

Scharf and Former Advisee to Publish New Book

When ECE Professor Louis Scharf and his Ph.D. student Peter Schreier began working together in 2000 they had no idea their research would lead to a book. In February, Cambridge University Press will release P.J. Schreier and L.L. Scharf, "Statistical Signal Processing of Complex-Valued Data: The Theory of Improper and Noncircular Signals," a breakthrough publication that comprehensively addresses the theory of signal processing for complex-valued signals.

The book brings to the science and engineering communities an account of work over the past two decades on complex-valued signals that do not conform to classical assumptions about their correlation structure. The research will likely benefit graduate students and researchers in communications, radar, sonar, geophysics, oceanography, electromagnetics, optics, acoustics, biomedical engineering, and other areas that routinely use complex-valued signals.

The pair finalized the book after Schreier completed a five-month sabbatical leave in Fort Collins and Scharf a one-month research leave at the University of Newcastle, Australia, where Schreier is now an associate professor.