

FALL 2011 COURSE ANNOUNCEMENT

ECE 697 CS

Introduction to Compressive Sensing

INSTRUCTOR

Prof. Marco F. Duarte, Marcus 215I, mduarte@ecs.umass.edu

Office Hours: 2:00pm – 3:00pm Tuesday and Thursday or by appointment.

LECTURE TIME AND PLACE

106 Marcus Hall

11:15am – 12:05pm Monday, Wednesday, and Friday.

DESCRIPTION

Compressive sensing is a new approach to simultaneous sensing and compression of natural signals that enables new sensor architectures for applications where standard regular sampling is not feasible due to sensor cost, power consumption, size, etc. The rich theory of compressive sensing uses tools from a variety of areas including approximation theory, linear algebra, convex optimization, high-dimensional geometry, probability, and statistics. This course provides background for study and research in compressive sensing, including signal models, measurement schemes, and recovery algorithms.

PREREQUISITES

This class assumes knowledge of signal theory equivalent to that obtained in ECE 608. Probability (ECE 603) is also recommended. If you are unsure whether you meet the requirements, please meet with the instructor.

ADDITIONAL INFORMATION

Website: <http://www.ecs.umass.edu/~mduarte/ece697cs/>