

# Computation and the Moving Image

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## Abstract

The iconic visual encapsulation of video is film: sprocket holes, celluloid, a sharp blade and mylar tape; and these metaphors underpin the interaction paradigms of the most modern video editing software. Although today's visual effects are often driven by 3D computer graphics, with 3D camera manipulations, effects are inserted into video as “layers” keyed by “mattes”.

In this talk I will discuss a number of more direct interactions with the moving image, dealing with 3D object insertion, object tracking, and new representations for video which were not possible without modern computation. I show how recent research in computer vision and computer graphics allows us to think of new paradigms in manipulating and representing video, ultimately editing in the image stream, not on it.

## Biografia

Investigador sénior da [Microsoft Research, Cambridge](#), UK. O seu trabalho de investigação está na intersecção da computação visual com a computação gráfica, nomeadamente na reconstrução de geometria 3D a partir de imagens 2D. Recebeu por duas vezes o mais alto prémio da visão por computador do IEEE, o David Marr Prize.

Em 2001 recebeu um Engineering Emmy Award, pelo software que desenvolveu para a criação de efeitos visuais complexos.

Estudou Matemática e Engenharia Informática na Universidade College Cork, e é doutorado pela Universidade de Edinburgh.