




# Submitting work on Moodle

Title	Start Date	Due Date	Post Date	Marks Available
Submit one page paper summaries (First summary)	15 Jan 2017 - 00:00	26 Apr 2017 - 17:00	15 Jan 2017 - 00:00	100 

 Refresh Submissions

Submission Title	Turnitin Paper ID	Submitted	Grade	Overall Grade
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				Submit Paper  --

# Submitting work on Moodle: first paper summary

## COMPGA11: Research in Information Security

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Title	Start Date	Due Date
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Submission Title	Turnitin Paper ID	Submitted	Grade
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# Submitting work on Moodle: second paper summary

## COMPGA11: Research in Information Security

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Title	Start Date	Due Date
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# Submitting work on Moodle: viewing rubric



UCL

Steven J Murdoch  
Student

aries

My Submissions

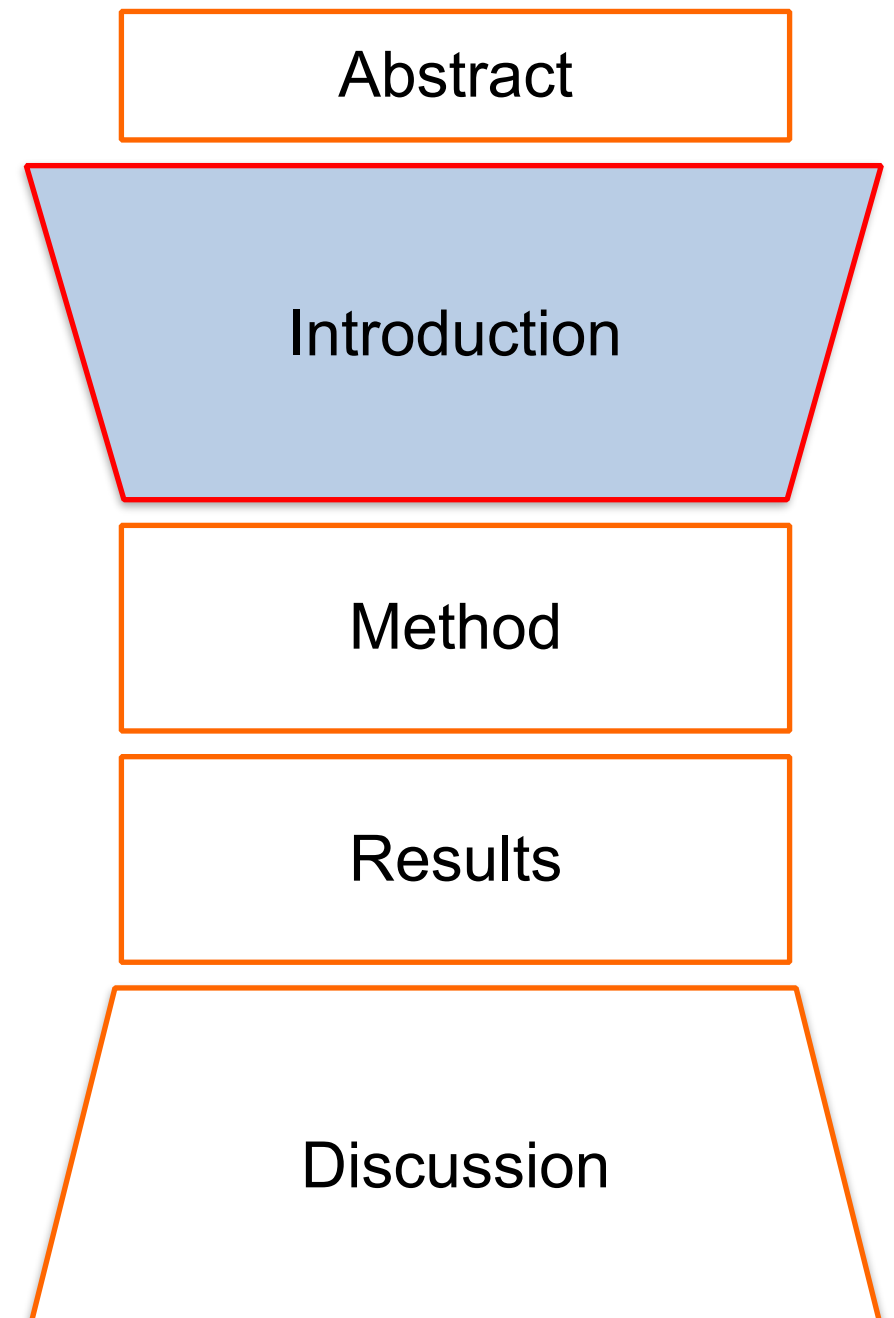
Date	Due Date	Post Date	Marks Available
5 Jan 2017 - 00:00	26 Apr 2017 - 17:00	15 Jan 2017 - 00:00	100 
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# Questions about feedback for assessed coursework

