**Adaptively modified histogram equalization (AMHE)**

Adaptively modified histogram equalisation (AMHE) modifies the probability density function (PDF) of the greyscale and then applies histogram specification to the modified PDF. However, over-enhancement and under-enhancement still can occur and some artefacts appear in some smooth regions because these methods entirely redistribute the original histogram. The AMHE does not produce any degradation, but it darkens the bright areas of the image and fails to boost the brightness of the dark regions.

