No.	Co-authors	Article title	Keywords	Vol., No., pp.	DOI	Citation
1	Rabah, C.B., Coatrieux, G., Abdelfattah, R.	Boosting up source scanner identification using wavelets and convolutional neural networks	conventional neural networks, digital content forensics, image wavelet analysis, source scanner identification	37, 6, 881-888	https://doi.org/10.18280/ts.370601	Rabah, C.B., Coatrieux, G., Abdelfattah, R. (2020). Boosting up source scanner identification using wavelets and convolutional neural networks. Traitement du Signal, Vol. 37, No. 6, pp. 881-888. https://doi.org/10.18280/ts.370601
2	Herbadji, A., Guermat, N., Ziet, L., Akhtar, Z., Cheniti, M., Herbadji, D.	Contactless multi-biometric system using fingerprint and palmprint selfies	COVID-19, multi-biometrics, score fusion, contactless fingerprint, contactless palmprint, BSIF, person authentication	37, 6, 889-897	https://doi.org/10.18280/ts.370602	Herbadji, A., Guermat, N., Ziet, L., Akhtar, Z., Cheniti, M., Herbadji, D. (2020). Contactless multi-biometric system using fingerprint and palmprint selfies. Traitement du Signal, Vol. 37, No. 6, pp. 889-897. https://doi.org/10.18280/ts.370602
3	Vrtagić, S., Softić, E., Ponjavić, M., Stević, Ž., Subotić, M., Gmanjunath, A., Kevric, J.	Video data extraction and processing for investigation of vehicles' impact on the asphalt deformation through the prism of computational algorithms	Histogram of Oriented Gradients (HOG), machine learning, Support Vector Machines (SVM), video processing, asphalt deformation	37, 6, 899-906	https://doi.org/10.18280/ts.370603	Vrtagić, S., Softić, E., Ponjavić, M., Stević, Ž., Subotić, M., Gmanjunath, A., Kevric, J. (2020). Video data extraction and processing for investigation of vehicles' impact on the asphalt deformation through the prism of computational algorithms. Traitement du Signal, Vol. 37, No. 6, pp. 899-906. https://doi.org/10.18280/ts.370603
4	Aydin, I., Kaner, S.	A new hybrid diagnosis of bearing faults based on time-frequency images and sparse representation	bearing faults, classification, extreme learning machine with sparse classifier, fault diagnosis, feature extraction, time-frequency images	37, 6, 907-918	https://doi.org/10.18280/ts.370604	Aydin, I., Kaner, S. (2020). A new hybrid diagnosis of bearing faults based on time-frequency images and sparse representation. Traitement du Signal, Vol. 37, No. 6, pp. 907-918. https://doi.org/10.18280/ts.370604
5	Liu, S.H., Shi, L.L., Xu, W.Y.	Projected Wirtinger gradient descent for digital waves reconstruction	signal recovery, Hankel Matrix Completion (HMC), feasible-point algorithm, fast iterative shrinkage-thresholding (FIST) algorithm	37, 6, 919-927	https://doi.org/10.18280/ts.370605	Liu, S.H., Shi, L.L., Xu, W.Y. (2020). Projected Wirtinger gradient descent for digital waves reconstruction. Traitement du Signal, Vol. 37, No. 6, pp. 919-927. https://doi.org/10.18280/ts.370605
6	Yang, X.Y., Liang, N.N., Zhou, W., Lu, H.M.	A face detection method based on skin color model and improved AdaBoost algorithm	face detection, image processing, skin color model, AdaBoost algorithm	37, 6, 929-937	https://doi.org/10.18280/ts.370606	Yang, X.Y., Liang, N.N., Zhou, W., Lu, H.M. (2020). A face detection method based on skin color model and improved AdaBoost algorithm. Traitement du Signal, Vol. 37, No. 6, pp. 929-937. https://doi.org/10.18280/ts.370606
7	Sahin, M.E., Guler, H., Hamamci, S.E.	Design and realization of a hyperchaotic memristive system for communication system on FPGA	chaos, circuit implementation, communication systems, FPGA, memristor, optimization	37, 6, 939-953	https://doi.org/10.18280/ts.370607	Sahin, M.E., Guler, H., Hamamci, S.E. (2020). Design and realization of a hyperchaotic memristive system for communication system on FPGA. Traitement du Signal, Vol. 37, No. 6, pp. 939-953. https://doi.org/10.18280/ts.370607