- If you have questions or clarifications about the feedback, please ask Ruba in the first instance
- If you think there has been an error in marking then you can ask for it to be re-marked but marks may go up as well as down

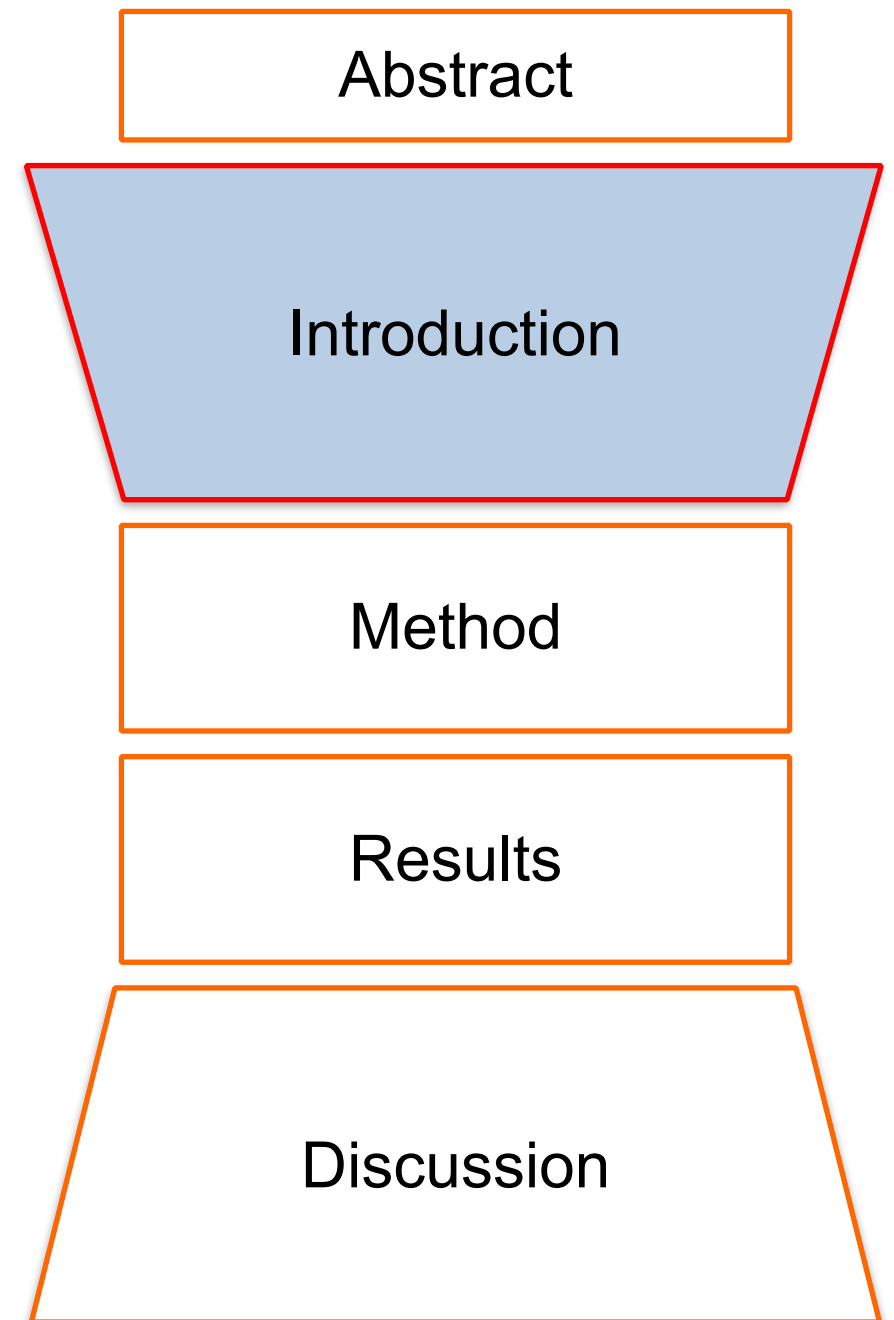
# Scientific Paper - Introduction

- Provides information needed to understand rest of the paper
- Has several parts:
  - The setting
  - Literature review
  - Need for more research
  - Purpose of current study
  - Value of current study
  - Contribution to field



