

This is an example of Exercise 4, where a 300 word piece is iteratively reduced by 30 words, until only 90 words remain. In this case each version is within seven words of the target. Note the differences in editing method for the different iterations.

- The first two cuts (300→270 and 270→240) were done by deleting unnecessary words and noun phrases, and by making slight re-wordings to keep the sense. These did not remove significant information.
- The third cut (240→210) required removing longer phrases, which removed information from the piece, but information that I decided was probably unnecessary anyway.
- The fourth and fifth cuts (210→180 and 180→150) also required the removal of longer phrases, but in this case the information that is removed is information that I still wanted to keep in the piece. I therefore had to insert new text that presents the removed information in fewer words. Of course, inserting that new text required me to find even more words to remove.
- The sixth cut (150→120), in this particular example, required me to throw away a whole section of nice material that I liked but that I decided was not as important as the rest of the piece.
- The final cut (120→90) reverted to the original method of paring away unnecessary words and making changes to keep the grammatical sense.

The later cuts certainly read better than the first. Which version do you think is best?

—Neil Dodgson, 6<sup>th</sup> October 2009

### **Original version (307 words)**

The Research Methods module is the only compulsory module in the MPhil in Advanced Computer Science. The aim of the module is to impart a range of research skills. It is based, largely, on the excellent book “Writing for Computer Science” by Justin Zobel. The course has twelve lectures, which cover reading, writing, presentation, experimental design and statistical analysis. Students learn research skills principally by practicing them. There are therefore ten assessed exercises, in which students try their hands at summarising a paper, critiquing a paper, reviewing a paper, writing their own prose, editing other students’ prose, graphing data sets, analysing experimental data, and preparing a presentation on a recent research paper. Three lecturers have been recruited. Neil Dodgson will give lectures on reading, writing and presenting. Per Ola Kristensson will lecture on experimental design and analysis. Simon Peyton-Jones will give a special guest lecture on how to write a good paper. Dr Neil Dodgson has extensive experience of research. He has published over 90 refereed papers, supervised a dozen successful PhD students, organised and chaired six conferences, sat on the programme committees of various other international conferences, reviewed papers for journals in imaging, graphics and optics, and is co-leader of the Laboratory’s Graphics & Interaction Research Group. Dr Per Ola Kristensson is a post-doctoral researcher in the Inference Group at the Cavendish Laboratory (Department of Physics), with sixteen refereed papers in human-computer interaction. He has designed and run a range of experiments in which people are asked to assess computer interfaces, which is why he has been asked to lecture on the module. Prof. Simon Peyton-Jones is a Principal Researcher at Microsoft Research, working in functional programming languages. He has an excellent sideline in explaining how best to carry out research and has been invited to give a different view of the subject to Dr Dodgson.

## First cut (273 words)

The Research Methods module is the compulsory module in the MPhil. The module's aim is to impart a range of research skills. It is based, largely, on "Writing for Computer Science" by Justin Zobel. The course has twelve lectures, covering reading, writing, presentation, experimental design and statistical analysis. Students learn research skills principally by practicing them. There are therefore ten assessed exercises, in which students try their hands at summarising, critiquing, and reviewing papers, writing their own prose, editing other students' prose, graphing data sets, analysing experimental data, and preparing a presentation. Three lecturers have been recruited. Neil Dodgson will lecture on reading, writing and presenting. Per Ola Kristensson on experimental design and analysis, and Simon Peyton-Jones on how to write a good paper. Dr Neil Dodgson has extensive experience of research. He has published over 90 refereed papers, supervised a dozen successful PhD students, organised, chaired, and sat on the programme committees of various international conferences, reviewed papers for journals in imaging, graphics and optics, and is co-leader of the Laboratory's Graphics & Interaction Research Group. Dr Per Ola Kristensson is a post-doctoral researcher in the Inference Group at the Cavendish Laboratory, with sixteen refereed papers in human-computer interaction. He has designed and run a range of experiments in which people are asked to assess computer interfaces, which is why he has been asked to lecture on the module. Prof. Simon Peyton-Jones is a Principal Researcher at Microsoft Research, working in functional programming languages. He has an excellent sideline in explaining how best to carry out research and has been invited to give a different view of the subject to Dr Dodgson.

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## Second cut (243 words)

The Research Methods module is compulsory. It aims to impart a range of research skills. It is based on "Writing for Computer Science" by Justin Zobel. There are twelve lectures, covering reading, writing, presentation, experimental design and statistical analysis. Students learn research skills principally by practicing them. There are therefore ten assessed exercises, in which students summarise, critique, and review papers, write their own prose, edit other's prose, graph data, analyse data, and prepare a presentation. There are three lecturers: Neil Dodgson on reading, writing and presenting; Per Ola Kristensson on experimental design and analysis; and Simon Peyton-Jones on how to write a good paper. Dr Dodgson has extensive experience of research. He has published over 90 papers, supervised twelve PhD students, sat on the programme committees of various international conferences, reviewed papers for journals in imaging, graphics and optics, and is co-leader of the Laboratory's Graphics & Interaction Research Group. Dr Kristensson is a post-doctoral researcher in the Inference Group at the Cavendish Laboratory, with sixteen papers in human-computer interaction. He has designed and run a range of experiments in which people are asked to assess computer interfaces, which is why he has been asked to lecture on the module. Prof. Peyton-Jones is a Principal Researcher at Microsoft Research, working in functional programming languages. He has an excellent sideline in explaining how best to carry out research and has been invited to give a different view of the subject to Dr Dodgson.

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### Sixth cut (123 words)

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### Seventh cut (94 words)

The Research Methods module is based on “Writing for Computer Science” by Justin Zobel. There are twelve lectures, covering reading, writing, presentation, experimental design and statistical analysis. Students learn research skills **through** assessed exercises, in which **they** summarise, critique, and review papers, write **and** edit prose, graph **and** analyse data, and prepare a presentation. There are three lecturers: Neil Dodgson, **from** the Computer Laboratory, on reading, writing and presenting; Per Ola Kristensson, **from** the Cavendish Laboratory, on experimental design and analysis; and Simon Peyton-Jones, **from** Microsoft Research, on how to write a good paper.

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