8	Nouioua, N., Seddiki, A., Ghaz, A.	Blind digital watermarking framework based on DTCWT and NSCT for telemedicine application	blind watermarking, DTCWT, NSCT, quantization, robust, telemedicine	37, 6, 955-964	https://doi.org/10.18280/ts.370608	Nouioua, N., Seddiki, A., Ghaz, A. (2020). Blind digital watermarking framework based on DTCWT and NSCT for telemedicine application. Traitement du Signal, Vol. 37, No. 6, pp. 955-964. https://doi.org/10.18280/ts.370608
9	Chen, D.	Multiple linear regression of multi-class images in devices of internet of things	internet of things (IoT), multiple classes, image recognition, multiple linear regression (MLR), convolutional neural network (CNN)	37, 6, 965-973	https://doi.org/10.18280/ts.370609	Chen, D. (2020). Multiple linear regression of multi-class images in devices of internet of things. Traitement du Signal, Vol. 37, No. 6, pp. 965-973. https://doi.org/10.18280/ts.370609
10	Mousavi, S., Kara, D.B., Seker, S.S.	Integrated fault evaluation through fusion algorithm supported by Kalman filter	Kalman filter, vibration signal, aging process, sensor validation, data fusion, fault detection, health information	37, 6, 975-987	https://doi.org/10.18280/ts.370610	Mousavi, S., Kara, D.B., Seker, S.S. (2020). Integrated fault evaluation through fusion algorithm supported by Kalman filter. Traitement du Signal, Vol. 37, No. 6, pp. 975-987. https://doi.org/10.18280/ts.370610
11	Bhatele, K.R., Bhadauria, S.S.	Glioma segmentation and classification system based on proposed texture features extraction method and hybrid ensemble learning	Thresholding, High Grade Glioma (HGG), Low Grade Glioma (LGG), DWT (Discrete wavelet transform), LBP (Local Binary pattern), GLRLM (Gray level run length Matrix) Enhanced wavelet binary pattern run length matrix method (EWBPRL), XGBoost with Random forest (XBGRF)	37, 6, 989-1001	https://doi.org/10.18280/ts.370611	Bhatele, K.R., Bhadauria, S.S. (2020). Glioma segmentation and classification system based on proposed texture features extraction method and hybrid ensemble learning. Traitement du Signal, Vol. 37, No. 6, pp. 989-1001. https://doi.org/10.18280/ts.370611
12	Yu, L., Zhang, B.L., Li, R.	Detection of unusual targets in traffic images based on one-class extreme machine learning	traffic images, multiple levels, extreme learning machine (ELM), semi-supervised learning	37, 6, 1003-1008	https://doi.org/10.18280/ts.370612	Yu, L., Zhang, B.L., Li, R. (2020). Detection of unusual targets in traffic images based on one-class extreme machine learning. Traitement du Signal, Vol. 37, No. 6, pp. 1003-1008. https://doi.org/10.18280/ts.370612
13	Li, Z., Han, X., Wang, L.Y., Zhu, T.Y., Yuan, F.T.	Feature extraction and image retrieval of landscape images based on image processing	landscape image, color feature extraction, image retrieval, image processing	37, 6, 1009-1018	https://doi.org/10.18280/ts.370613	Li, Z., Han, X., Wang, L.Y., Zhu, T.Y., Yuan, F.T. (2020). Feature extraction and image retrieval of landscape images based on image processing. Traitement du Signal, Vol. 37, No. 6, pp. 1009-1018. https://doi.org/10.18280/ts.370613
14	Saglam, A., Makineci, H.B., Baykan, Ö.K., Baykan, N.A.	Clustering-based plane refitting of non-planar patches for voxel-based 3D point cloud segmentation using k-means clustering	plane fitting, plane refitting, point cloud segmentation, plane clustering, k-means clustering, standard deviation thresholding	37, 6, 1019-1027	https://doi.org/10.18280/ts.370614	Saglam, A., Makineci, H.B., Baykan, Ö.K., Baykan, N.A. (2020). Clustering-based plane refitting of non-planar patches for voxel-based 3D point cloud segmentation using k-means clustering. Traitement du Signal, Vol. 37, No. 6, pp. 1019-1027. https://doi.org/10.18280/ts.370614
15	Shafiei, F., Fekri-Ershad, S.	Detection of lung cancer tumor in CT scan images using novel combination of super pixel and active contour algorithms	lung cancer tumor, CT scan images, super pixel algorithm, morphological operations, active contour	37, 6, 1029-1035	https://doi.org/10.18280/ts.370615	Shafiei, F., Fekri-Ershad, S. (2020). Detection of lung cancer tumor in CT scan images using novel combination of super pixel and active contour algorithms. Traitement du Signal, Vol. 37, No. 6, pp. 1029-1035. https://doi.org/10.18280/ts.370615
