

FLUCTUATION CORRELATION SPECTROSCOPY IN LIVE CELLS

Enrico Gratton

Laboratory for Fluorescence dynamics, University of California, Irvine

Fluctuation spectroscopy is a unique methodology for the study of molecular transport and interactions in living cells. The original conception of the FCS method for studying solutions must be radically modified to be compatible with the complex processes occurring in cells. The development of imaging methods based in fluctuation spectroscopy has in part achieved to goal of transferring single molecule approaches to the study of processes in the cell interior. In this talk I will review the principle of fluctuation spectroscopy and its application to imaging. Some example on relevant biological system will be presented to show the potential of the imaging fluctuation approach for the study of molecular interactions in real time in live cells.