


Presentation Grading

On the Fly....as students present

5-Minute Presentation



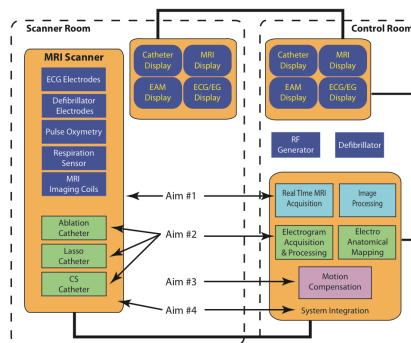
In order to apply all the advice you received and further refine your skills, we will do a second round of the 5-minute presentation of your specific aims this semester under the same guidelines at during the fall semester. To sign up for a presentation slot, go to this [Doodle Poll](#) , and select one option.

<http://www.doodle.com/mm89vkzi332vxze3> 

Please submit a pdf version of your slides at the latest just before your presentation.

Mechanics of Writing

Three Things

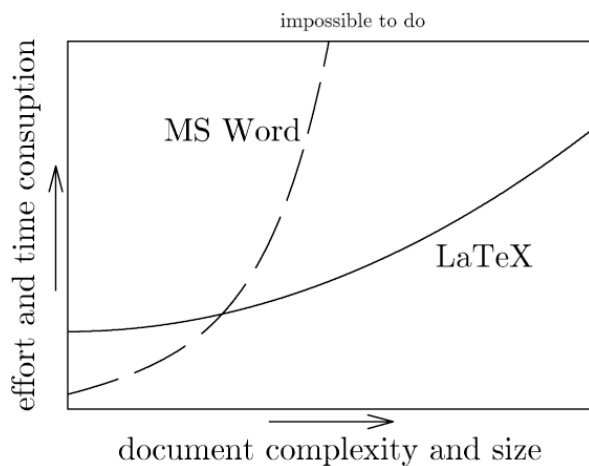


Cited References

Figure 2.2: Block diagram of the proposed MRI guided ablation system. Numbers in each block indicate the associated specific aim.

- [1] R.S. MacLeod, S. Shome, J.G. Stinstra, B.B. Punske, and B. Hopenfeld. Mechanisms of ischemia-induced ST-segment changes. *J. Electrocardiol.*, 38:8–13, 2005.
- [2] D.H. Brooks and R.S. MacLeod. Imaging the electrical activity of the heart: Direct and inverse approaches. In *IEEE International Conference on Image Processing*, pages 548–552. IEEE Computer Society, 1994.
- [3] G.R. Vergara, S. Vijayakumar, E.G. Kholmovski, J.J.E. Blauer, M.A. Guttman, C. Gloschat, G. Payne, K. Vij, N.W. Akoum, M. Daccarett, C.J. McGann, R.S. MacLeod, and N.F. Marrouche. Real-time magnetic resonance imaging-guided radiofrequency atrial ablation and visualization of lesion formation at 3 tesla. *Heart Rhythm. J.*, 8(2):295–303, February 2011.
- [4] S. Vijayakumar, E.G. Kholmovski, G. Vergara, J. Blauer, C. Gloschat, G. Payne, J. Davis, K. Vij, M. Guttman, C.J. MacGann, R.S. MacLeod, D.L. Parker, and N.F. Marrouche. Visualizing RF ablation lesions real-time at 3 Tesla. In *Proc. Intl. Soc. Mag. Reson.*, 2010.

Text Tools

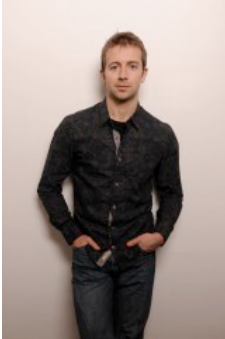


Word Rage

Remember “Death by Powerpoint”?

Word does too much and it does it without asking you!

Like moving figures around, or creating lists you did not want.



James Hayton

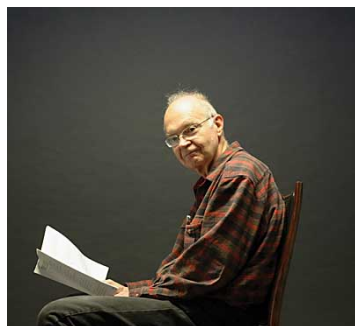
Sometimes moving one thing can mess up your whole document!

It always feels like I have to trick Word into doing what I want.

<http://3monththesis.com/writing-a-thesis-word-or-latex/>

So What is LaTeX?