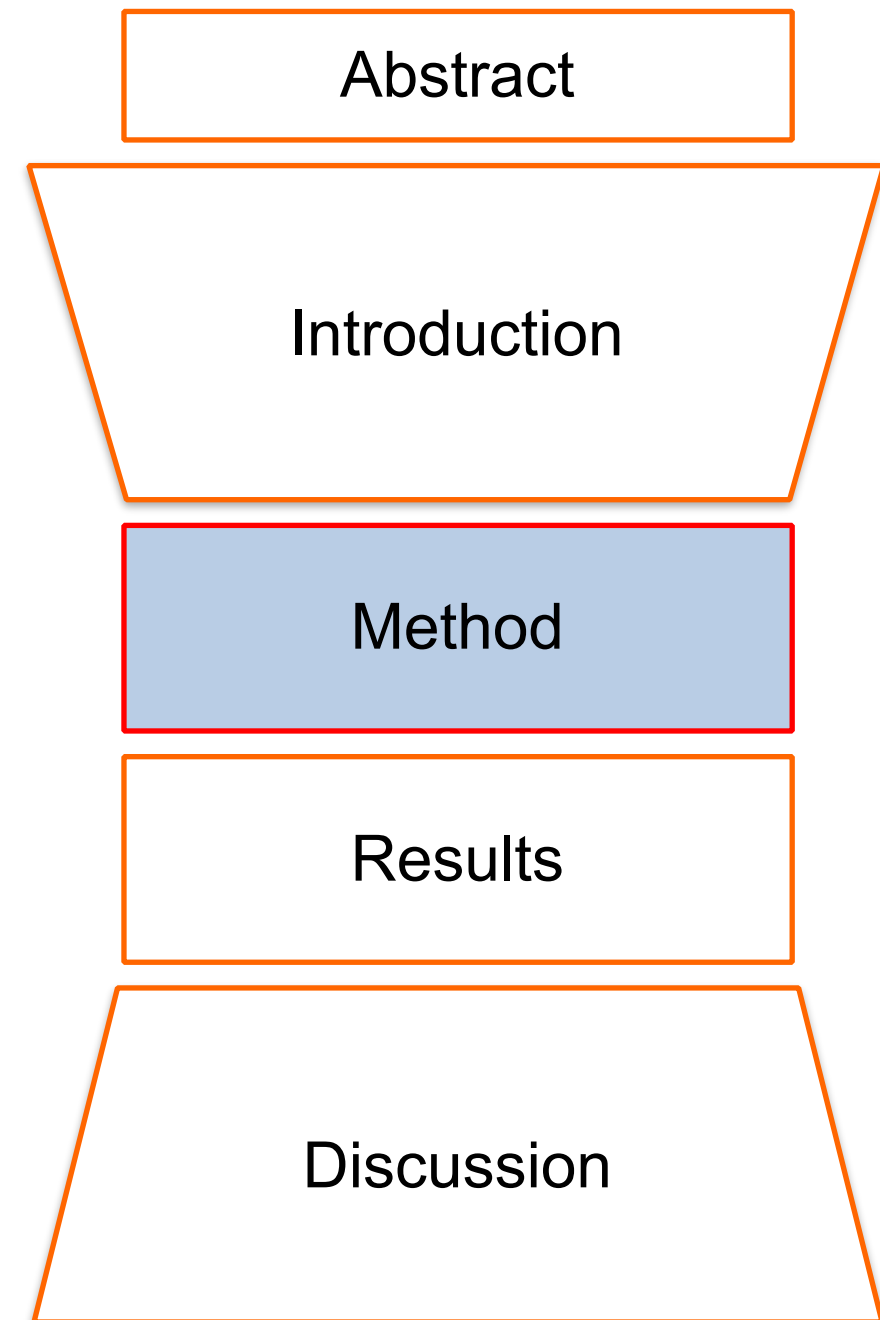
# Scientific Paper - Introduction

- Purpose of current study
  - Follow-up from gap identified in past research
  - Describes which research questions the study set out to answer
- May also be a separate background section



