

# Defence, Security & Space and FORUM, PARIS 2024

## Devices technology

- **Integra Technologies** SPEAKER : **Maurizio CICOLANI** ✓



### Biography:

Mr. Cicolani is the CEO and founder of C3AMS and also serves as a Technical Advisor to both Integra Technologies and MBDA since 2021. Prior to that, Mr. Cicolani served as the Chief Technical Officer at Leonardo in Rome, Italy, where he began his career in June 1985. As CTO & Engineering at Leonardo, he had responsibility for over 1000 engineers focused on advanced radar development with expertise in antenna AESA design, silicon and GaN transistors, MMICs technologies, HPA design, MW design, solid state transmitter design, and small and complex active and passive radars design. He also managed for long time the Leonardo's semiconductor wafer fab. Mr. Cicolani is an industry recognized expert and an icon of the radar industry. Maurizio is a graduate of "La Sapienza" University of di Rome.

### Talk title:

**Advanced Architectures and semiconductor technologies for Space Applications:**

**Discussion on implications of emerging semiconductor technologies for the next-generation systems architecture and products.**

### Abstract:

Technology and security are inextricably intertwined in the modern world. New developments in high power RF, digitalization, and artificial intelligence are transforming the products and systems used for space-based defense and communications. Components used in next-generation space systems will need to feature digital capability, higher power, higher efficiency, reduced packaging and an ability to implement AI algorithms to enable increased system functionality. The challenge will be evolving products used in space platforms towards modern, flexible and space efficient architectures. High Voltage RF GaN is leading this transition with a new generation of RF high power solutions that enable solid state replacement of traveling wave tubes, something that is not practical with 50V GaN due to its low power density. This new generation of High Voltage RF GaN together with the complete digitalization of previously analog functional blocks will radically change system architectures and add new operational characteristics. These new system architectures can be applied in every space platform product included Micro, LEO, GEO satellites. Integra Technologies is playing the lead role with its ground-breaking, industry first 100V RF GaN technology platform that is tailor-made for this evolution.

