TK Seminar (4CP): Time Management of Students

„Workshop“

Technische Universität Darmstadt

Outline

- Introduction
- Scientific writing
- Evaluation of own data
- Organizational matters: next steps
  - Attendance list
  - Partner assignments
  - Peer-Review
  - Important dates

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Introduction

Motivation

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What?

- Read and analyze current scientific publications

Why?

- Introduction to a research area
- Preparation and training for bsc/ msc theses
  - e.g. working w/ Latex
- You will get 4CPs ;)

How?

- ✓ Take part in practical phase
- Select a topic and study it
- Write a short paper
- Review another paper
- Submit your review + final paper

Topics

① Time management of students, Perceived Control of Time [1]

② Privacy, Personal sensing, Quantified self [2]

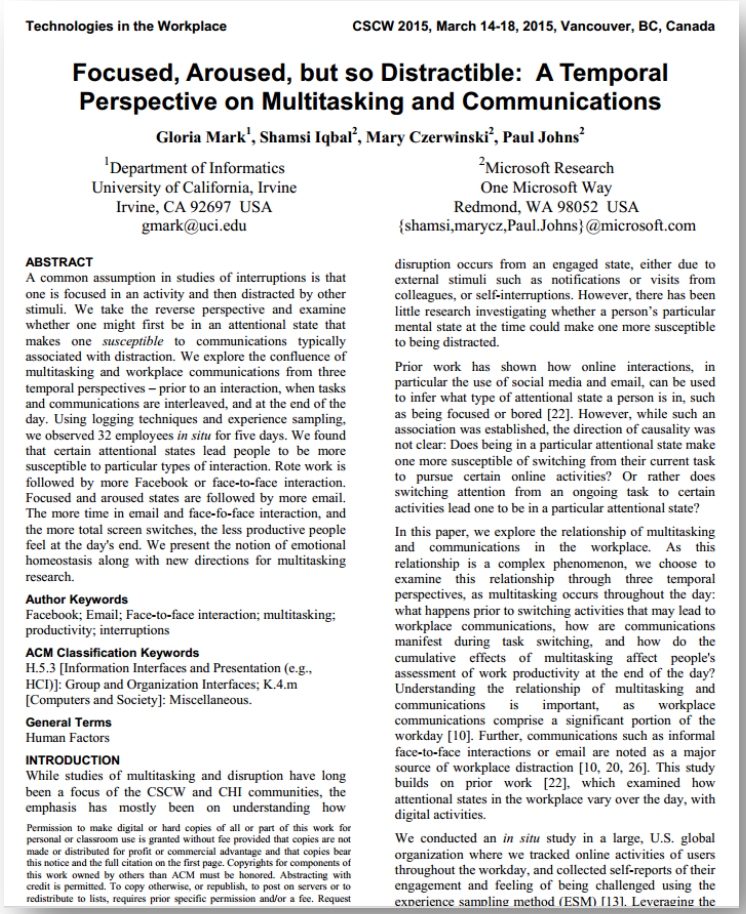
③ Activity prediction (i.a. location prediction) [3]

➢ within all topics computer-assisted systems / approaches should be considered

[1] Macan, Therese H., et al. "College students' time management: Correlations with academic performance and stress." Journal of educational psychology 82.4 (1990): 760.
[2] Schweizer, Immanuel, and Benedikt Schmidt. "Kraken. me: multi-device user tracking suite." Proceedings of the 2014 ACM International Joint Conference on Pervasive and Ubiquitous Computing: Adjunct Publication. ACM, 2014.
[3] Baumann, Paul, Wilhelm Kleiminger, and Silvia Santini. "The influence of temporal and spatial features on the performance of next-place prediction algorithms." Proceedings of the 2013 ACM international joint conference on Pervasive and ubiquitous computing. ACM, 2013.

Paper Format

- 2 column-layout (IEEE)



Technologies in the Workplace CSCW 2015, March 14-18, 2015, Vancouver, BC, Canada

Focused, Aroused, but so Distractible: A Temporal Perspective on Multitasking and Communications

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ABSTRACT
A common assumption in studies of interruptions is that one is focused in an activity and then distracted by other stimuli. We take the reverse perspective and examine whether one might first be in an attentional state that makes one *susceptible* to communications typically associated with distraction. We explore the confluence of multitasking and workplace communications from three temporal perspectives – prior to an interaction, when tasks and communications are interleaved, and at the end of the day. Using logging techniques and experience sampling, we observed 32 employees *in situ* for five days. We found that certain attentional states lead people to be more susceptible to particular types of interaction. Rote work is followed by more Facebook or face-to-face interaction. Focused and aroused states are followed by more email. The more time in email and face-fo-face interaction, and the more total screen switches, the less productive people feel at the day's end. We present the notion of emotional homeostasis along with new directions for multitasking research.

Author Keywords
Facebook; Email; Face-to-face interaction; multitasking; productivity; interruptions

ACM Classification Keywords
H.5.3 [Information Interfaces and Presentation (e.g., HCI)]: Group and Organization Interfaces; K.4.m [Computers and Society]: Miscellaneous.

General Terms
Human Factors

INTRODUCTION
While studies of multitasking and disruption have long been a focus of the CSCW and CHI communities, the emphasis has mostly been on understanding how disruption occurs from an engaged state, either due to external stimuli such as notifications or visits from colleagues, or self-interruptions. However, there has been little research investigating whether a person's particular mental state at the time could make one more susceptible to being distracted.

