

Information Systems

Born out of the foundational work of Turing, Church, and Shannon, information theory has revolutionized our understanding and notions of information and its acquisition, processing, storage, and communication via Information Systems. This interdisciplinary approach at the intersection of Electrical Engineering, Computer Engineering, Computer Science, Mathematics, and Physics continues to drive innovation in the Information Age. At ECE@UNM, our research is at the heart of current and emerging information systems in information security, information architecture, usage control, Big Data, cyber-physical systems, machine learning, wireless communications, autonomous cognitive communications, wireless security, distributed decision-making, artificial intelligence, statistical signal processing and the theory of classical and quantum information.

Area Chair: Prof. Manel Martinez-Ramon (<https://ece.unm.edu/faculty-staff/electrical-and-computer/manel-martinez-ramon.html>)

Faculty Members:

Prof. Tameem Albash (<https://www.unm.edu/~talbash/>)

Prof. Sudharman Jayaweera (<http://ece-research.unm.edu/jayaweera/>)

Prof. Manel Martinez-Ramon (<https://ece.unm.edu/faculty-staff/electrical-and-computer/manel-martinez-ramon.html>)

Prof. Milad Marvian (<http://www.unm.edu/~mmarvian/>)

Prof. Balu Santhanam (<http://ece-research.unm.edu/bsanthan/>)

Prof. Eirini Eleni Tsiropoulou (<http://ece-research.unm.edu/tsiropoulou/>)

Recommended courses

1. ECE 500 Theory of Linear Systems
2. ECE 506 Optimization Theory
3. ECE 517 Machine Learning
4. ECE 524 Network Economics
5. ECE 537: Foundations of Computing
6. ECE 539: Digital Signal Processing
7. ECE 541 Probability Theory and Stochastic Processes
8. ECE 542: Digital Communications Theory
9. ECE 545: Introduction to Quantum Information Science
10. ECE 547: Quantum Error Correction
11. ECE 549: Information Theory and Coding
12. ECE 551/651: Problems
13. ECE 599: Master's Thesis
14. ECE 642: Detection and Estimation Theory

Other courses delivered as Special Topics (ECE 595) may become available per semester. Please contact the Area Chair or the faculty members for further information.