

## Final assignment Fourier transform and wavelets

### JPG and JPG2000 compression

For this part of the course you are asked to prepare a final report. We will look at a practical application of wavelets and Fourier transforms: image compression. We consider the popular JPG format, which uses Fourier transforms and JPG2000, which uses wavelets.

On the course's internet page, go to the Wavelet & FFT resources page. Here you will find the documents and Matlab files needed.

- Write a report of approximately 15 pages on JPG and JPG2000 compression.
- Experiments you do should not require you to make big changes to the code.
- You don't need to answer every question asked in the documents. They are meant as a guide to point to interesting things. Choose some aspects you want to look at. Do not write in 'question and answer' style, but in 'report' style.
- The report has to be readable for someone with a mathematics background who did not follow the course.
- Focus on the wavelet part and the comparison between the wavelet and Fourier approaches. You already did a report on Fourier transforms in the first part of the course.
- Use logical sections (eg. "Introduction", "Theory", "Experiments", "Conclusion").
- Add references to any books, papers or other sources that you use.
- Creativity is encouraged. If you find something interesting in your results, try to explain it. If you have ideas for improvement, try them.

The deadline for handing in the report is at monday, February 28. If you have any questions, don't hesitate to ask us.

Good luck!

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