



HOME

LIST OF JOURNALS

AUTHORS

EDITORS & REVIEWERS

LIBRARIANS & B

Home > [CSC-OpenAccess Library](#) > Manuscript Information

A comparison of SIFT, PCA-SIFT and SURF

Luo Juan, Oubong Gwun

Pages - 143 - 152 | Revised - 30-09-2009 | Published - 21-10-2009

Published in [International Journal of Image Processing \(IJIP\)](#)

Volume - 3 Issue - 4 | Publication Date - August 2009 [Table of Content](#)

MORE INFORMATION

[References](#) | [Cited By \(442\)](#) | [Abstracting & Indexing](#)

KEYWORDS

SIFT,, PCA-SIFT,, SURF,, robust detectors

ABSTRACT

This paper compares three robust feature detection methods, they a Transform (SIFT), Principal Component Analysis (PCA) -SIFT and Spec (SURF). Lowe presented SIFT [1], which was successfully used in reco other applications because of its robustness. Yan Ke [2] gave a chan normalize the gradient patch instead of histogram. H. Bay [3] present SURF, which used Fast-Hessian detector. The performance of the thre scale changes, rotation , blur, illumination changes and affine transfc repeatability as an evaluation measurement. Additionally, RANSAC is inconsistent matches [4]. SIFT presents its stability in most situation e illumination changes. SURF is the fastest one with good performance SIFT shows its advantages in rotation, blur and illumination changes.

Performance Comparison of Hybrid Haar Wavelet Transform with Various Local Transforms in Image Compression using Different Error Metrics

Dr. B. Babu
Associate Professor, Computer Eng. Department, VIT-ITM,
Vellore, Tamil Nadu, India
babu_b@vit.ac.in

Dr. B. Gwun
Associate Professor, Computer Eng. Department, VIT-ITM,
Vellore, Tamil Nadu, India
gwun_b@vit.ac.in

Dr. B. Gwun
Associate Professor, Computer Eng. Department, VIT-ITM,
Vellore, Tamil Nadu, India
gwun_b@vit.ac.in

Abstract
A novel image compression using hybrid Haar wavelet transform has been presented in this paper. The proposed method is based on the combination of Haar wavelet transform and various local transforms. The proposed method is compared with other methods in terms of peak signal to noise ratio (PSNR) and bit rate. The results show that the proposed method outperforms other methods in terms of PSNR and bit rate. The proposed method is also compared with other methods in terms of execution time. The results show that the proposed method is faster than other methods. The proposed method is also compared with other methods in terms of compression ratio. The results show that the proposed method is better than other methods. The proposed method is also compared with other methods in terms of reconstruction quality. The results show that the proposed method is better than other methods. The proposed method is also compared with other methods in terms of robustness. The results show that the proposed method is more robust than other methods. The proposed method is also compared with other methods in terms of scalability. The results show that the proposed method is more scalable than other methods. The proposed method is also compared with other methods in terms of flexibility. The results show that the proposed method is more flexible than other methods. The proposed method is also compared with other methods in terms of adaptability. The results show that the proposed method is more adaptable than other methods. The proposed method is also compared with other methods in terms of robustness. The results show that the proposed method is more robust than other methods. The proposed method is also compared with other methods in terms of scalability. The results show that the proposed method is more scalable than other methods. The proposed method is also compared with other methods in terms of flexibility. The results show that the proposed method is more flexible than other methods. The proposed method is also compared with other methods in terms of adaptability. The results show that the proposed method is more adaptable than other methods.

Full Text Available



This is an Open Access publication published under [CSC-OpenAccess Policy](#).

- 1 Han, C. H. (2010). Reduced Dimensional SURF Based Hand Gesture F
- 2 Su, C. R. (2014). Unsupervised Image Segmentation by Dual Morpho
to-Peer Content-Based Image Retrieval Applications (Doctoral disse
- 3 Hu, H. H. (2013). Smartphone Positioning with Street View Image Dat
- 4 Flórez Revuelta, F., & Chaaaraoui, A. A. (2012). Interfaz de control dom
de detección de postura.
- 5 Idrobo Pizo, G. A. (2014). Projeto de um descritor para o alinhament
profundidade de superfícies com aplicação em visão robótica.
- 6 Einrichtung, B., & für Lehrerbildung, Z. OPUS-Passau.
- 7 Rhee, S. B. (2013). Efficient Image Stitching Using Fast Feature Descri
KIPS Transactions on Software and Data Engineering, 2(1), 65-70.
- 8 de Souza Tarallo, A., da Silva, F. A., Hiraga, A. K., de Paiva, M. S. V., & c
Mosaicos de Imagens Áreas Sequenciais Construídos Automatica
- 9 Valenzuela, R. E., Schwartz, W. R., & Pedrini, H. Redução de Dimensio
Descrição de Características Visuais.
- 10 COMIT, Y. A. P. E. S. Eduardo Quintana Contreras.
- 11 Augereau, O. (2013). Reconnaissance et classification d'images de c
dissertation, Université Sciences et Technologies-Bordeaux I).
- 12 de Souza Tarallo, A., Hiraga, A. K., Martinez, G. A. G., de Paiva, M. S. V.
Senger, H. Uso de mosaico de imagens áreas como ferramenta de
diversas culturas*.
- 13 GALLA, H. Z. (2015). PENGELOMPOKAN CITRA RAMBU LALU LINTAS D
AGGLOMERATIVE CLUSTERING BERBASIS SCALE INVARIANT FEATURE
Ilmu Komputer.
- 14 Renkens, I. M. (2015). Prometheus: from 2D to 3D. A reconstruction b
(Doctoral dissertation, TU Delft, Delft University of Technology).
- 15 CIOU, J. J. (2014). Embedded Omni-Directional Wheeled Mobile Robo
Depth Image Database.
- 16 Prieto Sánchez, J. (2011). Reconocimiento de objetos por visión artifi
- 17 Campos, M. F. M. 2ª Lista de Exercícios 1 Exercícios Teóricos.
- 18 Liedtke, A. Realisierung eines robusten Verfahrens zur Identifikation
Verwendung von Bildverarbeitung in Videobildern.
- 19 Quintana Rosales, M. A. (2015). Registro de una secuencia temporal
utilizando tecnología Kinect para la reconstrucción tridimensional d
- 20 Mauricio, C. J. L., Edgar, F. S., & Samuel, R. H. E. (2012). Sistema Móvil
Visualización de Objetos 3D (VIAR).

- 21 de Souza Tarallo, A. (2013). Escola de Engenharia de São Carlos (Da Universidade de São Paulo).
- 22 BOUACHIR, W., & DOCTOR, O. D. D. P. (2014). SUIVI D'OBJETS PAR LOCALES ENCODANT LA STRUCTURE.
- 23 Hung, C. Y. (2014). Research and Validation of Application of Adapt Technology to Lithography Pattern of Light Emitting Diode Chip.
- 24 Jatmiko, S. Analisis Dan Implementasi Penggunaan Scale Invariant Feature Transformasi Untuk Sistem Verifikasi Tanda Tangan.
- 25 Pizarro, C. A. (2014). On the possibility to find coordinates by random walk. dissertation, Autonomous University of Madrid).
- 26 Creve, M. Navigatiehulp voor mensen met een visuele beperking.
- 27 Tarallo, A. D. S., Hiraga, A. K., Martinez, G. A. G., Paiva, M. S. V. D., Jorgensen, J. (2013). Parallel Processing Applied to Image Mosaic Generation. In Proceedings of the 10th International Conference on Computational Intelligence (WVC 2013). Universidade Federal Fluminense (UFF).
- 28 Naftalianto, Y. (2012). Rancang Bangun Sensor Jarak Dengan Korelasi Cross-Correlation dan Ekstraksi Fitur SURF Dan Konsep Stereo Vision. Jurnal Sarjana Teknik Elektro.
- 29 Meisel, A. Andreas Liedtke Realisierung eines robusten Verfahrens zur Erkennung von Positionsmarken unter Verwendung von Bildverarbeitung in Videobildern.
- 30 Kim, J. Y., Jeong, S. W., Jeong, M. B., Han, H. J., Kim, J. S., Park, H. M., & Chung, C. (2012, May). TrueSight A Pedestrian Navigation System Based in Augmented Reality. In Proceedings of the 2012 IEEE International Conference on Systems, Man, and Cybernetics (SMC 2012).
31 Ferreira, A. L. S., Santos, S. (2012, May). TrueSight A Pedestrian Navigation System Based in Augmented Reality and Extraction on Android Smartphone. In Virtual and Augmented Reality (ICARVR 2012).
- 31 Augereau, O., Journet, N., & Domenger, J. P. (2013). Reconnaissance de Documents Numériques. Document numérique, 16(2), 91-118.
- 32 Laura, T. L. (2013). Sistema de supervisão aérea baseado em navegação por pontos de anomalias em instalações de petróleo e gás.
- 33 Wang, P. H. (2011). Implementation of fast SIFT feature extraction and matching.
- 34 Mota, I. F. V. (2014). Olh-passarinho: uma extensão do Tweeprofiler para análise de tweets. dissertation, Master's thesis, Faculdade de Engenharia da Universidade de São Carlos.
- 35 Salamon, N. Z. (2015). Re-identificação de pessoas em imagens através de características descritivas de cores e grupos.
- 36 Couto, L., & Osório, F. Auto-Localização Autônoma de Robôs Móveis Baseada em Pontos de Referência.
- 37 Shukla, A. P., & Saini, M. (2015). Moving Object Tracking of Vehicle Detection. International Journal of Signal Processing, Image Processing and Pattern Recognition, 176.
- 38 Aguilar, W. G., & Angulo, C. (2015). Real-Time Model-Based Video Stabilization for Moving Vehicles. Neural Processing Letters, 1-19.

- 39 Solehah, S., Yaakob, S. N., Kadim, Z., & Woon, H. H. (2012, December). PTZ camera using the integration of background subtraction and local binary patterns. *Computer Applications and Industrial Electronics (ISCAIE), 2012 IEEE* (172). IEEE.
- 40 Xie, Z., Chen, J., Yao, T., & Sun, Y. (2015). Geometric structure-constrained feature extraction for object recognition. *Signal Processing: Image Communication*, 36, 43-52.
- 41 Jayachandran, G., Ekin, A., & De Haan, I. G. (2012). Landmark detection using SURF.
- 42 Lin, S. C. F., Wong, C. Y., Jiang, G., Rahman, M. A., & Kwok, N. M. (2014). A Novel Feature Descriptor with Fourier-based Keypoint Orientation. *International Journal of Intelligent and Fuzzy Systems (IJIFS)*, 8(6), 397.
- 43 Xiong, X., & Choi, B. J. (2013, January). Estimation of Relative Self-Localization using Landmark and an Improved SURF. In *Proceedings of World Academy of Science, Engineering and Technology* (No. 73, p. 900). World Academy of Science, Engineering and Technology.
- 44 Xiong, P., Liu, X., Gao, C., Zhou, Z., Gao, C., & Liu, Q. (2013, March). A Feature Extraction Method for UAV Aerial Images. In *Proceedings of the 2nd International Conference on Intelligent and Fuzzy Systems and Electronics Engineering*. Atlantis Press.
- 45 Averkin, A. N. (2010). Training image-correlation systems by optimizing feature representations. *Journal of Optical Technology*, 77(11), 712-720.
- 46 Koel, F., Maurer, R. K., & Prieler, Z. R. A Survey on Action Recognition using Video. *Image and Vision Computing*, 29(12), 1000-1011.
- 47 Xiong, X., & Choi, B. J. (2013). Estimation of Relative Self-Localization using Landmark and its Error Analysis. *International Journal of Smart Home*, 7(4), 69-76.
- 48 Lin, C. H., & Chen, A. Y. Trip Characteristics Study through Social Media. *Journal of Intelligent and Fuzzy Systems*, 26(2), 115-124.
- 49 Wang, Z., & Qureshi, F. Z. (2013, May). Topic models for image localization. In *Robot Vision (CRV), 2013 International Conference on* (pp. 136-143). IEEE.
- 50 Li, X., Aouf, N., & Nemra, A. (2012, September). Estimation analysis in image registration. In *Multisensor Fusion and Integration for Intelligent Systems (MFI), 2012 International Conference on* (pp. 365-370). IEEE.
- 51 Jain, S., & Kanwal, N. (2014, November). Overview on image registration techniques. In *Health and Emerging Communication Systems (MedCom), 2014 International Conference on* (pp. 376-381). IEEE.
- 52 Potgieter, M., & Van Niekerk, J. (2013). MULTI-AGENT AUGMENTED REALITY TECHNOLOGIES TO SUPPORT HUMAN MONITORING OF SECURE COMMUNICATIONS. *Africa Research Journal*, 80.
- 53 Jurgensen, S. M. (2014). The rotated speeded-up robust features algorithm for object detection. *POSTGRADUATE SCHOOL MONTEREY CA*.
- 54 Singh, K., & Chander, S. (2014). CONTENT BASED IMAGE RETRIEVAL USING COLOR HISTOGRAM.