Prior work has shown how online interactions, in particular the use of social media and email, can be used to infer what type of attentional state a person is in, such as being focused or bored [22]. However, while such an association was established, the direction of causality was not clear: Does being in a particular attentional state make one more susceptible of switching from their current task to pursue certain online activities? Or rather does switching attention from an ongoing task to certain activities lead one to be in a particular attentional state?

In this paper, we explore the relationship of multitasking and communications in the workplace. As this relationship is a complex phenomenon, we choose to examine this relationship through three temporal perspectives, as multitasking occurs throughout the day: what happens prior to switching activities that may lead to workplace communications, how are communications manifest during task switching, and how do the cumulative effects of multitasking affect people's assessment of work productivity at the end of the day? Understanding the relationship of multitasking and communications is important, as workplace communications comprise a significant portion of the workday [10]. Further, communications such as informal face-to-face interactions or email are noted as a major source of workplace distraction [10, 20, 26]. This study builds on prior work [22], which examined how attentional states in the workplace vary over the day, with digital activities.

We conducted an *in situ* study in a large, U.S. global organization where we tracked online activities of users throughout the workday, and collected self-reports of their engagement and feeling of being challenged using the experience sampling method (ESM) [13]. Leveraging the

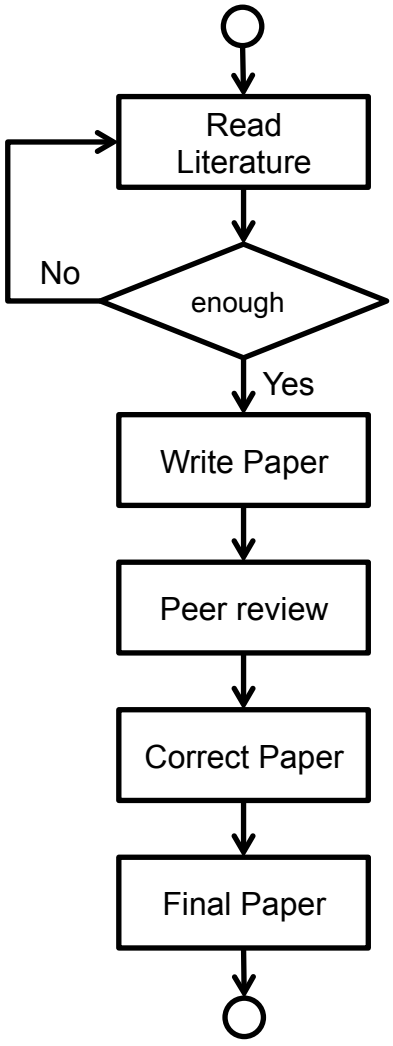
Paper Organization

- Structure (4-5 pages)
  - -) Paper title (> Construct your own title fitting to your paper content/topic)
  - -) Abstract
  - 1) Introduction / Motiviation (~0.5p)
  - 2) Theory part / literature research (~2p)
  - 3) Evaluation and reflection of own data (~1-2p)
  - 4) Conclusion (~0.5p)
  - -) References
- Language
  - English

PLAGIARISMS

- Write your **own text** and find your own references!
- We will automatically check all submitted papers for plagiats!
  - If we will detect plagiats, the students do not pass this course!

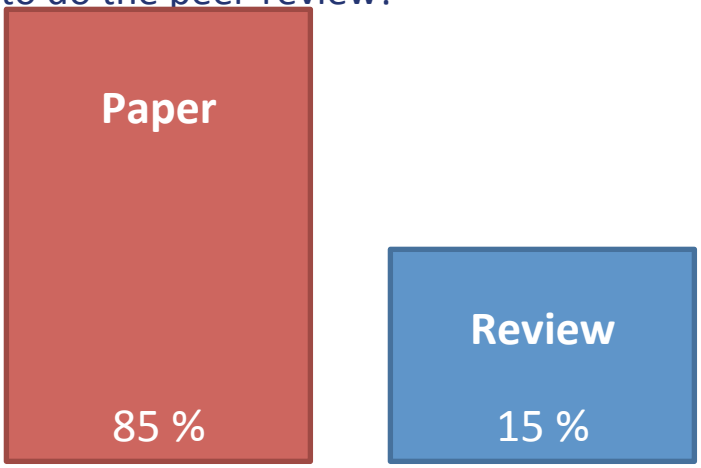
5 Steps to Success



1. Pick a topic, read the provided literature and **find more literature**
2. Write an overview or state-of-the-art report
3. Peer-Review process
   - Your report will be reviewed by a classmate (partner)
   - You will review a classmate‘s report
4. Correct and improve your report following the reviewer‘s comments
5. Submit your final paper

Evaluation and Grading

- You passed the practical phase… next…
  You get **4 graded credit points** for
  - Your paper: **4-5 pages** IEEE transactions style paper [1]
    - Using latex template: bare_conf.tex
  - Your participation in the review: both active and passive
    - You will get a template to do the peer-review!



You need to pass all parts!

[1] http://www.ieee.org/conferences_events/conferences/publishing/templates.html

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Scientific Writing

What's a scientific publication?

