



Joseph Pasqualichio

Faculty Mentors: Dr. Zourntos/Kundur
Department of Electrical Engineering
Texas A&M University

ABSTRACT

Wireless Sensor Networks are currently a hot research topic and show much promise for becoming the future of technology. Currently, many researchers are hard at work trying to make such sensor networks a reality by designing them to consume less power, while at the same time efficiently relay data. However, once established, these networks will require a certain level of security in order to keep their integrity. This paper focuses on the security aspect of wireless sensor networks and how such security can be implemented. The same restraints that make building wireless sensor networks such a challenge also apply to adding security, with a major emphasis on keeping the system low power. While the need for security can be appreciated at any level of wireless sensor network use, this need becomes increasingly important when dealing with such topics as national defense and Homeland Security.

- Summary – Read articles pertaining to wireless sensor networks
Learn to use Matlab and Simulink
Online research on oversampling
Get more information on new A/D converter from Dr. Zourntos
Use Matlab and Simulink to modify A/D converter to get SNR above 100
- Next Step – Add a security component to the A/D converter working with Dr. Kundur