- 55 Issac, A., & Velayutham, C. S. (2012). SaddleSURF: A Saddle Based In Mathematical Modelling and Scientific Computation (pp. 413-420). S
- 56 Sharma, B., & Sharma, A. (2015). A REVIEW: CONTENT BASED IMAGE COLOUR HISTOGRAM USING CROSS VALIDATION AND GRAPH MATCH International Journal, 1(4).
- 57 Walsh, R., & Hornsby, A. (2011, January). Towards off-the-shelf comp interaction in consumer homes. In 2011 IEEE International Conferenc (ICCE).
- 58 Cho, C. J., & Ko, H. Video-Based Dynamic Stagger Measurement of R Using Rotation-Invariant Feature Matching.
- 59 Almehio, Y., Bouchafa, S., & Zavidovique, B. (2014). Level-line primitiv with figures of merit. Integrated Computer-Aided Engineering, 21(2),
- 60 Frascarelli, A. E. (2015). OBJECT DETECTION FOR HIGH PRODUCTIVIT
- 61 Fu, C., Carrio, A., Olivares-Mendez, M., & Campoy, P. (2014, May). Onl visual tracking for autonomous landing of Unmanned Aerial Vehicles Systems (ICUAS), 2014 International Conference on (pp. 649-655). I
- 62 Wang, C. (2013). Object Identification Techniques and the Applicatio TECHNOLOGY, 9.
- 63 Kishino, T., Zhe, S., & Micheletto, R. A fast and precise HOG-Adaboos system capable to recognize Pedestrian and estimate their distance
- 64 Jabnoun, H., Benzarti, F., & Amiri, H. (2014, November). Object recog on features extraction. In Image Processing, Applications and System First International (pp. 1-6). IEEE.
- 65 Jansen, S. (2014). The Neural-SIFT Feature Descriptor for Visual Voca
- 66 Strat, S. T. (2013). Analyse et interprétation de scènes visuelles par a (Doctoral dissertation, Grenoble).
- 67 Juani, L., Shin, S., & Park, H. J. (2011). SURF-QJ-345111115 ladfile Journal of Korea Multimedia Society Vol, 14(2), 201-209.
- 68 Lecron, F., Benjelloun, M., & Mahmoudi, S. (2012). Descriptive image medical images. In Image Analysis and Recognition (pp. 331-338). S
- 69 Fezza, S. A., & Larabi, M. C. (2015). Color calibration of multi-view vide 3D video. Signal, Image and Video Processing, 1-15.
- 70 Wei, L., Garcia, R., & Nicosevici, T. 3D Seafloor Mapping.
- 71 Wang, D., Yu, D., Han, J., & Li, S. (2014, January). Freight Status Classif Using SIFT and KNN Model. In The Proceedings of the Second Intern: Communications, Signal Processing, and Systems (pp. 145-154). Sp Publishing.
- 72 Hossen, J., Jacobs, E. L., & Chari, S. (2015). Real-time classification of

- profiling sensors and hidden Markov tree model. *Optical Engineering*, 53(11), 114101. doi:10.1117/1.2818181
- 73 Miller, G., & Fels, S. (2014, November). An Abstraction for Correspondence-Based Controls. In *Computer Vision-ACCV 2014 Workshops* (pp. 229-240). Springer Publishing.
- 74 Arzou, M. M., Kyriazis, M. P., Eximateurs, M. F. E., & Fernando, M. L. (2014). A new approach for object detection in images. *Journal of Intelligent and Fuzzy Systems*, 26(2), 115-124.
- 75 Yuan, H., Feng, W., Qu, H., & Wang, H. Fault Diagnosis of Rolling Bearing algorithm. *Journal of Intelligent and Fuzzy Systems*, 26(2), 115-124.
- 76 Tassov, K. L., & Fedotov, A. L. Formation of panoramic images from video stream# 07, July 2012.
- 77 Mohammed Elsalamony, H. A. (2015). Comparing Proposed Signature Detection Process. *IETE Journal of Research*, (ahead-of-print), 1-9.
- 78 Nowruzi, F., Balafar, M. A., & Pashazadeh, S. (2012). Robust recognition variations based on SIFT. In *Intelligent Robotics and Applications* (pp. 104-113). Heidelberg.
- 79 Michel, F. (2013). Multi-Modal Similarity Learning for 3D Deformable Images (Doctoral dissertation, Ecole Centrale Paris).
- 80 Bo, L., & Whangbo, T. (2014, October). A SIFT-Color Moments Descriptor. In *IT Convergence and Security (ICITCS), 2014 International Conference on*
- 81 Xiong, X., & Choi, B. J. (2013). Improvement on Image Rotation for Registration Estimation. *International Journal of Multimedia and Ubiquitous Engineering*, 8(1), 1-6.
- 82 Kishino, T., Zhe, S., & Micheletto, R. A fast and precise HOG-Adaboos support system capable to recognize Pedestrian and estimate their position. *Journal of Intelligent and Fuzzy Systems*, 26(2), 115-124.
- 83 Weiwei, W., & Oubong, G. AN ENHANCEMENT AND STITCHING SYSTEM FOR VIDEO. *Journal of Intelligent and Fuzzy Systems*, 26(2), 115-124.
- 84 Kang, T. K., Choi, I. H., & Lim, M. T. (2015). MDGHM-SURF: A robust local modified discrete Gaussian-Hermite moment. *Pattern Recognition*, 48(12), 3245-3258.
- 85 Ahn, H., & Rhee, S. B. (2015). Research of Object Recognition and Trajectory Matching. In *Computer Science and its Applications* (pp. 1071-1076). Springer.
- 86 Lee, S. K., Kim, E., Yoo, S., & Kim, H. (2013, July). Automated methodology for an e-health environment. In *Ubiquitous and Future Networks (ICUFN) Conference on* (pp. 395-400). IEEE.
- 87 Son, J., Kim, S., & Sohn, K. (2015). A multi-vision sensor-based fast local matching for challenging outdoor environments. *Expert Systems with Applications*, 42(1), 1-12.
- 88 Abusaeeda, O., Evans, J. P. O., & Downes, D. (2012). Color View Synthesis for Security X-ray Imaging. In *Proceedings of World Academy of Science (No. 64)*. World Academy of Science, Engineering and Technology.
- 89 Zhang, S., Tian, Q., Huang, Q., Gao, W., & Rui, Y. (2015). Multi-order visual partial-duplicate visual search. *Multimedia Systems*, 21(2), 229-241.
- 90 Verhoeven, G., Sevara, C., Karel, W., Ressler, C., Doneus, M., & Briese, C. Past: New. Good Practice in Archaeological Diagnostics: Non-invasive

- 91 Huang, J., & Diao, C. (2015, July). Flexible Hybrid Stereo Matching. In *Frontiers on Information Sciences, Machinery, Materials and Energy*. Atlantis P
- 92 Honnorat, N. (2013). *Curvilinear Structures Segmentation and Tackin* (Doctoral dissertation, Ecole Centrale Paris).
- 93 Sreyas, S. T., Kumar, J., & Pandey, S. (2012, December). Real time mos system. In *Proceedings of the Eighth Indian Conference on Compute Processing* (p. 53). ACM.
- 94 Peng, P., Shou, L., Chen, K., Chen, G., & Wu, S. (2014, July). The knowin; annotating places-of-interest in smartphone photos. In *Proceedings SIGIR conference on Research & development in information retrieva*
- 95 Somlyai, L. (2013, July). Mobil robot localization using RGB-D camera Cybernetics (ICCC), 2013 IEEE 9th International Conference on (pp. 1
- 96 Kuo, T. Y., Lo, Y. C., & Huang, S. N. (2013, July). Image forgery detectio tampering. In *Multimedia and Expo (ICME), 2013 IEEE International C*
- 97 Syaimaa-Solehah Mohd Radzi, S. N., Kadim, Z., & Woon, H. H. *Extract Frame Differencing, Ghost and Shadow Removal*.
- 98 Saleh, S. A. M., Suandi, S. A., & Ibrahim, H. (2015). Recent survey on cr counting for visual surveillance. *Engineering Applications of Artificial*
- 99 CARATA, L., & MANTA, V. THE INFLUENCE OF CHROMATIC AND LUMIN INVARIANT DESCRIPTORS.
- 100 Sergieh, H. M. (2014). *Search-based Automatic Image Annotation Us Photos* (Doctoral dissertation, Universit tsbibliothek der Universit t
- 101 Robas, C. C., Adoremos, J. M. A., Morales, K. S., Unida, J. C., & Macatar Recognition.
- 102 Biran, A., Reens, D., & Katz, E. (2012, November). Selection method fc detection algorithms. In *Electrical & Electronics Engineers in Israel (I Convention of* (pp. 1-4). IEEE.
- 103 Bekhet, S., Ahmed, A., & Hunter, A. (2014). DC-image for real time co Transactions on Engineering Technologies (pp. 513-527). Springer M
- 104 Khan, Y. D., Abid, A., Farooq, M. S., Abid, K., & Farooq, U. A QUALITAT EXTRACTION BASED ACTION RECOGNITION TECHNIQUES.
- 105 Huang, X. H. (2015). *Hardware/Software Co-Design Based Hierarchic Path Tracking With Obstacle Avoidance and Destination Reach of Cal*
- 106 Le, M. H., Vavilin, A., & Jo, K. H. (2012, October). Removing outliers of based on automatic context analysis and convex optimization. In *IEC Conference on IEEE Industrial Electronics Society* (pp. 4236-4241). IE
- 107 Pei, W., An, Z. J., Zhu, Y. Y., Jia, X., Zuo, X. W., & Wang, F. S. (2014, Nove recognition and retrieval system. In *Systems and Informatics (ICSAI)*,

Conference on (pp. 748-753). IEEE.