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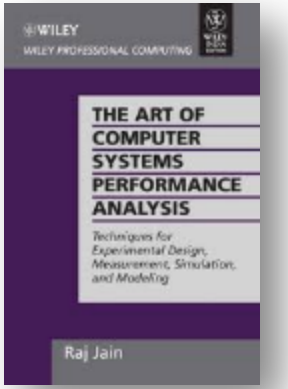
- Scientific Publication ➡ a message
  - With scientific background
  - Offer a new *insight* of a scientific problem
    - Solution
    - Problem
    - Criticism
  - OR a survey of a research field

- The message is a claim
  - That needs to be evaluated

  AND validated



Types of Publications

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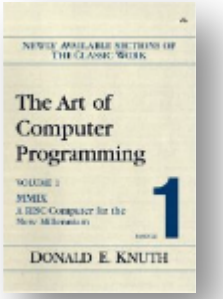
- Books
  - Survey (mostly) about a topic



- Journal Articles
  - Collection of related topics into one magazine (the journal)
  - Quality mostly depends on the Journal
  - Rankings: http://www.core.edu.au/index.php/

    Good Journal → Good Article

- Conferences and Symposia
  - The most recent research achievements
  - Strict page limits
  - Papers followed by a presentation
  - Quality is usually connected to the Conference
  - Rankings: http://www.core.edu.au/index.php/

    Good Conference → Good Paper

- Workshops
  - Mostly for work in progress
  - Good for discussing new ideas

References and Referencing

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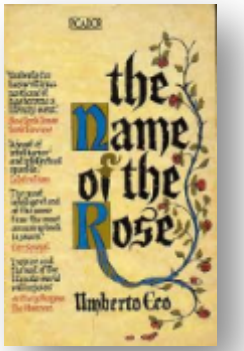
"... Often books speak of other books. Often a harmless book is like a seed that will blossom into a dangerous book, or it is the other way around: it is the sweet fruit of a bitter stem. In reading Albert, couldn't I learn what Thomas might have said? Or in reading Thomas, know what Averroës said?"

Brother William of Baskerville
— The Name of the Rose (1980), Umberto Eco



- Refer back to the original source of information
  - For others to identify the foundations of your work
  - Giving credit, when credit is due

    Not doing so is REALLY bad practice A.K.A. plagiarism
    - Grundregeln der wissenschaftlichen Ethik am Fachbereich Informatik

What should I reference?

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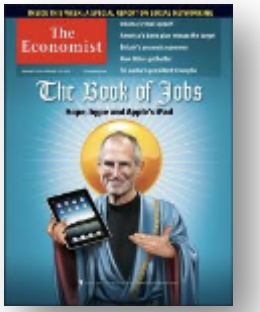
- Scientific publications
  - Articles, papers, books
- Standards
  - RFC, ITU, IEEE, W3C etc.

+ All other non-scientific sources
  - Surveys
  - Magazines
  - Reports



  - Can I reference Wikipedia?

or any other online material?

➡ YES, but mind: not reliable (or stable) information sources

Writing a Scientific Publication

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1. First, define the message
   - Objective of your publication

   → define the area of research

2. Read the related work
   - Define the work around your work
   - Finding out what has been done

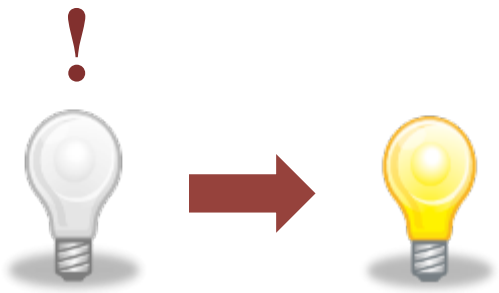
3. Implement your idea
   - Evaluate your idea
   - Validate your idea

4. Write your publication

3. Survey the related work
   - Evaluate differences
   - Identify trade-offs

1. Your Work, Your Message

- Finding the message
  - The most difficult part (!)
  - Also, the creative one
    - go beyond the state of the art
  - Find a story line.



- A message that needs science
  - Scientific foundations + challenges

  → can be found in related work

2a. Related Work? Where? How?

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- Related Work? Where?
  - For the initial literature ask your supervisor

    ➡ it will give you a broad idea about the area

  - Check publication repositories
    - ACM Digital Lib http://portal.acm.org/portal.cfm
    - IEEE Xplore http://ieee.org/portal/site
    - Google Scholar http://scholar.google.com
    - Academic Search http://academic.research.microsoft.com/

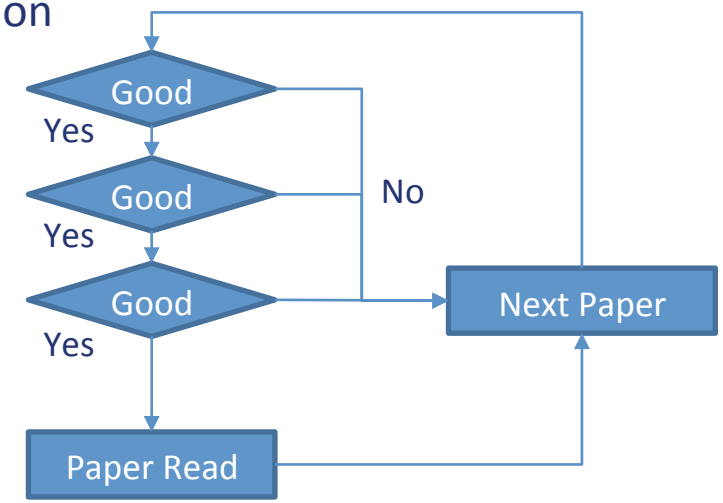
    - Conference directories http://www.dblp.org/search/
    - Authors' home pages

