SESSION 3: TECHNOLOGY

Chair: Glen "David" Via, *Air Force Research Laboratory*

In this Technology Session, invited speakers discuss a next-generation technology platform, GaN technology for RADAR, and the status of GaN technology in Japan. The first talk comes from the Defense Advanced Research Projects Agency (DARPA) and provides an overview of the Diverse Accessible Heterogeneous Integration (DAHI) program. Research activities related to the integration of compound semiconductors with silicon technology are described and potential applications discussed. Next, the Raytheon Company discusses GaN technology for RADAR. This review presents a historical perspective on early GaN device development through current production status, describes reliability assessments, and discusses MMIC insertion considerations. The last talk of the session comes from the University of Fukui, Graduate School of Engineering, in Japan. Here, the development of GaN HEMT technology for both RF and power switching applications are discussed along with an analysis of competing substrate offerings and enhancement mode device operation.