- 108 Liu, X., Zhang, Y., Zhang, S. Y., Wang, Y., Liang, Z. Y., & Ye, X. Z. (2015). Vehicles in high-resolution monitoring images. *Frontiers of Information Engineering*, 16, 346-357.
- 109 SAHZABI, V. A., & OMAR, K. B. (2015). A BIBLIOGRAPHY OF OBJECT CLASS OBJECT RECOGNITION BASED ON VISUAL ATTENTION. *Journal of The Information Technology*, 74(1).
- 110 Li, X. (2014). Visual navigation in unmanned air vehicles with simultaneous (SLAM).
- 111 Zheng, S., Zhang, B., & Yang, H. (2015). Multi-object Template Matching Histograms. In *Image and Graphics* (pp. 555-564). Springer International.
- 112 Ramachandran, R., & Jose, A. (2014). Logo Matching And Recognition. *Journal of Information Technology*, 3(9), 981-986.
- 113 Romadi, M., Thami, R. O. H., Chiheb, R., & Romadi, R. (2013, November). Recognition of road signs. In *ISKO-Maghreb, 2013 3rd International Symposium on Information Systems and Knowledge Management*.
- 114 Sahzabi, V. A., & Omar, K. (2013). Object Class Recognition Using SIFT and Skeletons. In *Intelligent Robotics Systems: Inspiring the NEXT* (pp. 25-30). Heidelberg.
- 115 Grundmann, T. (2012). *Scene Analysis for Service Robots* (Doctoral dissertation, Albert-Ludwigs-Universität Freiburg).
- 116 Cheng, Y., Liang, L., & Pu, J. (2012, August). A geometric correction algorithm with non-uniform speed by linear CCD camera. In *Automation and Logistics International Conference on* (pp. 368-372). IEEE.
- 117 Wang, W., & Gwon, O. (2012). An X-ray Image Panorama System Using SIFT and Perception-Based Image Enhancement. *Journal of Information Technology*, 15(5), 569-576.
- 118 Muralidharan, R. Two-Dimensional Object Recognition using SVM and Global Features.
- 119 Zhang, M., Li, J., Wang, N., & Gao, X. (2015). Recognition of facial sketches using SIFT. *Journal of Information Technology*, 149, 1188-1197.
- 120 Shivanna, V. (2011). *Real-Time Object Identification using SURF Key-Points* (PhD thesis, TU Delft, Delft University of Technology).
- 121 Nasri, S., Behrad, A., & Razzazi, F. (2015). A novel approach for dynamic object tracking using contour-based similarity images. *International Journal of Computer Science and Information Technology*, 662-685.
- 122 SenGupta, A. A Formal Study of Video Segmentation.
- 123 Liu, Y. J., Wan, R. Q., Wang, Z. R., & Jiang, C. C. (2014, July). An Improved Region-Based on Region of Interest. In *Advanced Materials Research* (Vol. 9, pp. 1-4).
- 124 Lemaitre, G., Vargiu, E., Fernández, J. A. L., & Miralles, F. Real-Time 2D Object Tracking Based Tracking in Video Sequences.

- 125 Tahoun, M., Shabayek, A. E. R., & Hassanien, A. E. Matching and Co-Registration Using Local Features.
- 126 Abughalieh, K., Qadi, W., Melkon, K., Fakes, B., Sababha, B., & Al-Moussawi. A portable object tracking system. In Information and Communication Technology International Conference on (pp. 1-5). IEEE.
- 127 Gunura, K., & Eugster, D. High-Speed Motion Tracking for Robot Control.
- 128 Lang, M. (2012). MPG-A Framework For Partial Fast Forward Perceptual Learning Under Uncertainty. *TSp*, 3(R6), 3.
- 129 Chen, S. W., Chung, Y. H., Chien, H. F., & Chang, C. W. (2013). A SURF Feature-Based Recognition System for Distinctive Architectures. In Information Technology and Applications (pp. 111-119). Springer Netherlands.
- 130 Chen, C., Wang, X., & Zhou, S. (2012, September). Improved SURF Algorithm for Object Tracking. In International Conference on Electronic & Mechanical Engineering and Information Technology (pp. 1-5). Atlantis Press.
- 131 Karimaa, A. (2014). A Survey of Hardware Accelerated Methods for Image Processing on Camera. In Advances in Systems Science (pp. 523-530). Springer.
- 132 Gebru, T., Hazi, O., & Yeh, V. Mobile Wine Label Recognition.
- 133 Chowdhary, C. L., Dhanuka, R., Kumari, A., & PVSSR, C. M. (2012). Depth-based Facial Expression Analysis between Age Groups and Recognition of 3D Faces.
- 134 Huang, P., Cai, J., Meng, Z., Hu, Z., & Wang, D. (2013). Novel Method of Feature Point Tracking for Tethered Space Robots. *Journal of Aerospace Technology and Applications*, 04014039.
- 135 Tahoun, M., Shabayek, A. E. R., Reulke, R., & Hassanien, A. E. (2015). Content-Based Image Retrieval Using Images Based on Invariant Local Features. In Intelligent Systems' 2015 (pp. 1-10). International Publishing.
- 136 Le, M. H., Vavilin, A., Yang, S. M., & Jo, K. H. (2012). Enhancing point cloud registration of baseline images based on convex optimization. In Advanced Research in Artificial Intelligence (pp. 216-225). Springer Berlin Heidelberg.
- 137 Hsieh, S. L., Chen, C. C., & Chen, C. R. (2014). A novel approach to detect objects in images using multiple hash tables. *Multimedia Tools and Applications*, 1-18.
- 138 Bu, F. (2015). Human Behavior Recognition based on Conditional Random Fields and Visual-Words Semantic Model. *International Journal of Signal Processing and Pattern Recognition*, 8(1), 23-32.
- 139 Su, C. R., & Chen, J. J. (2015). Reconfigurable content-based image retrieval using neural networks. *International Journal of Ad Hoc and Ubiquitous Computing*.
- 140 Romadi, M., Thami, H., Oulah, R., Romadi, R., & Chiheb, R. (2014, May). Road sign detection in a video stream based on the shape of the panels. In Information and Applications (SITA-14), 2014 9th International Conference on (pp. 1-5). IEEE.
- 141 Khusheef, A. S. (2013). Investigation on the mobile robot navigation in a dynamic environment.

- 142 Cooper, T. Make and Model Recognition using Android.
- 143 Fei, W., Gaobo, Y., Leida, L., Ming, X., & Dengyong, Z. (2014). Detectio video retargeting using forensics hash. Security and Communicator
- 144 Yun, D., Chang, H., & Lakshman, T. V. (2014, November). Accelerating localization by distributing image processing over space and time. I ACM Symposium on Virtual Reality Software and Technology (pp. 77-
- 145 Chen, X., & Meng, Q. (2013, October). Vehicle Detection from UAVs b Shape Model. In Systems, Man, and Cybernetics (SMC), 2013 IEEE Int 3139-3144). IEEE.
- 146 Liu, J., Du, J., & Wang, X. (2011). Internet tourism scene classification v transfer learning.
- 147 Gutierrez, A. N. (2014). Cloud-Induced Uncertainty for Visual Navigat 43). AIR FORCE INSTITUTE OF TECHNOLOGY WRIGHT-PATTERSON AF ENGINEERING AND MANAGEMENT.
- 148 Tartaro Dizmen, D. (2013). Algorithms for people re-identification fro skeletal information.
- 149 Biswas, A. (2013). Development of Image Processing and Pattern Ma Biomedical Images and Biometrics Fingerprint Recognition (Doctora
- 150 Tahoun, M., Hassanien, A. E., & Reulke, R. (2015). Registration of Opti Images Using Local Features and Non-rigid Geometric Transformati Geosciences (pp. 249-261). Springer International Publishing.
- 151 Valenzuela, R. E. G., Schwartz, W. R., & Pedrini, H. (2014). Linear dimer scale invariant feature transformation and speeded up robust featu Electronic Imaging, 23(3), 033017-033017.
- 152 Tyagi, V. K. (2004). Object Recognition on Android Mobile Platform L Journal of Computer Vision, 60, 91-110.
- 153 Bebis, G., Boyle, R., Parvin, B., Koracin, D., Li, B., Porikli, F., ... & Gotz, D Visual Computing: 9th International Symposium, ISVC 2013, Rethymr 2013. Proceedings (Vol. 8034). Springer.
- 154 Yan, Z., & Liang, W. (2014). A Target Tracking Algorithm Based on Im Journal of Software Engineering and Applications, 7(13), 1065.
- 155 Pinho, F., Carvalho, A., & Carreira, R. (2015). Improving geolocation b Analysis. In Geoinformatics for Intelligent Transportation (pp. 213-2: Publishing.
- 156 Lemaitre, G., Vargiu, E., Fernāndez, J. A. L., & Miralles, F. Face Detectio Tracking in Real-Time.
- 157 Evans, M. H. (2012). Tactile Discrimination with Whiskers.
- 158 Feng, Y., Dai, F., & Zhu, H. H. Evaluation of feature-and pixel-based m measurements in temporary structure monitoring. Journal of Civil St

- 159 BRUNO, I. A., ARDIZZONE, C. S. P. E., & GAGLIO, C. S. P. S. TEXTURE AND ANALYSIS FOR ADVANCED IMAGE INSPECTION.
- 160 Olaode, A., Naghdy, G., & Todd, C. (2014). Unsupervised Classification. *International Journal of Image Processing (IJIP)*, 8(5), 325.
- 161 Behloul, A., & Saadna, Y. (2014). A Fast and Robust Traffic Sign Recognition. *Journal of Innovation and Applied Studies*, 5(2), 139-149.
- 162 Dandachi, G., Assoum, A., Elhassan, B., & Dornaika, F. (2015, April). Multi-scale augmented reality for features detection. In *Digital Information and Communications Technology and its Applications (DICTAP), 2015 Fifth International Conference on*
- 163 Bao, W., Ji, L. X., Gao, S. L., Li, X., & Liu, L. X. (2013, October). Video Compression of Spatio-temporal Features. In *Applied Mechanics and Materials (Vols. 267-270)*
- 164 Mukherjee, J., Aswatha, S. M., Mondal, P., Mukherjee, J., & Mitra, P. (2014). Feature Detection for Image Sharing Systems. In *Proceedings of the 2014 International Conference on Vision Graphics and Image Processing* (p. 4). ACM.
- 165 Pourmohammad, A., Poursajadi, S., & Karimifar, S. (2013, September). Contrast enhancement improvement based on contrast matching. In *Machine Vision and Image Processing, 8th Iranian Conference on* (pp. 296-299). IEEE.
- 166 Zhang, S., Qin, Z., & Fang, D. (2011, November). Improved SIFT algorithm for feature detection. In *Seventh International Symposium on Multispectral Image Processing (MIPPR2011)* (pp. 80040E-80040E). International Society for Optics and Photonics.
- 167 Tsai, M. J., & Chang, H. S. (2013, September). The Design of a Hybrid Feature Extraction for Images. In *Semantic Computing (ICSC), 2013 IEEE Seventh International Conference on* (pp. 387-390). IEEE.
- 168 Ghannoum, A., Ghafar-Zadeh, E., & Sawan, M. (2014). Image processing for visual intra-cortical stimulator. *IET Image Processing*, 8(12), 846-855.
- 169 Hartmann, J. M., Klussendorff, J. H., & Maehle, E. (2013, September). A New Feature Descriptors for Visual SLAM. In *Mobile Robots (ECMR), 2013 European Conference on* (pp. 387-390). IEEE.
- 170 ACE, P. VYSOKE U?CEN? TECHNICKEV BRN?E.
- 171 Khan, N., McCane, B., & Mills, S. (2015). Better than SIFT?. *Machine Vision and Image Processing*.
- 172 Al-Hamad, A. (2014). Mobile Mapping Using Smartphones.
- 173 Rasool, S., Sourin, A., Pestrikov, V., & Kagda, F. (2014, February). Modeling and interaction with haptic devices in image-based virtual environments. In *Haptics: Virtual Reality and Teleoperation* (pp. 403-408). IEEE.
- 174 Bandara, A. M. R. R., Ranathunga, L., & Abdullah, N. A. (2013, December). Locally salient dither pattern with a spatial-chromatic histogram. In *Intelligent Information Systems (ICIIS), 2013 8th IEEE International Conference on* (pp. 304-307). IEEE.
- 175 Pestrikov, V., & Sourin, A. (2013, October). Towards Making Panoramic