  - Other sources from the reference lists

REPEAT

2b. Related Work and Relevance

- Related Work → ∞
  - Identify the relevant sources
  - Evaluating the importance of a publication
    1. Read the abstract
    2. Check the reference list
    3. Read the conclusions
    4. Read the rest



- Related work will
  - Compare your results against their results
  - Be used as input for a survey

Referencing: doing it right

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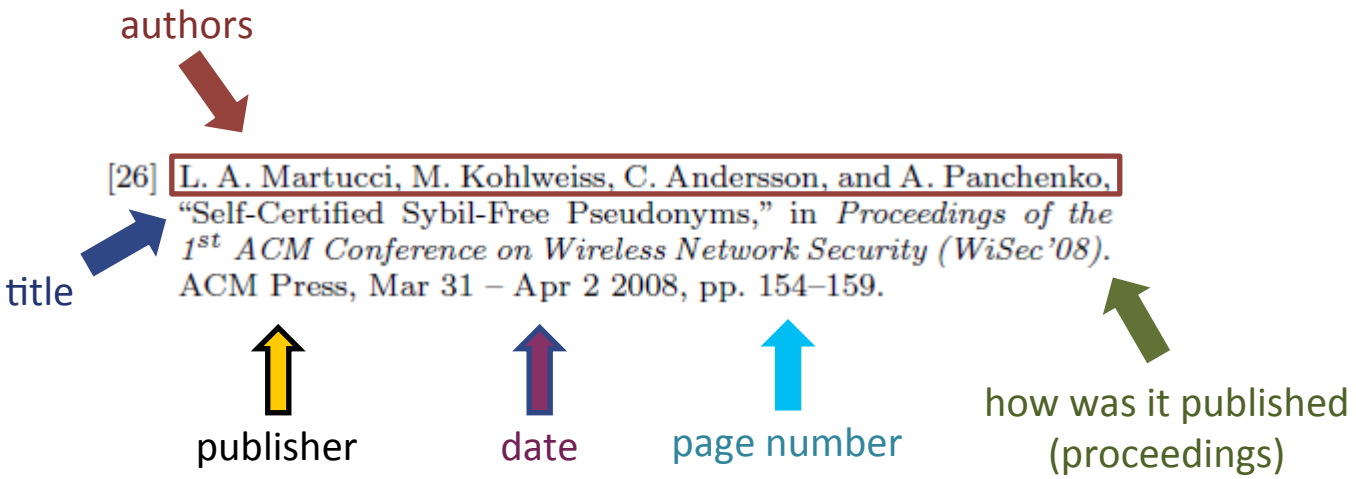
- A reference looks like this:



- there are also other reference styles
- if you use LaTeX to write your report, have a look at BibTeX.

4. Write your Publication

- Always have a good paper structure
  - Organize your ideas
  - Organize your papers

  Define it BEFORE starting to add text

  - Plan the content of each section

- Writing skills
  - No one learns without doing it

  General Guidelines:
  - Be concise
  - Be precise

Peer-reviews

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- Peer-reviews
  - Peers review your work and verify its general quality
  - Evaluate the work before being published
  - Offer suggestions to improve the work (!)

- How's quality defined in a publication?
  - Novelty
  - Soundness
    - → Evaluation + Validation
  - Completeness
  - Readability

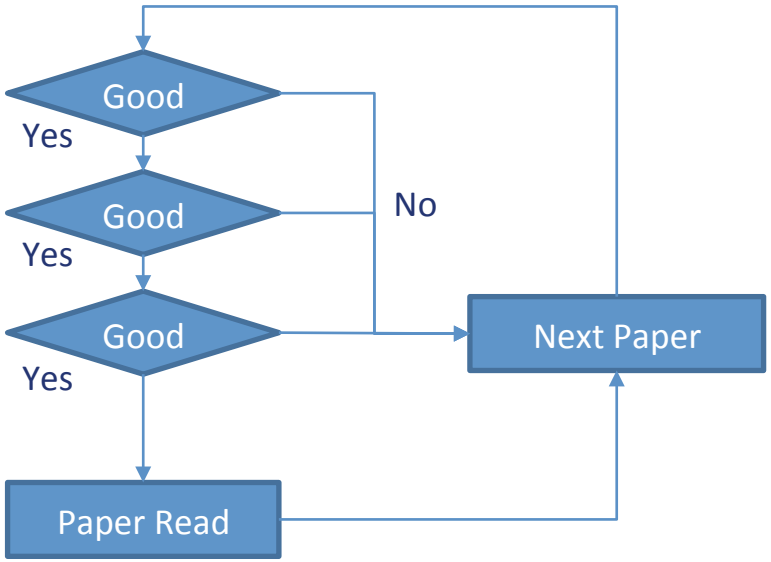
- What to write
  - Positive and negative aspects of the work
  - Constructive criticism (if possible)
  - Offer suggestions to improve the paper
    e.g. + literature
  - Suggest an overall evaluation of the work

