

Introduction to Publishing Research

Advanced Operating Systems

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The beginning

- Bright idea!
- What if... others had the same idea?
- What is new in...?
- Who else can help me?

Finding relevant publications

- Search (sort **descending by publication year**)
 - ACM Digital Library - <http://dl.acm.org/>
 - IEEE Explore - <http://ieeexplore.ieee.org/>
 - Microsoft Academic Search - <http://academic.research.microsoft.com/>
 - Google Scholar - <http://scholar.google.com/>
- Filter publications - browse by...
 - Journal/Transactions/Proceedings (NSDI, OSDI, Transactions on Networking etc.)
 - Interest Group (SIGCOMM, SIGOPS etc.)

Managing Bibliography

- Mendeley - <http://www.mendeley.com/>
 - Reference manager
 - Collaboration tool
 - Academic Social Network
- Managing Bibliographic References
 - Adding publications
 - Managing publications
 - Annotating and highlighting
 - Sharing references
 - Exporting bibliography

Adding publications - PDFs

The screenshot shows the Mendeley Desktop application window. The 'File' menu is open, displaying options like 'Add Files...', 'Add Folder...', 'Watch Folder...', 'Add Entry Manually...', 'Export...', 'Delete Documents', 'Remove from Collection', 'Rename Document Files...', 'Synchronize Library', and 'Quit'. A callout box points to the 'Add Files...' option, stating: 'You have different options to set up your library: • Add single files or an entire folder • “Watch a folder” to automatically import PDF files • Drag and drop PDFs into Mendeley Desktop'. Another callout box points to the main list of publications, stating: '... and Mendeley will try to extract the document details automatically'. The main list shows a table of publications with columns for Title, Author, Year, Journal, and Date Added. The selected entry is 'Articles Mesenchymal stem cells for treatment of steroid-resistant, severe, acute graft-versus-host disease: a phase II study' by K. Blanc, F. Frasson, L. Ball et al. The right-hand pane shows the details for this article, including the journal 'The Lancet', year '2008', volume '371', issue, pages '1579-1586', abstract, tags, keywords, citation key, URL, and catalog IDs.

You have different options to set up your library:

- Add single files or an entire folder
- “Watch a folder” to automatically import PDF files
- Drag and drop PDFs into Mendeley Desktop

... and Mendeley will try to extract the document details automatically

Title	Author	Year	Journal	Date Added
Cotransplantation of ex vivo expanded mesenchymal stem cells accelerates lympho...	Ball, L. M.; Bernard...	2007	Blood	4/5/09
Third party mesenchymal stromal cell infusions fail to induce tissue repair despite ...	Ball, L; Bredius, R; L...	2007	Leukemia	3/22/09
Progenitors of acute GVHD: manipulate the ...	Barnett, A John; ...	2008	Best Practice	4/5/09
Stem cells suppress lymphocyte	2002	Hematology	4/5/09
Homing of in vitro expanded Stro-1 - or Stro-1 + human mesenchymal stem cells int...	Bensidhoum, Morad...	2004	Journal of Clinical Onco...	3/7/09
Bone Marrow Stromal Stem Cells: Nature, Biology, and Potential Applications	Bianco, Paolo; RIMI...	2001	Stem Cells	3/7/09
Articles Mesenchymal stem cells for treatment of steroid-resistant, severe, acute graft-ve...	Blanc, Katarina Le; ...	2008	The Lancet	4/5/09
Treatment of severe acute graft-versus-host disease with third party haploidentical mese...	Blanc, Katarina Le; ...	2004	The Lancet	4/5/09
Clonogenicity of Human Endometrial Epithelial and Stromal Cells 1	Chan, Rachel W S; ...	2004	Biotechnology	3/7/09
Rapid expansion of recycling stem cells in cultures of plastic-adherent cells from huma...	Colter, David C; Clas...	2000	Proc. Natl. Acad. Sci. U...	3/7/09
Origin and Differentiation of Human and Murine Stroma	DENNIS, JAMES E.; ...	2002	Stem Cells	3/7/09
Expression Profiling and Functional Analysis of Wnt Signaling Mechanisms in Mesenchym...	Etheridge, S. Leah; ...	2004	Stem Cells	3/22/09
Cotransplantation of haploidentical mesenchymal stem cells to enhance engraft...	Fang, Baijun; Li, Nin...	2009	Pediatric transplantation	7/10/09
Tissue engineered bone grafts: biological requirements, tissue culture and clinical rele...	Fröhlich, Mirjam; Gr...	2008	Current stem cell researc...	9/15/09
The STRO-1+ fraction of adult human bone marrow contains the osteogenic precursors	Gronthos, S; Grave...	1994	Blood	3/7/09
Molecular and cellular characterisation of	Gronthos, Stan; Zan...	2003	Journal of Cell	3/7/09

