

# IGSN CONFERENCE

## 25 Years of Neuroscience Excellence

April 21-22, 2026

**Session 2: Bridging Engineering and Neuroscience: Advances in Neuromodulation, Psychosis Research, and Haptic Technology**

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### **HAPTIC DISPLAYS FOR HIGH-FIDELITY HAPTIC FEEDBACK TO ENHANCE MULTIMODAL INTERACTION – ENGINEERING AT THE CROSSROADS OF NEUROSCIENCE**

The Tactile Internet is a key future oriented field that focuses on real time communication between humans and machines. Applications of the Tactile Internet require haptic sensor and actuator solutions that are low latency, lightweight, flexible, easy to use, wearable, and easily integrable. This presentation introduces several wearable haptic interfaces developed by a research team led by the author, employing a range of technologies. Perceptual knowledge and multimodal interaction principles are leveraged to enhance both the hardware capabilities and the design of haptic signals. These advances are enabled through the integration of knowledge and principles from neuroscience and engineering.