TEX → LATEX



Don Knuth

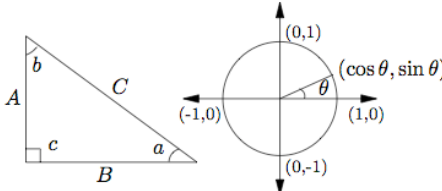


Leslie Lamport

<http://www.lamport.org/>

What You Can Do With LaTeX

Trigonometry



Pythagorean theorem:
 $C^2 = A^2 + B^2.$

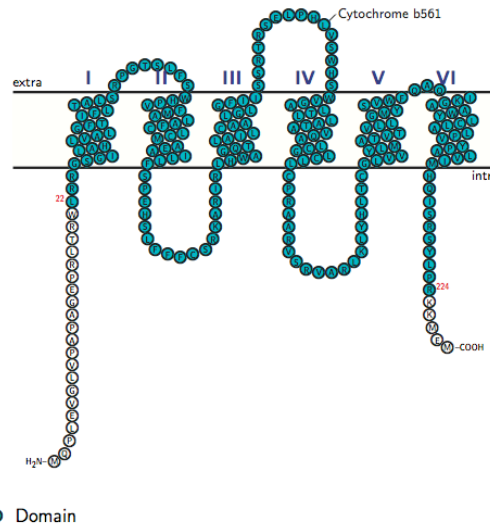
Definitions:

$$\sin a = A/C, \quad \cos a = B/C,$$

$$\csc a = C/A, \quad \sec a = C/B,$$

$$\tan a = \frac{\sin a}{\cos a} = \frac{A}{B}, \quad \cot a = \frac{\cos a}{\sin a} = \frac{B}{A}.$$

Area, radius of inscribed circle:
 $\frac{1}{2}AB, \quad \frac{AB}{A+B+C}.$



What You Can Do With LaTeX

Andante KV 315

pour flûte et orchestre

W. A. Mozart
 transcription pour flûte, hautbois et orgue
 D. Taupin



What You Can Do With LaTeX

Grupo																	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
IA	IIA	IIIB	IVB	VB	VIB	VIIIB		VIIIB		IB	IIIB	IIIA	IVA	VA	VIA	VIIA	VIIIA
1 H 1,01																	2 He 4,00
3 Li 6,94	4 Be 9,01											5 B 10,81	6 C 12,01	7 N 14,01	8 O 16,00	9 F 19,00	10 Ne 20,18
11 Na 22,99	12 Mg 24,31											13 Al 26,98	14 Si 28,09	15 P 30,97	16 S 32,06	17 Cl 35,45	18 Ar 39,95
19 K 39,10	20 Ca 40,08	21 Sc 44,96	22 Ti 47,90	23 V 50,94	24 Cr 52,00	25 Mn 54,94	26 Fe 55,85	27 Co 58,93	28 Ni 58,71	29 Cu 63,55	30 Zn 65,38	31 Ga 69,72	32 Ge 72,59	33 As 74,92	34 Se 78,96	35 Br 79,90	36 Kr 83,80
37 Rb 85,47	38 Sr 87,62	39 Y 88,91	40 Zr 91,22	41 Nb 92,91	42 Mo 95,94	43 Tc (98)	44 Ru 101,07	45 Rh 102,91	46 Pd 106,4	47 Ag 107,87	48 Cd 112,40	49 In 114,82	50 Sn 118,69	51 Sb 121,75	52 Te 127,60	53 I 126,90	54 Xe 131,30
55 Cs 132,91	56 Ba 137,34	57 La* 138,91	72 Hf 178,49	73 Ta 180,95	74 W 183,85	75 Re 186,21	76 Os 190,2	77 Ir 192,22	78 Pt 196,09	79 Au 196,97	80 Hg 200,59	81 Tl 204,37	82 Pb 207,2	83 Bi 208,96	84 Po (209)	85 At (210)	86 Rn (222)
87 Fr (223)	88 Ra 226,03	89 Ac** (227)	104 Rf (261)	105 Db (262)	106 Sg (263)	107 Bh (262)	108 Hs (265)	109 Mt (266)	110 Uun (269)	111 Uuu (272)	112 Uub (277)	113 Uut (282)					
*Lantanídeos	58 Ce 140,11	59 Pr 140,91	60 Nd 144,24	61 Pm (145)	62 Sm 150,36	63 Eu 151,96	64 Gd 157,25	65 Tb 158,92	66 Dy 162,50	67 Ho 164,93	68 Er 167,26	69 Tm 168,93	70 Yb 173,04	71 Lu 174,97			
**Actínídeos	90 Th 232,04	91 Pa 231,04	92 U 238,03	93 Np 237,05	94 Pu (244)	95 Am (243)	96 Cm (247)	97 Bk (247)	98 Cf (251)	99 Es (252)	100 Fm (257)	101 Md (258)	102 No (259)	103 Lr (260)			

Metais

Metalóides

Metais de transição

Não-metais

Gases nobres

What You Can Do With LaTeX



Helping the World Communicate!

