Since the first experimental demonstration almost twenty years ago the field of quantum “ghost” imaging has rapidly developed and is still attracting great interest. It later branched into second-order intensity correlation imaging with pseudothermal and true thermal light without a lens, higher-order correlation imaging, computational imaging with only one detector, differential ghost imaging, and our recently demonstrated “correspondence imaging” [1] where no direct second-order correlation is even necessary. After extending this concept to time-correspondence differential ghost imaging which produces a signal-to-noise ratio that parallels or exceeds that of differential ghost imaging [2], we further developed a technique which is robust, gives excellent image quality, and requires even less data storage and computation time [3]. On another note, we have applied correlation imaging to secure cryptographic key amplification and distribution amongst a network of users, which could be used in combination with quantum key generation to solve the problem of multiparty key distribution [3].