Articles Mesenchymal stem cells for treatment of steroid-resistant, severe, acute graft-versus-host disease: a phase II study

Authors: K. Blanc, F. Frasson, L. Ball et al.

View research catalog entry for this paper

Journal: *The Lancet*
Year: 2008
Volume: 371
Issue:
Pages: 1579-1586

Abstract:

Tags:

Keywords:
autoimmune; GVHD; MSC

Citation Key:
Blanc2008

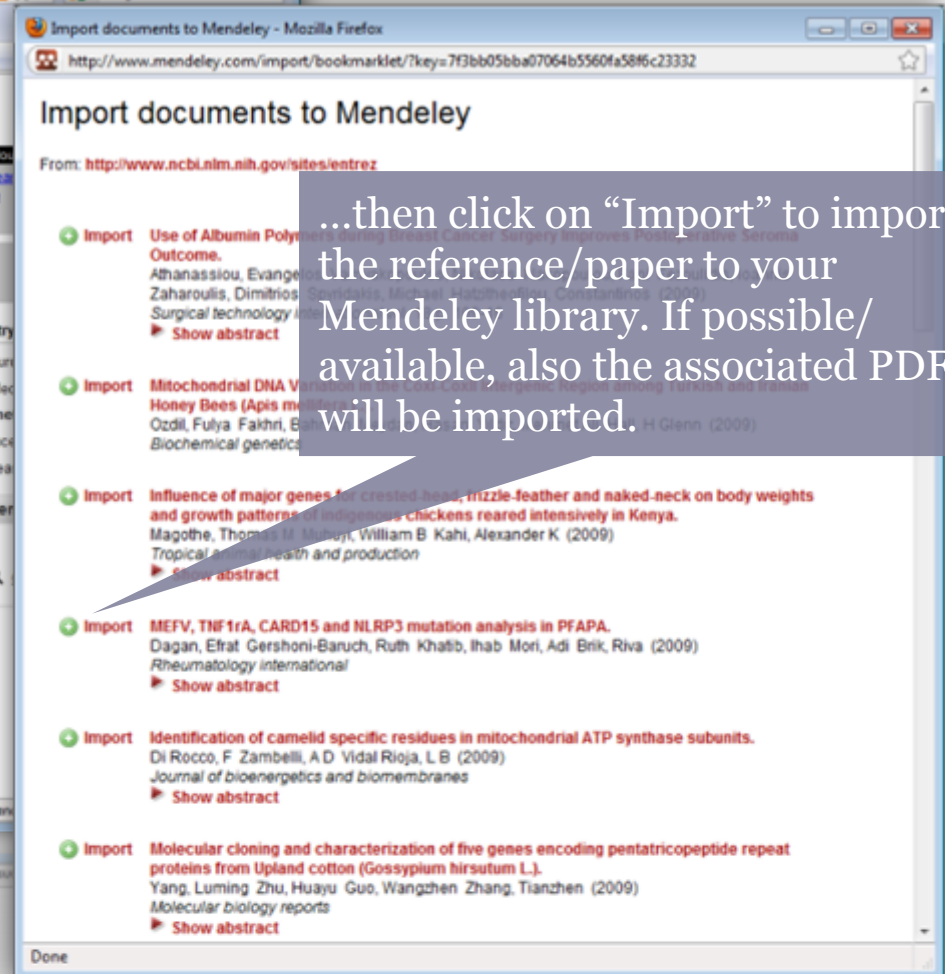
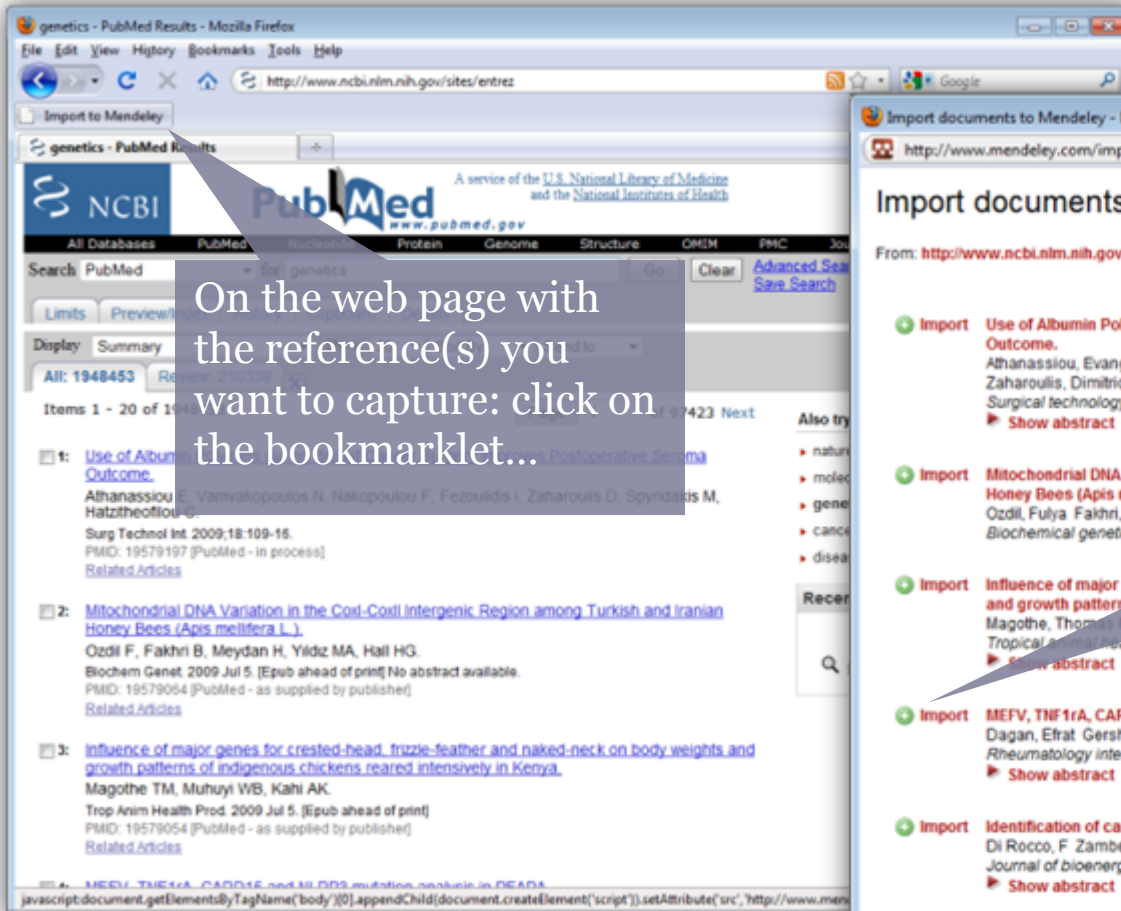
URL:
Add URL...

Catalog IDs
ArXiv ID:

Adding publications – Web Importer

On the web page with the reference(s) you want to capture: click on the bookmarklet...

...then click on “Import” to import the reference/paper to your Mendeley library. If possible/available, also the associated PDF will be imported.



