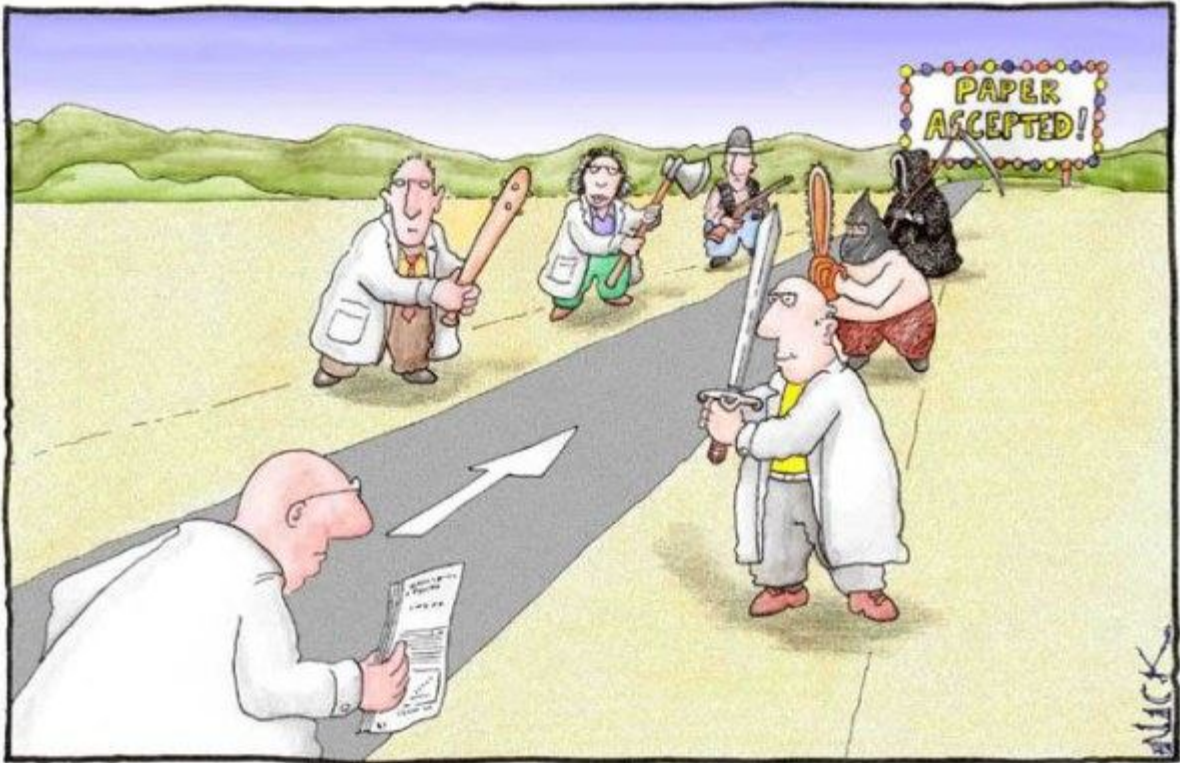


The most cited papers in Computer Vision

In Computer Vision, Paper Talk on February 10, 2012 at 11:10 pm

by gooly (Li Yang Ku)



Although it's not always the case that a paper cited more would be better, a highly cited paper usually indicates that something interesting have been discovered. There's usually no harm to take a further look at them. The following are the papers, which I know, cited most in Computer Vision.

Cited by 14455

A theory for multiresolution signal decomposition: The wavelet representation
SG Mallat – Pattern Analysis and Machine Intelligence, IEEE ..., 1989

Cited by 13235

A computational approach to edge detection
J Canny – Pattern Analysis and Machine Intelligence, IEEE ..., 1986

Cited by 12841

Stochastic relaxation, Gibbs distributions, and the Bayesian restoration of images
Geman and Geman - Pattern Analysis and Machine ..., 1984

Cited by 12801 + 4129 (Object recognition from local scale-invariant features)

Distinctive image features from scale-invariant keypoints
DG Lowe - International journal of computer vision, 2004

Cited by 12251

Snakes: Active contour models
M Kass, A Witkin, Demetri Terzopoulos - International journal of computer ..., 1988

Cited by 9358 + 3206 (Face Recognition using Eigenfaces)

Eigenfaces for Recognition
Turk and Pentland, Journal of cognitive neuroscience Vol. 3, No. 1, Pages 71-86, 1991
(9358 citations)

Cited by 6958

Determining optical flow
B.K.P. Horn and B.G. Schunck, Artificial Intelligence, vol 17, pp 185-203, 1981

Cited by 6291

Scale-space and edge detection using anisotropic diffusion
P Perona, J Malik
Pattern Analysis and Machine Intelligence, IEEE Transactions on 12 (7), 629-639

Cited by 5632

An iterative image registration technique with an application to stereo vision
B. D. Lucas and T. Kanade (1981), An iterative image registration technique with an application to stereo vision. Proceedings of Imaging Understanding Workshop, pages 121-130

Cited by 5626 + 3540 (Robust real time face detection)

Rapid object detection using a boosted cascade of simple features
P Viola, M Jones
Computer Vision and Pattern Recognition, 2001. CVPR 2001. Proceedings of the ...

