



James C. Anderson has been a member of the technical staff at MIT Lincoln Laboratory since 1977, and received his PhD in electrical engineering and computer science from MIT under the Laboratory's Staff Associates program. His doctoral thesis applied digital signal processing techniques to perception-based speech analysis/synthesis, and this research subsequently led to his discovery of the *Spectral Magnitude Analysis Theorem* and the *Wavelet Magnitude Analysis Theorem*. He designed the first TCAS aircraft collision avoidance system display, a Lincoln Laboratory project that was featured at the Smithsonian National Air and Space Museum for nearly a decade.

While at Lincoln Laboratory, Jim has worked on sonar, radar and optical systems for military platforms ranging from submarines to satellites. He was Unit Engineer for the Space-Based Visible digital signal processor system, which has operated on-board the Midcourse Space Experiment satellite since 1996. His first patent issued in 1981.

Prior to joining Lincoln Laboratory, Jim was a Graduate Student Teaching Fellow at the University of Michigan in Ann Arbor. As an undergraduate at Wichita State University in Kansas, he was also a design engineer for NCR Corp., where he contributed to the early development and applications of floppy disk technology. Jim's first publication, with co-author Douglas Malewicki, was an improvement to the Fehskens-Malewicki equations for modeling sub-sonic endo-atmospheric rocket flight ([www.ninfinger.org](http://www.ninfinger.org), Feb. 1971). He has been an IEEE member for 34 years and an amateur radio operator (WAØZAW) for 37 years.