A Good Thesis (from COMPGA99)

• Addresses one or more challenging information security problems
• Describes why this problem is important
• Describes related work that has already been done in the area and what the state of the art currently is
• Proposes solutions and gives a critical evaluation of the proposed models

Observation, Problem Definition & Initial Data Gathering

Literature Review

Hypotheses/Proposed Models
A Good Thesis (from COMPGA99)

- Gives an easy to read presentation of the results, uses precise and correct technical terms
- It gives a balanced and critical evaluation of the proposed solutions
- May point to further interesting research questions
A Good Thesis

• Ties the different parts of the thesis together to form a whole coherent argument

• It displays creativity, thoroughness, logical and critical reasoning, etc.

• A well structured, logical narrative with an obvious beginning, middle and end
MSc Dissertation Tips

• Start straight away!
• Ensure you have a well formed research question/problem
  • Which you can justify
  • Is succinct – one sentence ideally
    • Print it out and put it above your desk
• Stay focused on research question/problem
  • But don’t be afraid to slightly shift focus - if justifiable
• Don’t treat literature review as an afterthought
MSc Dissertation Tips

• Be very aware of “scope creep”
• Plan your time
  • Simple project plan – Excel or Word will do
  • How can a software project be a year late?
    • “one day at a time” – Fred Brooks, The Mythical Man Month, 1975
• Draft a table of contents early on
  • Summary of each section
  • Helps maintain focus
MSc Dissertation Tips

- Can you clearly identify your hypotheses?
- Revisit and refine your COMPGA11 literature review
  - Will need rewriting to refocus it to fit in with the dissertation approach and structure, and page limits
- User studies take time and effort
  - Plan well in advance!
- Get someone to read it
  - Someone not expert in the field
MSc Dissertation Tips

• Keep in regular contact with supervisor(s)

• Do not expect supervisor to solve problems for you or tell you what to do

• Try to think of possible solutions to discuss with your supervisor
Example of Peer-to-Peer (P2P) File Sharing Literature Review

Overview of P2P topic, real-world problems, existing research in field, identified gaps

COMPGA11

P2P technologies
- What is P2P?
- History of P2P
- What is motivation for P2P?
- Good/bad use of P2P
- Problems with P2P
- Summary of research into problems of P2P
- Causes of inadvertent disclosure via P2P
- Incidents of inadvertent disclosure
- P2P empirical studies

Good/bad use of P2P

P2P file-sharing
Dissertation Literature Review

Overview of P2P topic, real-world problems, existing research in field, identified gaps

COMPGA11

P2P technologies
History of P2P
What is motivation for P2P?
Good/bad use of P2P
Summary of research into problems of P2P
Incidents of inadvertent disclosure
P2P file-sharing
Problems with P2P

Dissertation

What is P2P?
Examples of existing UIs for feedback and control
Problems with existing UI approaches

Mental models
Theoretical Foundations of Privacy
Existing theories about users’ perceptions of privacy

Cognitive problems

Caveat: This list is not exhaustive!

More specific focus on inadvertent disclosure, peoples’ mental models, perceptions of privacy, problems with UIs

P2P empirical studies
Causes of inadvertent disclosure via P2P

P2P file-sharing
Dissertation Literature Review

Overview of P2P topic, real-world problems, existing research in field, identified gaps

Structured by a) technology and history; b) real world problems; c) studies into problems.....

Structured by a) inadvertent sharing, b) privacy perceptions; c) privacy theories; d) UIs; e) studies into UIs and privacy perceptions.....

COMPGA11

P2P technologies
- History of P2P
- What is motivation for P2P?
- Good/bad use of P2P
- Summary of research into problems of P2P
- Incidents of inadvertent disclosure

P2P file-sharing
- Problems with P2P

What is P2P?