Managing publications

My Library

- All Documents
- Recently Added
- Favorites
- CiteULike
- Needs Review
- My Publications
- Unsorted
- Automatically Imported
- Biosensor
- CSCs Biology
- Data citation
- Data reuse
- Data sharing and withholding
- Elsevier Grand Challenge for the Life S...
- Embryonic Stem Cells
- graph related
- iPSCs Biology
- linked data
- MSC Biology

Filter by My Tags

- Filter by Author's Keywords
- Filter by Authors
- Filter by My Tags
- Filter by Publications

autoimmune
baboon
biomarker
bone
bone marrow
cartilage

MSC Biology

Open attached PDF files in integrated viewer

Documents can be marked read/unread

Star your favorite papers

Filter by authors, tags, publications or keywords

★	●	📄	Authors	Title	Year	Published In	Added
☆	●	📄	Almeida-Parada, Gr...	Cotransplantation of human stromal cell progenitors into preimmune fetal sheep resu...	2000	Cell	3/7/09
☆	●	📄	Ball, L. M.; Bernard...	Cotransplantation of ex vivo expanded mesenchymal stem cells accelerates lympho...	2007	Blood	4/5/09
☆	●	📄	Ball, L.; Bredius, R; L...	Third party mesenchymal stromal cell	2007	Leukemia	3/22/09
☆	●	📄	Barrett, A John; Leb...	Prophylaxis of acute GVHD: manipulate the graft or the environment?	2008	Best Practice & Research ...	4/5/09
☆	●	📄	Bartholomew, Ameli...	Mesenchymal stem cells suppress lymphocyte proliferation in vitro and prolong skin graft s...	2002	Hematology	4/5/09
☆	●	📄	Bensidhoum, Morad...	Homing of in vitro expanded Stro-1 - or Stro-1 + human mesenchymal stem cells int...	2004	Journal of Clinical Onco...	3/7/09
☆	●	📄	Bianco, Paolo	Biology, and Potential Applications	2001	Stem Cells	3/7/09
★	●	📄	Le Blanc, Katarina; ...	Mesenchymal stem cells for treatment of steroid-resistant, severe, acute graft-vers...	2008	Lancet	4/5/09
☆	●	📄	Blanc, Katarina Le; ...	Treatment of severe acute graft-versus-host disease with third party haploidentical mese...	2004	The Lancet	4/5/09
☆	●	📄	Chan, Rachel W S	Clonogenicity of Human Endometrial Epithelial	2004	Biotechnology	3/7/09
★	●	📄	Colter, David C; Clas...	Rapid expansion of recycling stem cells in cultures of plastic-adherent cells from huma...	2000	Proc. Natl. Acad. Sci. U...	3/7/09
☆	●	📄	DENNIS, JAMES E.; ...	Origin and Differentiation of Human and Murine Stroma	2002	Stem Cells	3/7/09
☆	●	📄	Etheridge, S. Leah; ...	Expression Profiling and Functional Analysis	2004	Stem Cells	3/22/09

Annotating and highlighting

Pan

Highlight Text

Add Note

Select Text

Copy

Paste

Rotate Left

Rotate Right

Zoom Out

Zoom In

Fullscreen

Sync Library

My Library

Treatment of severe a...

Type here to search

Adult bone-marrow-derived mesenchymal stem cells are immunosuppressive and prolong the rejection of mismatched skin grafts in animals. We transplanted haploidentical mesenchymal stem cells in a patient with severe treatment-resistant grade IV acute graft-versus-host disease of the gut and liver. Clinical response was striking. The patient is now well after 1 year. We postulate that mesenchymal stem cells have a potent immunosuppressive effect in vivo.

Lancet 2004; **363**: 1439–41
See Commentary page 1411

Severe acute graft-versus-host disease (GVHD) after allogeneic stem-cell transplantation is associated with high mortality. Bone marrow contains pluripotent mesenchymal stem cells that form bone, cartilage, adipose tissue, and muscle. These stem cells are not immunogenic and escape recognition by alloreactive T cells and natural killer cells. **Mesenchymal stem cells given intravenously have been well tolerated.** Furthermore, they are immunosuppressive and inhibit the proliferation of alloreactive T cells. Preliminary reports of

