

## Productivity Tools

Time is precious. The better one uses their time, the more productive one can be. The purpose of this section is to provide tools that one can use to be more productive. I expect that some of you are already using a few of these tools. I also expect many of these tools to be new (or at least “how” to use them is new) for a large portion of students.

### Back-up information storage

One of the WORSE things that can happen to a graduate student is to have their hard drive crash *without* having it backed up. Despite tools available to greatly lessen the impact, I still see large impacts on graduate students when this happens. Here are ways to prepare for the worse:

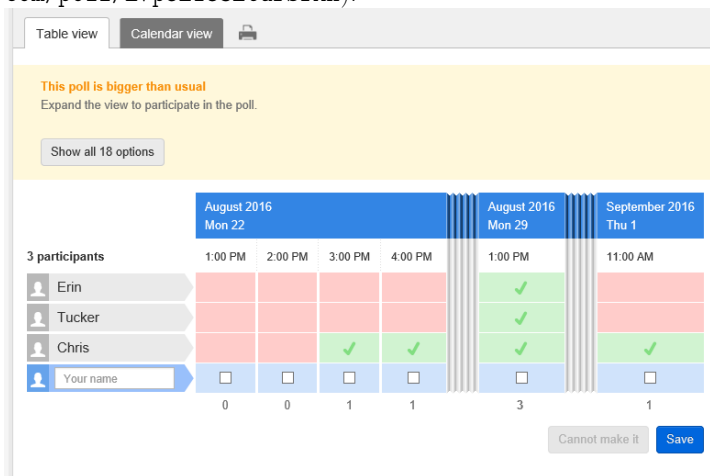
- Cloud-based storage
  - All UNL students receive an *unlimited* amount of cloud-based storage via Box. Simply, you can use Box to automatically synchronize files stored on your computer with a back-up stored on one of Box’s servers at data centers in the US (i.e., files are stored “in the cloud”). To take advantage of this service, follow the details at <http://box.unl.edu>. In summary, you will need to
    1. Create an account
    2. Download and install software from Box onto your computer
    3. Use a particular folder (like C:\Users\Bilder\Box Sync) to save files into.

Whenever files and folders change in your folder, they are uploaded to the Box servers. After you leave UNL, you

## Scheduling a meeting

Most students will need to schedule a MS or PhD Supervisory Committee meeting at some point during their graduate studies. Trying to find a time when all faculty members on this committee can meet is often a daunting task. It may seem like the best way to find a time is to send an e-mail to all committee members and have everyone provide a schedule. A much more efficient way is to set up a “Doodle Poll” at [doodle.com](http://doodle.com) that collects time availability information. The basic use of these polls is free, and there are no requirements to create an account.

Below is a recent example poll set up by a MS student to schedule a Supervisory Committee meeting (<http://doodle.com/poll/z7p5zi83ztursfxn>):



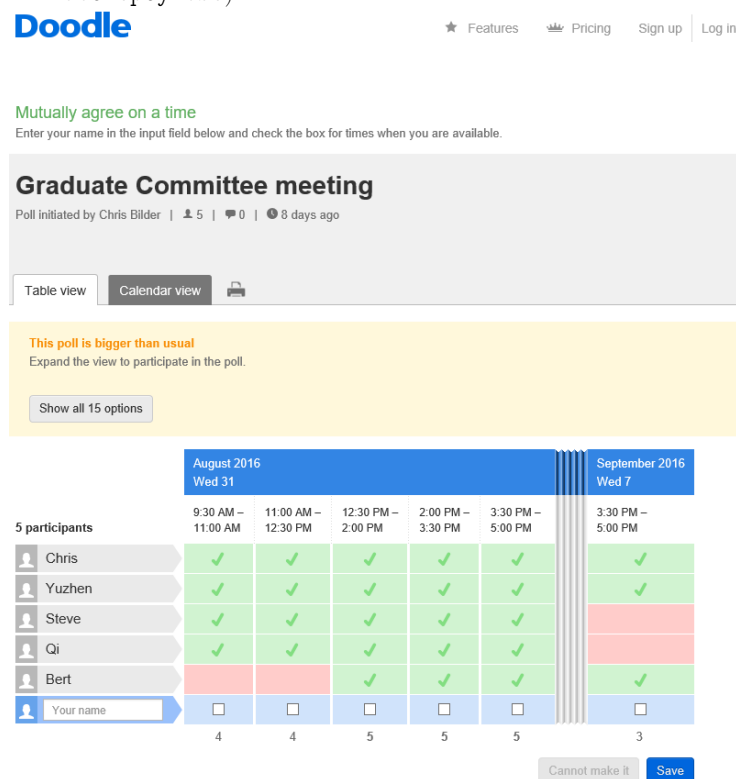
The poll view can be expanded to show all times that are available by selecting the “Show all 18 options” button or by selecting the