16	Zhang, J., Feng, M.Q., Wang, Y.	Automatic segmentation of remote sensing images on water bodies based on image enhancement	image enhancement, remote sensing image, water bodies, image segmentation, adaptive morphology	37, 6, 1037-143	https://doi.org/10.18280/ts.370616	Zhang, J., Feng, M.Q., Wang, Y. (2020). Automatic segmentation of remote sensing images on water bodies based on image enhancement. Traitement du Signal, Vol. 37, No. 6, pp. 1037-1043. https://doi.org/10.18280/ts.370616
17	Toraman, S.	Preictal and interictal recognition for epileptic seizure prediction using pre-trained 2D-CNN models	biomedical image processing, EEG, epilepsy, preictal, convolutional neural network, deep learning	37, 6, 1045-1054	https://doi.org/10.18280/ts.370617	Toraman, S. (2020). Preictal and interictal recognition for epileptic seizure prediction using pre-trained 2D-CNN models. Traitement du Signal, Vol. 37, No. 6, pp. 1045-1054. https://doi.org/10.18280/ts.370617
18	Dong, J.F., Li, X.	An image classification algorithm of financial instruments based on convolutional neural network	financial instruments, convolutional neural network (CNN), image classification, momentum weight update, weight attenuation	37, 6, 1055-1060	https://doi.org/10.18280/ts.370618	Dong, J.F., Li, X. (2020). An image classification algorithm of financial instruments based on convolutional neural network. Traitement du Signal, Vol. 37, No. 6, pp. 1055-1060. https://doi.org/10.18280/ts.370618
19	Bhardwaj, L., Mishra, R.K.	Mitigating the interference caused by pilot contamination in multi-cell massive multiple input multiple output systems using low density parity check codes in uplink scenario	massive MIMO, Multi Cell MIMO, low density parity check codes (LDPC), pilot contamination, channel estimation, channel vector	37, 6, 1061-1074	https://doi.org/10.18280/ts.370619	Bhardwaj, L., Mishra, R.K. (2020). Mitigating the interference caused by pilot contamination in multi-cell massive multiple input multiple output systems using low density parity check codes in uplink scenario. Traitement du Signal, Vol. 37, No. 6, pp. 1061-1074. https://doi.org/10.18280/ts.370619
20	Msonda, P., Uymaz, S.A., Karaağaç, S.S.	Spatial pyramid pooling in deep convolutional networks for automatic tuberculosis diagnosis	automated diagnosis, deep convolutional neural networks, image classification, spatial pyramid pooling, tuberculosis	37, 6, 1075-1084	https://doi.org/10.18280/ts.370620	Msonda, P., Uymaz, S.A., Karaağaç, S.S. (2020). Spatial pyramid pooling in deep convolutional networks for automatic tuberculosis diagnosis. Traitement du Signal, Vol. 37, No. 6, pp. 1075-1084. https://doi.org/10.18280/ts.370620
21	Wang, Y.N., Yang, Y.M., Li, Y.	Recognition and difference analysis of human walking gaits based on intelligent processing of video images	gait recognition, lower limb motions, residual network, gait difference	37, 6, 1085-1091	https://doi.org/10.18280/ts.370621	Wang, Y.N., Yang, Y.M., Li, Y. (2020). Recognition and difference analysis of human walking gaits based on intelligent processing of video images. Traitement du Signal, Vol. 37, No. 6, pp. 1085-1091. https://doi.org/10.18280/ts.370621
22	Yadav, D., Akanksha, Yadav, A.K.	A novel convolutional neural network based model for recognition and classification of apple leaf diseases	plants, apple, contrast stretching, fuzzy c-means, CNN, disease diagnosis	37, 6, 1093-1101	https://doi.org/10.18280/ts.370622	Yadav, D., Akanksha, Yadav, A.K. (2020). A novel convolutional neural network based model for recognition and classification of apple leaf diseases. Traitement du Signal, Vol. 37, No. 6, pp. 1093-1101. https://doi.org/10.18280/ts.370622