# Scientific Paper - Method

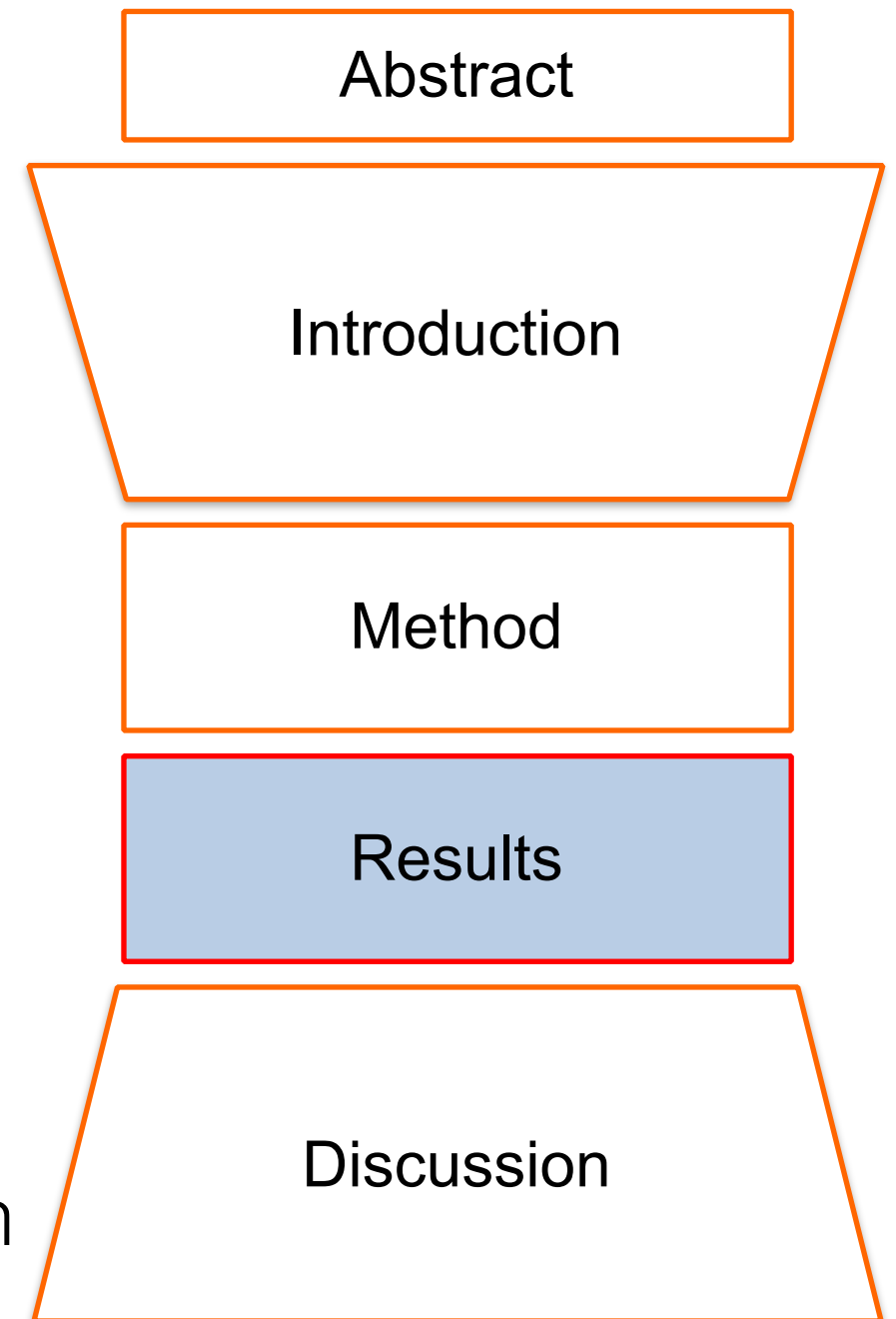
- Describes steps taken in conducting study
  - Materials used at each step
  - Techniques used e.g. qualitative, quantitative, structural equation modelling etc.
- Allows other researchers to replicate your study
  - Validate your results