can maintain a free Box account with a limited amount of space.

- Box is just one of many companies that provide cloud-based storage. My personal favorites are Dropbox and OneDrive, which are both free with limits on the amount of storage available. In particular, I really like Dropbox because it allows one to recover files that have been deleted or saved over. For example, suppose you delete text in a file, save the file, and close the file. Later, you realize you should not have deleted the text! You can still recover this file on Dropbox’s website.
- Files/folders can be synchronized across computers. Thus, a change to one file on a computer will lead to a back-up created in the cloud AND to another computer that you specify.
- Files/folders can be easily shared with other individuals. For example, I shared 1GB+ of files in multiple folders with the co-author of my *Analysis of Categorical Data with R* book while we were writing it. Without sharing these files, it would have been much more difficult to collaborate. For students, sharing files/folders can be very useful when completing assignments via group work!
- External hard drive - These hard drives are relatively inexpensive. I simply have a once-a-month appointment on my calendar to remind me to copy over an entire folder structure to an external, password-protected hard drive. These hard drives also often come with automatic back-up software so that this type of back-up or file synchronization occurs automatically.

accordion-like folds in the image between dates.

Below is another recent example poll that I set up for a Graduate Committee meeting (<http://doodle.com/poll/i4fzdt6nep6yxtse>):



Both polls show what they look like upon completion. The key

aspects are:

- The *organizer* of the meeting creates a set number of times when a meeting would start or when a meeting would be held.
- An e-mail is sent to all *participants* of the meeting that contains a link to the poll.
- The *participants* indicate their availability for the meeting.
- Once all participants have given their available times, the organizer chooses one which best fits into everyone's schedule.

For the previous examples, the first meeting was scheduled for Monday, August 29th at 2PM (all three participants indicated they were available), and the second meeting was scheduled for Wednesday, August 31 at 1:00-2:30.

To set-up your own poll, simply go to [doodle.com](http://doodle.com) and select SCHEDULE AN EVENT. From there, follow the relatively easy steps given on the website. There are a number of "extra" settings that you can include, such as

- Hiding the poll results from other participants
- Add a "If need be" option to "yes" and "no" regarding availability

Once the poll is set-up, you will be given two links: one to share with the participants and one for you to make changes to the poll if needed.

Lastly, a note about etiquette when using these polls. Please do not purposely be the "last person" to take the poll and then select only one time. Some participants will do this to control the exact time when the meeting takes place. This further complicates matters when a participant's schedule changes so that an alternative time needs to be found.

for a meeting. Below is an example from when I was the secretary for Faculty Senate's Informative Technologies and Services Committee:

## Pen-enabled laptops

Many students take typed notes during class using a laptop. However, for classes with mathematical content, this can be difficult due to the equations and symbols used in class. Pen-enabled laptops (e.g., tablet PC, tablet with a keyboard) though allow one to type AND use a pen for electronic notetaking. As a user of these types of laptops since 2003, below are some thoughts and recommendations on their use:

