Instructor: Dr. Shih-Chun Chang

Office: Engineering 3234          Classroom: R B218
Office Hour: Tuesday 3-5 PM       Class: Wednesday 7:20-10 PM
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Textbook:


Supplementary References:


Learning Outlines:

1. Source Coding
2. Data Compression
3. Baseband Communication
4. Equalization
5. Digital Modulation
6. Trellis Coding
7. Synchronization
8. OFDM
9. CDMA
10. Multiuser Detection Theory
Grading:

1. HW 10%
2. Test 1 25% 10/16
3. Test 2 25% 11/13
4. Final 40% 12/11

Weekly Schedule:

Week 1: 8/28 Lloyd-Max Algorithm and Vector Quantization
Week 2: 9/4 Rate-Distortion Theory and LZ Algorithm
Week 3: 9/11 Nyquist Criterion and Partial Response
Week 4: 9/18 PAM and Optimal Filter Design
Week 5: 9/25 MLSE and Viterbi Algorithm
Week 6: 10/2 Adaptive Equalization
Week 7: 10/9 Digital Modulations
Week 8: 10/16 Test 1
Week 9: 10/23 Trellis-Coded Modulation
Week 10: 10/30 Synchronization
Week 11: 11/6 OFDM
Week 12: 11/13 Test 2
Week 13: 11/20 Multiuser Detection Theory
Week 14: 11/27 Thanksgiving (No Class)
Week 15: 12/4 Spread Spectrum and CDMA
Week 16: 12/11 Final Examination