Abstract

As millimeter- and submillimeter-wave device and circuit technologies move from the laboratory into customized commercial components and instruments, the search for mainstream applications that might serve as a basis for significant capital investment has expanded. A plethora of hypothetical, and often unrealistic expectations for the technology have been touted, mainly in biomedical imaging, defense and security, and communications applications, but most fail the comparison test for existing or competing alternatives, and some are based on false premises. This talk will briefly cover the advantages and limitations of millimeter- and submillimeter-wave technology when applied in the biomedical field, and specifically highlight an application that the speaker believes fulfills at least one dream for broad-based disease application – millimeter-wave non-invasive monitoring of blood glucose levels.