- My Department of Statistics seminar in 2006 and my JSM presentation in 2008 provide good examples of how to use Tablet PCs for teaching, research, and regular business activities. While some of the tools available have changed since 2008, my uses highlighted are still important. Links to recordings of these seminars are available from [www.chrisbilder.com/CV](http://www.chrisbilder.com/CV).
- Use a notetaking software package during class. These types of software include OneNote (part of Office) and Evernote. If I was a student, this is how I would take notes! Helpful aspects of OneNote include:
  - Files are automatically saved, so there is no need to click on a save button.
  - Word and PDF files can be imported so that notes can be taken on them.
  - A nice organizational structure is available. Notebooks are available which can be divided into sections. These sections can have separate pages within it (see next graphic).
  - Audio and video can be recorded within the software. Notes taken are synchronized with the audio/video so that one can click on an icon next to the notes and the audio/video will appear at the corresponding time point. I have found this aspect to be quite helpful when I have been a secretary

The screenshot shows the OneNote interface with an audio recording player at the top. Below the player is a table titled "2013-2014 MEMBERS" with columns for NAME, EMAIL, and TERM. The table lists various members with their names, email addresses, and terms of service. Some names are crossed out with a red line. Below the table, there are sections for "1. Announcements" and "2. Old Business".

NAME	EMAIL	TERM
ASUN		August 2013
<del>Christina Guthmann, ASUN</del>	<del>Christina.Guthmann@gmail.com</del>	August 2013
<del>Kevin Lee, Physics &amp; Astronomy</del>	<del>klee6@unl.edu</del>	August 2014
<del>Christopher Bilder, Statistics</del>	<del>cbilder3@unl.edu</del>	August 2014
<del>Rich Leiter, Law</del>	<del>rich.leiter@unl.edu</del>	August 2014
<del>Steve Ladunga, Statistics</del>	<del>sladunga2@unl.edu</del>	August 2014
<del>David Woodman, School of Biological Sciences, CHAIR</del>	<del>dwoodman1@unl.edu</del>	August 2015
<del>Dave Billesbach, Biological Systems Engineering</del>	<del>dbillesbach1@unl.edu</del>	August 2015
<del>Ian Cottingham, Raikes School</del>	<del>ian@unl.edu</del>	August 2016
<del>Mark Askren, Chief Information Officer (ex-officio, non-voting)</del>	<del>maskren2@unl.edu</del>	cont.
<del>Lance Perez, Representative of Academic Affairs (non-voting)</del>	<del>lperez1@unl.edu</del>	cont.
<del>David Jackson, Representative of Agriculture and Natural Resources, (non-voting)</del>	<del>djackson1@unl.edu</del>	cont.
Pam, new student, Kraft, other procurement, Health		

1. Announcements  
4-4-14  
Audio recording started: 11:30 AM Friday, April 4, 2014

2. Old Business  
LMS updates

3. New Business  
Senate report  
Question about Adobe license for students

- Handwritten notes (via the electronic pen) can be inserted within Word and PDF files. For PDF files, my preference is

to use PDF Annotator which allows for both handwritten and typed notes.

## Search tools to find statistics research

Finding statistical research papers is a common task that statisticians need to do. Obviously, if one is engaging in statistical research, one needs to determine what else has been done in an area. Perhaps not so obvious is when one is simply looking for how best to perform an analysis by applying known methods. There are two main databases/indexes that statisticians use to find statistical research papers: Current Index to Statistics and Google Scholar.

### *Current Index to Statistics*

The Current Index to Statistics (CIS) has been the traditional tool used by statisticians when searching for statistical research papers on a particular subject. CIS is a joint online publication by the ASA and IMS. Access to CIS is available through our library or through having a membership with one of these statistical associations. Below is the main home page for CIS:

The **Current Index to Statistics** is a bibliographic index to publications in statistics, probability, and related fields.

The on-line **CIS Extended Database** indexes the entire contents of over 160 "core journals", in most cases from 1975 (or first issue if later) to the current end year, and pre-1975 coverage for some, selected articles with statistical content since 1975 from about 1200 additional journals (cumulatively) in related fields, and about 11,000 books in statistics published since 1975.

