The first part of this seminar will cover the functions of sensors and how they are integrated into complete systems. Sensors are our connection with the real world. We will review various sensor types, especially silicon sensors, and how to extract signals from them accurately. We will also look at MEMs motion sensors, such as accelerometers and gyroscopes. We will investigate how sensors are included in IoT applications.

The second part of the seminar will provide an initial look at high-speed data converters. High-speed data converters are at the core of all modern communications, video, and image-capture systems. We'll take a quick look at general data converters, and then move on to the issues of sampled-data systems. Then, we'll review a few high-speed architectures, with application to cellular systems, cameras, and signal generation.

David W. Kress is a graduate of MIT, with BSEE degrees in both Chemical Engineering and Electrical Engineering, as well as an MSEE in Electrical Engineering, specializing in bioengineering and integrated circuit design. Mr. Kress worked at the Massachusetts General Hospital from 1967 through 1972, and also served as a consultant designing medical equipment for many applications. He has worked at Analog Devices since 1972. Mr. Kress started as an IC chip designer, primarily high-speed op amps, moved into thin-film process engineering, and then moved into a variety of marketing roles. These roles have included product marketing and product selection, strategic planning, marketing communications, and new product management. More recently he has served as Director of Applications Engineering, and as Director of Technical Marketing. In these areas, the primary effort has been to prepare and manage the support needed to bring new products to market. Mr. Kress has composed and delivered multiple technical seminars and technical training for ADI audiences and customers.