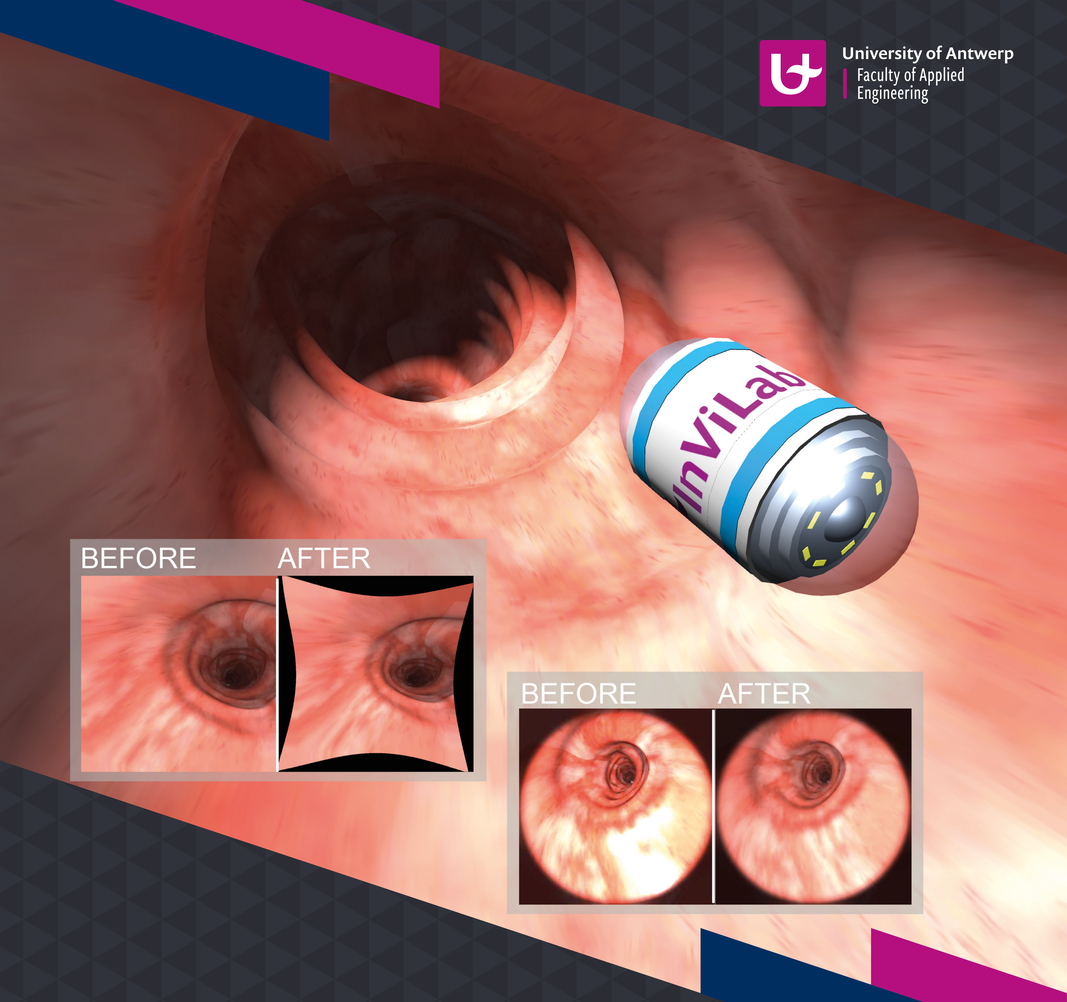
University of Antwerp
Faculty of Applied Engineering



HOW TO GET MORE OUT OF ENDOSCOPIC IMAGES

Endoscopic images and videos suffer from heavy distortion, low resolution, specular reflections, missing frames, etc. We learn a low-dimensional latent representation of those images, which can be exploited to enhance them. Moreover, our methods are based on non-black box probabilistic models, which allow for uncertainty assessment in a medical setting.

RESEARCH GOALS

Undistort images

Fisheye lenses provide a larger field of view. However, they severely distort the image. By learning this distortion, we can undo it.

Fill in missing frames

By learning a latent representation of the images, we can interpolate between them to find missing images in a video.

Remove reflections

Wet tissues result in specular reflections. These pixels can be treated as missing data, which can be filled in.

Stitch images

Enhanced images make better stitching possible in overviews such as mosaics or panoramas.

More information
www.invilab.be

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