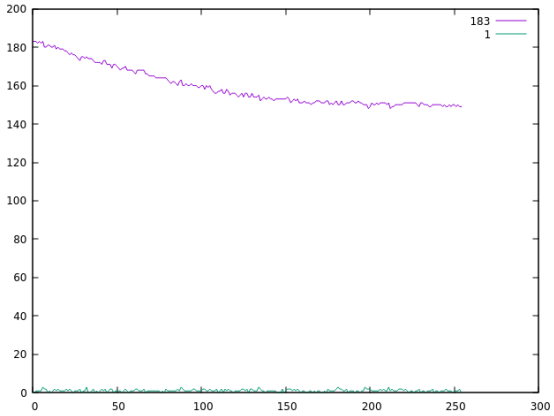
TP3 - Filtre inverse vidéo et floutages d'images

1 Création de la carte de gradient d'une image

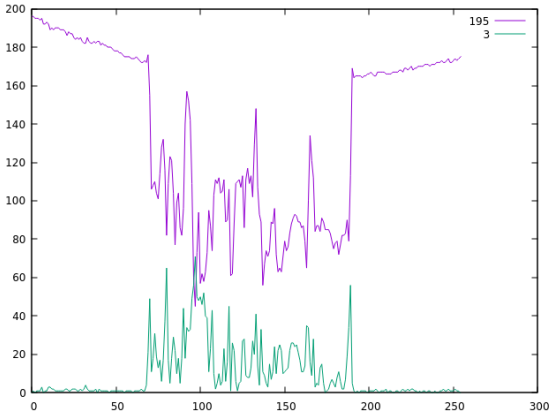
Image de taille 256x256 récupérée sur le site de William Puech
https://www.lirmm.fr/~wpuech/enseignement/donnees_multimedia/images/

Image de base

Image de la norme des gradients



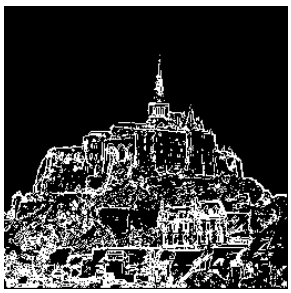
Comparaison profil de la ligne 10



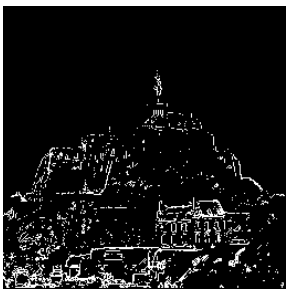
Comparaison profil de la ligne 120

2 Extraction des maximums locaux par seuillage

Image normée



Seuil 25

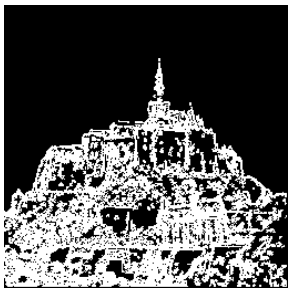


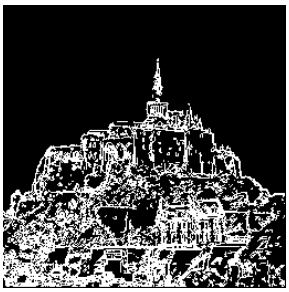
Seuil 50

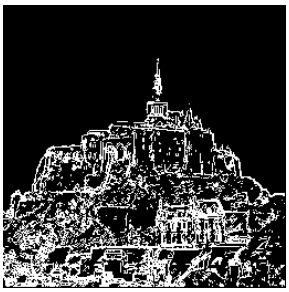
Seuil 75

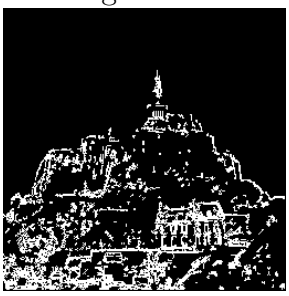
3 Seuillage par hystérésis des maximums locaux