Alt-N Technologies, Ltd
2201 East Lamar Blvd, Suite 270
Arlington, Texas 76006 USA
<http://www.altn.com>

Sales & Tech Tips

September 2003

In this issue

- [MDaemon Stops Spam!](#)
- [SSL How To's](#)
- [White Lists & Exclusions](#)
- [Server Security Basics](#)
- [GW Folder Sharing](#)

Osirusoft RBL Gone!

Osirusoft, a popular antispam black list site, is offline following extended denial of service attacks. The Osirusoft listing should be removed from MDAemon's Spam Blocker:

1. Choose the *Security > Spam Blocker* command.
2. Select the *Spam Blocker Hosts* tab.
3. Click on the item containing *osirusoft* and click on *Remove*.

MDaemon 6.8 Stops Spam

Two new features — Bayesian filtering and heuristic detection — have made MDAemon 6.8 very effective at stopping spam before it reaches users.

New AntiSpam tools come included, at no additional cost, with MDAemon 6.8 PRO!

With *Bayesian filtering*, each email site decides what is spam and legitimate email by dragging and dropping examples of both into the filtering engine. The filter then compares the content of the examples to the content of new messages to separate spam from real mail. Given several hundred examples of each type, Bayesian filtering is more than 95 percent accurate on spam, with virtually zero mistakes for important email.

Heuristic spam detection uses feature-matching rules — red HTML text, for example — to identify spam. Through years of “learning” what spam (and legitimate) messages typically look like, the heuristic rules have become very reliable in separating spam from normal email.

MDaemon supports multiple means of fighting spam, including assured access through white lists.

For more information on stopping spam with MDAemon, see the *Security Tools for Spam Control* white paper, the *MDaemon AntiSpam HowTos* and the *AntiSpam* tutorial, by Ross McWilliam.

What You Can Do With LaTeX

Neighborhood News

Emigration Oaks Property Owners Association, Inc.

Winter 2009



In this issue

- [Your Board Members](#)
- [Keep Our Trails Clean](#)
- [Emigration Oaks Web Sites](#)
- [Trail Mess](#)
- [Snow Removal](#)
- [Election News](#)
- [Road Construction](#)
- [Emigration Oaks Directory](#)
- [Oaks Email List on Yahoo](#)
- [Winter Cycling](#)
- [Power 24/7](#)
- [Barking Dogs](#)

Keep Trails Clean

Please help keep our trail clean!

From the Editor: Winter Wonders!

It is winter. It is cold. And the power is off... again.

Each week I try and protect a day from meetings and teaching so I can do some research, write some papers, on a rare week even go skiing. This plan does not always work, but when it does, I have the best day of my week! This week, I figured it was time to write the *Neighborhood News*.

But this week, I also have a special setting, a strange combination of high tech and high farce that has many of us sitting in the dark. We've all seen the power poles being replaced along the Emigration Canyon Rd. and heard the promises of better service to come. For the past 30 hours, however, we have all learned what it is like to live without electricity—without warming and without any news of when we will get it back. Thanks Rocky Mountain Power for this great improvement in service!

The high tech part is that at our house, we were smart or lucky enough to install a generator and so we are the only house on our street showing any lights. In fact, there is enough power to drive my laptop and the lights in my office, and all my wonderful gadgets. However, the power outage has disconnected my modem, killed our phone line, and shut down the local AT&T cell tower. As a result, I have not felt so disconnected from the larger world since I bought my first cell phone!

I don't worry though, because I know I have neighbors around. I am in a community and when all else fails, it is the people, you people, who matter most. So here it is, the winter 2008/09 newsletter, written from my tiny, isolated island of technology, to all of you, my neighbors and friends.

Rob

Trails Wasted on (by) our Dogs

Your Board Members

Quick! Name three members of the EOPOA Board! There have been some changes since last year so read on to learn more.



Larry Braby: In only his second year as Board member, Larry, like a fine wine, is a rich vintage and has risen to the position of President and Treasurer of the Board. He served 4 years on the Emigration Canyon Community Council, two as Chairman. Larry retired 15 years ago from the JC Penney Company where he was a division controller. Larry and his wife, Eula, enjoy traveling, skiing, and a good tennis game.



Mae Taylor-Ohlin: Mae has served as secretary for the Board for the past four years and sets the sartorial standards for the Board, a truly thankless and hopeless task. She was employed by the Utah State Office of Education for 36 years and retired as the State Director of Special Education and At Risk Programs. Mae and her husband, John, love living in the Oaks, and expect to stay for many years to come.



