

Analyse spectrale d'une image

Étude des fréquences spatiales contenues dans l'image

Basses fréquences

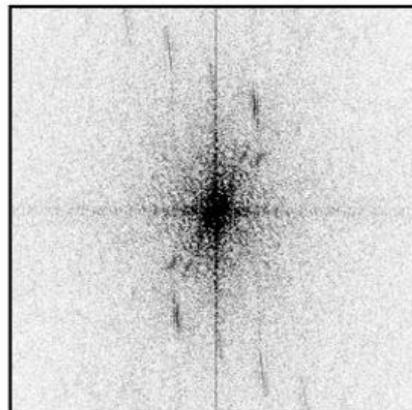
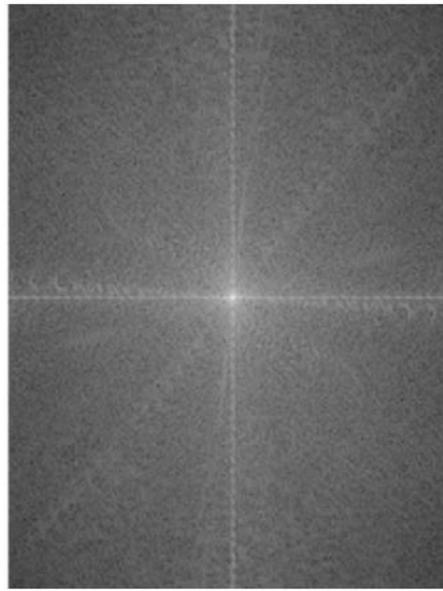
- Lentes et faibles variations
- zones presque uniformes

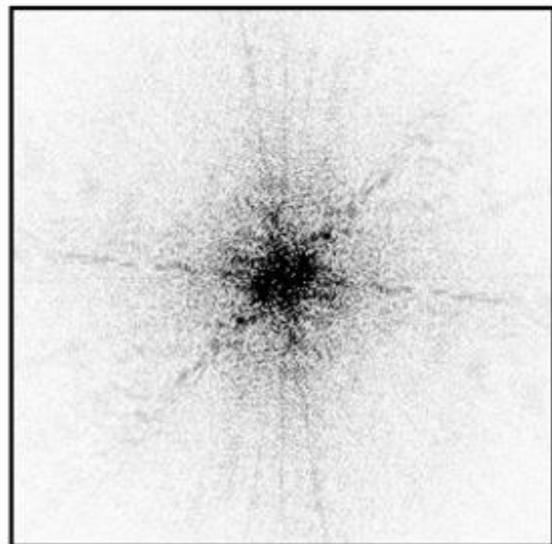
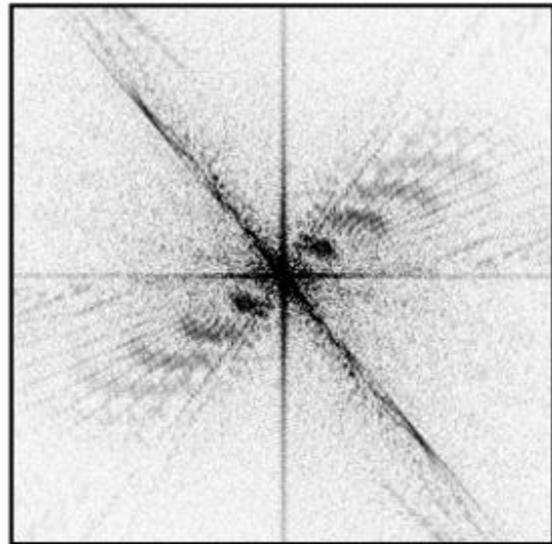
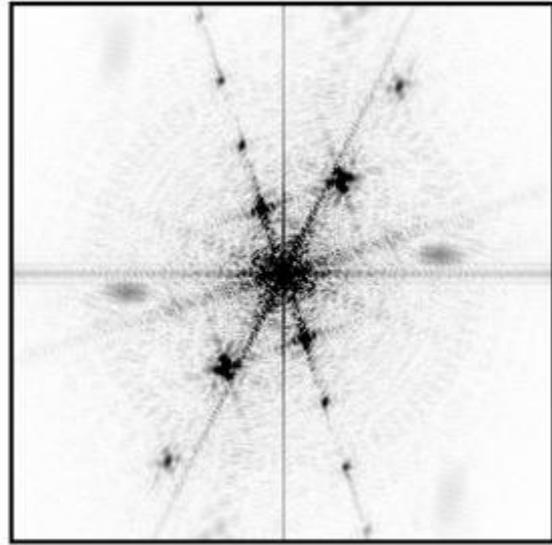
Hautes fréquences