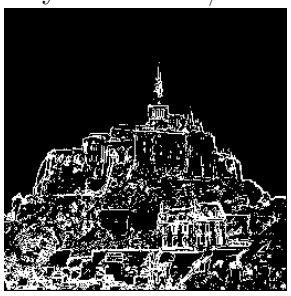

Image normée

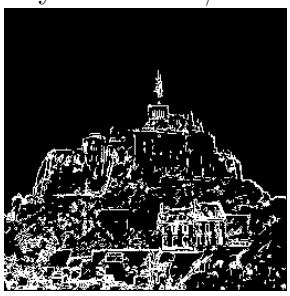

Hysteresis 10 / 30


Hysteresis 20 / 30


Hysteresis 25 / 30


Hysteresis 25 / 50


Hysteresis 30 / 30


Hysteresis 30 / 40

4 Prétraitement par filtrage

4.1 Différents filtre


Image de base

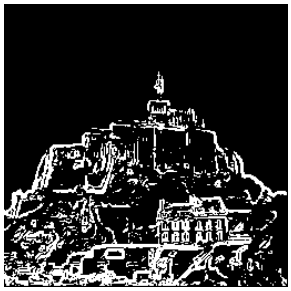

Norme des gradients


Filtre moyenneur


Filtre Gaussien

4.2 Seuils

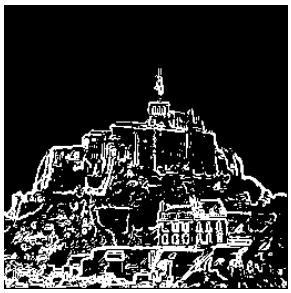

Filtre moyenneur

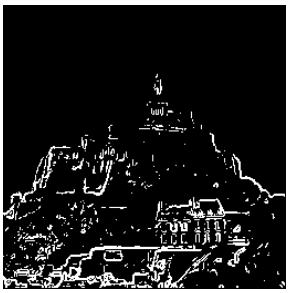

Seuil 15


Seuil 25


Seuil 50


Filtre Gaussien


Seuil 15

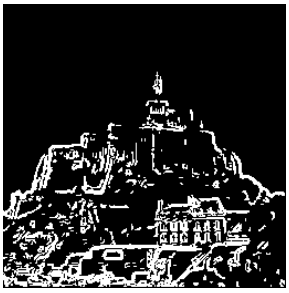

Seuil 25


Seuil 50

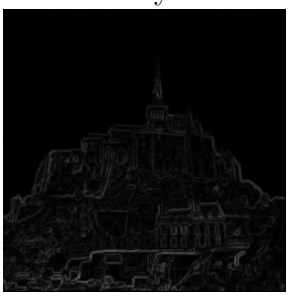
4.3 Hystérésis