#### Search journal articles and conference proceedings

For any url, you can add [.bib](#) to the end to see the results as bibtex, or [.xml](#) as xml

#### Search authors

#### Search books

#### Search journals

#### Subscribing to the CIS Query Server

- [License categories and terms](#)
- [Prices](#)
- [How to order and order form](#)
- ["Frequently Asked Questions" \(FAQ\) for CIS licensing and access](#)

#### CIS News

#### CIS Coverage, Specifications and Related Information

- [Selecting keywords: 10 Guidelines to authors and editors, an article about keywords, and a list of keywords commonly used in CIS](#)

#### Contacting CIS; management and editors

- [Editors and Management Committee](#)
- [Send us an e-mail message](#)

A search for my last name on CIS leads to three different names for which I am represented in the database:

### Authors

#### Search for bilder

3 authors found.

- [Christopher R. Bilder](#)
- [Bilder, Christopher R.](#)
- [Bilder, Christopher](#)

Below are the results from selecting the second name:

## Bilder, Christopher R.

(as bibtex)



Elsewhere: [\[math people\]](#) [\[google\]](#) [\[google scholar\]](#)

### Articles (25)

- Koziol, Natalie A., Bilder, Christopher R., MRCV: A Package for Analyzing Categorical Variables with Multiple Response Options. *R Journal*, The 2014. 6:144-150
- Loughin, Thomas M., Bilder, Christopher R., On the use of a log-rate model for survey-weighted categorical data. *Communications in Statistics: Theory and Methods* 2011. 40:2661-2669
- Bilder, Christopher R., Tebbs, Joshua M., Chen, Peng, Informative retesting. *Journal of the American Statistical Association* 2010. 105:942-955
- Bilder, Christopher R., Zhang, Boan, Schaarschmidt, Frank, Tebbs, Joshua M., binGroup: A package for group testing. *R Journal*, The 2010. 2:56-60
- Chen, Peng, Tebbs, Joshua M., Bilder, Christopher R., Group Testing Regression Models with Fixed and Random Effects. *Biometrics* 2009. 65:1270-1278
- Chen, Peng, Tebbs, Joshua M., Bilder, Christopher R., Global goodness-of-fit tests for group testing regression models. *Statistics in Medicine* 2009. 28:2912-2929
- Bilder, Christopher R., Human or cylon? Group testing on "Battlestar Galactica". *CHANCE* 2009. 22:46-50
- Bilder, Christopher R., Malone, Christopher J., Tablet PC applications in statistics education, part I.
- Bilder, Christopher R., Tebbs, Joshua M., An Introduction to Categorical Data Analysis (2nd ed.). Alan Agresti. *Journal of the American Statistical Association* 2008. 103:1323-1323
- Bilder, Christopher R., Loughin, Thomas M., Modeling Association Between Two or More Categorical Variables that Allow for Multiple Category Choices. *Communications in Statistics: Theory and Methods* 2007. 36:433-451
- Tebbs, Joshua M., Bilder, Christopher R., Hypothesis tests for and against a simple order among proportions estimated by pooled testing. *Biometrical Journal* 2006. 48:732-804
- Bilder, Christopher R., Tebbs, Joshua M., Empirical Bayesian estimation of the disease transmission probability in multiple-vector-transfer designs. *Biometrical Journal* 2005. 47:502-516
- Bilder, Christopher R., Group testing model estimation and inference.
- Tebbs, Joshua M., Bilder, Christopher R., Confidence interval procedures for the probability of disease transmission in multiple-vector-transfer designs. *Journal of Agricultural, Biological, and Environmental Statistics* 2004. 9:75-90
- Bilder, Christopher R., Loughin, Thomas M., Testing for marginal independence between two categorical variables with multiple responses. *Biometrics* 2004. 60:241-248
- Tebbs, Joshua M., Bilder, Christopher R., Moser, Barry K., An empirical Bayes group-testing approach to estimating small proportions. *Communications in Statistics: Theory and Methods* 2003. 32:983-995
- Tebbs, Joshua M., Bilder, Christopher R., Moser, Barry K., An empirical Bayes group-testing approach to estimating small proportions. *Communications in Statistics: Theory and Methods* 2003. 32:983-995
- Bilder, Christopher R., Loughin, Thomas M., Strategies for modeling two categorical variables with multiple category choices.
- Bilder, Christopher R., Loughin, Thomas M., Testing for conditional multiple marginal independence. *Biometrics* 2002. 58:200-208
- Malone, Christopher J., Bilder, Christopher R., Statistics course web sites: Beyond syllabus.html. *Journal of Statistics Education: An International Journal on the teaching and learning of statistics* 2001. 9:5-5
- Bilder, Christopher R., Loughin, Thomas M., On the first-order Rao-Scott corrections of the Umesh-Loughin-Scherer statistic. *Biometrics* 2001. 57:1253-1255
- Bilder, Christopher R., Loughin, Thomas M., On the first-order Rao-Scott correction of the umesh7Loughin7Scherer statistic. *Biometrics* 2001. 57:1253-1255
- Bilder, Christopher R., Loughin, Thomas M., Nettleton, Dan, Multiple marginal independence testing for pick any/Sc3 variables. *Communications in Statistics: Simulation and Computation* 2000. 29:1285-1316
- Malone, Christopher J., Bilder, Christopher R., Increasing student-instructor and student-student interaction through a statistics course website.
- Bilder, Christopher R., Loughin, Thomas M., "It's good!" An analysis of the probability of success for placekicks. *CHANCE* 1998. 11:20-24