Jeannine Bennett: Jeannine is now in her second year of Board membership and is responsible for helping us all figure out the C&R's and find ways to live with them, which is probably the most challenging task on the Board. Jeannine is an insurance defense attorney, community volunteer, dog trainer, and probably qualifies as the most underage grandma on the Board.



Chris Lehman: Chris is a newcomer to the Board but has assumed one of the most challenging roles in chairing the architectural committee. Chris' skills as a biochemist and his success in the biotech industry and as a financial manager make him a natural choice for his position; his calm demeanor and level head make him an inspired one for overseeing the construction in the Oaks.



Dave McNally: Dave is another new member of the Board who has stepped into big shoes; he has taken over from Andy ("Gregarios") Gallegos in heading the welcoming committee. Dave has the perfect charm for this position, gleaned from a very successful career in business after his degree in mechanical engineering and his love of cycling, skiing, hiking and the outdoor life of our community.



Kathy Christensen: Kathy is a longstanding Board member and, aside from her husband, Jack, perhaps the best known face in the community. She focuses her activities on safety and security, especially fire awareness and has written two successful FEMA grants for fire prevention. Kathy also helped create the Neighborhood Watch program and is active on the security committee.



Steve Bott: Steve is in third year and responsible for road planning, maintenance, and repair. Steve has been a resident of the Oaks since 2005 and an Emigration canyon resident since 1996. Steve is an anesthesiologist and avid outdoorsman and hopes to maintain and improve our common areas and our access to adjacent public land and continue to make the Oaks a great place to live.

Bioengineering 6061: Presentations

Mechanics of Writing

11

What You Can Do With LaTeX

Real-time MRI guided radio frequency ablation for patients with atrial fibrillation

Robert S. MacLeod^{1,2,3,4} and Nassir Marrouche¹,

¹Comprehensive Arrhythmia Research and Management (CARMA) Center
University of Utah
Salt Lake City, UT 84112

²Scientific Computing and Imaging Institute
University of Utah
Salt Lake City, UT 84112

³Department of Bioengineering
University of Utah
Salt Lake City, UT 84112

⁴Cardiovascular Research and Training Institute
University of Utah
Salt Lake City, UT 84112

Email: macleod@sci.utah.edu and nassir.marrouche@hsc.utah.edu

Bioengineering 6061: Presentations

Mechanics of Writing

12

What You Can Do With LaTeX

Real-time MRI guided radio frequency ablation for patients with atrial
fibrillation

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Salt Lake City, UT 84112

⁴Cardiovascular Research and Training Institute
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Salt Lake City, UT 84112

Email: macleod@sci.utah.edu and nassir.marrouche@hsc.utah.edu

ELECTROCARDIOGRAPHIC MAPPING AND CHARACTERIZATION OF MYOCARDIAL ISCHEMIA

by

Shibaji Shome

A dissertation submitted to the faculty of
The University of Utah
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

The LaTeX Philosophy

Separate the writing from the document creation

Let the computer keep track of things

Support clean structure

Make shareable document and shareable templates

Extend the language through packages

Visible markup is more powerful than hidden “smart”
commands

The LaTeX Process

```
\begin{document}

\title{Notes for Lab \#1: Dissection}
\author{2012: Rob, Brian, Brett, and the legacy of great TA's}
\maketitle

\tableofchildlinks

\section{Introduction}

This Lab allows you to identify and compare the size, shape and tissue type
of the major anatomic landmarks of the heart and lungs. The goal of the
lab is not, however, just to observe anatomy but to associate structure
with function. The heart is a pump for blood that comes into the right
atrium, goes out through the right ventricle, returns through the left
atrium, and leaves again through the left ventricle. Imagine this is all
the information you had and imagine you are the first person to be permitted
to dissect one. Try and figure out what the various components are, how
each works, especially how the shape, composition, and even texture of
each part contributes to its function.

\section{Reference material}

\begin{itemize}

\item \htmladdnormallink{www.hometrainingtools.com}
      {http://www.hometrainingtools.com/article.asp?ai=1318&bhcd2=1263563424}
      from the \htmladdnormallink{Home Science Tools}
      {http://www.hometrainingtools.com} web site.
\item
      \htmladdnormallink{www.gwc.maricopa.edu/class/bio202/heart/anthrt.htm}
      {http://www.gwc.maricopa.edu/class/bio202/heart/anthrt.htm} from the
      \htmladdnormallink{Biological Sciences Home Page}
      {http://www.gwc.maricopa.edu/class/bio202/index.htm}
```

Bioengineering 6061: Presentations

Mechanics of Writing

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The LaTeX Process

Notes for Lab #1: Dissection

2012: Rob, Brian, Brett, and the legacy of great TA's

January 11, 2012

1 Introduction

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2 Reference material

- www.hometrainingtools.com from the Home Science Tools web site.
- www.gwc.maricopa.edu/class/bio202/heart/anthrt.htm from the Biological Sciences Home-Page
- Both lung photos faculty.washington.edu/kepeter/119/images/lung_sections.htm and heart photos faculty.washington.edu/kepeter/119/images/heart_sections.htm from Karen Petersen at the University of Washington.
- Even a YouTube video

Figure 1 shows a diagram for the cow heart geometry that will be useful during the dissection.