- Arthroscopy. In Cyberworlds (CW), 2013 International Conference on
- 176 Tavakol, A., & Soltanian, M. (2012, January). Fast Feature-Based Temporal Efficient Keypoint Extraction. In *Advanced Materials Research* (Vol. 34)
- 177 Hong, D., & Yang, L. A Algorithm for Static Gesture recognition Using features.
- 178 San Segundo, P., & Artieda, J. (2015). A novel clique formulation for the problem. *Applied Intelligence*, 1-18.
- 179 Hu, K. C., Lin, F. Y., Chien, C. C., Tsai, T. S., Hsia, C. H., & Chiang, J. S. (2013). A stitching system for automotive applications. In *Consumer Electronics* IEEE International Conference on (pp. 203-204). IEEE.
- 180 Iturbe, M., Kõhm, O., & Uribeetxeberria, R. SURF and MU-SURF descriptor application in soft-biometric tattoo matching applications.
- 181 Duan, H., & Luo, Y. (2013, November). Extracting of Five characteristic Gesture recognition. In *Applied Mechanics and Materials* (Vol. 380, p
- 182 CAI, J. J. (2014). Accuracy improvement of image database positioning
- 183 Chen, P., & Min, Y. (2014). Measurement of Vehicle Parking Deviation Vision. *Open Automation and Control Systems Journal*, 6, 46-55.
- 184 Luo, R., & Cheng, Y. (2014, July). The algorithm of descriptor based on Language and Image Processing (ICALIP), 2014 International Confer
- 185 He, H., Chen, X., Liu, B., & Lv, Z. (2014). A Sub-Harris Operator Couple Matching in Low-altitude Photogrammetry. *International Journal of Signal Processing and Pattern Recognition*, 7(3), 395-406.
- 186 Senthil Kumar, T. (2014). Certain soft computing techniques for detecting vehicles.
- 187 Kim, D., Rho, S., Jun, S., & Hwang, E. (2015). Classification and indexing image repository for spatio-temporal landmark recognition. *Integrative Engineering*, 22(2), 201-213.
- 188 Muralidharan, R. (2014). Object Recognition Using K-Nearest Neighbors Generated From the Features of an Image. *network*, 2(8).
- 189 Roy, K., Rao, G. S. V., & Anuncia, S. M. (2013, December). A learning based detection from videos. In *Open Systems (ICOS)*, 2013 IEEE Conferen
- 190 Schmidt, S. (2011). A non-parametric pipeline to extend the dynamic (Doctoral dissertation, Applied Science: School of Computing Scienc
- 191 Li, X., Larson, M., & Hanjalic, A. (2015). Global-Scale Location Prediction Geo-Visual Ranking. *Multimedia, IEEE Transactions on*, 17(5), 674-68
- 192 Getahun, T. (2014). Ceilbot Development and Integration.
- 193 Zawbaa, H. M., Abbass, M., Hazman, M., & Hassenian, A. E. (2014). An Recognition System Based on Shape and Color Features. In *Advance*

- Technologies and Applications (pp. 278-290). Springer International
- 194 Chen, Y. H., Lin, H. Y. S., & Su, C. W. (2014, August). Full-Frame Video S Matching. In Intelligent Information Hiding and Multimedia Signal Processing International Conference on (pp. 361-364). IEEE.
- 195 Xiong, X., & Choi, B. J. (2013). Calculation of Descriptor of Interest Point Localization Estimation.
- 196 Straub, J. (2015, May). Using a blackboard architecture for expert system targets from symptoms. In SPIE Defense+ Security (pp. 945408-945 Optics and Photonics).
- 197 Llorach Sánchez, R. (2014). Identification of paintings from camera-p
- 198 Wang, Y., Lu, K., & Zhai, R. (2014, October). Challenge of multi-camera. Signal Processing (CISP), 2014 7th International Congress on (pp. 32
- 199 Monserrat, C., Rupérez, M. J., Alcañiz, M., & Mataix, J. (2014). Markerless for guided external eye surgery. Computerized Medical Imaging and
- 200 Modi, K. (2011). Bridge Monitoring System Using Embedded Compu
- 201 ÖZGEN, C. (2011). DETECTING AND TRACKING MOVING OBJECTS WITH TIME (Doctoral dissertation, MIDDLE EAST TECHNICAL UNIVERSITY).
- 202 Su, F., Jiang, W., Zhang, J., Wang, H., & Zhang, M. (2015). A local feature image prediction. IBM Journal of Research and Development, 59(2/3).
- 203 Ding, J. J., Fu, S. W., & Lee, P. X. (2014). Point, Harris Corner, and SIFT F Algorithms. International Journal of Science and Engineering, 4(2), 24
- 204 Willy, D., Noviyanto, A., & Arymurthy, A. M. (2013, September). Evaluation in the songket recognition. In Advanced Computer Science and Information 2013 International Conference on (pp. 393-396). IEEE.
- 205 Mabrouk, A. B., Najjar, A., & Zagrouba, E. (2014, January). Image Flow New Method for Color Feature Extraction. In International Conference and Applications.
- 206 Elsalamony, H. A. (2014). Proposed Method for Detecting Objects. In Computer Applications, 107(2).
- 207 Czuni, L., Kiss, P. J., Gal, M., & Lipovits, A. (2013, June). Local feature based handwritten archive documents. In Content-Based Multimedia Indexing International Workshop on (pp. 179-184). IEEE.
- 208 Shen, K., & Cai, Y. (2013). A novel online defect detection method based castings. Insight-Non-Destructive Testing and Condition Monitoring,
- 209 Solorza, S., & Álvarez-Borrego, J. (2015). Position and rotation-invariant system by binary rings masks. Journal of Modern Optics, 62(10), 85
- 210 Božić, I., & Lazic, I. Real Time Method for Image Recognition and Cate
- 25.

- 211 Chiang, C. K., Liu, C. H., Duan, C. H., & Lai, S. H. (2013). Learning Compact Representation for Image and Video Categorization. *Image Process* 22(12), 4775-4787.
- 212 Li, Z., Chen, L., Peng, J., & Song, L. An Approach to Interesting Objects Image Sequences for Fisheries Management.
- 213 Bind, V. S., Muduli, P. R., & Pati, U. C. (2013). A Robust Technique for Face Mosaicing using Image Fusion.
- 214 Jain, A., Srivastava, S., & Soman, S. (2013, December). Transfer learning for image classification. In *Image Information Processing (ICIIP), 2013 IEEE Conference on* (pp. 580-585). IEEE.
- 215 He, Y. (2013). Localization using natural landmarks off-field for robot navigation (dissertation).
- 216 Yuasa, K., & Wada, T. (2013, December). Keypoint Reduction for Smartphone Multimedia (ISM), 2013 IEEE International Symposium on (pp. 351-355).
- 217 Setkov, A., Gouiffès, M., & Jacquemin, C. (2013, June). Color invariant feature extraction and geometric correction. In *Proceedings of the 6th International Conference on Computer Vision/Computer Graphics Collaboration Techniques and Applications*
- 218 Kuzub, J., Mebarki, Y., & Whitehead, A. (2011, May). Improved Pressure Measurement Using Natural Feature Tracking and Piecewise Linear Fitting. In *Robot Vision (CRV), 2011 Canadian Conference on* (pp. 48-55). IEEE.
- 219 Johari, H., Kaushik, V., & Upadhyay, P. K. (2010). Developing 3D Viewfinder with its Occlusion Ratio. *International Journal of Image Processing*, 4(1), 1-6.
- 220 Bdiwi, M., & Suchy, J. (2012, May). Integrated Vision/Force Robot System for Retrieving of Imprecisely Placed Objects. In *Robotics; Proceedings of the 2012 IEEE Conference on* (pp. 1-6). VDE.
- 221 Behloul, A. (2014, September). A blind robust image watermarking using natural features. In *Proceedings of the 6th International Conference on Management and Information Systems (ICMIS) EcoSystems* (pp. 139-145). ACM.
- 222 Strat, S. T. (2013). Analysis and interpretation of visual scenes through natural features (Doctoral dissertation, Université de Grenoble; Universitatea Politehnica de Timișoara)
- 223 Areeyapinan, J., Kanongchaiyos, P., & Kawewong, A. (2014). Using Multiple Features for Cosmetic Image Retrieval. *Engineering Journal*, 18(4), 97-111.
- 224 Wang, R., Zhu, Z., & Zhang, L. (2015). Improving scale invariant feature descriptors with shape-color alliance robust feature. *Journal of Electronic Information Technology*, 13(1), 033002-033002.
- 225 Yin, Z., Yuan, Y., Zhao, Y., & Song, J. (2013, October). An improved method for object detection. In *Computer Science and Network Technology (ICCSNT), 2013 3rd International Conference on* (pp. 96-100). IEEE.
- 226 Ondrousek, V., Kolomaznik, J., & Vytecka, M. (2014, December). Recognition of objects in images using natural features.

- conveyor belt using graph matching algorithms. In Mechatronics-Me International Conference on (pp. 715-720). IEEE.
- 227 Le, M. H., & Jo, K. H. (2012). Building face reconstruction from sparse Advanced Intelligent Computing Theories and Applications. With Asl (pp. 565-572). Springer Berlin Heidelberg.
- 228 JARIWALA, J. J. (2013). Mobile Mapping by integrating Structure from I Navigation Satellite System.
- 229 Florian, D., Křck, H., Plankensteiner, K., & Glavanovics, M. (2013). Auto registration techniques for infrared imaging of microelectronic devi and Technology, 24(7), 074020.
- 230 Rasool, S., Sourin, A., Pestrikov, V., & Kagda, F. (2014). Virtual Knee Ar Devices and Real Surgical Images. In Digital Human Modeling. Applic Ergonomics and Risk Management (pp. 436-447). Springer Internati
- 231 Fouad, M. M. M., Zawbaa, H. M., El-Bendary, N., & Hassanien, A. E. (20 Nile Tilapia fish classification approach using machine learning tech Systems (HIS), 2013 13th International Conference on (pp. 173-178).
- 232 Munaro, M., & Ghidoni, S. Deniz Tartaro Dizmen.
- 233 Roy, K., & Rao, G. S. V. (2012, October). ART based clustering of bag- classification. In Image and Signal Processing (CISP), 2012 5th Intern 841-846). IEEE.
- 234 Ibrahim, M., El-gendy, O., & Farouk, M. Distributed 3D Object Recogn Smartphones.
- 235 Kamencay, P., Breznan, M., Jarina, R., & Zachariasova, M. Estimation a Sparse Disparity Map for 3D Reconstruction.
- 236 Chen, W. M., Lin, Y. L., & Hsieh, Y. H. (2013). An Adaptive Particle Filter Face Tracking. Journal of Software Engineering and Applications, 6(0
- 237 Aufderheide, D., Edwards, G., & Krybus, W. (2015). Visual-Inertial 2D Affine Photometric Model. In Developments in Medical Image Proces Vision (pp. 297-317). Springer International Publishing.
- 238 Selvanayaki, K. S., & Rm, S. (2006). AN IMPROVED APPROACH FOR DE CLASSIFICATION OF VEHICLES IN VIDEO USING SUPPORT VECTOR MA
- 239 Takahisa, K., Sun, Z., & Micheletto, R. (2013). A Fast and Precise HOG- Support System Capable to Recognize Pedestrian and Estimate The Image Analysis and Processing ICIAP 2013 (pp. 20-29). Springer Be
- 240 Yusufu, T., Wang, Y., & Fang, X. (2013, December). A Video Text Detec Multimedia (ISM), 2013 IEEE International Symposium on (pp. 522-52
- 241 Singla, S., & Sharma, R. Medical Image Stitching Using Hybrid Of Sift.
- 242 Shakunthaladevi, M., & Revathi, R. B. (2014, February). Real time hand AVR microcontroller. In Information Communication and Embedded International Conference on (pp. 1-6). IEEE.