Examples of existing UIs for feedback and control

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Theoretical Foundations of Privacy

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Dissertation
Dissertation Literature Review

Overview of P2P topic, real-world problems, existing research in field, identified gaps

COMPGA11
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COMPGA11 lit. rev. informs dissertation lit. rev (but they must be different)
Literature review marking

• 1. Understanding of papers reviewed (motivation, main points included and appropriately weighted, arguments grasped)
• 2. Background reading (discovery of relevant literature, understanding of context, awareness of impact of papers reviewed)
• 3. Achievement/analysis (critical analysis, added value, e.g., new points not given by papers reviewed, errors in papers reviewed or identification of different approaches, difficulty/depth)
• 4. Clarity of presentation of literature review (organisation, use of citations, ease of understanding explanations, precise technical language)

Consider what to use from what you have learned in this course
Critical analysis of papers in literature review

• Topics covered in this course
  • Appropriateness of methodology
  • Appropriateness of structure and presentation
  • Appropriateness of research design (e.g. experiments, quantitative or qualitative data)
  • Appropriateness of analysis techniques
  • Appropriateness of means to manage bias
  • Appropriateness of ethical considerations
Literature review submission

• Due Thursday April 28th 2016 at 5pm
• Must be in PDF format, maximum 20MB
• Submit via Moodle “COMPGA11 Literature Review (2015/16)”
• If you are late submitting your COMPGA11 literature review, it will receive a deduction of 10% in the mark. If you are more than 48 hours late, the literature review will receive a mark of 0.
• Technical problems at your end are not a valid excuse. Submit early and test!
Paper review process

- Paper assigned to one or more reviewers
  - Perhaps selected from a group
  - Perhaps solicited based on paper topic
- Each reviewer independently reviews paper
- Reviewers discuss (in person or online)
  - Opinions may be changes, reviews might not be updated
- Process may be repeated in multi-round cycles, possibly with new reviewers
Author rebuttal

- Between two rounds, authors see reviews and are invited to comment
- Major benefit is ability to correct factual errors
- Also an opportunity to point out good aspects of the review
- Effect of rebuttals is debatable, and probably has little impact for the average paper
Re-submission

- Rejected papers can be submitted to another venue, or to the same venue if permitted for hybrid/journal venues
- May be reviewed by same reviewers, different reviewers or with some overlap
  - Even if submitted to an entirely different venue
- Authors are strongly encouraged to fix issues
Shepherding

• One person (usually a reviewer) is selected to ensure some important changes are made
• Paper cannot be accepted until shepherd is happy
• Shepherded papers are almost always accepted; exceptions:
  • Authors strongly disagree with the reviewers
  • Reviewers asked for too much
  • Failures of communication between shepherd and authors
Camera-ready

- Name comes from photo-lithography
- Authors need to prepare a version to be published in the proceedings/pre-proceedings
- Encouraged to make changes proposed by reviewers
  - and during conference, in the case of post-proceedings
- No checking performed, except perhaps by chair
  - Major changes are not permitted except by permission of chair
- Authors must comply with technical requirements
  - embedded fonts, file size, margins
Some publication venues will edit submitted papers

- Light touch editing
  - Fixing style
  - Using standard citation format
- More substantial
  - Re-phrase significant parts of article
  - More common for non-academic articles
- Editing may make article worse; complain (within reason)
Open-access version

• Funders may require that article is made available open-access
  • e.g. via institutional repository
  • HEFCE (UK) and NSF (US) are the latest to require this
• Publishers tried to fight this but are mostly falling in line, but rules vary
  • May require payment
  • May require embargo period
  • If edited or typeset by publisher, only the submitted version can be used
Reviews

• For next week, please look at
  • Privacy is a Process, not a PET - A Theory for Effective Privacy Practice (accepted)
  • Too close for comfort: a study of the effectiveness and acceptability of rich-media personalized advertising. (accepted)
  • My privacy when adopting a technology – I know what’s important to me (rejected)
  • Would You Sell Your Mother‘s Data? Personal Data Disclosure in a Simulated Credit Card Application (rejection/accepted)
Fear of speaking