23	Wang, S.W., Yuan, B., Wu, D.	A hybrid classifier for handwriting recognition on multi-domain financial bills based on DCNN and SVM	financial bill, handwriting recognition, deep convolutional neural network (DCNN), support vector machine (SVM)	37, 6, 1103-1110	https://doi.org/10.18280/ts.370623	Wang, S.W., Yuan, B., Wu, D. (2020). A hybrid classifier for handwriting recognition on multi-domain financial bills based on DCNN and SVM. Traitement du Signal, Vol. 37, No. 6, pp. 1103-1110. https://doi.org/10.18280/ts.370623
24	Lejmi, W., Khalifa, A.B., Mahjoub, M.A.	A novel spatio-temporal violence classification framework based on material derivative and LSTM neural network	challenges, classification, derivative, LSTM, motion, recognition, material, violence	37, 5, 687-701	https://doi.org/10.18280/ts.370501	Lejmi, W., Khalifa, A.B., Mahjoub, M.A. (2020). A novel spatio-temporal violence classification framework based on material derivative and LSTM neural network. Traitement du Signal, Vol. 37, No. 5, pp. 687-701. https://doi.org/10.18280/ts.370501
25	Rahmani, A.I., Almasi, M., Saleh, N., Katouli, M.	Image fusion of noisy images based on simultaneous empirical wavelet transform	simultaneous empirical wavelet transform, merge rules, coefficients, layers	37, 5, 703-710	https://doi.org/10.18280/ts.370502	Rahmani, A.I., Almasi, M., Saleh, N., Katouli, M. (2020). Image fusion of noisy images based on simultaneous empirical wavelet transform. Traitement du Signal, Vol. 37, No. 5, pp. 703-710. https://doi.org/10.18280/ts.370502
26	Mohammedhasan, M., Uğuz, H.	A new early stage diabetic retinopathy diagnosis model using deep convolutional neural networks and principal component analysis	diabetic retinopathy, deep learning, convolutional neural network, principal component analysis, edge-preserving guided image filtering, U-network, data augmentation	37, 5, 711-722	https://doi.org/10.18280/ts.370503	Mohammedhasan, M., Uğuz, H. (2020). A new early stage diabetic retinopathy diagnosis model using deep convolutional neural networks and principal component analysis. Traitement du Signal, Vol. 37, No. 5, pp. 711-722. https://doi.org/10.18280/ts.370503
27	Zhao, S.J., Zhu, J.C., Wu, D.	Design and application of a greedy pursuit algorithm adapted to overcomplete dictionary for sparse signal recovery	overcomplete dictionary, hard thresholding pursuit, projections	37, 5, 723-732	https://doi.org/10.18280/ts.370504	Zhao, S.J., Zhu, J.C., Wu, D. (2020). Design and application of a greedy pursuit algorithm adapted to overcomplete dictionary for sparse signal recovery. Traitement du Signal, Vol. 37, No. 5, pp. 723-732. https://doi.org/10.18280/ts.370504
28	Al-Hashim, M.A., Al-Ameen, Z.	Retinex-based multiphase algorithm for low-light image enhancement	image enhancement, image processing, low-light images, retinex-based multiphase algorithm	37, 5, 733-743	https://doi.org/10.18280/ts.370505	Al-Hashim, M.A., Al-Ameen, Z. (2020). Retinex-based multiphase algorithm for low-light image enhancement. Traitement du Signal, Vol. 37, No. 5, pp. 733-743. https://doi.org/10.18280/ts.370505
29	Fang, Q.Z., Liu, Y.X., Zhang, L.L.	Design and implementation of a lossless compression system for hyperspectral images	field programmable gate array (FPGA), hyperspectral image, lossless compression, forward prediction, full-pipeline construction	37, 5, 745-752	https://doi.org/10.18280/ts.370506	Fang, Q.Z., Liu, Y.X., Zhang, L.L. (2020). Design and implementation of a lossless compression system for hyperspectral images. Traitement du Signal, Vol. 37, No. 5, pp. 745-752. https://doi.org/10.18280/ts.370506
30	Bouida, A., Beladgham, M., Bassou, A., Benyahia, I., Ahmed-Taleb, A., Haouam, I., Kamline, M.	Evaluation of textural degradation in compressed medical and biometric images by analyzing image texture features and edges	image quality assessment, image texture analysis, image edge detection, wavelet-based compression, medical and biometric images	37, 5, 753-762	https://doi.org/10.18280/ts.370507	Bouida, A., Beladgham, M., Bassou, A., Benyahia, I., Ahmed-Taleb, A., Haouam, I., Kamline, M. (2020). Evaluation of textural degradation in compressed medical and biometric images by analyzing image texture features and edges. Traitement du Signal, Vol. 37, No. 5, pp. 753-762. https://doi.org/10.18280/ts.370507
