MELBOURNE
SCHOOL OF
ENGINEERING

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**PhD Program offered to
IIT Kanpur, Madras and IISc students**
by the Melbourne School of Engineering

Efficient Information Hiding schemes for Images and Video streaming using Error Correcting codes

Supervisors: Dr. Udaya Parampalli

Project description: Digital media like images, audio and video are vulnerable to theft, misuse or manipulation when distributed over Internet. Watermarking is a technology which can thwart such vulnerabilities. This project is about constructing watermarking/information hiding techniques for video and images using pseudorandom arrays and codes.

Pseudorandom sequences have been used in watermarking in the literature. Here a random signature sequence with good correlations will be embedded in image or video such that they are not easily erased during the transmission. The embedded sequence can be retrieved from the image or video to ascertain the ownership due to its correlation property.

In this project, we will use multi-dimensional pseudorandom arrays and low rate error correcting codes with good properties required for information hiding

Student performance requirement: GPA of 8.5/10 or better.

Please note: the applicant must discuss with the nominated supervisor before finalizing the project proposal to be submitted to the University of Melbourne. This proposal is dedicated to IIT Kanpur, IIT Madras and I.I.Sc educated students only. The scholarship covers tuition and living expenses to work on the project. Applicants are not required to do any teaching. Duration of the PhD is 3-3.5 years and applicants can be admitted to the PhD candidature after the completion of a Masters degree or 4 year Bachelors degree from IIT Kanpur.

Rankings: The Melbourne School of Engineering is Australia's No. 1 engineering and technology school and No. 25 in the world [*]

Website: www.eng.unimelb.edu.au

[*] **Times Higher Education World University Rankings 2012-2013.**