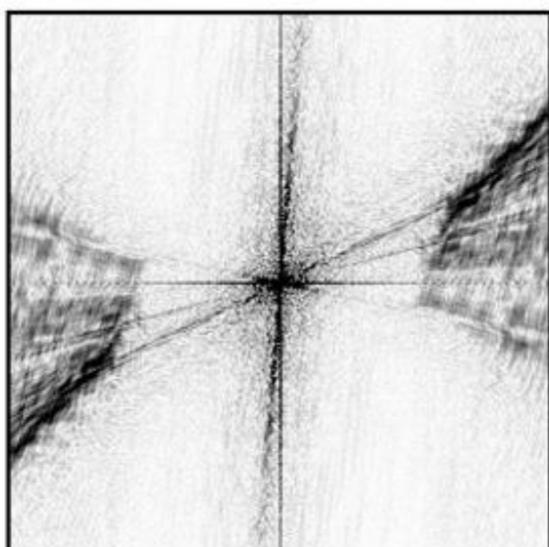
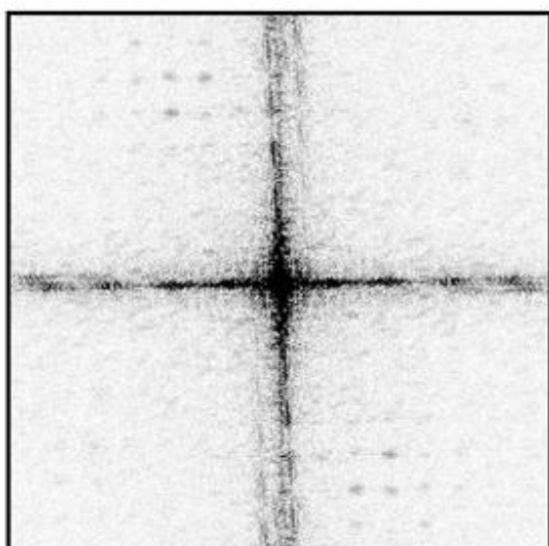
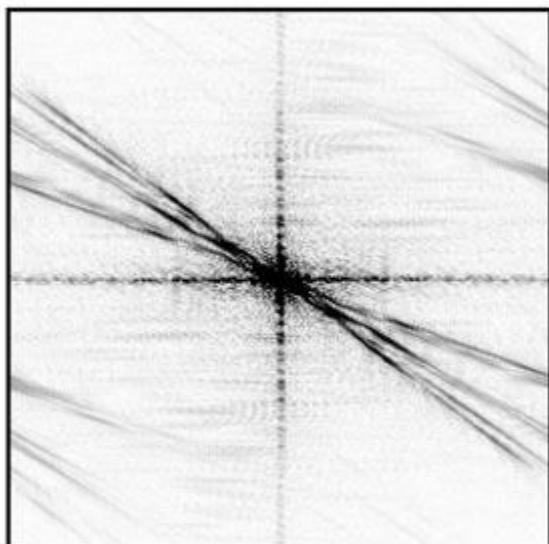
- Variations rapides et contrastées
- Contours
- Détails
- Bruit