A 9-year-old boy with acute lymphoblastic leukaemia in third remission received a transplant of blood stem cells from an HLA-A, HLA-B, HLA-DRB1 identical, unrelated, female donor after conditioning with cyclophosphamide (120 mg/kg) and fractionated total body irradiation (3 Gy for 4 days). Immunosuppression included thymoglobulin (6 mg/kg) during the conditioning, followed by ciclosporin combined with four doses of methotrexate. On day 11 after allogeneic stem-cell transplantation, the patient developed a maculopapular rash of the thorax and back that progressed despite treatment with prednisolone (2 mg/kg daily). By day 22, the patient developed diarrhoea (>1000 mL per day) and abdominal pain requiring morphine. He stopped eating on day 24. Bilirubin and alanine aminotransferase concentrations rose (figure 1). Psoralen and ultraviolet-A light (PUVA) treatment (two to three times per week) for 3 weeks was followed by extracorporeal PUVA (one to four times per week) for 6 weeks. Infliximab (10 mg/kg) and daclizumab (1 mg/kg) for 4 weeks were ineffective

Highlighted by you at 3:24:55 PM on Saturday, October 16, 2010

You ○
10/16/2010 3:26:12 PM
See Gregory et al. 2004

MSC $\times 10^6/\text{kg}$

Number of stools per

—●— Bilirubin
—○— Stools

in concentration (mmol/L)

300
250
200
150
100

25
20
15
10

We chose the mother as donor, because she was readily available and because MHC-compatibility is not necessary for mesenchymal stem-cell immunosuppression.¹ After ethics-committee approval and informed consent, mesenchymal stem cells were isolated as previously described.¹ Briefly, we isolated mononuclear cells from a bone marrow aspirate by Percoll gradient centrifugation (Sigma, St Louis, MO, USA). The cells were plated at a density of 3×10^5 cells per 175 cm^2 in polystyrene flasks in low glucose Dulbecco's modified Eagle's medium (Life Technologies, Gaithersburg, MD, USA) supplemented with 10% fetal

Details

Notes

Notes:

B

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U

Annotations:

You ○

10/16/2010 3:25:52 PM

See Gregory et al. 2004

Page 1

Sharing references

Groups can be private or public (invite only or open)

Search: Type here to search

Groups

- Mendeley Office
- Reinventing the scientific paper
- social media
- Stem Cell Assays
- testing-sharing
- alt-metrics
- Biosensor
- Creatively named research papers**
- Data sharing and withholding
- Embryonic Stem Cells
- Mendeley.com design feedback
- MSC Biology
- MSCs and Bone
- My Publications
- Myeloma
- Open Access Week
- Reinventing the Scientific Paper
- AntibodyEngineering
- CSCs Biology
- Data citation
- Data reuse

Filter by My Tags

- All
- Buffy
- evidence-based medicine
- fun
- lol
- necrophilia
- parachute
- randomized controlled trial
- stupidity
- Zombies

Creatively named research papers, owned by [stephen croome](#) [Edit Settings](#)

Overview Documents (32) Members

What's on your mind?

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[Effect of background noise on food perception](#)

Yesterday - comment - like

[Victor Henning](#) likes this.

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[Dinner at Baby's: Werewolves, dinosaur jaws, hen's teeth, and horse toes](#)

[Cloning and functional analysis of 5'-upstream region of the Pokemon gene.](#)

14th October - comment - like

William Gunn added a document to this group

[Parachute use to prevent death and major trauma related to gravitational challenge: systematic review of randomised controlled trials.](#)

14th October - comment - like

[Ricardo Vidal, Sjúður Hammer and Victor Henning](#) like this.

About this group

Research papers with bombastic or interesting titles.^{***}
This is an Open, publicly visible group and everyone can contribute. Its great for open discussion around a subject.^{***} The alternative was an Invite-only group which is publicly visible, but the creator decides who can contribute; great for public reading lists or curating your lab's research output

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Economics

31 members [show all](#)

<http://www.mendeley.com/groups/536621/creatively-named-research-papers/>

[Email to colleagues](#)

Public groups only have the reference details – no full text. Private groups contain the full text including notes & annotations.

View the group online – other users can request to join or simply follow the activity of the group

Citing

The image shows a Microsoft Word document titled "Document1 - Microsoft Word" with the "Insert Citation" button highlighted in the ribbon. A callout box points to this button with the text "Click on 'Insert Citation' in Word". Below the ribbon, a text box contains the sentence "A sentence that needs a citation.".

Below the Word window, the Mendeley Desktop application is shown. The "Documents (44)" tab is active, displaying a list of papers. A callout box points to the list with the text "Highlight the paper(s) you want to cite".