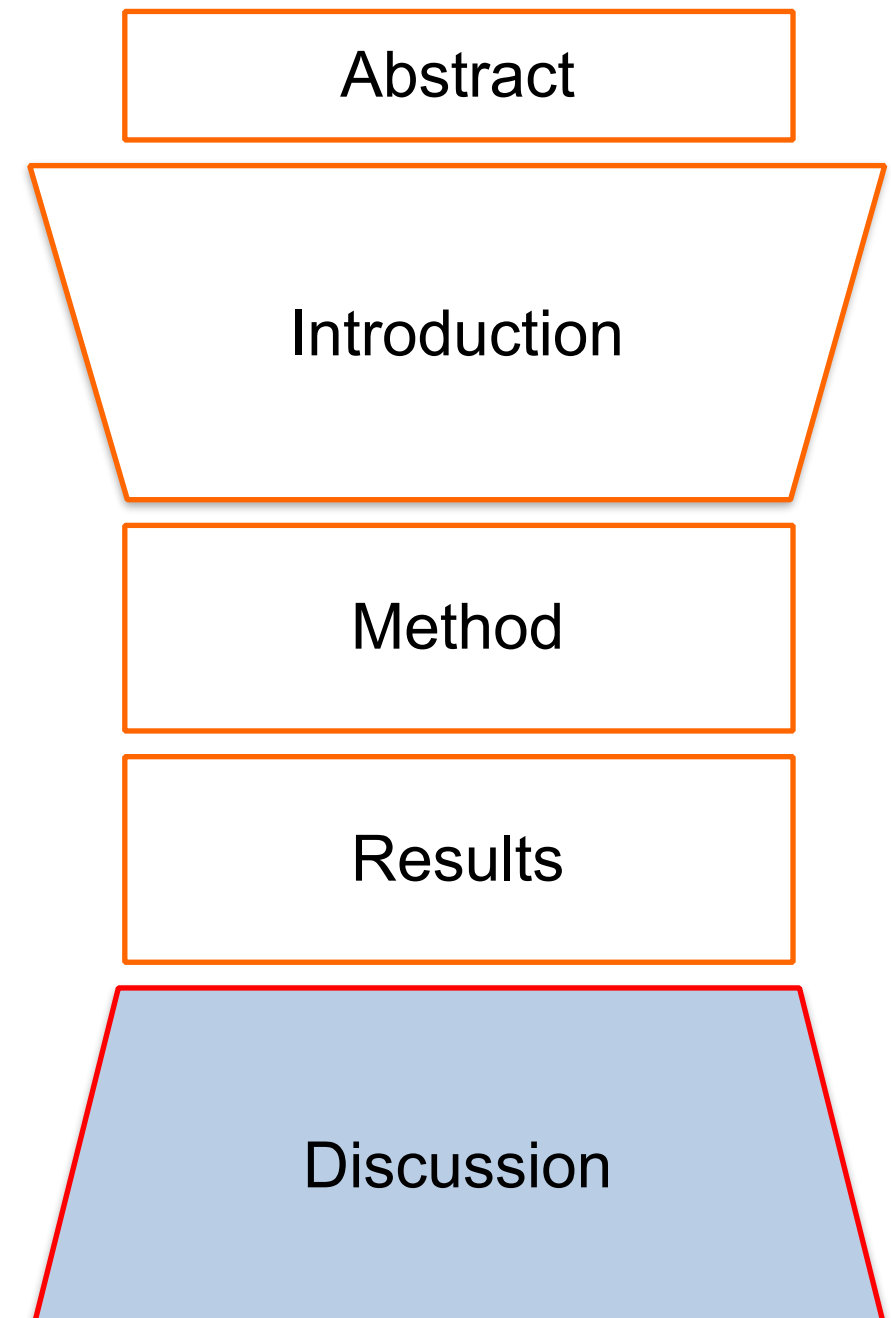
# Scientific Paper - Results

- Describes steps taken in conducting study
  - Materials used at each step
- Presents the findings of your study
  - Includes figures and text
  - Descriptive statistics
  - Relationships between variables
    - Hypotheses supported?
    - Themes identified in qualitative data
- Claim – Evidence vs. Fact – Conclusion



# Scientific Paper - Discussion

- Interprets the findings
  - Explains what findings imply
  - Tries to explain or speculate about the results obtained
- Can include conclusions
  - Summary of main findings
  - Recommendations
  - Contribution of research
    - Substantive
    - Methodological
  - Limitations of research
  - Future research



# Presentations

- Many possible goals for a presentation
  - To inform
  - To persuade
  - To cover your back
- Typical goal of academic presentation is to encourage the right people to find out more

# Formats of presentations

- Powerpoint has become dominant and expected style
  - Nested bullet lists
- Much to criticise
  - Low amount of information per slide
  - No context
  - Hides narrative
- See work by Edward Tufte

# Review Of Test Data Indicates Conservatism for Tile Penetration

- The existing SOFI on tile test data used to create Crater was reviewed along with STS-107 Southwest Research data
  - Crater overpredicted penetration of tile coating **significantly**
    - Initial penetration to described by normal velocity
      - Varies with volume/mass of projectile(e.g., 200ft/sec for 3cu. In)
    - **Significant** energy is required for the softer SOFI particle to penetrate the relatively hard tile coating
      - Test results do show that it is possible at sufficient mass and velocity
    - Conversely, once tile is penetrated SOFI can cause **significant** damage
      - Minor variations in total energy (above penetration level) can cause **significant** tile damage
  - Flight condition is **significantly** outside of test database
    - Volume of ramp is 1920cu in vs 3 cu in for test

# Alternative approaches

- No Powerpoint
  - or just as “decoration”
- Something different
  - e.g. Prezi
- Handouts
  - Potential to be far richer in terms of information content (see Tufte, Cognitive Style of Powerpoint)
- Risk is that focus will be on style rather than content

We will not have a  
vocal chord left. The  
vocal chords will be  
eliminated by a process  
of evolution, as was  
the tail of man when he  
came from the ape.

**TED**

Larry Lessig



zoom outside the slide and

give your ideas

space



# Assertion-Evidence style

- Begin each body slide with a sentence-assertion headline that is left justified and no more than two lines
- Support the assertion headline with visual evidence (photographs, drawings, graphs, films, or words and equations arranged visually)—avoid bullet lists
- In the body of the slide, use words only when necessary—design your slides so that the audience reads no more than 20 words per minute

# Fragments quickly outpace the blast wave and become the primary hazard to personnel



# Goals of a Literature Review

- Understand the state of the art
  - What is current substantive knowledge?
  - What are the most important questions?
  - What research has been done most recently?
  - Who is doing the research?
  - What are they investigating?
- What is current methodological knowledge?
  - What research methods are being used?
  - What tools and techniques are being used?
  - How are results being analysed?