Bioengineering 6061:

16

The LaTeX Process

```

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\section{Reference material}

\begin{itemize}

\item \htmladdnormallink{www.hometrainingtools.com}
      {http://www.hometrainingtools.com/article.asp?ai=1318&bhcd2=1263563424}
      from the \htmladdnormallink{Home Science Tools}
      {http://www.hometrainingtools.com} web site.
\item
      \htmladdnormallink{www.gwc.maricopa.edu/class/bio202/heart/anthrt.htm}
      {http://www.gwc.maricopa.edu/class/bio202/heart/anthrt.htm} from the
      \htmladdnormallink{Biological Sciences HomePage}
      {http://www.gwc.maricopa.edu/class/bio202/index.htm}
\item Both lung photos
      \htmladdnormallink{faculty.washington.edu/kepeter/119/images/lung
        \_sections.htm}
      {http://faculty.washington.edu/kepeter/119/images/lung_sections.htm} and
      heart photos
      \htmladdnormallink{faculty.washington.edu/kepeter/119/images/heart
        \_sections.htm}
      {http://faculty.washington.edu/kepeter/119/images/heart_sections.htm}
      from Karen Petersen at the University of Washington.
\item Even a \htmladdnormallink{YouTube video}
      {http://www.youtube.com/watch?v=z3UHpvEJMns}
\end{itemize}
\end{document}

```

Notes for Lab #1: Dissection

2012: Rob, Brian, Brett, and the legacy of great TA's

January 11, 2012

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2 Reference material

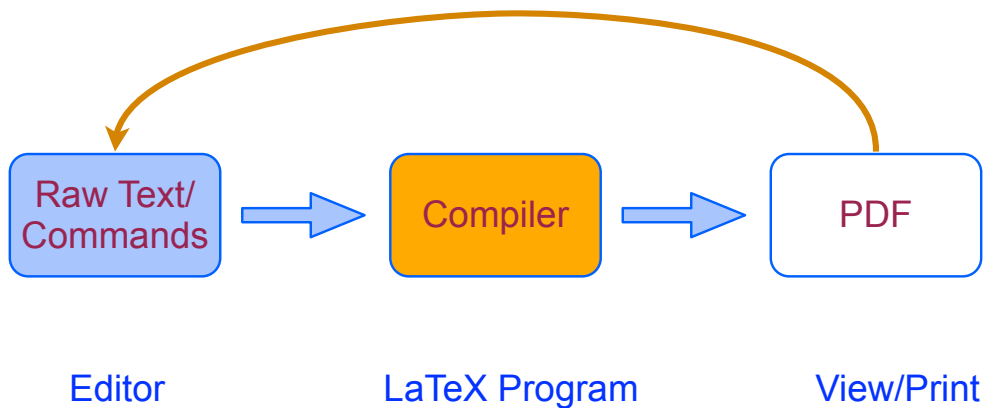
- www.hometrainingtools.com from the Home Science Tools web site.
- www.gwc.maricopa.edu/class/bio202/heart/anthrt.htm from the Biological Sciences Home-Page
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- Even a YouTube video

Figure 1 shows a diagram for the cow heart geometry that will be useful during the dissection.

Mechanics of Writing

17

The LaTeX Process



What LaTeX Keeps Track Of

```
\section{Methods}  
\label{sec:meth}
```

4. Methods

In the methods in
Section~\ref{sec:meth}

In the Introduction in
Section 4,

What LaTeX Keeps Track Of

Sections (6 levels)

