1. Cell image segmentation

Iterative thresholding for segmentation of cells from noisy images

<http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2818.2000.00653.x/full>

Applying deformable templates for cell image segmentation <http://www.sciencedirect.com/science?_ob=MiamiImageURL&_cid=272206&_user=7778205&_pii=S0031320399000916&_check=y&_coverDate=2000-05-01&view=c&wchp=dGLbVlS-zSkWb&md5=fd8bc398b7299092dc37de5905313d2e/1-s2.0-S0031320399000916-main.pdf>

Applying deformable templates for cell image segmentation

<http://www.sciencedirect.com/science/article/pii/S0031320399000916>

1. Rail-road track inspection

High Speed Video Inspection of Joint Bars Using Advanced Image Collection and

Processing Techniques

<http://www.railway-research.org/IMG/pdf/i.3.1.3.2.pdf>

Machine-Vision Inspection of Railroad Track

<http://www.arema.org/files/library/2008_Conference_Proceedings/Machine-Vision_Inspection_of_Railroad_Track_2008.pdf>

Advancements in Railroad Track Inspection

Using Machine-Vision Technology

<http://ict.uiuc.edu/railroad/CEE/pdf/Edwards_et_al_AREMA_2009_Final.pdf>

1. Vehicle detection & classification from aerial data
2. Pavement inspection
3. Steganography

Spread spectrum image steganography

<http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=777088>

1. Adaptive thresholding technique

Broad easy to expand upon

1. Image resolution enhancement

Broad easy to expand upon