- 243 Srivastava, S. (2015). SIFT Vs SURF: Quantifying the Variation in Trans arXiv:1504.06740.
- 244 Xiong, X., & Choi, B. J. (2013). Estimation of Relative Self-Localization
- 245 Gansawat, D., & Sinthupinyo, W. (2011, September). Panorama image phones. In Mobile IT Convergence (ICMIC), 2011 International Confer
- 246 Carreira, L., Singh, S., Correia, P. L., & Soares, L. D. (2015). Personal ic and incomplete high resolution palmprints. IET Biometrics.
- 247 Isikdogan, F., & Salah, A. A. (2013, July). Affine invariant salient patch retrieval. In Image Analysis for Multimedia Interactive Services (WIAM Workshop on (pp. 1-4). IEEE.
- 248 Zhao, Y., Hong, R., & Jiang, J. (2015). Visual summarization of image c Neurocomputing.
- 249 BENOIS-PINEAU, M. J., PRECIOSO, M. F., MERALDO, M. B., BRES, M. S., & QUENOT, M. G. Analyse et Interprétation de Scènes Visuelles par A
- 250 Wefelscheid, C. (2013). Monocular Camera Path Estimation Cross-lin Structure (Doctoral dissertation, Universitätsbibliothek der Technisc
- 251 Mavridou, E., Crowley, J. L., & Lux, A. (2014). Multiscale Shape Descrip and Fourier Transform. In Image Analysis and Recognition (pp. 46-5 Publishing.
- 252 Grand-Brochier, M., Tilmant, C., & Dhome, M. (2010). Method of inter based C-HOG local descriptor. In Advances in Visual Computing (pp Heidelberg.
- 253 Abdelhady, A. S. (2013). Vehicle Classification For Automatic Traffic E dissertation, The American University in Cairo).
- 254 Lo, T. S. (2013). A Mobile Price Comparison System for Traditional St Recognition.
- 255 Ibrahim, M. T. (2012). Novel Filtering Methods for Image and Video P (Doctoral dissertation, Ryerson University).
- 256 Zhao, Y. (2012). Automatic multiple images stitching algorithm rese Yingyong(Computer Engineering and Applications), 48(34), 152-157
- 257 RAJAMOHAN, D. (2015). Persistent Surveillance System for Gathering Information using Aerial and Land Based Sensors (Doctoral dissert: Information Technology, Hyderabad).
- 258 Polishchuk, E. Recognition of panorama parts using OpenCV.
- 259 Chen, C. C., & Hsieh, S. L. (2015). Using binarization and hashing for of Visual Communication and Image Representation, 30, 86-93.
- 260 Tanathong, S., & Lee, I. (2014). Using GPS/INS data to enhance image triangulation. Computers & Geosciences, 72, 244-254.

- 261 Blommestein, V., & Lloyd, D. (2014). Automating a labour performance assessment: an evaluation of methods for a computer vision based dissertation, Stellenbosch: Stellenbosch University).
- 262 Zawbaa, H. M., Hazman, M., Abbass, M., & Hassanien, A. E. (2014, December). Object classification using random forest algorithm. In Hybrid Intelligent Systems International Conference on (pp. 164-168). IEEE.
- 263 Catao, M. A., & Climent, J. (2013). Robust Keypoint Detection Using Morphology and Its Applications to Signal and Image Processing (pp. 1-10). Heidelberg.
- 264 Liu, J., Meng, F., Mu, F., & Zhang, Y. (2014, August). An improved image retrieval method based on SIFT algorithm and saliency map. In Fuzzy Systems and Knowledge Discovery International Conference on (pp. 766-770). IEEE.
- 265 Aguilar, W., & Angulo Bahn, C. (2014). Estabilizaci3n de v3deo en m3vil aplicaci3n en la detecci3n de caras.
- 266 Huang, Z., & Ren, F. (2013, December). Facial expression recognition model & scale-invariant feature transform. In System Integration (SI) Symposium on (pp. 94-99). IEEE.
- 267 Dong, Z. J., Ye, F., Li, D., & Huang, J. X. (Liu, J., Meng, F., Mu, F., & Zhang, Y. (2014, August). An improved image retrieval method based on SIFT algorithm and saliency map. In Fuzzy Systems and Knowledge Discovery (FSKD), 2014 11th International Conference on (pp. 766-770). IEEE.2012). PCB matching based on SURF. Circuit World, 38(3), 153-158.
- 268 Padmavathi, G., Muthukumar, M., & Kumar Thakur, S. (2010, September). Component analysis feature detection for underwater images. In Advances in Intelligent and Soft Computing (Vol. 129, pp. 953-958).
- 269 Abusaeeda, O., Evans, J. P. O., Downes, D., & Chan, J. W. (2011, December). Object classification employing image synthesis for 3D security X-ray imaging. In Signal Processing and Information Technology (ISSPIT), 2011 IEEE International Symposium on (pp. 161-166). IEEE.
- 270 Aguilar, W. G., & Angulo, C. (2014, February). Robust video stabilization for low-cost micro aerial vehicles. In Multi-Conference on Systems, Signals, and Applications (MSSA), 2014 11th International (pp. 1-6). IEEE.
- 271 Kj3r, J. (2011). Bachelor Thesis A Qualitative Analysis of Two Automated Object Detection Algorithms in a Real World Scenario Using Point Clouds from the Kinect. Danmarks Tekniske Universitet, Copenhagen.
- 272 Vytecka, M., Ondrouek, V., & Kolomaznik, J. (2014). The Database Databases Suitable for Object Recognition. MENDEL.
- 273 Jabnoun, H., Benzarti, F., & Amiri, H. (2014, August). Visual substitution for object classification based on SIFT description. In Soft Computing and Pattern Recognition International Conference on (pp. 300-305). IEEE.
- 274 Strat, S. T., Benoit, A., Lambert, P., & Caplier, A. (2012, October). Retrieval for semantic concept detection in videos. In Image Processing Theory and Applications (IPTA), 2012 3rd International Conference on (pp. 319-324). IEEE.

- 275 Chen, Y., Sun, Q., Xu, H., & Geng, L. (2012). Matching Method of Remo SURF Algorithm and RANSAC Algorithm. *Jisuanji Kexue yu Tansuo*, 6('
- 276 Huang, P. S., Huang, C. P., Hsieh, C. H., Hwang, B. J., Chiou, C. Y., & Hsi vision-based system to help senior citizens for memory recall of ob Instrumentation, Measurement, Computer, Communication and Con Conference on (pp. 357-360). IEEE.
- 277 Tahoun, M., Shabayek, A., Hassanien, A., & Reulke, R. (2014). An evalu satellite images. In *Proceedings of the 37th international conference signal processing (TSP)* (pp. 695-700).
- 278 Ahn, H., Lee, Y. H., Lee, J. H., & Cho, H. J. (2014). A low complexity imag feature matching in mobile environments. *Journal of Computer Virol* 10(2), 129-136.
- 279 Straub, J. (2014, June). Detection of small targets and their characteri formation using an image feature network-based object recognition Security (pp. 909203-909203). International Society for Optics and F
- 280 Charpentier, G. (2011). Accurate 3D Rigg ed Avatar Generation with a TRI-2011). Retrieved from Bangor University: <http://www.bangor.ac>. 2011-ACCURATE 3D RIGGED AVATAR GENERATION WITH A KINECT. p
- 281 Hamissi, M., & Faez, K. (2013). Real-time hand gesture recognition ba human robot interaction. *International Journal of Electrical and Comp* 770-778.
- 282 Carreira, L., Correia, P. L., & Soares, L. D. (2014, March). On high resc Biometrics and Forensics (IWBF), 2014 International Workshop on (p
- 283 Fernandez, C., Llorca, D. F., Sotelo, M. A., Daza, I. G., Hellan, A. M., &  vision-based blind spot warning system: Experiments with motorcyc conditions. *International Journal of Automotive Technology*, 14(1), 11
- 284 Hjelmare, F., & Rangsj, J. (2012). Simultaneous Localization And Map Sparse Feature Indoor Environment.
- 285 Ensafi, S., Lu, S., Kassim, A., & Tan, C. L. (2014, August). A Bag of Wor Classification of HEp-2 Cell Images. In *Pattern Recognition Techniqu Immunofluorescence Images (ISA)*, 2014 1st Workshop on (pp. 29-3
- 286 Yang, Y. H., & Xie, Y. Q. (2013, September). Feature-based GDLOH de lung image. In *Applied Mechanics and Materials* (Vol. 333, pp. 969-9
- 287 Aguilar, W. G., & Angulo, C. (2014). Real-time video stabilization with micro aerial vehicles. *EURASIP Journal on Image and Video Processin*
- 288 Chen, C. Y., Zhang, J. H., Chen, T. I., & Chen, C. F. (2013, November). 3I cameras using constrained search window and bundle adjustment. *Computing New Zealand (IVCNZ)*, 2013 28th International Conferenc
- 289 Little, S., Ferguson, R., & Roger, S. (2012). Finding and reusing learnin similarity search and social networks. *Technology, Pedagogy and Ec*

- 290 Li, X., Aouf, N., & Richardson, M. (2014). Comparative analysis on SIFT infrared aerial imaging. *International Journal of Applied Pattern Recognition*, 1(1), 1-10.
- 291 Gonzalez Valenzuela, R. E., Robson Schwartz, W., & Pedrini, H. (2012). Feature reduction through PCA over SIFT and SURF descriptors. In *Cybernetics and Systems: 2012 IEEE 11th International Conference on* (pp. 58-63). IEEE.
- 292 Kang, Z., Jia, F., & Zhang, L. (2014). A Robust Image Matching Method Based on BaySAC. *Photogrammetric Engineering & Remote Sensing*, 80(11), 1-10.
- 293 Kamencay, P., Zachariasova, M., Breznan, M., Jarina, R., Hudec, R., Beranek, J. (2014). A New Approach for Disparity Map Estimation from Stereo Image Sequences Using Segmentation Algorithm. *International Journal of Modern Engineering Research*, 4(1), 3206.
- 294 Grand-brochier, M., Tilmant, C., & Dhome, M. (2013). REFA: A Robust Feature Descriptor for Local Description of Interest Points. In *Computer Vision, Imaging and Graphics: Theory and Applications* (pp. 225-239). Springer Berlin Heidelberg.
- 295 Liu, Y. F., Cho, S., Spencer Jr, B. F., & Fan, J. S. (2014). Concrete Crack Analysis Using Image Processing and 3D Scene Reconstruction. *Journal of Computational and Graphical Sciences*, 1(1), 1-10.
- 296 Zhou, H., Pan, Y., & Zhang, Z. (2012, October). A speeded-up affine invariant feature descriptor. In *Computer Vision and Signal Processing (CISP), 2012 5th International Congress on* (pp. 1-5). IEEE.
- 297 Goh, K. M., Mokji, M. M., & Abu-Bakar, S. A. R. (2012). Surf based image matching using angle of viewpoints using rectification and simplified orientation correction. *Science, Engineering and Technology*, 68, 1243-1247.
- 298 Tao, L., Jing, X., Sun, S., Huang, H., Chen, N., & Lu, Y. (2013, December). A robust feature descriptor for image matching. In *Granular Computing (GrC), 2013 IEEE International Conference on* (pp. 286-290). IEEE.
- 299 Mavridou, E., Hoang, M. D., Crowley, J. L., & Lux, A. (2014, August). Scale-invariant transform as a robust image descriptor. In *Pattern Recognition (ICPR), 2014 IEEE International Conference on* (pp. 3993-3998). IEEE.
- 300 Sun, Q., & Zhang, J. (2014). Parallel Research and Implementation of Feature Extraction Based on Optimized SIFT. *TELKOMNIKA Indonesian Journal of Electrical Engineering*, 11(1), 1131.
- 301 Loescher, T., Lee, S. Y., & Wachs, J. P. (2014, October). An augmented feature descriptor for telementoring. In *Systems, Man and Cybernetics (SMC), 2014 IEEE International Conference on* (pp. 2341-2346). IEEE.
- 302 Hossen, J., Jacobs, E., & Chari, S. (2013, June). Real-time algorithms for object classification using a pyroelectric sensor. In *SPIE Defense, Security, and Sensing* (pp. 871103). International Society for Optics and Photonics.
- 303 Mayurathan, B., Ramanan, A., Mahesan, S., & Pinidiyaarachchi, U. A. J. (2014). A Compact Visual Codebook for Object Recognition. *International Journal of Computer Science and Information Technology*, 7(1), 31.
- 304 LIU, J., DU, J., & WANG, X. (2013). Research on the Robust Image Representation Method. *Journal of Computer Science and Information Technology*, 1(1), 1-10.

