

## DIRECT ABSORPTION SPECTROSCOPY WITH ELECTRO-OPTIC FREQUENCY COMBS

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The application of electro-optic frequency combs to direct absorption spectroscopy<sup>a</sup> has increased research interest in high-agility, modulator-based comb generation. This talk will review common architectures for electro-optic frequency comb generators as well as describe common self-heterodyne and multi-heterodyne (i.e., dual-comb) detection approaches. In order to achieve a sufficient signal-to-noise ratio on the recorded interferogram while allowing for manageable data volumes, broadband electro-optic frequency combs require deep coherent averaging,<sup>b</sup> preferably in real-time. Applications such as cavity-enhanced spectroscopy, precision atomic and molecular spectroscopy, as well as time-resolved spectroscopy will be introduced.

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<sup>a</sup>D.A. Long et al., *Opt. Lett.* **39**, 2688 (2014)

<sup>b</sup>A.J. Fleisher et al., *Opt. Express* **24**, 10424 (2016)