Instructor : Terry Caelli

340 Final Examination Questions

Current Venue: 09:00 - 11:00 on Tuesday Dec 12 in V112.

Choose 6 of the following
No topic should cover the main area of your Projects

1. When is a numerical algorithm stable? Illustrate instability with an example.
2. How is Information measured in a channel?
3. What is Huffman coding? What is its relation to Noiseless Coding?
4. What is the best way to solve sets of n linear equations in m unknowns where n = m and n < m?
5. How would you compute the eigenvalues and eigenvectors of a real symmetric matrix?
6. What is one well-posed method for computing the derivatives of a function?
7. How do you solve the linear least squares problems given a design matrix?
8. How would you find the minimum of a non-linear real-valued function of many variables?
9. What is Simulated Annealing and how does it work?
10. What is the Fast Fourier Transform?
11. What is a filter and its relation to convolution theory? Give an example.
12. What are wavelets? Give an example of their use.
13. What is clustering? Give an example.
14. How would you perform numerical integration?