<sup>A</sup>T<sub>E</sub>X using IEEEtran.cls version 1.8 and later. I wish you the best of success.

December 27, 2012

A. Subsection Heading Here  
Subsection text here.  
1) Subsubsection Heading Here: Subsubsection text here.

II. CONCLUSION

The conclusion goes here.

ACKNOWLEDGMENT

The authors would like to thank...

REFERENCES

[1] H. Kopka and P. W. Daly, *A Guide to L<sup>A</sup>T<sub>E</sub>X*, 3rd ed. Harlow, England: Addison-Wesley, 1999.



- Latex online editor
  - easy to use
  - team cooperation
    - Review comments
    - Track changes



# Support Chinese

- The compiler chooses XeLaTeX
- Add in tex file
  - `\usepackage[UTF8]{ctex}`



# 作业4

1. 使用Latex写报告
  - 本课程后续作业均用latex书写
2. 一个section介绍自己感兴趣的主题，以及为什么
3. 一个section介绍该主题你找的一篇最新高水平论文
4. 一个section介绍该主题你觉得重要的关键词、论文、学者，以及你为什么认为重要



# 课程报告要求

1. 使用Latex工具写课程报告
2. 使用IEEtran模板的conference选项
  - Double column, 10pt according to IEEE template,
3. 中文书写, 1~2页
4. 包含姓名学号
5. 至少1张图
6. 至少1个表格
7. 至少1个带编号公式
8. 至少3篇参考文献
9. 下周上课前提交