31	Sun, H.Y., Wang, L., Song, Z., Chen, G.	Three-dimensional mirror surface measurement based on local blur analysis of phase measuring deflectometry system	three-dimensional (3D) imaging, phase measuring deflectometry (PMD), local blur, integral reconstruction	37, 5, 763-771	https://doi.org/10.18280/ts.370508	Sun, H.Y., Wang, L., Song, Z., Chen, G. (2020). Three-dimensional mirror surface measurement based on local blur analysis of phase measuring deflectometry system. Traitement du Signal, Vol. 37, No. 5, pp. 763-771. https://doi.org/10.18280/ts.370508
32	Kalakoti, G., G, P.	Key-frame detection and video retrieval based on DC coefficient-based cosine orthogonality and multivariate statistical tests	key-frame, background scenes, forefront objects, DC-coefficients, cosine orthogonality test, multivariate statistical parametric test	37, 5, 773-784	https://doi.org/10.18280/ts.370509	Kalakoti, G., G, P. (2020). Key-frame detection and video retrieval based on DC coefficient-based cosine orthogonality and multivariate statistical tests. Traitement du Signal, Vol. 37, No. 5, pp. 773-784. https://doi.org/10.18280/ts.370509
33	Ghorbanian, A., Maghsoudi, Y., Mohammadzadeh, A.	Clustering-based band selection using structural similarity index and entropy for hyperspectral image classification	band selection, dimension reduction, hyperspectral image, entropy, structural similarity, support vector machine (SVM)	37, 5, 785-791	https://doi.org/10.18280/ts.370510	Ghorbanian, A., Maghsoudi, Y., Mohammadzadeh, A. (2020). Clustering-based band selection using structural similarity index and entropy for hyperspectral image classification. Traitement du Signal, Vol. 37, No. 5, pp. 785-791. https://doi.org/10.18280/ts.370510
34	Zhang, X.R., Chen, G.	An automatic insect recognition algorithm in complex background based on convolution neural network	convolutional neural network (CNN), edgeless active contour, insect image recognition, complex background, narrow-band fast method	37, 5, 793-798	https://doi.org/10.18280/ts.370511	Zhang, X.R., Chen, G. (2020). An automatic insect recognition algorithm in complex background based on convolution neural network. Traitement du Signal, Vol. 37, No. 5, pp. 793-798. https://doi.org/10.18280/ts.370511
35	Aydemir, O.	Odor and subject identification using electroencephalography reaction to olfactory	electroencephalogram, brain response, odor, subject identification, multi-class classification, feature extraction	37, 5, 799-805	https://doi.org/10.18280/ts.370512	Aydemir, O. (2020). Odor and subject identification using electroencephalography reaction to olfactory. Traitement du Signal, Vol. 37, No. 5, pp. 799-805. https://doi.org/10.18280/ts.370512
36	Jin, D.B., Xu, S.Q., Tong, L.J., Wu, L.Y., Liu, S.M.	End image defect detection of float glass based on faster region-based convolutional neural network	float glass, defect detection, faster region-based convolutional neural network (Faster RCNN), target detection, end image	37, 5, 807-813	https://doi.org/10.18280/ts.370513	Jin, D.B., Xu, S.Q., Tong, L.J., Wu, L.Y., Liu, S.M. (2020). End image defect detection of float glass based on faster region-based convolutional neural network. Traitement du Signal, Vol. 37, No. 5, pp. 807-813. https://doi.org/10.18280/ts.370513
37	Beirami, B.A., Mokhtarzade, M.	Superpixel-based minimum noise fraction feature extraction for classification of hyperspectral images	minimum noise fraction, superpixel, feature extraction, hyperspectral classification, SuperMNF	37, 5, 815-822	https://doi.org/10.18280/ts.370514	Beirami, B.A., Mokhtarzade, M. (2020). Superpixel-based minimum noise fraction feature extraction for classification of hyperspectral images. Traitement du Signal, Vol. 37, No. 5, pp. 815-822. https://doi.org/10.18280/ts.370514
