Abstract:
Femtosecond-laser frequency combs have revolutionized metrology at optical frequencies and have introduced or advanced numerous applications from precision spectroscopy to quantum information. A new direction in experiments is to create frequency combs using parametric nonlinear optics in microresonators. Such micro-combs offer a range of advantages including miniature size, low turn-on power, broadband spectra, and the potential for fully integrated systems. I will report on experiments that explore the microcomb generation process, and that realize a microcomb optical clock.