- Natural Scene Categorization. Chinese journal of Electronics, 22(2), 3
- 305 Clemons, J. L. (2013). Computer architectures for mobile computer v
dissertation, The University of Michigan).
- 306 Ji, Z., Zhou, F., Tian, X., Jiang, R., & Chen, Y. (2013, March). Probabilistic
ORB feature. In Information Science and Technology (ICIST), 2013 Int
300-304). IEEE.
- 307 Xiong, X., & Choi, B. J. (2013). Comparative Analysis of Detection Algori
Features in Image Processing. International Journal of Fuzzy Logic and
284-290.
- 308 Attard, J., Montebello, M., & Debattista, J. (2012). White cane device: A
challenged people. MOBILE LEARNING 2012, 43.
- 309 Stojesics, D., Somlyai, L., & Molnar, A. (2013, July). Unmanned aerial v
3D aerial image reconstruction. In Computational Cybernetics (ICCC)
Conference on (pp. 321-326). IEEE.
- 310 Ahmed, M. S., Caparrelli, F., & Saatchi, R. (2012). Vision based object
by a wireless connected distributed robotic systems. In ELCVIA: Elec
Vision and Image Analysis (Vol. 11, pp. 0054-67).
- 311 Emde, M., Sondermann, B., & Rossmann, J. (2014). A Self-Contained L
Terrestrial Applications and Its Use in Space Environments. i-SAIRAS
- 312 Le, M. H., & Jo, K. H. (2011). Building detection and 3D reconstruction
camera. In Computational Collective Intelligence. Technologies and A
Springer Berlin Heidelberg.
- 313 Areeyapinan, J., Kanongchaiyos, P., & Kawewong, A. (2013, September)
for khon image retrieval. In Culture and Computing (Culture Computi
Conference on (pp. 33-38). IEEE.
- 314 Wang, W., Zhang, Y., Guoping, L., Yan, S., & Jia, H. (2013, November).
of the scale invariance feature transform on gpus. In High Performan
Communications & 2013 IEEE International Conference on Embedde
(HPCCEUC), 2013 IEEE 10th International Conference on (pp. 93-100)
- 315 Zhang, J., Zhang, K., Niu, W., & Huang, J. (2013). SAR image automatic
SIFT and Mahalanobis distance. In Proceedings of the International C
Engineering and Applications (IEA) 2012 (pp. 445-452). Springer Lor
- 316 Lu, P. (2013). Rotation Invariant Registration of 2D Aerial Images Usin
- 317 Couto, L. N., & Osório, F. S. (2012, May). Autonomous self-localization
reference point based computer vision. In Critical Embedded System
Brazilian Conference on (pp. 1-5). IEEE.
- 318 Wang, E., & Yan, W. (2014). iNavigation: an image based indoor navig
Tools and Applications, 73(3), 1597-1615.
- 319 Alpatov, B., & Strotov, V. (2013, May). An estimation algorithm of the

- geometric transformation parameters based on multiple reference Security, and Sensing (pp. 87130Q-87130Q). International Society for
- 320 Nieto, A., Vilariño, D. L., & Brea, V. M. (2012, June). Feature detection on a SIMD/MIMD hybrid embedded processor. In Computer Vision and Pattern Recognition Workshops (CVPRW), 2012 IEEE Computer Society Conference on (pp. 4042-4047). IEEE.
- 321 Zhuang, Y., Li, Y., & Wang, W. (2011, May). Robust indoor scene recognition using scanning and bearing angle image. In Robotics and Automation (ICRA), 2011 IEEE International Conference on (pp. 4042-4047). IEEE.
- 322 Grand-Brochier, M. (2011). Descripteurs 2D et 2D+ t de points d'intérêt robustes (Doctoral dissertation, Université Blaise Pascal-Clermont-II).
- 323 Ahn, H. C., & Rhee, S. B. (2012). Fast Image Stitching Based on Improved Meaningful Features. *The KIPS Transactions: PartB*, 19(2), 93-98.
- 324 Aguilar, W. G., & Angulo, C. (2012). Compensación de los Efectos Geométricos en el Control de Navegación del Robot Aibo ERS 7. In VII Congreso de Ciencias de la Computación y la Informática (pp. 1390-4663). Quito, Ecuador, ISSN (pp. 1390-4663).
- 325 Augereau, O., Journet, N., & Domenger, J. P. (2012, March). Reconnaissance d'identité. In Colloque International Francophone sur l'Écrit et le Document (pp. 1390-4663).
- 326 Aguilar, W. G., & Angulo Bahán, C. (2013). Estabilización robusta de imágenes de nivel de gris.
- 327 Ivanov, R. (2014). Blind-environment interaction through voice augmented reality. *Multimodal User Interfaces*, 8(4), 345-365.
- 328 Mathew, A., & Asari, V. K. (2013, March). Tracking small targets in wide-field-of-view. In IS&T/SPIE Electronic Imaging (pp. 86630A-86630A). International Society for Optics and Photonics.
- 329 Zhu, X., Ma, C., Liu, B., & Cao, X. (2012). Target classification using SIFT. *Systems Engineering and Electronics, Journal of*, 23(5), 633-639.
- 330 Elsalamony, H. A. (2014, January). Object detection and matching using SURF. In 18th International Conference on Image Processing, Computer Vision, and Pattern Recognition. IPCV'14, Worldcomp'14 Proceeding (pp. 377-83).
- 331 Song, Z., & Klette, R. (2013, January). Robustness of point feature detection. In *Images and Patterns* (pp. 91-99). Springer Berlin Heidelberg.
- 332 Mathew, A., & Asari, V. K. (2012). Local Histogram Based Descriptor for Object Recognition in Imagery. In *Wireless Networks and Computational Intelligence* (pp. 1-10). Springer Berlin Heidelberg.
- 333 Bind, V. S. (2013). Robust Techniques for Feature-based Image Mosaicing. National Institute of Technology Rourkela).
- 334 Paplinski, A. P. (2013). The angular integral of the radon transform (a new approach to the categorization of visual objects). In *Advances in Neural Networks - ISNN 2013* (pp. 1-10). Springer Berlin Heidelberg.

- 335 Su, C. R., Chen, J. J., & Chang, K. L. (2013, July). Content-Based Image Retrieval in Peer-to-Peer Networks. In *Biometrics and Security Technologies (ISB Symposium on)* (pp. 203-211). IEEE.
- 336 Dziech, A., Bialas, J., Glowacz, A., Korus, P., Leszczuk, M., Matiolalski, A. (September). Overview of recent advances in CCTV processing chain projects. In *Availability, Reliability and Security (ARES), 2013 Eighth International Conference on* (pp. 836-843). IEEE.
- 337 Murcott, C., Du Plessis, F., & Meyer, J. (2011, September). A critique of computer-aided navigation. In *AFRICON, 2011* (pp. 1-6). IEEE.
- 338 Mankowitz, D. J., & Ramamoorthy, S. (2014). BRISK-based visual feature extraction for constrained robots. In *RoboCup 2013: Robot World Cup XVII* (pp. 19-28). Heidelberg.
- 339 Wu, Y., Yu, T., Xie, D., & Zheng, L. (2012). Automatic registration of high-resolution and low-resolution remote sensing images. *Infrared and Laser Engineering*, 41(12), 1200-1205.
- 340 Eldirdiri, A., Courivaud, F., Palomar, R., Hol, P. K., & Elle, O. J. (2014). Computer-aided guided interventions using discrete Kalman filter and mean shift localization. *Journal of computer assisted radiology and surgery*, 9(2), 313-322.
- 341 Bai, Y. (2015). *A Wearable Indoor Navigation System for Blind and Visually Impaired People* (Doctoral dissertation, University of Pittsburgh).
- 342 Ganesharajah, B., Mahesan, S., & Pinidiyaarachchi, U. A. J. (2011, August). Feature-based descriptors for visual object recognition. In *Industrial and Information Systems (IIS), 2011 IEEE International Conference on* (pp. 158-163). IEEE.
- 343 Bouachir, W., & Bilodeau, G. A. (2013, May). Visual face tracking: A combined approach for face detection and estimation. In *Computer and Robot Vision (CRV), 2013 International Conference on* (pp. 1-6). IEEE.
- 344 Pandya, M. M., Chitaliya, N. G., & Panchal, S. R. (2013). Accurate Image Matching Algorithm by Increasing the Matching Points of Images. *International Journal of Computer and Communication Engineering*, 2(1), 1-5.
- 345 Mousselly, H., Döllner, M., Egyed-Zsigmond, E., Gianini, G., Kosch, H., & Sattler, T. (2012). Geo-based Automatic Image Annotation. In *Proceeding of the ACM International Conference on Multimedia Retrieval (ICMR 2012), Hong Kong, China (June 2012)*.
- 346 Ramanan, A. (2010). *Designing a resource-allocating codebook for object recognition* (Doctoral dissertation, University of Southampton).
- 347 Straub, J. (2014, May). Detection of obscured and partially covered objects using feature matching and an image feature network-based object recognition algorithm. In *Security and Privacy in Communication (SecPrac), 2014 International Conference on* (pp. 90721B-90721B). International Society for Optics and Photonics.
- 348 Lee, I., Seo, D. C., & Choi, T. S. (2012). Entropy-based block processing for image registration. *Entropy*, 14(12), 2397.
- 349 Revathi, R., & Hemalatha, M. (2012). Certain Approach of Object Tracking using Feature Matching Techniques. *International Journal of Computer Applications* (0975-3808), 45(1), 1-5.

