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MSEE 334
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Office hours: by appointment.

Course web site: www.ece.purdue.edu/"ipollak/ee648


Other strongly recommended books:

Final Grades will be determined on the basis of three or four problem sets—or you can think of these as take-home exams if you wish—and the project (see below). There will not be any in-class exams. Given the fact that there are so few problem sets, it is imperative that each student do them by himself/herself. You may use any literature, but no collaboration is allowed. You may not use any assistance from any person, be it someone who is taking the course or not.

For projects, on the contrary, it is encouraged that you talk to the other students and the instructor. If anyone else but yourself makes a substantial contribution to your project, this should be clearly acknowledged in the project report.

Projects. For the final project, you will need to

- read a paper or a set of papers;
- write a report summarizing the contributions of the papers and the relationships among them;
- write C or Matlab code which simulates some aspects of the algorithms presented in the papers;
- give a 35-40 minute in-class presentation.

The last two weeks of the class (approximately) will be devoted to project presentations.
Talk to the instructor regarding your project topic and the relevant set of papers. Your project topic must be selected by February 25. While most projects will be done individually, teams of no more than two people may be formed for projects that require substantial work, subject to instructor’s approval.

Some possible project topics are:

1. Wedgelets, surflets, and plateles.

2. Directional filter banks, ridgelets, curvelets, and contourlets.

www.cmap.polytechnique.fr/preprint/repository/500.pdf


www.ece.purdue.edu/~ipollak/pub.html

www.ece.purdue.edu/~ipollak/pub.html

5. Wavelet image coding.


6. Lifting and wavelets on irregular grids.


www.ai.mit.edu/people/samson/area-exam/royal.pdf

www.cmap.polytechnique.fr/preprint/repository/500.pdf

7. Wedgeprints and wavelet footprints.

www.commse.ee.ic.ac.uk/~pld/publications/

www.dsp.rice.edu/publications/


www.isye.gatech.edu/~xiaoming/publication/


www.isye.gatech.edu/~xiaoming/publication/

You are welcome to come up with a different project topic, subject to approval by the instructor.