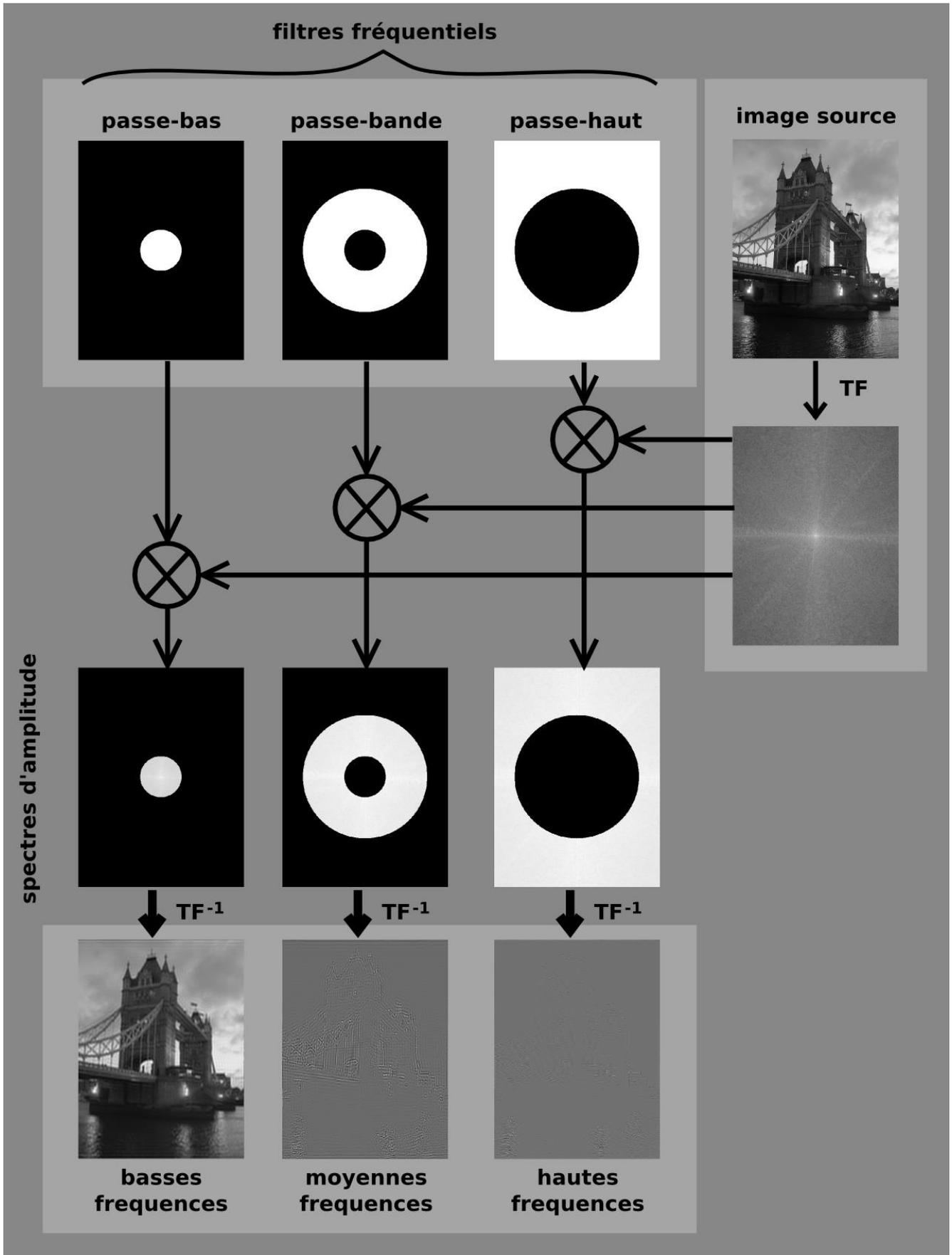
L'image et sa transformée de Fourier spatiale