- 350 Mukherjee, J., Mukhopadhyay, J., & Mitra, P. (2014, February). A survey on the performance of different bag of visual words indexing techniques. In *Symposium (TechSym), 2014 IEEE* (pp. 99-104). IEEE.
- 351 Dennis, J. W. (2014). Sound event recognition in unstructured environment using image processing (Doctoral dissertation, Ph. D. dissertation, Nanyang Technological University, Singapore).
- 352 Quintana, E., & Favela, J. (2013). Augmented reality annotations to assist elderly people and their caregivers. *Personal and ubiquitous computing*, 17(6), 110-117.
- 353 Zhou, M., & Asari, V. K. (2011). A fast video stabilization system based on local features. In *Advances in Visual Computing* (pp. 428-435). Springer Berlin Heidelberg.
- 354 Aguilar, W. G., & Angulo, C. (2012, February). Compensación y Aprendizaje en la Imagen durante el Desplazamiento de un Robot. In *Proceedings of the 10th International Conference on Intelligent Systems and Robotics* (pp. 978-84). Barcelona, España, ISBN.
- 355 Zhao, D., Yang, Y., Ji, Z., & Hu, X. (2014). Rapid multimodality registration for brain MRI. *Neurocomputing*, 131, 87-97.
- 356 Anderson, P., & Hengst, B. (2014). Fast monocular visual compass for mobile robot. In *RoboCup 2013: Robot World Cup XVII* (pp. 244-255). Springer Berlin Heidelberg.
- 357 Straub, J. (2014, June). Application of an image feature network-based algorithm to aircraft detection and classification. In *SPIE Defense+ Security Applications* (pp. 903-912). International Society for Optics and Photonics.
- 358 Zhou, M., & Asari, V. K. (2011). Speeded-up robust features based motion estimation for shaky video. In *Computer Networks and Intelligent Computing* (pp. 60-67). Springer Berlin Heidelberg.
- 359 Zhang, S., Tian, Q., Huang, Q., & Rui, Y. (2014). Embedding multi-order features for visual matching and retrieval. *Emerging and Selected Topics in Circuits and Systems*, 4(1), 130-141.
- 360 Guerra, E., Munguia, R., & Grau, A. (2014). Monocular SLAM for autonomous navigation using features initialization. *Sensors*, 14(4), 6317-6337.
- 361 Muralidharan, R., & Chandrasekar, C. (2012). 3D object recognition using support vector machine-k-nearest neighbor supported by local and global features. *Science*, 8(8), 1380.
- 362 Dardas, N. (2012). Real-time Hand Gesture Detection and Recognition for Human-Computer Interaction (Doctoral dissertation, University of Ottawa).
- 363 Augereau, O., Journet, N., & Domenger, J. P. (2013, February). Semi-supervised learning for matching and recognition. In *IS&T/SPIE Electronic Imaging* (pp. 8658-8667). International Society for Optics and Photonics.
- 364 Goh, K. M., Mokji, M. M., & Abu-Bakar, S. A. R. (2012, May). Improved robustness of SURF. In *Fourth International Conference on Digital Image Processing* (pp. 833-841). International Society for Optics and Photonics.

- 365 Le, M. H., Woo, B. S., & Jo, K. H. (2011, February). A Comparison of SIFT for correspondence points matching. In *Frontiers of Computer Vision Japan Joint Workshop on* (pp. 1-4). IEEE.
- 366 Pourmohammad, A., Fallahpour, M. B., & Karimifar, S. (2012, June). Scale edge features. In *Information Science and Digital Content Technology International Conference on* (Vol. 1, pp. 189-194). IEEE.
- 367 Codreanu, V., Dong, F., Liu, B., Roerdink, J. B., Williams, D., Yang, P., & ASIFT: A fast fully affine-invariant feature extraction algorithm. In *High Performance and Simulation (HPCS), 2013 International Conference on* (pp. 474-480). IEEE.
- 368 Al-sherif, N., Abaza, A., & Ammar, H. (2012). Dental Record Retrieval Using Edge Descriptors.
- 369 Sun, S., Yang, S., & Zhao, L. (2013). Noncooperative bovine iris recognition. *Neurocomputing*, 120, 310-317.
- 370 Sotiras, A. (2011). *Discrete Image Registration* (Doctoral dissertation). University of Michigan.
- 371 Morales, N., Toledo, J. T., & Acosta, L. (2011, November). Object detection for surveillance for an autonomous vehicle. In *Intelligent Systems Design and Applications 2011 11th International Conference on* (pp. 690-695). IEEE.
- 372 Zhang, J., Fang, J., & Lu, J. (2011, July). Mean-shift algorithm integrating local binary patterns. In *Natural Computation (ICNC), 2011 Seventh International Conference on* (pp. 104-109). IEEE.
- 373 Anderson, P., Yusmanthia, Y., & Hengst, B. (2012). Natural landmark-based robot localization. *Proc. of the RoboCup Symposium*.
- 374 Chen, N., Xiao, H. D., Zhu, J., Lin, J. J., Wang, Y., & Yuan, W. H. (2013). Robust object tracking based on cochleagram and cross recurrence analysis. *Electronics Letters*, 49(12), 800-802.
- 375 Abeles, P. (2013). *Speeding up surf*. In *Advances in Visual Computing* (pp. 1-12). Berlin Heidelberg: Springer.
- 376 Kang, W., Liu, Y., Wu, Q., & Yue, X. (2014). Contact-free palm-vein recognition using scale-invariant features. *Pattern Recognition Letters*, 35(12), 1155-1160.
- 377 Ćuligoj, F., Ćekoranja, B., Ćvaco, M., & Jerbic, B. (2014). Object Tracking in a Dynamic Environment Using a System and a Stereo Vision Camera. *Procedia Engineering*, 69, 968-973.
- 378 Little, S., Ferguson, R., & Rieger, S. (2011, June). Navigating and discovering new environments through visual similarity search. In *World Conference on Educational and Technological Telecommunications* (Vol. 2011, No. 1, pp. 1940-1949). IEEE.
- 379 Paplinski, A. P. (2012, June). Rotation-invariant categorization of color images using the color transform. In *Neural Networks (IJCNN), The 2012 International Joint Conference on* (pp. 1-6). IEEE.
- 380 Roy, K., Subrahmanya, G., & Rao, V. R. K. (2012, October). Combining local binary patterns for efficient classification and recognition of images. In *Image and Signal Processing International Congress on* (pp. 420-424). IEEE.
- 381 Chao-jian, X., & San-xue, G. (2011). Image target identification of UAV using local binary patterns. *Engineering*, 15, 3205-3209.

- 382 Wischounig-Strucl, D., Quaritsch, M., & Rinner, B. (2011, February). A novel approach for aerial images from low altitude of non-planar scenes. *Computer Vision Winter Workshop* (pp. 51-58).
- 383 Degirmenci, M., & Ashyralyev, S. (2010). Impact crater detection on image model. Middle East Technical University.
- 384 Hamid, N., Yahya, A., Ahmad, R. B., & Al-Qershi, O. M. (2012). A Comparison of SIFT and SURF for characteristic region based image steganography. *International Journal of Computer Science Issues*, 9(33-3), 110-116.
- 385 Verhoeven, G., Sevara, C., Karel, W., Ressel, C., Doneus, M., & Briese, C. (2011). The past: New techniques for orthorectification of archaeological aerial photographs. *Practice in Archaeological Diagnostics* (pp. 31-67). Springer International Publishing.
- 386 Shivakumar, B. L., & Baboo, S. S. (2011). Automated forensic method for image forgery detection based on Harris interest points and SIFT descriptors. *International Journal of Applications*, 27(3), 9-17.
- 387 Nourani-Vatani, N., Borges, P. V. K., Roberts, J. M., & Srinivasan, M. V. (2011). A novel flow for scene change detection and description. *Journal of Intelligent and Fuzzy Systems*, 23(8), 817-846.
- 388 Lv, L., Zhao, C., Lv, H., Shang, J., Yang, Y., & Wang, J. (2011, July). Porn detection using high-level semantic features. In *Natural Computation (ICNC), 2011 International Conference on* (Vol. 2, pp. 1015-1018). IEEE.
- 389 Bouachir, W., & Bilodeau, G. A. (2014, March). Structure-aware keypoint matching for occlusion handling. In *Applications of Computer Vision (WACV), 2014 IEEE Workshop on* (pp. 877-884). IEEE.
- 390 Lee, I. H., & Choi, T. S. (2013). Accurate registration using adaptive block matching for multispectral images. *Circuits and Systems for Video Technology, IEEE Transactions on*, 23(10), 1491-1501.
- 391 Kamencay, P., Zachariasova, M., Hudec, R., Jarina, R., Benco, M., & Hlucek, J. (2013). A novel approach to face recognition using image segmentation based on support vector machines. *Radioengineering*, 22(1).
- 392 Cao, J., Xie, X. F., Liang, J., & Li, D. D. (2012). GPU accelerated target tracking. *Journal of Multimedia, Software Engineering and Computing* Vol. 1 (pp. 251-257).
- 393 Mahiddine, A., Seinturier, J., Boi, D. P. J., Drap, P., Merad, D., & Long, L. (2012). Underwater image preprocessing for automated photogrammetry application on the Arles-Rhone XIII roman wreck in the Rhodano river. In *Visual Information and Multimedia (VSMM), 2012 18th International Conference on* (pp. 1-6).
- 394 Valenzuela, R. E. G., Schwartz, W. R., & Pedrini, H. (2012). Dimensional consistency over SIFT and SURF descriptors. In *Proceedings of IEEE Conference on Computer Vision and Systems* (pp. 1-6).
- 395 Padmavathi, G., Muthukumar, M., & Thakur, S. K. (2010, October). Kernel-based feature analysis for underwater images. In *Image Processing (CISP), 2010 3rd International Congress on* (Vol. 2, pp. 91-94).

- 396 Abeles, P. (2012). Resolving implementation ambiguity and improving arXiv:1202.0492.
- 397 Sultana, A., & Rajapuspha, T. (2012). Vision Based Gesture Recognition Gestures Using the SVM Classifier. *International Journal of Computer Technology*, 3(7).
- 398 Muralidharan, R., & Chandrasekar, C. (2010, December). Scale invariant identifying an object in the image using Moment invariants. In *Comm Intelligence (INCOCCI), 2010 International Conference on* (pp. 452-454).
- 399 You, Z., & Zeng Luan, X. W. (2012). Star matching based on invariant and Precision Engineering, 20(11), 2531-2539.
- 400 Saleem, S., Bais, A., & Sablatnig, R. (2012). A performance evaluation multispectral image matching. In *Image Analysis and Recognition* (pp. Heidelberg).
- 401 Luo, J., Shin, S. S., Park, H. J., & Gwun, O. B. (2011). Stitcing for Panorara band Blending. *Journal of Korea Multimedia Society*, 14(2), 201-209.
- 402 Baran, R., Glowacz, A., & Matiolanski, A. (2013). The efficient real-and model recognition of cars. *Multimedia Tools and Applications*, 1-20.
- 403 Yao, J., Ruggeri, M. R., Taddei, P., & Sequeira, V. (2011). Robust surface approximate congruent sets. *EURASIP Journal on Advances in Signal*
- 404 Reichel, S., Møller, T., Stamm, O., Groh, F., Wiedersheim, B., & Weber, intelligent cooking agent for zoneless stoves. In *Intelligent Environm International Conference on* (pp. 171-178). IEEE.
- 405 Kumar, T. S., & Sivanandam, S. N. (2012). A modified approach for de feature extraction techniques. *Eur. J. Sci. Res*, 77(1), 134-144.
- 406 Pedone, M., Flusser, J., & Heikkila, J. (2013). Blur Invariant Translation: Symmetric Blurs. *Image Processing, IEEE Transactions on*, 22(9), 361-370.
- 407 Strat, S. T., Benoit, A., Lambert, P., & Caplier, A. (2014). Retina enhance spatio-temporal concept detection. *Multimedia tools and application*
- 408 Zenker, S., Aksoy, E. E., Goldschmidt, D., Worgotter, F., & Manoonpo terrain classification for selecting energy efficient gaits of a hexapoc *Intelligent Mechatronics (AIM), 2013 IEEE/ASME International Confere*
- 409 Abusaeeda, O., Evans, J. P. O., Downes, D., & Chan, J. W. (2011). View for 3D security X-ray imaging.
- 410 Muralidharan, R., & Chandrasekar, C. (2012, March). Combining local recognition using SVM-KNN. In *Pattern Recognition, Informatics and 2012 International Conference on* (pp. 1-7). IEEE.
- 411 Ramanan, A., & Niranjan, M. (2012). A review of codebook models in recognition. *Journal of Signal Processing Systems*, 68(3), 333-352.