This listing provides a good place to discuss the problems with CIS:

- Is the plot helpful?
- CIS is missing 14 of my publications that have been published since 2011. My two other name listings do not provide any of these publications.
- Clicking on the title of my 2010 JASA papers leads to

## Informative retesting

Bilder, Christopher R., Tebbs, Joshua M., Chen, Peng. *Journal of the American Statistical Association* 2010. 105 (491): 942-955

### Locate this article in:

- Other databases: [JSTOR](#)
- Search engines: [Google scholar](#), [Google](#)
- Citation services: [citeulike](#), [bibsonomy](#)

### Bibtex

```
@article{CIS-253223,
  Author = {Bilder, Christopher R. and Tebbs, Joshua M. and Chen, Peng},
  Title = {Informative retesting},
  Journal = {Journal of the American Statistical Association},
  Volume = {105},
  Number = {491},
  Year = {2010},
  Pages = {942--955},
  Keywords = {Binary response, Identification, Pooled testing, Group testing, chlamydia, gonorrhoea}
}
```

The link does not directly go to the paper. Instead, other links are provided to potentially find it. Also, there is no list of other papers that have referenced this paper. Having access to this type of list is essential for finding improvements upon the methods presented in this paper that may have been developed since publication.

When recently asked to be the chair of the CIS Management Committee, I e-mailed the following to the individual who made this request:

I agree that the future of what will happen with CIS is somewhat uncertain right now. In my opinion, its current form is inadequate. Bibliographical entries are years behind, these entries are done by hand, and there is no way to determine what papers cite a work of interest. Unless these three problems can be resolved, it probably would be best to discontinue CIS. This may sound a little strange to say because CIS is still making a profit. However, a large concern of mine is how CIS reflects upon our discipline with not being able to find recent bibliographical entries

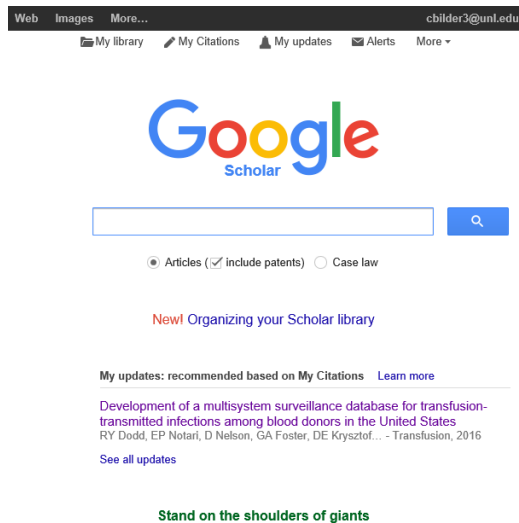
and not being able to quickly follow a chain of citations for a work of interest.