Authors	Title	Year	Published In	Added
Almeida-Porada, Grac...	Cotransplantation of human stromal cell progenitors into preimmune fetal sheep results...	2000	Cell	3/7/09
Ball, L. M.; Bernardo, ...	Cotransplantation of ex vivo expanded mesenchymal stem cells accelerates lymphocy...	2007	Blood	4/5/09
Ball, L.; Preidus, R.; La...	Third party mesenchymal stromal cell infusions fail to induce tissue repair despite successful c...	2007	Leukemia	3/22/09
Bartholomew, Amela...	Mesenchymal stem cells suppress lymphocyte proliferation in vitro and prolong skin graft surv...	2002	Hematology	4/5/09
Bensidhoum, Morad, ...	Homing of in vitro expanded Stro-1 ⁺ Stro-1 ⁺ human mesenchymal stem cells into the NOD/S...	2004	Journal of Clinical Oncol...	3/7/09
Bianco, Paolo; RIMIN...	Bone Marrow Stromal Stem Cells: Nature, Biology, and Potential Applications	2001	Stem Cells	3/7/09
Blanc, Katarina Le; Fr...	Articles Mesenchymal stem cells for treatment of steroid-resistant, severe, acute graft-versus-...	2008	The Lancet	4/5/09
Blanc, Katarina Le; R...	Treatment of severe acute graft-versus-host disease with third party haploidentical mesench...	2004	The Lancet	4/5/09
Chan, Rachel W S; Sc...	Clonogenicity of Human Endometrial Epithelial and Stromal Cells 1	2004	Biotechnology	3/7/09

R & ggplot2

- R = software environment for statistical computing
 - <http://www.r-project.org/>
 - <http://cran.r-project.org/doc/manuals/R-intro.pdf>
- ggplot2 – R package for good looking graphics
 - <http://had.co.nz/ggplot2/>
 - needs install in R (see install instructions)

Some random data for a plot

```
$ cat data1.dat
```

```
x y
```

```
1 1  
2 2.3  
3 3.2  
4 4.2  
5 4.7  
6 6.2  
7 5.2  
8 4.3
```

```
$ cat data2.dat
```

```
x y
```

```
1 0.5  
2 1  
3 2.2  
4 3.2  
5 4.0  
6 5.0  
7 4.2  
8 3.3
```


R script for generating a plot

```
#!/usr/bin/Rscript

library(ggplot2)

save_plot = function(plot, filename) {
  pdf(paste(filename, ".pdf", sep=""), width=6, height=3.5)
  print(plot)
  dev.off()
}

theme_set(theme_bw())

mydata1 = read.table("data1.dat", header=TRUE)
mydata2 = read.table("data2.dat", header=TRUE)

p = ggplot() +
  geom_line(aes(x=mydata1$x, y=mydata1$y, linetype="Rarest-first strategy"), size=1) +
  geom_line(aes(x=mydata2$x, y=mydata2$y, linetype="Sequential strategy"), size=1) +
  opts(axis.title.y = theme_text(angle = 90)) +
  opts(axis.title.x = theme_text(vjust = 0.2)) +
  scale_x_continuous("Time (s)") +
  scale_y_continuous("Memory usage (MB)") +
  coord_cartesian() +
  opts(legend.position=c(.35,0.80)) +
  opts(legend.background = theme_rect(fill = "white", colour="darkgrey", size = 0.3)) +
  scale_linetype_manual("Legend", c("Rarest-first strategy"="solid", "Sequential strategy"="twodash"))

save_plot(p, "super-plot")
```


LaTeX

- Text processor (not editor)
 - TeX = programming language
 - LaTeX = set of macros for TeX
- Useful for generating
 - books, articles, presentations, CVs etc.
- The good things:
 - Plain text source (versioning)
 - Allows focusing on content
 - Good-looking math formulas
- The bad things:
 - Not WYSIWYG
 - New/Extra commands to remember
 - Cryptic error messages

IEEEtran publication template

- LaTeX resources:
 - <http://en.wikibooks.org/wiki/LaTeX/> - Wiki Book
 - <http://tex.stackexchange.com/> - Questions & Answers
- Template for IEEE conferences = IEEEtran
 - <http://mirror.ctan.org/macros/latex/contrib/IEEEtran.zip>
 - bare_conf.tex (for conferences)