- It is NOT the reviewer's work
  - to correct the publication!
  - to point typos (unless if it's one or two)

Summary

- A scientific publication is a **message**; a **validated claim**
- Refer to the original source of information, **avoid plagiarism**

1. Read the abstract
2. Check the reference list
3. Read the conclusions
4. Read the rest



- The peer-review should help, not criticize

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Evaluation of Own Data

Evaluation
Structure

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- ~1-2pages
  - depending on length of theory part
- Descriptive Analysis
  - Graphics / Plots / Tables (max. 3!)
  - Description of data / graphics
  - Inference / reflection with regard to your topic / theory part
- Final paragraph about technical implementation or possibilities
  - How could we use this data?
  - What is missing?
- Evaluation should reflect your storyline!

Evaluation
Own data

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- What do you currently have?
  - Timeline with your activities / tags
  - Report: total time spending on each activity
  - Kraken.me Dashboard: Locations, App usage, ...
- Your task
  - Evaluate these data in respect of your storyline
- Use (min: 1, max: 3)
  - Tables
  - Graphics
  - Plots

Evaluation
Sample Showcase 1

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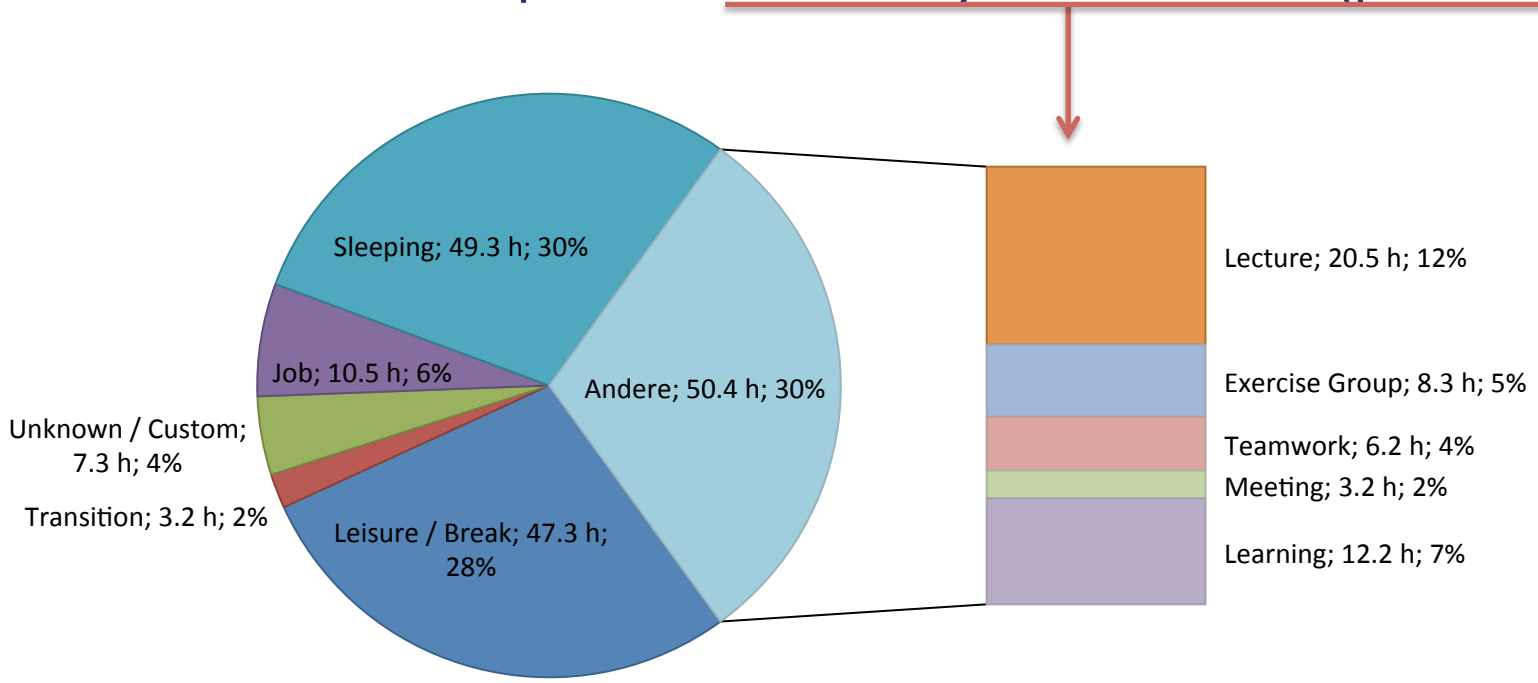
- University guideline
  - 1CP ≈ 25/30h (Semester) ≈ 1-1.5h (Week)
  - Standard: 30CP (Semester) ≈ 900h (Semester) ≈ 35h (Week)
- How much time do I spend in university-related stuff (per week)?



