

Abstract:

This talk will chronicle the captivating journey of Spinal Cord Stimulation (SCS) from its historical inception to the cutting-edge 3rd-generation waveform systems with automatic remote monitoring/programming capabilities. We delve into the advancements of each generation, from 2nd gen's sub-perception Burst and High-frequency options to 3rd gen's sub-perception therapies, such as Biotronik Neuro's Resonance, also covering closed-loop approaches and ultra-low-frequency stimulation. Finally, we peer into the future, unveiling possibilities of SCS beyond pain management and discussing AI integration for personalized therapy management.

Bio

Marcelo Barú is Member of Technical Staff at Biotronik Neuro. During the last decade he led the HW Architecture and System Engineering of Prospera, Biotronik Neuro's first implantable Spinal Cord Stimulator (SCS) introduced in the market in April 2023. Mr. Barú is also the principal inventor of the Resonance SCS sub-perception therapy run by the Prospera system. He has almost 30 years of experience conceiving and designing AIMDs with focus on neuromodulation/CRM. He has over 34 patents filed with more than half of them granted. He holds an Electrical Engineering degree from Universidad de la República, Uruguay, and a M.A.Sc. degree from Simon Fraser University, Canada.