38	Guo, Q.	Detection of head raising rate of students in classroom based on head posture recognition	head posture recognition, head raising rate (HRR), convolutional neural network (CNN), human organ model	37, 5, 823-830	https://doi.org/10.18280/ts.370515	Guo, Q. (2020). Detection of head raising rate of students in classroom based on head posture recognition. Traitement du Signal, Vol. 37, No. 5, pp. 823-830. https://doi.org/10.18280/ts.370515
39	Melek, M., Manshouri, N., Kayikcioglu, T.	Low-cost brain-computer interface using the Emotiv Epoc headset based on rotating vanes	EEG, Emotiv Epoc headset, brain-computer interface, rotating vanes, information transfer rate	37, 5, 831-837	https://doi.org/10.18280/ts.370516	Melek, M., Manshouri, N., Kayikcioglu, T. (2020). Low-cost brain-computer interface using the Emotiv Epoc headset based on rotating vanes. Traitement du Signal, Vol. 37, No. 5, pp. 831-837. https://doi.org/10.18280/ts.370516
40	Keivani, M., Sazdar, A.M., Mazloum, J., Rahmani, A.E.	Application of empirical wavelet transform in digital image watermarking	digital watermarking, empirical wavelet transform, copyright, alpha blending	37, 5, 839-845	https://doi.org/10.18280/ts.370517	Keivani, M., Sazdar, A.M., Mazloum, J., Rahmani, A.E. (2020). Application of empirical wavelet transform in digital image watermarking. Traitement du Signal, Vol. 37, No. 5, pp. 839-845. https://doi.org/10.18280/ts.370517
41	Lu, S., Zhang, Q., Liu, Y., Liu, L., Zhu, Q., Jing, K.	Retrieval of multiple spatiotemporally correlated images on tourist attractions based on image processing	image processing, tourist attractions, multiple spatiotemporally correlated images (MSCIs), image retrieval	37, 5, 847-854	https://doi.org/10.18280/ts.370518	Lu, S., Zhang, Q., Liu, Y., Liu, L., Zhu, Q., Jing, K. (2020). Retrieval of multiple spatiotemporally correlated images on tourist attractions based on image processing. Traitement du Signal, Vol. 37, No. 5, pp. 847-854. https://doi.org/10.18280/ts.370518
42	Singh, N.P., Singh, V.P.	Efficient segmentation and registration of retinal image using gumble probability distribution and brisk feature	retinal image, feature descriptor, segmentation, registration, probability distribution functions	37, 5, 855-864	https://doi.org/10.18280/ts.370519	Singh, N.P., Singh, V.P. (2020). Efficient segmentation and registration of retinal image using gumble probability distribution and brisk feature. Traitement du Signal, Vol. 37, No. 5, pp. 855-864. https://doi.org/10.18280/ts.370519
43	Krishnaveni, P.R., Kishore, G.N.	Image based group classifier for brain tumor detection using machine learning technique	malignant tumor, feature extraction, classification, segmentation	37, 5, 865-871	https://doi.org/10.18280/ts.370520	Krishnaveni, P.R., Kishore, G.N. (2020). Image based group classifier for brain tumor detection using machine learning technique. Traitement du Signal, Vol. 37, No. 5, pp. 865-871. https://doi.org/10.18280/ts.370520
44	Wang, Y.N., Yang, Y.M., Zhang, P.Y.	Gesture feature extraction and recognition based on image processing	image processing, gesture feature extraction, gesture recognition, convolutional neural network (CNN)	37, 5, 873-880	https://doi.org/10.18280/ts.370521	Wang, Y.N., Yang, Y.M., Zhang, P.Y. (2020). Gesture feature extraction and recognition based on image processing. Traitement du Signal, Vol. 37, No. 5, pp. 873-880. https://doi.org/10.18280/ts.370521

45	Ouali, M.A., Ghanai, M., Chafaa, K.	TLBO optimization algorithm based-type2 fuzzy adaptive filter for ECG signals denoising	ECG signal, ECG denoising, type-2 fuzzy logic, optimization algorithm, TLBO	37, 4, 541-553	https://doi.org/10.18280/ts.370401	Ouali, M.A., Ghanai, M., Chafaa, K. (2020). TLBO optimization algorithm based-type2 fuzzy adaptive filter for ECG signals denoising. Traitement du Signal, Vol. 37, No. 4, pp. 541-553. https://doi.org/10.18280/ts.370401