Evaluation
Sample showcase 2

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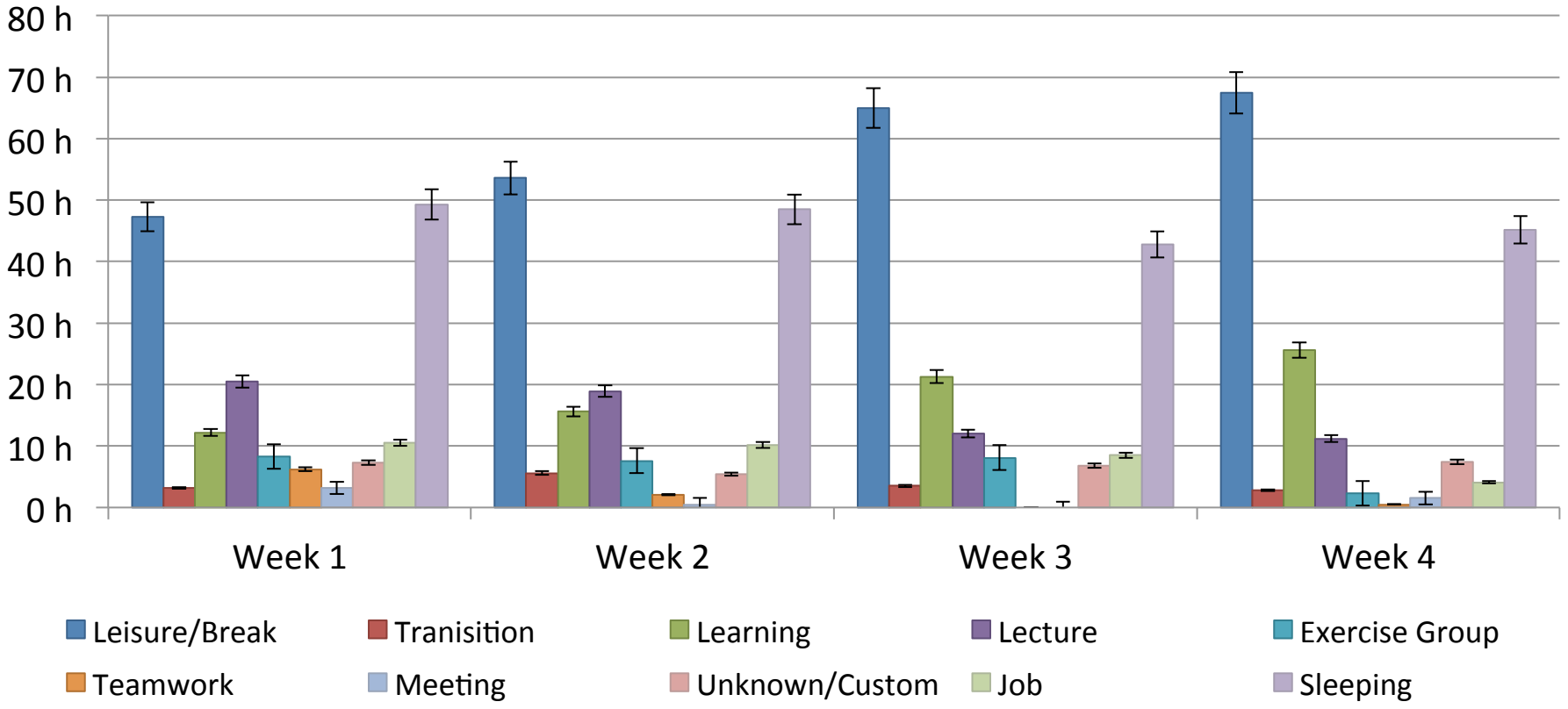
- How much time do I spend over semester weeks?



Evaluation
Sample showcase 3

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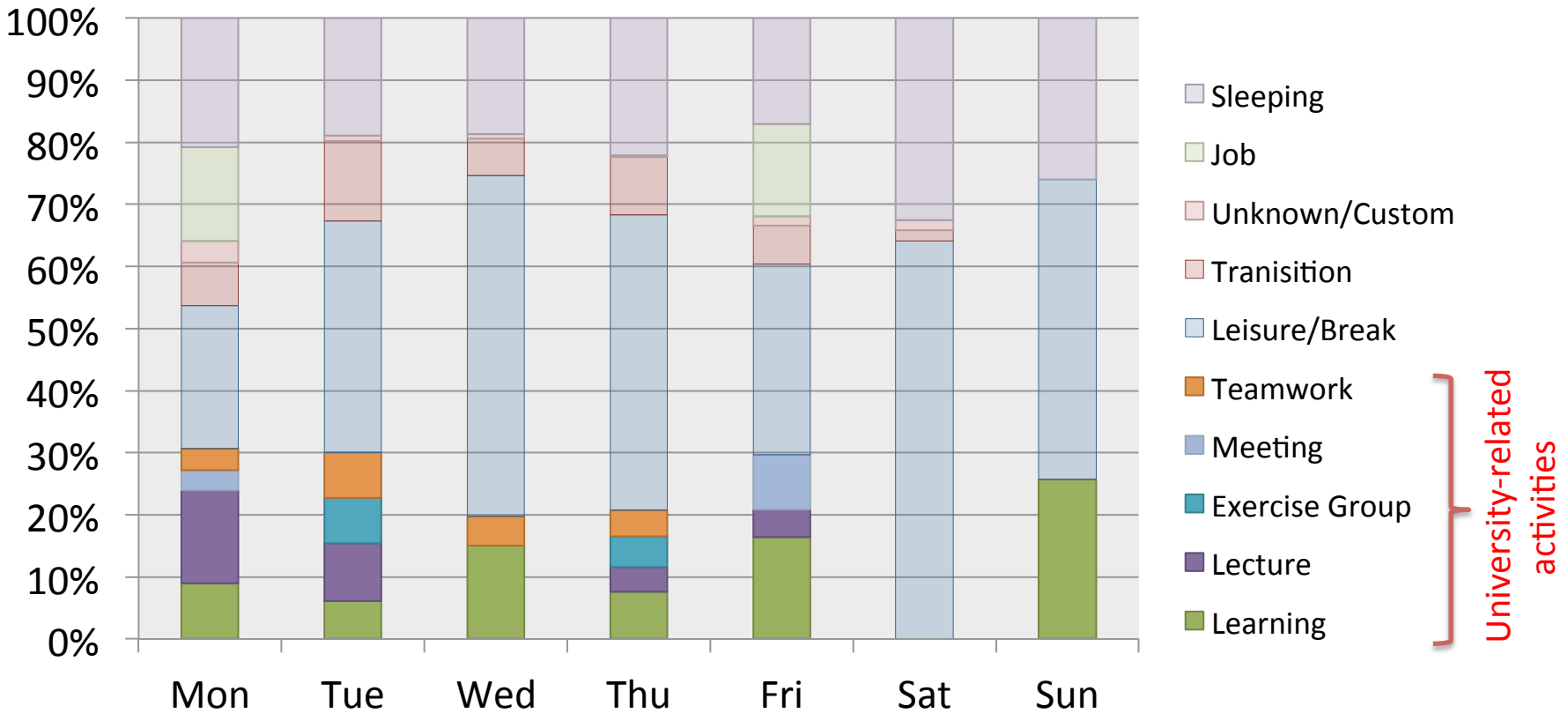
- How much time do I spend depending on weekday/weekend?