Reasons to still use CIS are

- Shows only statistical research papers
- Comprehensive listing of 2010 and older papers

## Google Scholar

Google Scholar (<http://scholar.google.com>) is now my first tool used to find papers. One can use it with or without a Google account. Below is my entry page for Google Scholar:



As you would expect, one can simply search for an author of a paper or a subject area by typing in the appropriate words in

in this paper.

- My first paper does not appear until the fourth paper listed. This is my only paper listed on the first page, although the last two entries oddly are

### CITATION] List of Attendees

..., T Bailey, L Ballou, C Bilder... - Applied ..., 2000 - Department of Statistics, Kansas ...

Save More

### Correction to the Table of Contents for the September 2012 Issue

..., JZ Huang, J Hu, CS McMahan, JM Tebbs, CR Bilder - Wiley Online Library

Please note that the following articles were incorrectly published as "Biometric Methodology" articles in the September 2012 issue (Volume 68, Issue 3). These articles are "Biometric Practice" articles and should have appeared in that section of the Table of Contents. The ...

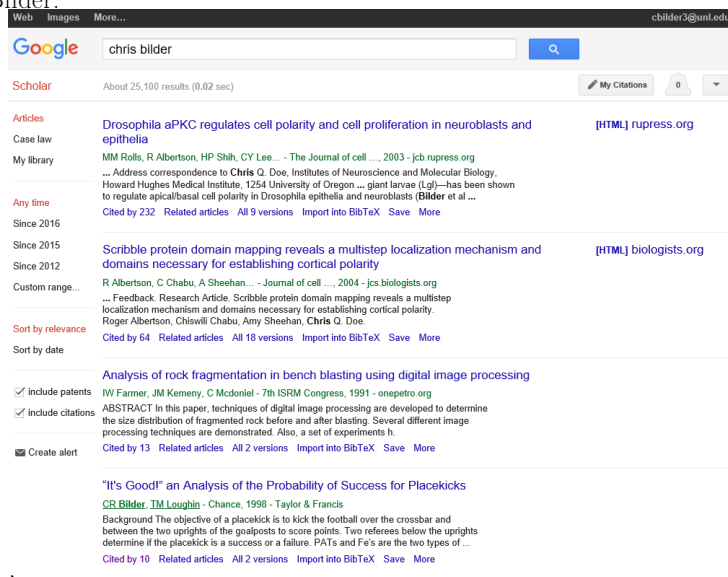
Save More

which helps to show that the results returned are not always relevant.

- Surprisingly, there is more than one "Chris Bilder" in the world, so papers by individuals in other disciplines will appear.
- Searching by "Christopher Bilder" does produce much better results, but I do not think this occurred before my profile was public (creating this profile is discussed shortly).
- Multiple references, which are practically the same, may be counted more than once. For example, Bilder, Loughin, and Nettleton (*Comm. in Stat.: Simulation and Computation*, 2000) has 10 citations from the same book, but from different chapters of the book.
- Papers posted on a personal or university website, rather than a peer reviewed journal, are often included in search results.