Page numbers

Figures

Tables

Lists and list items

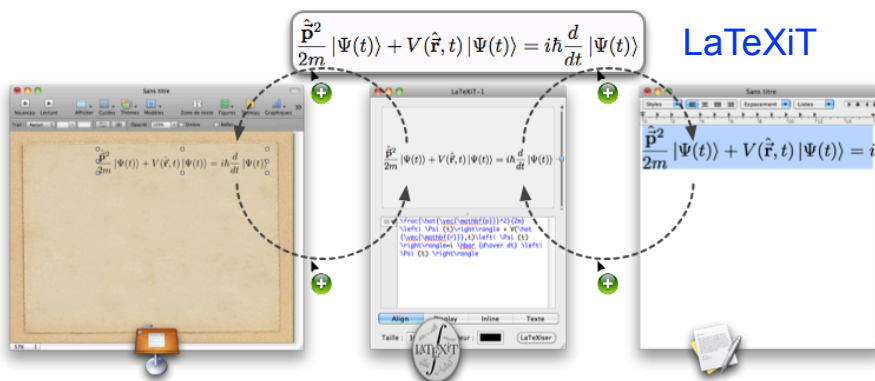
Equation numbers

GOt to Here on FEB 11

Equations

```
\begin{equation}
n(t) = n_{\infty}(v_o) - (n_{\infty}(v_o) - n_0)e^{-t/\tau_n(v_o)}.
\label{eq:pot-nsol}
\end{equation}
```

$$n(t) = n_{\infty}(v_o) - (n_{\infty}(v_o) - n_0)e^{-t/\tau_n(v_o)}$$



<http://pierre.chachatelier.fr/latexit/latexit-home.php?lang=en>

Figures

```
\begin{figure}[!ht]
\centering
\includegraphics[width=100mm]
{./Figures/NonConformal}
\caption{\label{fig:Conformal}
\textbf{A comparison of the replicated
boundary between two material types
using conformal, or a boundary fitting
meshing algorithm, and without conformal
meshing techniques. } The solid red line
in this figure represents the original
boundary between the two materials.
Figure A shows a meshing algorithm ... }
\end{figure}
```

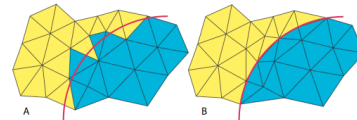
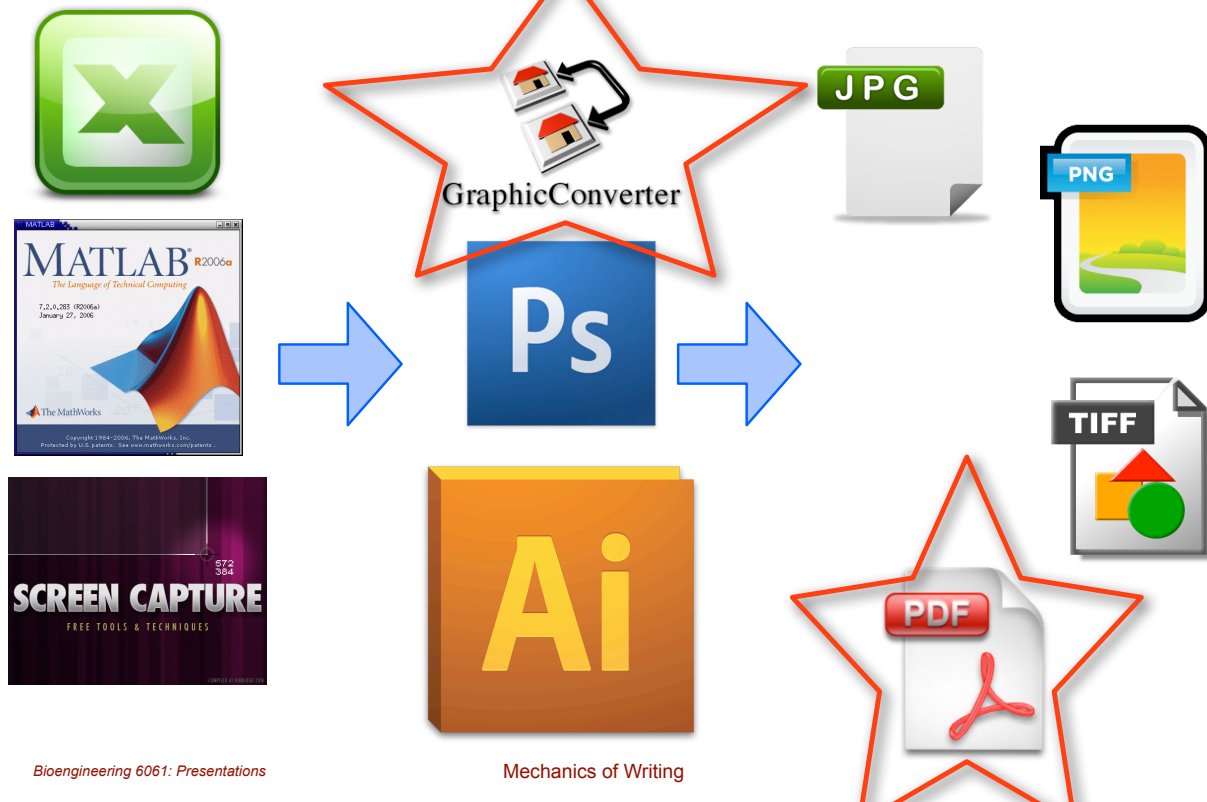
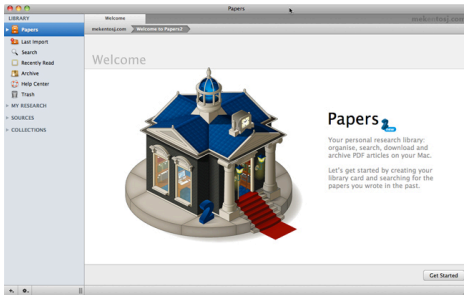
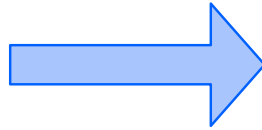
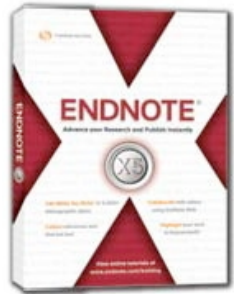