Sample Paper
Topic: Time Mangement of Students

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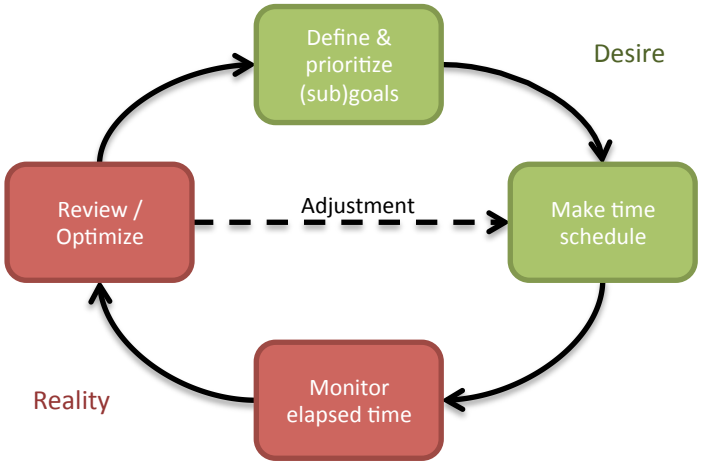
- Storyline (Sample!)
  - Good time management results in
    - less stress
    - better academic performance
  - How could I reach good time management?
    - Define tasks & create time schedule
    - Control & Optimize
      - Quantified self
    - Increase self-awareness
  - How could I optimize my time management?
  - Which computer-assisted systems could help me?
    - Requirements?
    - Ideas for new systems?
  - ....



Sample Paper
Topic: Quantified Self

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- What is quantified self or personal tracking?
  - Research systems?
- Benefits
  - Increasing self-awareness
  - Activity tracking (e.g. Nike Fuelband)
  - What are my time-consuming activities?
- Discussion
  - Manual tracking
  - Semi-auto tracking (e.g. Labels)
  - Automated tracking (e.g. Kraken.me)
- Outlook and future ideas
  - Personal assistance systems

Sample Paper
Topic: Activity Prediction

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- What did I do in the past?
  - When? Where? How often?
- What will I do in the future?
  - Habits, Schedule
  - Evaluation: check it with your own data
- Could computer systems predict my future activities?
  - How?
  - What are the requirements?
  - Ideas?
- Could then computer systems assist me?
  - How?
  - What are the benefits?

Paper assessment

- Storyline
  - consistency
  - structure
  - common thread
- Content
- Evaluation / Originality
- Style
  - presentation / layout
  - writing style
  - typos
- Literature research / References
  - choice (quality)
  - amount (rule of thumb: ~10)
  - correct citation
  - correct references style

Evaluation
Summary

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- Evaluation should consider your storyline!
  - **Be creative!**
- Structure
  - Descriptive analysis
  - Inferences
- ~1-2pages long
- Use plots and/or tables
  - min: 1, max: 3
  - Mean + standard deviation
- Use your own data
  - Do not fake it!