The purpose of the above discussion is to show you that Google Scholar is definitely not perfect. One does really need to examine the results carefully to make sure that something is not missed.

the search window. Below is what happens when I type in Chris Bilder:



This listing provides a good place to discuss the problems with Google Scholar:

- It is not discipline specific. Thus, I cannot filter the results by "Statistical research papers". I have found an R program available on Github which could potentially be used to do this, but this violates Google's policies regarding the use of Scholar (Google only allows 1-2 searches via this program until it cuts off access).
- The first paper above appears because there is a co-author by the name of "Chris" and a paper by "Bilder, D." is referenced

Below is a screen capture of my "It's Good! an Analysis of the Probability of Success for Placekicks" entry in the previous search results:

### "It's Good!" an Analysis of the Probability of Success for Placekicks

CR Bilder, TM Loughin - Chance, 1998 - Taylor & Francis

Background The objective of a placekick is to kick the football over the crossbar and between the two uprights of the goalposts to score points. Two referees below the uprights determine if the placekick is a success or a failure. PATs and Fe's are the two types of ...

Cited by 10 Related articles All 2 versions Save More

Important items to examine:

- The "Cited by 10" link may be the most important aspect of this entry. Clicking on this link shows what other papers have referenced my paper since its publication. If one wants to do new research on this topic, these references (and references of these papers...) are essential for understanding what has been done in this area.
- The "Import into BibTeX" link provides the following BibTeX code:

```
@article{bilder1998s,
  title={"It's Good!" an Analysis of the Probability of
    Success for Placekicks},
  author={Bilder, Christopher R and Loughin, Thomas M},
  journal={Chance},
  volume={11},
  number={2},
  pages={20 - 30},
  year={1998},
  publisher={Taylor & Francis}
}
```

which can be used by reference management software, like JabRef ([www.jabref.org](http://www.jabref.org)). These types of software tools should be used when writing any papers with more than a few references. STAT 850 discusses them in more detail.

- The "More" link provides additional options like "Cite". By

clicking on “Cite”, a number of bibliography citation types will appear.

Cite

Copy and paste a formatted citation or use one of the links to import into a bibliography manager.

MLA	Bilder, Christopher R., and Thomas M. Loughin. "It's Good!" an Analysis of the Probability of Success for Placekicks." <i>Chance</i> 11.2 (1998): 20-30.
APA	Bilder, C. R., & Loughin, T. M. (1998). "It's Good!" an Analysis of the Probability of Success for Placekicks. <i>Chance</i> , 11(2), 20-30.
Chicago	Bilder, Christopher R., and Thomas M. Loughin. "It's Good!" an Analysis of the Probability of Success for Placekicks." <i>Chance</i> 11, no. 2 (1998): 20-30.
Harvard	Bilder, C.R. and Loughin, T.M., 1998. "It's Good!" an Analysis of the Probability of Success for Placekicks. <i>Chance</i> , 11(2), pp.20-30.
Vancouver	Bilder CR, Loughin TM. "It's Good!" an Analysis of the Probability of Success for Placekicks. <i>Chance</i> . 1998 Mar 1;11(2):20-30.

[BibTeX](#) [EndNote](#) [RefMan](#) [RefWorks](#)

However, no statistics journals use one of these citation methods. Each journal tends to have their own style that they follow. Fortunately, these journals tend to give a citation style file that can take BibTeX code and create the correct style for a bibliography automatically.

Once you start publishing your own papers and have your own account, benefits of using Google Scholar include:

- Create your own private or public profile of your research; mine is available at <http://goo.gl/bDXjnR>.
- Scholar suggests new papers for you to examine based on your publication history.

Overall, I have found the listing of citations on Google Scholar to be very current.

### *Other search tools*

Before Google Scholar was available, I often used the Web of Science to search for papers. This index is available from our

library and provides many of the same features as Google Scholar, including a list of what papers cite a paper of interest. The one advantage of using this search tool still is that it provides much fewer references which are not worthwhile to investigate.

## Additional tools

- Be organized: For example, create “to do” lists
- Learn to say “No”: We all want to say “Yes” when asked to do something of interest, but it just can not always be done
- Use symbolic mathematical software: For example, Maple and Mathematica can provide checks for homework answers in STAT 882 and 883

If you have other tools that you have found to help your productivity, please feel free to suggest them!