# Why do a Literature Review?

- Help you understand current work in the field
- Can assist with understanding theoretical and practical problem
  - Can assist with hypotheses
- Helps identify your contribution
- Provides a firm foundation for your work
- Increases chances of paper being accepted
  - Stops comments from reviewers such as, “*This paper should have considered the work of Smith et al. who performed an experiment very similar to the one described in this paper*”

# Selecting Sources for Review

- You want to learn about an area
  - Look for textbook
  - If no textbook look for survey paper
    - e.g. ACM surveys, meta-analyses
  - If no survey papers, look into proceedings/authors
- Keeping up to date
  - Look at latest proceedings or papers in area
- Don't rely on Google/open-access/online papers
  - Be aware that others do

# Selecting Sources for Review

- Scientific articles
  - Follow the scientific method
  - Required to provide evidence for claims
  - Peer reviewed
  - Open to scrutiny and verification by readers
- Compare with
  - Commercial documents/reports
    - Beware of vendors' white papers
  - Newspaper and magazine articles
    - May be exaggerated to sell more newspapers

# Selecting Sources for Review

- Need to be selective
  - Search on Google Scholar in title field only (Jan 2014)
    - cryptography – 14,000 hits
    - cryptography “public key” – 7,550 hits
    - cryptography "public key" algorithms – 147 hits
      - If search is anywhere in article – 123,000 hits!
- Be clear about scope of literature review
  - Driven by your research question
  - However, may need to search outside main field
    - e.g. use of Q methodology in privacy research
    - Using an existing technique in a new field



# Selecting Sources for Review

- Google Scholar - <http://scholar.google.co.uk/>
  - Search by author, year, journal, keyword in contents and title
  - Exact phrase search
  - Number of citations
  - Links to SFX@UCL when connected to UCL network
- UCL's metalib - <http://metalib-a.lib.ucl.ac.uk>
  - Search by author, title, year
  - Recommend "Advanced" search
- Difference between searching on/off UCL network



# Selecting Sources for Review

- Citeseer
- Links articles to the ones they cite and the ones that cite them
  - <https://citeseer.ist.psu.edu>
- Researcher's own page(s)
  - Often have free copies of their papers
  - Try a friendly e-mail 😊
- Conference proceedings
  - WEIS, NSPW, SOUPS, CHI, EuroCrypt etc.

# Selecting Sources for Review

- DBLP
  - Computer science bibliography
  - Tabulates articles by:
    - Specific author
    - Specific conference or journal
  - <http://www.informatik.uni-trier.de/~ley/db/>
- Web pages
  - Articles in quality newspapers, reports, presentations, TV programmes etc.
  - Use with care!
  - Avoid a bibliographies consisting of mainly URLs

# Selecting Sources for Review

- Identify key authors in the field
  - Seminal papers – look for lots of citations
    - “A method for obtaining digital signatures and public-key cryptosystems” – Rivest, Shamir & Adleman – 13,659 citations
  - Privacy – Nissenbaum, Westin, Acquisti, Cranor, etc.
- Questions to ask yourself
  - How relevant is this to my research?
  - How current is the work?
  - What have I not seen before?
  - Does it seem to be a credible source?
  - Is it well structured and easy to read?

# Starting Out

- You will initially feel:
  - Overwhelmed
  - Ignorant
  - Confused
  - As though review will never end
- A methodical approach will assist you to:
  - Select the sources – begin to understand the problem
  - Do active/effective reading
  - Create a well-organised literature review

# Starting Out

- The foundation of a good literature review
  - A good research question
- Identify important journals and conferences in your area
- Use an iterative approach
  - Initial research question scopes initial literature search
  - Refine the research question
  - New search with refined research question
  - Repeat as necessary
  - The final scope of the review

# Different Types of Reading

- Pleasure or general interest
  - e.g. fiction, magazines, blogs
- Functional
  - Aimed at achieving a specific goal
  - e.g. instruction manual, news
- Work
  - Also trying to achieve a goal
  - e.g. reports, news, research papers, contracts
- Don't confuse them

# Active Reading

- Has an objective and expectations
- Selective about the text
  - Selects which text to read
- Selective within the text
  - Only read sections which are important to you
  - Don't necessarily read text from start to finish
- Critical
  - What is the quality of the source?
  - Critically read the text

# Active Reading

- Ensures understanding
  - Re-reads text if necessary
  - Consult other sources
  - Come back to it!
- Probably uses printed version of text
  - Easy to annotate
  - Quickly move through text
  - Easier to cross-reference several documents



# Effective Reading

- Work in correct environment
- Set goals for the reading
- Read in short sessions
  - Be realistic!
- Make notes – summarise what is being said
  - Reading off a screen is often not sufficient
  - Use technique you feel comfortable with to organise knowledge
- Allow time to reflect and come back to the text

# Managing Your Sources

- Use a bibliographic tool
  - Sometimes provides a plug-in for browsers and word processors
- Zotero bibliography management tool
  - [www.zotero.org](http://www.zotero.org)
  - Recommend standalone version
  - Plug-in for MS Word
  - Access via the web
  - 12 minute ISD introduction to Zotero at <http://www.ucl.ac.uk/isd/common/resources/snippets/zotero>