Misc LaTeX

- Comments start with the `%` character
- New functionalities can be added by including packages using by using `\usepackage`

before `\begin{document}`

```
\usepackage{lipsum} % allows inserting paragraphs  
                    % from Lorem Ipsum
```

...

```
\lipsum[20]         % inserts the 20th paragraph  
\lipsum[10-14]      % inserts paragraphs from 10 to 14
```

Tables

- **table** environment – parameter: **wanted table position(s)**
(h = here, t = top...)
- **tabular** environment – describes **column alignment**, vertical lines
 - Column separator: &
 - Line separator: \\

```
\begin{table}[h]  
  \caption{An Example of a Table}  
  \label{table:table_example}  
  \centering  
  \begin{tabular}{|c|c|}  
    \hline  
    One & Two \\  
    \hline  
    Three & Four \\  
    \hline  
  \end{tabular}  
\end{table}
```

Figures

- Vector graphic vs. Bitmap
- **PDFs are preferred**
- **ensure `\usepackage{graphicx}` is in the .tex file**
- **figure** environment – parameter: **wanted figure position(s)**
- **includegraphics** command – multiple options
 - scale, width, height

```
\begin{figure}[h]  
  \centering  
  \includegraphics[width=3.5in]{path2file_no_extension}  
  \caption{My Super Plot} % caption below figure  
  \label{fig:my_figure}   % label must be below caption  
\end{figure}
```

Formulas

- **A lot** is possible:
 - <http://en.wikibooks.org/wiki/LaTeX/Mathematics>
 - http://en.wikibooks.org/wiki/LaTeX/Advanced_Mathematics
- **Inline formulas – between \$. . . \$**

```
$ \forall x \in X, \quad \exists y \leq \epsilon $
```
- **equation** environment


```
\begin{equation}
  \label{eq:my_formula}
  L' = \{L\}{\sqrt{1-\frac{v^2}{c^2}}}
\end{equation}
```


Bibliography & Citations

- Two modes of including bibliography
 - (not recommended) embedded entries – `thebibliography` env.
 - external BibTeX file

- Commands for including & generating the bibliography

```
\bibliographystyle{IEEEtran}
```

```
\bibliography{comma_separated_list_of_bib_files}
```

- Commands for citing

```
\cite{bib_entry}
```

```
\cite{bib_entry1, bib_entry2...}
```

References

- Adding labels around the document

```
\section{Section Name}
```

```
\label{sec:label_name}
```

```
\begin{table}
```

```
\label{table:table_label_name}
```

```
...
```

```
\end{table}
```

- Referencing labels

```
\ref{sec:label_name}
```

```
\ref{table:table_label_name}
```

```
\ref{fig:my_figure}
```

```
\ref{eq:eq:my_formula}
```

Building the PDF

- 1st pass: extract information about bibliography
`pdflatex bare_conf.tex`
- BibTex: build list of references
`bibtex bare_conf`
- 2nd pass: include bibliography, extract position of the references
`pdflatex bare_conf.tex`
- 3rd pass: match references with bibliographic entries
`pdflatex bare_conf.tex`

Finishing up

- Pick conference/journal from:
 - where others publish (see *Finding relevant publications*)
 - <http://www.wikicfp.com/cfp/>
- **Funding!** yes, publishing a paper costs (most of the time)
 - http://en.wikipedia.org/wiki/Open_access_journal
- Paper must be adapted to conference/journal requirements (not only structure, but also contents)
- **Editor's Note: How to Write Research Articles in Computing and Engineering Disciplines**
by Ivan Stojmenovic, Editor in Chief
at *IEEE Transactions on Parallel and Distributed Systems*:
http://elf.cs.pub.ro/soa/res/paper/Writing_Scientific_Articles.pdf

Assignment & Project proposal

- Assignment
 - info @ <http://elf.cs.pub.ro/soa/2011-2012/project/assignment>
- Project proposal
 - info @ <http://elf.cs.pub.ro/soa/2011-2012/project/general-info>
 - template @ <http://elf.cs.pub.ro/soa/2011-2012/project/proposals>