Figure 1: A comparison of the replicated boundary between two material types using conformal, or a boundary fitting meshing algorithm, and without conformal meshing techniques. The solid red line in this figure represents the original boundary between the two materials. Figure A shows a meshing algorithm that does not attempt to preserve the interface during the tessellation of the volume, but reconstructs the boundary post-tessellation. Figure B shows a conformal mesh that attempts to preserve the boundary by placing nodes directly on the interface.

Making Figures



Literature Reference Tools



www.mekentosj.com/papers/



www.zotero.org



Get Mendeley What is Mendeley? Papers Groups

www.mendeley.com/

Comparison of the tools

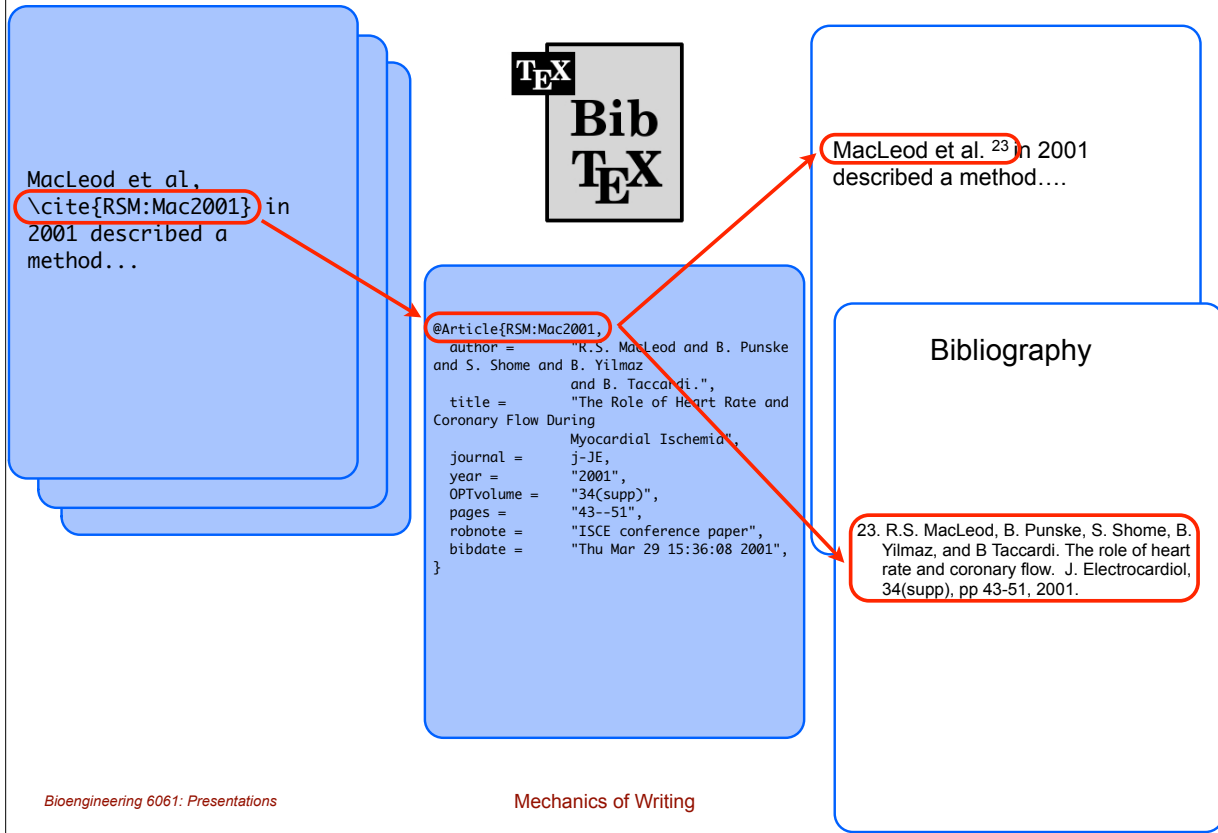
Reference Management Software: a Comparative Analysis of Four Products