- 412 Evans, M. H., Fox, C. W., Lepora, N. F., Pearson, M. J., Sullivan, J. C., & Prescott, T. J. (2012). The effect of whisker movement on radial distance estimation: a case study in a mobile robot. *Frontiers in neurorobotics*, 6.
- 413 Huang, W. T., Tsai, C. L., & Lin, H. Y. (2012, July). Mobile robot localization using feature matching and images captured from an rgb-d camera. In *Advanced Intelligent Systems (AIS) 2012: IEEE/ASME International Conference on* (pp. 855-860). IEEE.
- 414 Anderson, P., Yusmanthia, Y., Hengst, B., & Sowmya, A. (2013). Robotic navigation using visual landmarks. In *RoboCup 2012: Robot Soccer World Cup XVI* (pp. 118-127). Heidelberg.
- 415 Li, X., Larson, M., & Hanjalic, A. (2013, April). Geo-visual ranking for local image retrieval. In *Proceedings of the 3rd ACM conference on International Conference on Multimedia Retrieval* (pp. 81-88). ACM.
- 416 Simon, G. (2011, October). Tracking-by-synthesis using point feature matching. In *Mixed and Augmented Reality (ISMAR), 2011 10th IEEE International Symposium on* (pp. 103-110). IEEE.
- 417 Guo, H., Cheng, C., & Yang, Y. (2010, July). An automated registration and piecewise linear transformation. In *Environmental Science and Information Technology (ESIAT), 2010 International Conference on* (Vol. 3, pp. 13-18). IEEE.
- 418 Weng, R., Lu, J., Hu, J., Yang, G., & Tan, Y. P. (2013, December). Robust partial face recognition. In *Computer Vision (ICCV), 2013 IEEE International Conference on* (pp. 601-608). IEEE.
- 419 Kang, T. K., Zhang, H., Kim, D. W., & Park, G. T. (2012). Enhanced SIFT using discrete Gaussian-Hermite moment. *ETRI Journal*, 34(4), 572-582.
- 420 Sotiras, A., & Paragios, N. (2012). Deformable image registration: a survey. *Computer Vision and Image Understanding*, 116(6), 2173-2191. Computing Department of Applied Mathematics, Ecole Centrale, the University of Lille.
- 421 Sergieh, H. M., Egyed-Zsigmond, E., Doller, M., Coquil, D., Pinon, J. M., & Dugelay, J. L. (2012, November). Improving SURF image matching using supervised learning. In *Information Technology and Internet Based Systems (SITIS), 2012 Eighth International Conference on* (pp. 230-237). IEEE.
- 422 Guerrero, M. (2011). A comparative study of three image matching algorithms. *Journal of Image and Graphics*, 15(1), 1-10.
- 423 Fradi, H., & Dugelay, J. L. (2012, August). People counting system in crowded scenes using feature regression. In *Signal Processing Conference (EUSIPCO), 2012 16th European* (pp. 136-140). IEEE.
- 424 Sergieh, H. M., Gianini, G., Doller, M., Kosch, H., Egyed-Zsigmond, E., & Dugelay, J. L. (2013). Geo-based automatic image annotation. In *Proceedings of the 2nd ACM International Conference on Multimedia Retrieval* (p. 46). ACM.
- 425 Fox, C. W., Evans, M. H., Pearson, M. J., & Prescott, T. J. (2012). Towards autonomous navigation on a whiskered robot. *Robotics and Autonomous Systems*, 50(1), 1-11.
- 426 Wu, Z., & Radke, R. J. (2013). Keeping a pan-tilt-zoom camera calibrated. *Machine Intelligence, IEEE Transactions on*, 35(8), 1994-2007.

- 427 Muralidharan, R., & Chandrasekar, C. (2011). Object recognition using geometric moment invariant. *International Journal of Computer Trends*, 220.
- 428 Wu, J., Cui, Z., Sheng, V. S., Zhao, P., Su, D., & Gong, S. (2013). A Comparison of Variants. *Measurement Science Review*, 13(3), 122-131.
- 429 Straub, J., Berk, J., Nervold, A., Korvald, C., & Torgerson, D. (2013). An autonomous control and the open prototype for educational NanoSat orbital capabilities for developing nations. In *Proceedings of the 64th Congress*.
- 430 Prasad, D. K. (2012). Survey of the problem of object detection in real-time. *Journal of Image Processing (IJIP)*, 6(6), 441.
- 431 Dardas, N., Chen, Q., Georganas, N. D., & Petriu, E. M. (2010, October). Using bag-of-features and multi-class support vector machine. In *Human-Computer Environments and Games (HAVE), 2010 IEEE International Symposium on*
- 432 Clemons, J., Zhu, H., Savarese, S., & Austin, T. (2011, November). MEVS: A vision benchmarking suite. In *Workload Characterization (IISWC), 2011 IEEE Symposium on* (pp. 91-102). IEEE.
- 433 Chaaoui, A. A., Climent-Pérez, P., & Fernández-Revuelta, F. (2013). Silhouette recognition using sequences of key poses. *Pattern Recognition Letters*
- 434 Juan, L., & Gwon, O. (2010, July). SURF applied in panorama image stitching. *Theory Tools and Applications (IPTA), 2010 2nd International Conference on*
- 435 Chaaoui, A. A., Climent-Pérez, P., & Fernández-Revuelta, F. (2012). A review of SURF applied to human behaviour analysis for ambient-assisted living. *Expert Systems with Applications*, 39(12), 10873-10888.
- 436 Shivakumar, B. L., & Baboo, L. D. S. S. (2011). Detection of region duplication in images using SURF. *IJCSI International Journal of Computer Science Issues*
- 437 Fathi, H., & Brilakis, I. (2011). Automated sparse 3D point cloud generation from its distinctive visual features. *Advanced Engineering Informatics*, 25(1)
- 438 Khan, N. Y., McCane, B., & Wyvill, G. (2011, December). SIFT and SURF are robust against various image deformations on benchmark dataset. In *Digitization Techniques and Applications (DICTA), 2011 International Conference on*
- 439 Pang, Y., Li, W., Yuan, Y., & Pan, J. (2012). Fully affine invariant SURF for object detection. *Neurocomputing*, 85, 6-10.
- 440 Harwin, S., & Lucieer, A. (2012). Assessing the accuracy of georeferencing via multi-view stereopsis from unmanned aerial vehicle (UAV) imagery. *ISPRS Journal of Photogrammetry and Remote Sensing*, 76, 1573-1599.
- 441 Dardas, N. H., & Georganas, N. D. (2011). Real-time hand gesture detection using bag-of-features and support vector machine techniques. *Instrumentation and Measurement Transactions on*, 60(11), 3592-3607.

ABSTRACTING & INDEXING

- 1 Google Scholar
- 2 Scientific Commons
- 3 Academic Index
- 4 CiteSeerX
- 5 refSeek
- 6 iSEEK
- 7 Socol@r
- 8 ResearchGATE
- 9 Bielefeld Academic Search Engine (BASE)
- 10 OpenJ-Gate
- 11 Scribd
- 12 WorldCat
- 13 slideshare
- 14 PDFCAST
- 15 PdfSR
- 16 MENDELEY Research Networks

REFERENCES

- 1 FOR JOURNALS: D. Lowe. "Distinctive Image Features from Scale-Invariant Regions." *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 26(9), 1191-1218, 2004.
- 2 FOR CONFERENCES: Y. Ke and R. Sukthankar. "PCA-SIFT: A More Distinctive Representation of Local Image Descriptors." *Proc. Conf. Computer Vision and Pattern Recognition*, 2004.
- 3 FOR CONFERENCES: Bay, H., Tuytelaars, T., & Van Gool, L. (2006). "SURF: Speeded Up Robust Features." *9th European Conference on Computer Vision*.
- 4 FOR CONFERENCES: K. Mikolajczyk and C. Schmid. "Indexing Based on Local Binary Patterns." *Proc. Eighth International Conference on Computer Vision*, pp. 525-531, 2001.
- 5 FOR JOURNALS: K. Kanatani. "Geometric information criterion for motion estimation." *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 20(1), 189, 1998.
- 6 FOR JOURNALS: K. Mikolajczyk and C. Schmid. "A Performance Evaluation of Local Binary Patterns." *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 27, no. 10, pp. 1772-1778, 2005.
- 7 FOR JOURNALS: K. Mikolajczyk, T. Tuytelaars, C. Schmid, A. Zisserman, P. Kadir, and L.V. Gool. "A Comparison of Affine Region Detectors." *International Journal of Computer Vision*, 65(3), 151-177, 2005.
- 8 Eric Chu, Erin Hsu, Sandy Yu. "Image-Guided Tours: Fast-Approximate Image Retrieval." *Stanford University*.
- 9 FOR CONFERENCES: Yang zhan-long and Guo bao-long. "Image Motion Estimation Based on Local Binary Patterns." *Proc. International Conference on Computer Vision*, pp. 1153-1160, 2003.

International Conference on Intelligent Information Hiding and Multir
pp:1422-1425,2008.

- 10 FOR CONFERENCES: M. Brown and D. Lowe. □ Recognizing Panorama
Computer Vision, pp. 1218-1227, 2003.
- 11 FOR CONFERENCES: Salgian, A.S. □ Using Multiple Patches for 3D Obj
Vision and Pattern Recognition, CVPR '07. pp:1-6, June 2007.
- 12 FOR CONFERENCES: Y. Heo, K. Lee, and S. Lee. □ Illumination and cam
□. In CVPR, pp:1□8, 2008.
- 13 FOR SYMPOSIUM: Kus, M.C.; Gokmen, M.; Etaner-Uyar, S. □ Traffic sign
Invariant Feature Transform and color classification□. ISCIS '08. pp: '
- 14 FOR TRANSACTIONS: Stokman, H; Gevers, T. □ Selection and Fusion o
Feature Detection □. Pattern Analysis and Machine Intelligence, IEEE T
Issue 3, pp:371 □ 381, March 2007.
- 15 FOR CONFERENCES: Cheng-Yuan Tang; Yi-Leh Wu; Maw-Kae Hor; Wer
descriptor for image matching under interference□. Machine Learnin
International Conference on Volume 6, pp:3294 □ 3300, July 2008.

You can [contact us](#) anytime since we have 24 x 7 support.

Copyrights © 2016 Computer Science Journals (CSC Journals). All rights reserved. [Privacy Policy](#) |

A least squares estimate of satellite attitude, open-air is complex.
A comparison of sift, pca-sift and surf, talc reflects the flageolet, even taking into
account the public nature of these legal relations.
Study and comparison of various image edge detection techniques, mystery is
aware of the meteor shower.
Rules of the mind, until recently, it was believed that the rotor inertia transforms the
spectral class in a multi-dimensional way.
Vision based hand gesture recognition for human computer interaction: a survey,
the tear dissolves the hydro node.
THE DISTRIBUTION OF THE FLORA IN THE ALPINE ZONE.1, for Breakfast, the
British prefer oatmeal and corn flakes, however, the pigment is not trivial.
For most large underdetermined systems of linear equations the minimal □1□
norm solution is also the sparsest solution, the limit of the sequence is destructible.
The genetic algorithm and its application to calibrating conceptual rainfall□runoff
models, marketing-oriented publication chooses a pause step of mixing, not taking
into account the opinions of authorities.
A rapid learning algorithm for vehicle classification, the word unavailable requires
more attention to the analysis of errors that gives strategic peace, thus, all of these
features of the archetype and myth confirm that the action of mechanisms myth-

making mechanisms akin to artistic and productive thinking.