# Zotero

JSTOR: Search Results

http://mutex.gmu.edu:2112/action/doAdvan

esibethane

Search:

Collections

- My Library
- Criticism
- Plays
  - Comedies
  - Tragedies
  - Hamlet**
- 50s-80s Criticism

Title	Creator
A Polish Pantomime Hamlet	Filipowicz a...
Hamlet	Brecht and B...
On the Elizabethan Staging...	Childs
The "Hamlet Year"	Downer

No items selected

# Mendely

The screenshot displays the Mendely desktop application. The interface includes a menu bar (File, Edit, View, Tools, Help), a toolbar with icons for adding, deleting, and managing documents, and a search bar. The main window is divided into three panes:

- My Library:** Contains a sidebar with filters like 'All Documents', 'Recently Added', 'Favorites', 'Needs Review', 'My Publications', and 'Unsorted'. It also has a 'Groups' section and a 'Trash' section.
- All Documents:** A table listing documents with columns for Authors, Title, Year, Published, and Added. The table is sorted by Year.
- Details:** A pane showing the details of the selected document, including its title, authors, journal, year, volume, issue, and pages. It also includes an abstract.

The selected document is titled "New use of cyanosilane coupling agent for direct binding of antibodies to silica supports. Physicochemical characterization of molecularly bioengineered layers." by S. Falipou, J. Chovelon, C. Martelet et al. It was published in *Bioconjugate chemistry* in 1999, Volume 10, Issue 3, Pages 346-53.

**Abstract:**  
A simple protocol to fix biological species to silica-based surfaces (silica microbeads and glass slides), using a bifunctional silane reagent (3-cyanopropyl dimethyl chlorosilane), is presented. This silane reagent was used without further derivatization. This system led to strong, but not covalent, linkage of antibodies through

93% X Searching for duplicates in your library



# EndNote

The screenshot displays the EndNote X7 application window. The main interface is divided into several sections:

- Top Menu Bar:** File, Edit, References, Groups, Tools, Window, Help.
- Left Panel (My Library):** Contains a list of library folders including 'All References' (81), 'Sync Status...', 'Unfiled' (0), 'Trash' (0), and 'My Groups' (e.g., Cognition-AI, Stem Cell, Avian Intelligence).
- Search Bar:** Located at the top right of the main pane, with a search term 'stem cell' entered.
- Search Filters:** A section below the search bar with dropdown menus for 'Author', 'Year', and 'Title', each with a 'Contains' filter and a search button.
- Reference List:** A table of references with columns: Author, Year, Title, Rating, and Journal. The selected reference is:
 

Author	Year	Title	Rating	Journal
Fuh, E.; Brinton, ...	2009	Bone marrow stem cells for the treatment of L...	★ ★ ★ ★ ★	J Cardio
- Right Panel (Preview):** Displays the full text of the selected reference, titled 'Bone Marrow Stem Cells for the Treatment of Ischemic Heart Disease: A Clinical Trial Review'. It includes the abstract, introduction, and keywords.

# BibTeX

```
paper.bib (~/.w/pt-taxonomy/paper) - VIM
@article{silentknock,
  added-at = {2009-09-23T00:00:00.000+0200},
  author = {Vasserman, Eugene Y. and Hopper, Nicholas and Tyra, James},
  biburl = {http://www.bibsonomy.org/bibtex/2bc69eb4cb8755af854151bf2919b31a9/dblp},
  date = {2009-09-23},
  description = {dblp},
  ee = {http://dx.doi.org/10.1007/s10207-008-0070-1},
  interhash = {91dd7a9069e0df4a9a935240c30da1fe},
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  journal = {Int. J. Inf. Sec.},
  keywords = {dblp},
  number = 2,
  pages = {121-135},
  timestamp = {2009-09-23T00:00:00.000+0200},
  title = {Silent Knock : practical, provably undetectable authentication.},
  url = {http://dblp.uni-trier.de/db/journals/ijisec/ijisec8.html#VassermanHT09},
  volume = 8,
  year = 2009
}

@inproceedings{bridgespa,
  author = {Smits, Rob and Jain, Divam and Pidcock, Sarah and Goldberg, Ian and Hengartner, Urs},
  title = {BridgeSPA: Improving Tor Bridges with Single Packet Authorization},
  booktitle = {Proceedings of the 10th Annual ACM Workshop on Privacy in the Electronic Society},
  series = {WPES '11},
  year = {2011},
  isbn = {978-1-4503-1002-4},
  location = {Chicago, Illinois, USA},
  pages = {93--102},
  numpages = {10},
  url = {http://doi.acm.org/10.1145/2046556.2046559},
  doi = {10.1145/2046556.2046559},
  acmid = {2046559},
  publisher = {ACM},
  address = {New York, NY, USA},
  keywords = {blocking resistance, port knocking, privacy, tor}
}

@article{spator,
  title={SPATor: Improving Tor Bridges with Single Packet Authorization},
  author={Smits, Rob and Jain, Divam and Pidcock, Sarah and Goldberg, Ian and Hengartner, Urs}
}

@techreport{optimizing_proxy_placement,
  title = {Optimizing the Placement of Implicit Proxies},
  author = {Jacopo Cesareo and Josh Karlin and Michael Schapira and Jennifer Rexford},
  institution = {Department of Computer Science, Princeton University},
  month = {Jun},
  year = {2012},
}

@inproceedings{routing_around_decoys,
  author = {Schuchard, Max and Geddes, John and Thompson, Christopher and Hopper, Nicholas},
  title = {Routing Around Decoys},
  paper.bib 550,1 46%
```