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Organizational Matters

Next steps

Next steps

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- Attendance list
  - Please sign and confirm your attendance!
- Partner assignment
  - You will be assigned to another student based on the attendance list
- Peer-review
  1) Send your partner a first draft of your paper (<= 24.03.15)
  2) Review your partner‘s paper using the peer-review template (<= 31.03.15)
  3) Send your partner feedback (<= 31.03.15)
  4) Submit your review and your partner‘s draft (31.03.15)

- We will send you following stuff in the evening:
  - All lecture slides
  - Peer-review template
  - Your partner assignment

Important dates

- Peer-Review: Tue, 31.03.2015 23:59
- Paper: Sun, 12.04.2015 23:59

- Submissions via E-Mail
  - Recipient: christian.meurisch@tk.informatik.tu-darmstadt.de
  - CC*: <your partner>
  - Subject: [tk-seminar] <Paper|Review> submission: <title>
  - Body: <name>, <matriculation number>, <degree course>
  - PDF attachment: <matriculation number>_<paper|review*|draft*>.pdf

  - Note: Please replace all fields with <...> by your content!
  - *only required for peer-review submission

THE END

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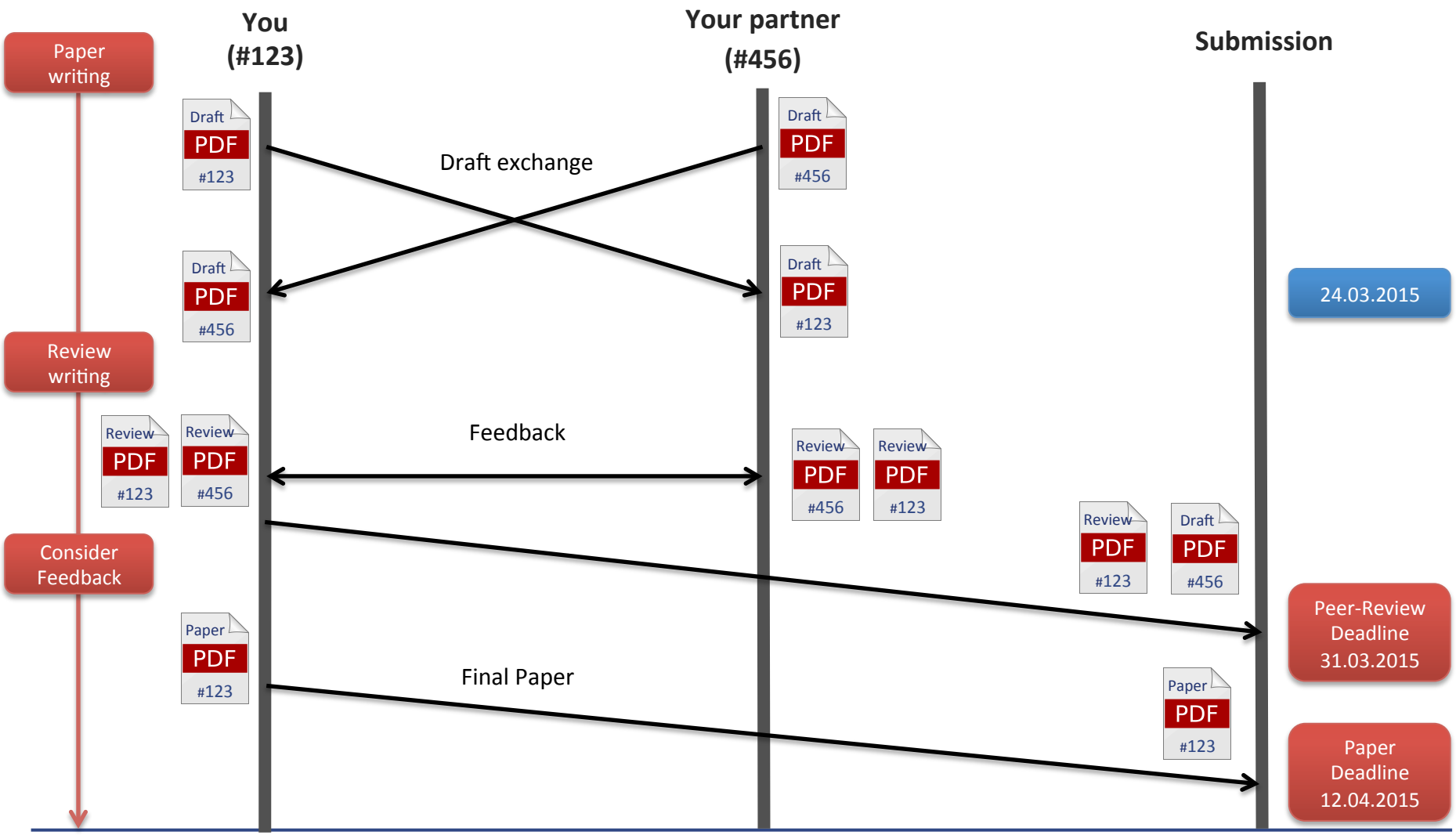
Thank you for your attention!

Questions?

Appendix
Sequence diagram



Appendix
Sample submissions

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- Peer-Review submission
  - Recipient: christian.meurisch@tk.informatik.tu-darmstadt.de
  - CC: my.partner@gmail.com
  - Subject: [tk-seminar] Review submission: Activity prediction
  - Body: Sam Sampleman, 123, Msc. Informatics
  - PDF attachment: 123_review.pdf, 456_draft.pdf

- Paper submission
  - Recipient: christian.meurisch@tk.informatik.tu-darmstadt.de
  - Subject: [tk-seminar] Paper submission: Time management
  - Body: Sam Sampleman, 123, Msc. Informatics
  - PDF attachment: 123_paper.pdf