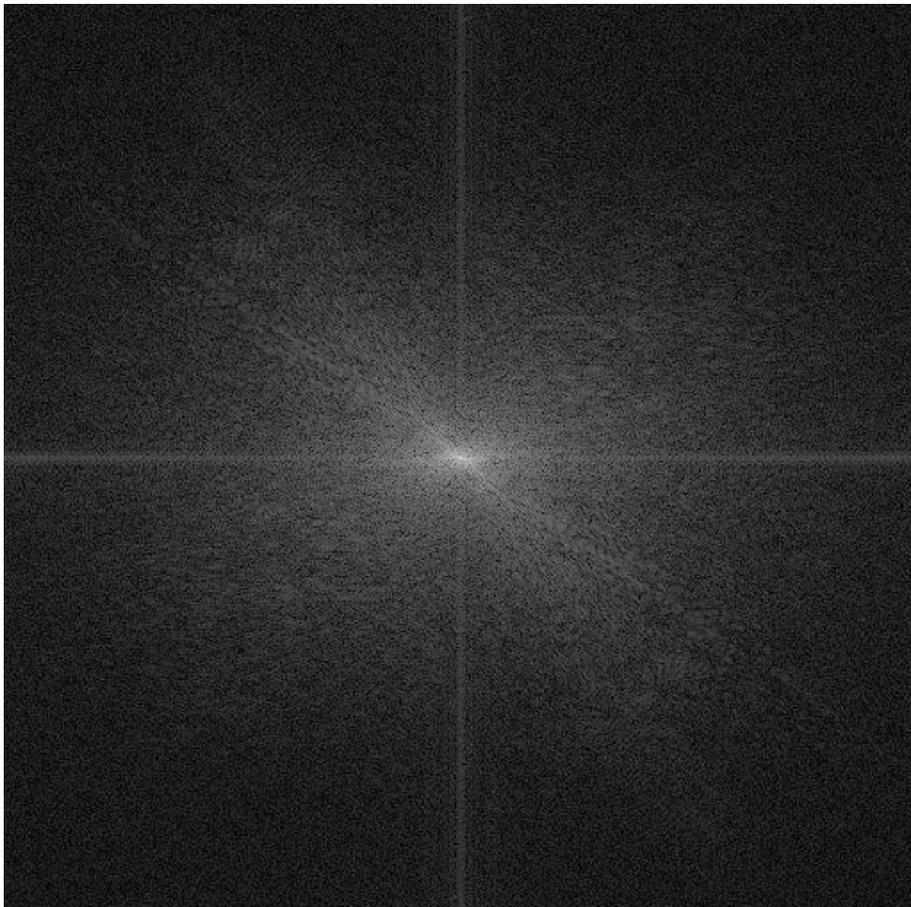




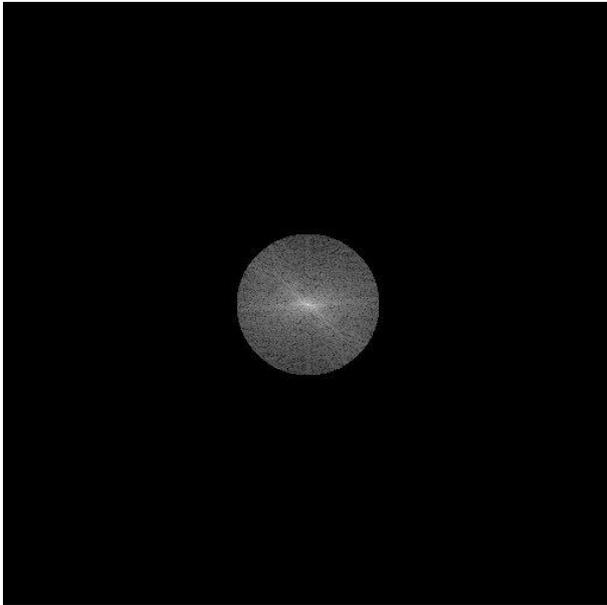
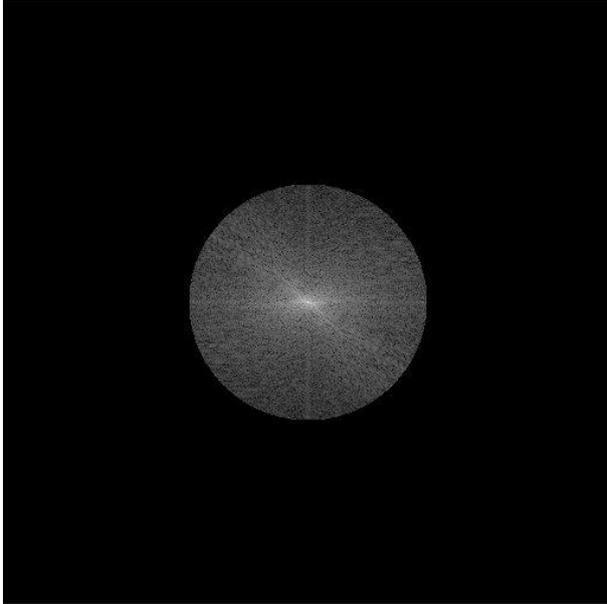
Utilisation de filtres optiques