	CiteULike	Mendeley	RefWorks	Zotero
Import from bibliographic databases	2	3	4	5
Gather metadata from PDFs	N/A	5	N/A	2
Organize citations in RM	4	5	5	5
Annotate citations	4	5	4	4
Share library	4	4	1	3
Exchange data with other RMs	5	5	4	5
Format citations in multiple styles	1	3	5	3
Integrate with word processors	N/A	5	2	5
Sum	20	35	25	32

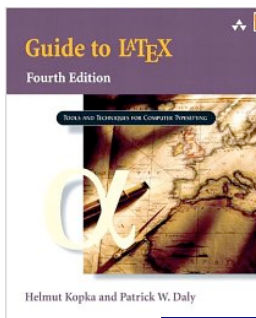
Table 3: Our ratings of the feature sets of the four RMs on a scale of 1 to 5, with 5 being best.

<http://www.istl.org/11-summer/refereed2.html>

LaTeX and BibTeX



How to Learn LaTeX



The Not So Short Introduction to L^AT_EX 2_ε

Or L^AT_EX 2_ε in 157 minutes

Rob's LaTeX Page <http://www.sci.utah.edu/~macleod/latex/>

Rob's favorite links to all things LaTeX.

Basic Documentation

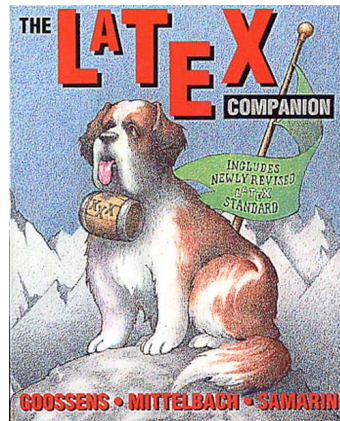
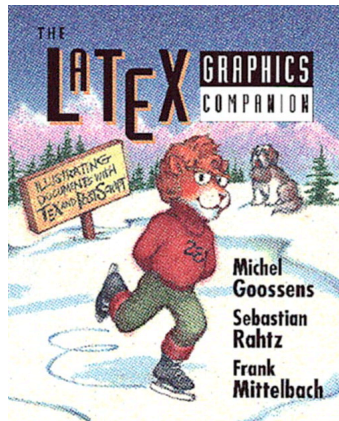
- Guide To LaTeX by Kopka and Daly, 4th edition is current. This is my personal favorite.
- LaTeX: A Document Preparation System by Leslie Lamport (2nd edition) is a classic; the original from the author of LaTeX.
- pdfLaTeX: the main source of information from TUG
- pdfTeX manual (in pdf) and the pdfTeX FAQ collection (in pdf)
- How I like to use figures in LaTeX
- My own sample tex file
- CVRTI L^AT_EX Local Guide, also in single sided and double sided postscript files.
- Mac Users Guide to LaTeX links to everything about using LaTeX on the mac.
- The LaTeX Navigator
- A LaTeX manual from Emory University

Getting the Software

There are many sources for LaTeX, almost all of them free. Here are some I, or people I respect, have used:

- Mac/OSX: MacPorts, the first choice for all free OSX software
- TexLive package documentation in MacPorts. Check this as there are too many different TexLive bundles and one has to choose carefully.
- Mac/OSX: TeXShop; a TeX previewer for Mac OS X.
- Windows: MikTeX, this is the dominant freeware version of LaTeX for Windows. Use WinEdit as the editor.
- Windows: WinEdit is the editor of choice to go with MikTeX
- CTAN the comprehensive TeX archive (UNC mirror)
- LaTeX home page TeTeX is also available via MacPorts It is no longer the package of choice--try TexLive instead, available through Macport
- TeX Users Group (TUG)

LaTeX Companions



DEBUGGING LATEX ERRORS

Friday, 21 January 2011 03:21 | Author: Judson |

In debugging latex compiling errors, it helps to view the raw output, and scroll up from the bottom until you find a useful error message. For instance, I am currently using Kile as my latex editor. I have to switch from "Log and Messages" to the "Output" tab at the bottom to get more meaningful data on the error.

Why Not LaTeX?