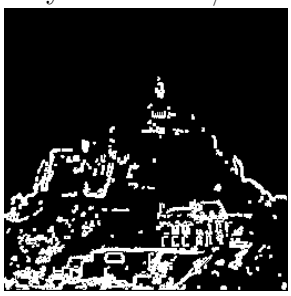

Filtre moyenneur

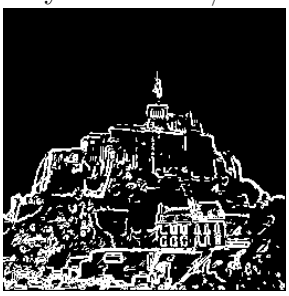

Hysteresis 10 / 30

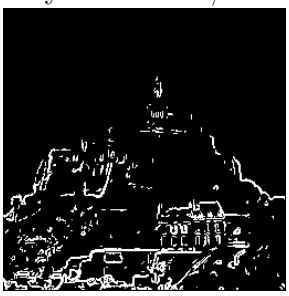

Hysteresis 15 / 20


Hysteresis 25 / 30

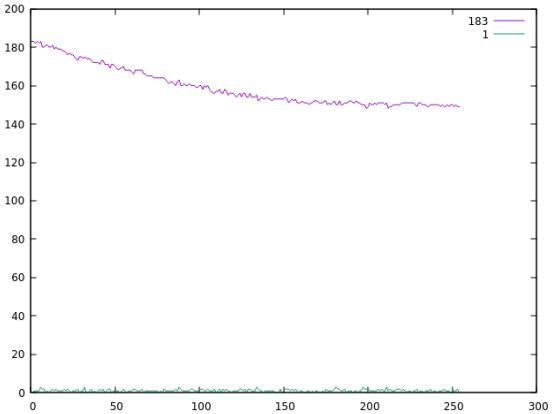

Filtre moyenneur


Hysteresis 10 / 30

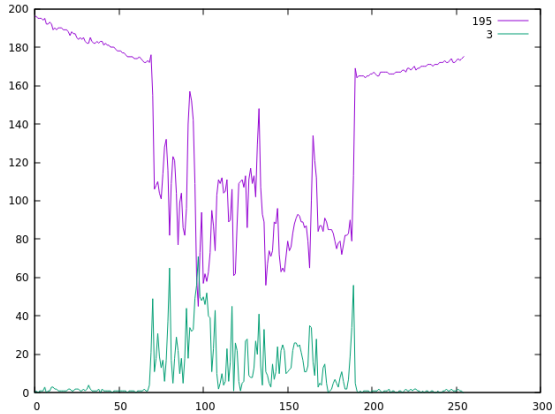

Hysteresis 15 / 20


Hysteresis 25 / 30

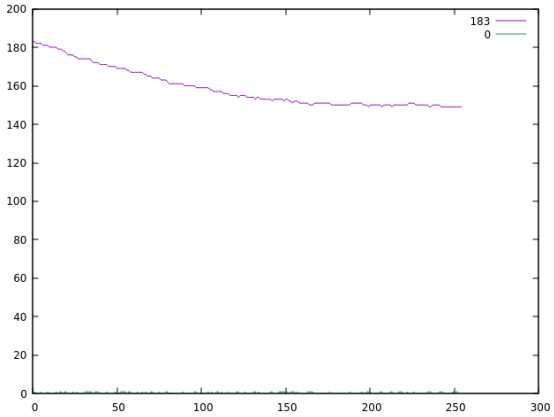
4.4 Profil de ligne



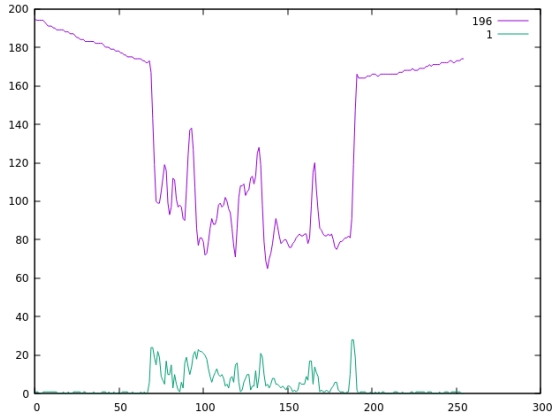
Gradient ligne 10



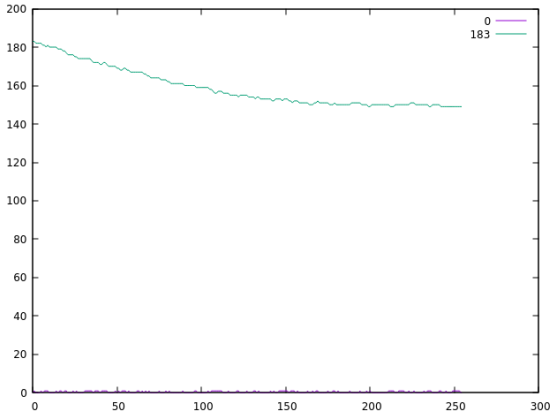
Gradient ligne 120



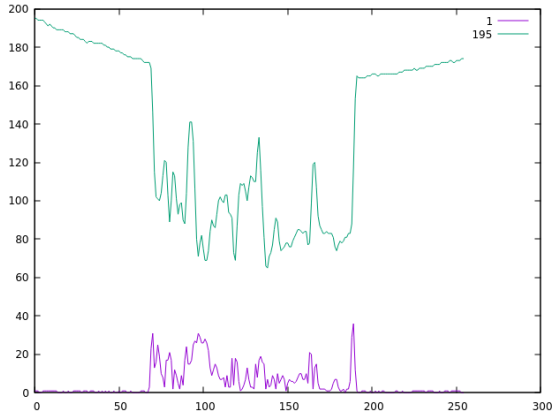
Moyenneur ligne 10



Moyenneur ligne 120



Gaussien ligne 10



Gaussien ligne 120