ELEC 445 Inverse Problems and Imaging

Course Outline & Information, 2016

Overview:

This 10-point paper introduces classical and statistical solution methods for inverse problems.

We begin with an introduction to inverse problems that arise in mathematical descriptions of physical systems, including image deblurring and analysis of experimental data. Solution methods include analytic and computational tools for solving inverse problems, based on classical regularization methods and Bayesian inference, as well as theoretical properties of inverse problems and solutions.

Web:

Detailed information for the paper can be found at:
http://www.otago.ac.nz/physics/postgraduate/postgraduate-papers/?papercode=ELEC445

Course information, assignments, files, are available at:
http://coursesupport.physics.otago.ac.nz/wiki/pmwiki.php/ELEC445/HomePage

Course Coordinator:

Colin Fox (Room 523, colin.fox@otago.ac.nz)

Lecturer(s):

Colin Fox and Danny Schumayer

Textbook:

The 2009 version of the course notes written by Sze M Tan, Colin Fox and Geoff K. Nicholls. will be provided at the first class.

Timetable:

<u>Lectures</u>	Room G400; 11.00am-12.50am Fri	(8 2-hour lectures)
	In 2016, lectures will take place in weeks 9,10,11,15,16,18,19,20	
<u>Tutorials</u>	Room G400: Thur 9:00, same weeks as lectures	

Homework Assignments:

There will be 3 assignments that each count for 10% of the final mark, so 30% in total.

Final Exam: Counts for 70% of the final grade.

If you have any special learning needs or requirements you are encouraged to inform the Course Coordinator.