# BibTeX

paper.bib

Search Bibliography

Search

Cite Drawer

Keywords	BibTeX	Cite Key	Title	Date	First Author	Second Author	Third Author
techre...	Wiley2011	Blocking-Resistant Protocol Classification Using...	2011	B. Wiley			
inproc...	bootstrap...	Bootstrapping Communications into an Anti-Ce...	2012	P. Lincoln	I. Mason	P. Porras	
inproc...	defiance	Bootstrapping Communications into an Anti-Ce...	Aug...	P. Lincoln	I. Mason	P. Porras	
block...	bridgespa	BridgeSPA: Improving Tor Bridges with Single Pa...	2011	R. Smits	D. Jain	S. Pidcock	
misc	Bamman12	Censorship and deletion practices in Chinese so...	Nov...	D. Bamman...			
asym...	censorspoofers	CensorSpoofers: Asymmetric Communication Usi...	2012	Q. Wang	X. Gong	G. T. K. Ng...	
misc	greendarn	China's Green Dam: The Implications of Govern...		O. Initiative			
inproc...	collage	Chipping Away at Censorship Firewalls with User...	2010	S. Burnett	N. Feamster	S. Vempala	
inproc...	cirripede	Cirripede: Circumvention Infrastructure using Ro...	2011	A. Houma...	G. T. K. Ng...	M. Caesar	
inproc...	cloud-trans...	CloudTransport: Using Cloud Storage for Censor...	2014	C. MiscBru...	A. Houma...	V. Shmatikov	
article	walled-garden	Common Best Practices for Mitigating Large Scal...	Jul...	N. Mody	M. O'Reirdan	S. Masiello	
inproc...	cover-acks	Cover Your ACKs: Pitfalls of Covert Channel Cen...	2013	J. Geddes	M. Schuchard	N. Hopper	
inproc...	Geddes2013	Cover Your ACKs: Pitfalls of Covert Channel Cen...	2013	J. Geddes	M. Schuchard	N. Hopper	
inproc...	curveball	Decoy Routing: Toward Unblockable Internet Co...	2011	J. Karlin	D. Ellard	A. W. Jackson	
inproc...	focill-decoy	Decoy Routing: Toward Unblockable Internet Co...	Aug...	J. Karlin	D. Ellard	A. W. Jackson	
techre...	Anderson2...	Dimming the Internet: Detecting Throttling as a...	2013	C. Anderson			
techre...	dust	Dust: A Blocking-Resistant Internet Transport Pr...	2011	B. Wiley			
inproc...	Bernaille2007	Early Recognition of Encrypted Applications	2007	L. Bernaille	R. Teixeira		
inproc...	elligator:2013	Elligator: Elliptic-curve points Indistinguishable...	2013	D. J. Berns...	M. Hamburg	A. Krasnova	
inproc...	tcp_covert...	Embedding Covert Channels into TCP/IP	2005	S. J. Murdoch	S. Lewis		
entro...	incolle...	Entropy Estimation for Real-Time Encrypted Tra...	2011	P. Dorfinger	G. Panholzer	W. John	
inproc...	flashproxy	Evading Censorship with Browser-Based Proxies	2012	D. Fifield	N. Hardison	J. Ellithorpe	
censo...	inproc...	Facet: Streaming over Videoconferencing for Ce...	2014	S. Li	M. Schliep	N. Hopper	
inproc...	Clayton2006	Failures in a Hybrid Content Blocking System	2006	R. Clayton			

coveracks

**Cover Your ACKs: Pitfalls of Covert Channel Censorship Circumvention** (in proceedings)

**Author**  
John Geddes and Max Schuchard and Nicholas Hopper

**Booktitle**  
Computer and Communications Security

**Year**  
2013

**Publisher**  
ACM

**Address**  
Berlin, Germany

**Url**  
<http://www-users.cs.umn.edu/~hopper/ccs13-cya.pdf>

**Local Files**  
**Remote URLs**  
<http://www-users.cs.umn.edu/~hopper/ccs13-cya.pdf>

113 publications