

**Abstract:**

The radio spectrum is becoming more and more crowded, and radio receivers become interference limited. As there is a demand for multi-mode flexible radio devices, traditional dedicated narrowband filtering no longer satisfies. During the last decade, several new radio receiver architectures have been proposed which offer more flexibility than traditional receivers with dedicated fixed filtering, while still achieving good sensitivity and robustness for interference. Different names have been used to refer to these receivers, e.g. reconfigurable receiver, multi-band receiver, wideband receiver, SAW-less receiver, software defined radio receiver or cognitive radio receiver. These receivers have in common that they all aim for a high dynamic range while relying less on fixed filters. This lecture reviews several proposed concepts, e.g. linearization techniques, noise and distortion cancelling, Low Noise Transconductance Amplifiers followed by current-mode mixing, mixer-first receivers, frequency-translated N-path filtering, harmonic rejection and spatial interference rejection.