Cited by 5476

Normalized cuts and image segmentation

J Shi, J Malik

Pattern Analysis and Machine Intelligence, IEEE Transactions on 22 (8), 888-905

Cited by 4004

The Laplacian pyramid as a compact image code

Burt and Adelson, - Communications, IEEE Transactions on, 1983

Cited by 3897

Condensation—conditional density propagation for visual tracking

M Isard and Blake - International journal of computer vision, 1998

Cited by 3746

Good features to track

Shi and Tomasi, 1994. Proceedings CVPR'94., 1994 IEEE ..., 1994

Cited by 3282

Neural network-based face detection

HA Rowley, S Baluja, Takeo Kanade - Pattern Analysis and ..., 1998

Cited by 3009

Histograms of oriented gradients for human detection

N Dalal... – ... 2005. CVPR 2005. IEEE Computer Society ..., 2005

Cited by 2647

Emergence of simple-cell receptive field properties by learning a sparse code for natural images

BA Olshausen - Nature, 1996

Cited by 2588

Shape matching and object recognition using shape contexts

S Belongie, J Malik, J Puzicha

Pattern Analysis and Machine Intelligence, IEEE Transactions on 24 (4), 509-522

Cited by 2382

A performance evaluation of local descriptors

K Mikolajczyk, C Schmid

Pattern Analysis and Machine Intelligence, IEEE Transactions on 27 (10 ..

Cited by 2360

Fast approximate energy minimization via graph cuts

Y Boykov, O Veksler, R Zabih

Pattern Analysis and Machine Intelligence, IEEE Transactions on 23 (11 .

Cited by 2151

The structure of images

JJ Koenderink - Biological cybernetics, 1984 – Springer

Cited by 2147

Shape and motion from image streams under orthography: a factorization method

Tomasi and Kanade - International Journal of Computer Vision, 1992

Cited by 1889

Active appearance models

TF Cootes, GJ Edwards... – Pattern Analysis and ..., 2001

Cited by 1819

Surf: Speeded up robust features

H Bay, T Tuytelaars... – Computer Vision–ECCV 2006, 2006

Cited by 1767

Scale & affine invariant interest point detectors

K Mikolajczyk, C Schmid

International journal of computer vision 60 (1), 63-86

Cited by 1764

Modeling and rendering architecture from photographs: A hybrid geometry-and image-based approach

PE Debevec, CJ Taylor, J Malik

Proceedings of the 23rd annual conference on Computer graphics and ...

Cited by 1648

Feature extraction from faces using deformable templates

AL Yuille, PW Hallinan... – International journal of computer ..., 1992

Cited by 1647

Region competition: Unifying snakes, region growing, and Bayes/MDL for multiband image segmentation

SC Zhu, A Yuille

Pattern Analysis and Machine Intelligence, IEEE Transactions on 18 (9), 884-900

Cited by 1494

Beyond bags of features: Spatial pyramid matching for recognizing natural scene categories

S Lazebnik, C Schmid, J Ponce

Computer Vision and Pattern Recognition, 2006 IEEE Computer Society ...

Cited by 1458

Object class recognition by unsupervised scale-invariant learning

R Fergus, P Perona, A Zisserman

Computer Vision and Pattern Recognition, 2003. Proceedings. 2003 IEEE ...

Cited by 1417

Recovering high dynamic range radiance maps from photographs

PE Debevec, J Malik

ACM SIGGRAPH 2008 classes, 31

Cited by 1258

A comparison of affine region detectors

K Mikolajczyk, T Tuytelaars, C Schmid, A Zisserman, J Matas, F Schaffalitzky ...

International journal of computer vision 65 (1), 43-72

Cited by 1138

Efficient graph-based image segmentation

PF Felzenszwalb... – International Journal of Computer ..., 2004

Cited by 1131

A bayesian hierarchical model for learning natural scene categories

L Fei-Fei... – Computer Vision and Pattern ..., 2005

Note that the ones I listed are just the ones that came up to my mind, let me know if I missed any important publications; I would be glad to make the list more complete.