• What is glossophobia?
  • From the Greek
    • γλῶσσα (glōssa) – meaning tongue
    • φόβος (phobos) – fear or dread

• Fear of public speaking
  • You are not alone
    • Estimated 75% of people experience some degree of anxiety/nervousness when public speaking
Anxiety

Relationship Between Anxiety and Performance

Level of Anxiety

Level of Performance

Boredom

Optimum

Panic
Presentation style

\[
\begin{align*}
\left( \gamma_{\mu} \frac{\partial}{\partial x_{\mu}} + i e \frac{A_{\mu}}{\hbar c} + \frac{mc}{\hbar} \right) \psi &= 0 \\
\left( \gamma_{4} \frac{\partial}{\partial x_{4}} + i e A_{0} + \frac{mc}{\hbar} \right) \psi &= 0 \\
\left( \gamma_{4} \frac{\partial}{\partial x_{4}} - \gamma_{4} \frac{e}{\hbar c} + \frac{mc^{2}}{\hbar} \right) \psi &= 0 \\
\left( c \frac{\partial}{\partial x_{4}} - V(r) - mc^{2} \gamma_{4} \right) \psi &= 0 \\
\frac{h c}{c} \begin{pmatrix} 1 & 0 \\ 0 & 0 \end{pmatrix} \frac{\partial}{\partial x_{i}} \psi &= \begin{pmatrix} V(r) + mc^{2} \gamma_{4} \\ V(r) - mc^{2} \gamma_{4} \end{pmatrix} \\
\frac{c}{\sigma_{i} p_{i}} \begin{pmatrix} 0 & \sigma_{i} p_{i} \\ \sigma_{i} p_{i} & 0 \end{pmatrix} \left( \begin{pmatrix} \psi_{A} \\ \psi_{B} \end{pmatrix} \right) &= \begin{pmatrix} i \hbar \frac{\partial}{\partial t} - V(r) - mc^{2} \\ i \hbar \frac{\partial}{\partial t} - V(r) + mc^{2} \end{pmatrix} \left( \begin{pmatrix} \psi_{A} \\ \psi_{B} \end{pmatrix} \right)
\end{align*}
\]
Presentation style

...and this!
But if you do use diagrams from the paper it is essential to credit the source.

Provide a simpler diagram (abstracted view)
Things to improve (presentation)

• Tendency to read large amounts of text from slides
  • Makes presenter look away from the audience
• Presenter prompts
  • Do not have lengthy scripts
    • Cue cards as backup
  • If presentation memorised it should not sound rehearsed
• Speak with confidence and purpose
• Make eye contact with all of audience
Things to improve (presentation)

• Own the presentation space
• Pace your speech – don’t treat it as a sprint
  • Speech sounds slower in your head than it does to audience
  • Do not be afraid to pause
• Look like you are enjoying it (if appropriate)
  • Enthusiasm is infectious
• Slides should have little text
• An image / chart / table is worth a thousand words
• Careful with font and colours / slide backgrounds
Things to improve (slides)

- Things to improve (slides):
  - Avoid using cheesy clipart
    - OK for class
    - Not professional presentations
  - When referring to related work, always mention paper, author(s) and dates
  - Watch out for copyrights on picture and diagrams!
Things to improve (paper summaries)

- Sticking too close to paper structure
- Failing to see the forest for the trees
  - Focusing too much on details not core to the paper
  - Communicating means prioritising!
  - This means accepting loss: not all information is equally important
  - Loss of detail does not imply loss of accuracy
- Setting the scene
  - Important to position paper in the field
  - Do not jump straight to the details
  - Explain why research was needed - motivation
Things to improve (paper summaries)

• Discussion of research’s adherence to scientific method or ethics often completely lacking, or very brief
  • Sometimes only slight mention even if there were experiment(s)
  • If not completely relevant – why not?
• Usually binary answer: follows vs. does not follow
• No breakdown of implicit hypotheses when not specified in paper