We are developing novel magnetic sensors amenable to wireless interrogation in complex sensor networks. These sensors are based on an acousto-electric effect where the propagation velocity of surface acoustic waves (SAW) in a piezoelectric substrate changes in response to the conductivity of an overlying magnetic film. Key benefits realizable from the successful development of these devices include:

- Passive (no battery) operation
- Remote radio frequency (RF) interrogation
- Field programmable ID for sensor networks
- Rugged and inexpensive

**Supported by:** NSF  
**Investigator:** Dr. Dhagat, OSU