Title
Convolution: From Calculus to Image Processing

Abstract
Convolution is a mathematical operation defined on two functions, f and g, that produces a third function. This new function, denoted $f * g$, is somehow a "blend" of f and g. In the continuous case the blending is achieved via integration, whereas discrete convolution is defined via summation. This talk will introduce the convolution operator in both the continuous and discrete settings. We will explore applications of convolution to signal processing, with an emphasis on image filtering in the field of digital image processing.