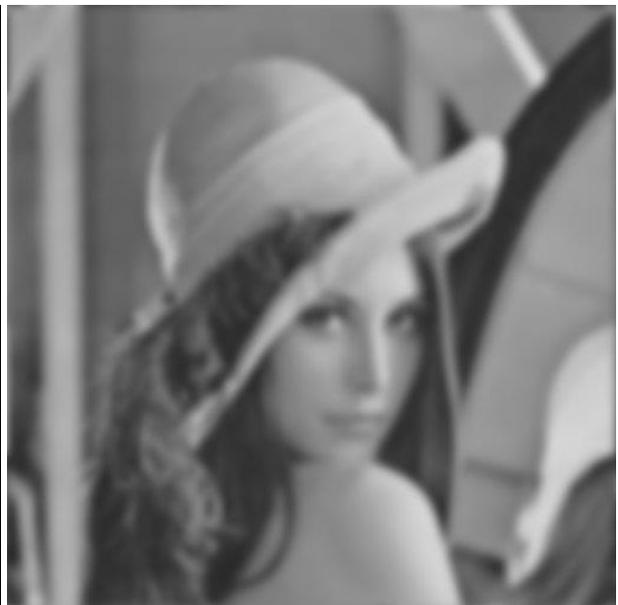
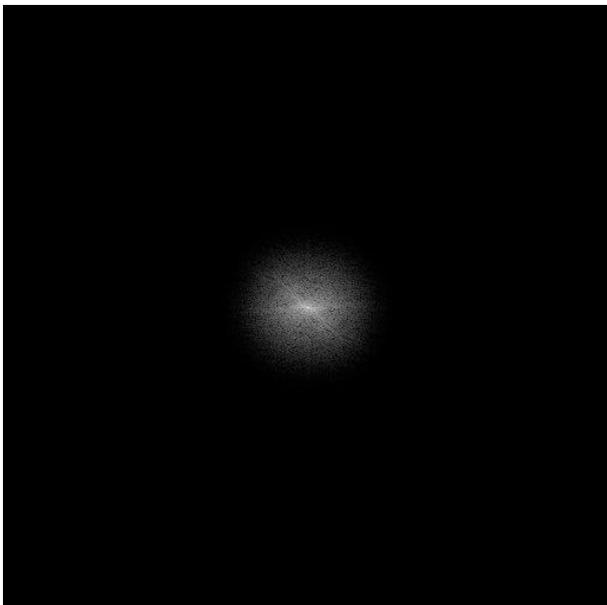
Traitement d'une photo par Transformée de Fourier spatiale



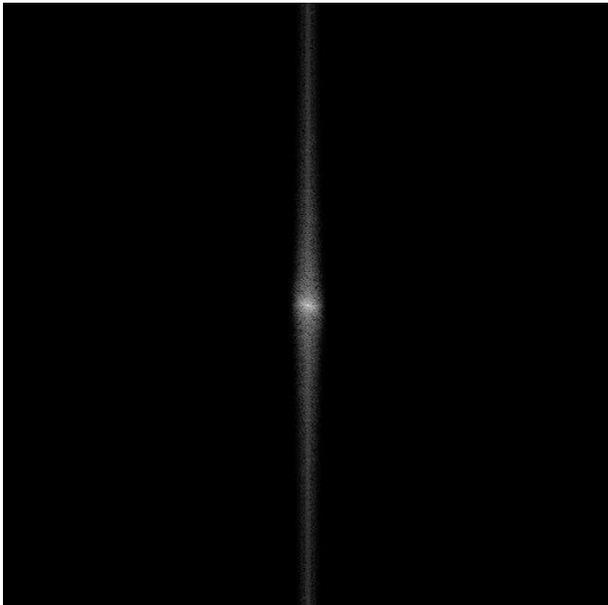
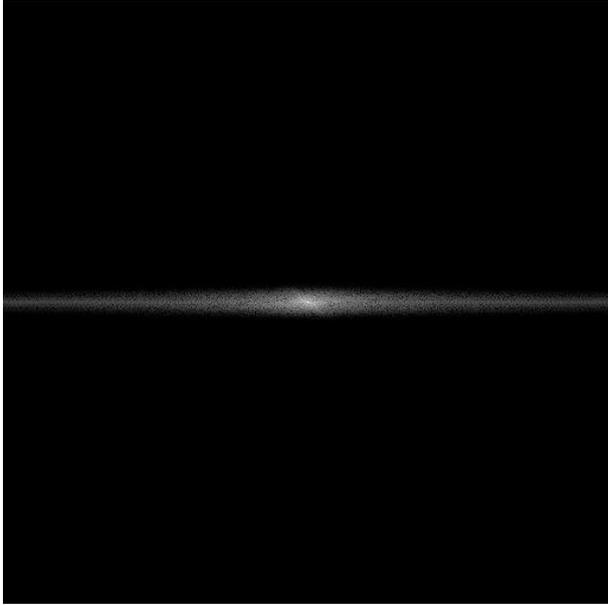
Filtrage passe-bas pour supprimer les défauts



Filtrage gaussien : l'image obtenue est floutée



Filtrage gaussien dans une direction donnée :
on supprime les variations spatiales de l'image dans la direction orthogonale



Suppression d'un tramage par filtrage



On supprime directement les fréquences spatiales correspondant aux défauts



L'image est détramée.