

List of Final Projects: Digital Signal Processors course, Spring 2010

1. Image Object Locator
2. DTMF Generator/Detector
3. Signal generator: Sine, Pulse, PWM, ramp, noise of different types...
4. G726
5. G729
6. G723
7. MELP
8. Line Echo canceller G168
9. Acoustic Echo canceller
10. PID controllers, adaptive and non-adaptive
11. Acoustic Source tracker
12. Neural net signal recognition
13. Kalman filters application
14. Spectral subtraction for speech enhancement
15. Error correcting codes e.g. Convolutional + Viterbi
16. SVM classification
17. Spectral Estimation: STFT and spectrogram, Pizarenko, Music, ...
18. Dedicated DSP IP Core design, System level simulation in Simulink
19. Application specific DSP board design
20. RSA, ultra-long integer modular arithmetic
21. RXDX platform setup and implementation
22. Ultrasound applications
23. Multi-core programming applications
24. Other suggestions