46	Al-Qaisi, A., AlTarawneh, M.S., ElSaid, A., Alqadi, Z.	A hybrid method of face feature extraction, classification based on MLBP and layered-recurrent network	feature extraction, MLBP, classification, L-RNN, Quasi-Newton Back propagation	37, 4, 555-561	https://doi.org/10.18280/ts.370402	Al-Qaisi, A., AlTarawneh, M.S., ElSaid, A., Alqadi, Z. (2020). A hybrid method of face feature extraction, classification based on MLBP and layered-recurrent network. Traitement du Signal, Vol. 37, No. 4, pp. 555-561. https://doi.org/10.18280/ts.370402
47	Mehanović, D., Kevrić, J.	Phishing website detection using machine learning classifiers optimized by feature selection	classification, Decision Tree, feature selection, K-Nearest Neighbors, phishing website detection, Random Forest	37, 4, 563-569	https://doi.org/10.18280/ts.370403	Mehanović, D., Kevrić, J. (2020). Phishing website detection using machine learning classifiers optimized by feature selection. Traitement du Signal, Vol. 37, No. 4, pp. 563-569. https://doi.org/10.18280/ts.370403
48	Akgun, O.	Determination of the appropriate kernel structure in electroencephalography analysis of alcoholic subjects	alcoholic, EEG, ambiguity function, Wigner Ville distribution, nonseparable kernel, separable kernel, Doppler independent kernel, lag independent kernel	37, 4, 571-577	https://doi.org/10.18280/ts.370404	Akgun, O. (2020). Determination of the appropriate kernel structure in electroencephalography analysis of alcoholic subjects. Traitement du Signal, Vol. 37, No. 4, pp. 571-577. https://doi.org/10.18280/ts.370404
49	Wang, H.D.	A synchronous transmission method for array signals of sensor network under resonance technology	resonance technology, wavelet transform, sensor network, array signals, three-node collaboration	37, 4, 579-584	https://doi.org/10.18280/ts.370405	Wang, H.D. (2020). A synchronous transmission method for array signals of sensor network under resonance technology. Traitement du Signal, Vol. 37, No. 4, pp. 579-584. https://doi.org/10.18280/ts.370405
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51	Bulla, P., Anantha, L., Peram, S.	Deep neural networks with transfer learning model for brain tumors classification	brain tumor, deep learning, inceptionV3, MR imaging, multi-class classification, transfer learning	37, 4, 593-601	https://doi.org/10.18280/ts.370407	Bulla, P., Anantha, L., Peram, S. (2020). Deep neural networks with transfer learning model for brain tumors classification. Traitement du Signal, Vol. 37, No. 4, pp. 593-601. https://doi.org/10.18280/ts.370407
52	Wang, Z.	Recognition and analysis of behavior features of school-age children based on video image processing	video image processing, school-age children, behavior features, behavior recognition	37, 4, 603-610	https://doi.org/10.18280/ts.370408	Wang, Z. (2020). Recognition and analysis of behavior features of school-age children based on video image processing. Traitement du Signal, Vol. 37, No. 4, pp. 603-610. https://doi.org/10.18280/ts.370408
53	Ornek, A.H., Ervural, S., Ceylan, M., Konak, M., Soylu, H., Savasci, D.	Classification of medical thermograms belonging neonates by using segmentation, feature engineering and machine learning algorithms	fast correlation-based filter, local binary pattern, machine learning, neonate, thermography	37, 4, 611-617	https://doi.org/10.18280/ts.370409	Ornek, A.H., Ervural, S., Ceylan, M., Konak, M., Soylu, H., Savasci, D. (2020). Classification of medical thermograms belonging neonates by using segmentation, feature engineering and machine learning algorithms. Traitement du Signal, Vol. 37, No. 4, pp. 611-617. https://doi.org/10.18280/ts.370409
54	Bai, S.Z., Han, F.L.	Tourist behavior recognition through scenic spot image retrieval based on image processing	image processing, scenic spot image retrieval, tourist behavior recognition, scale invariant feature transform (SIFT)	37, 4, 619-626	https://doi.org/10.18280/ts.370410	Bai, S.Z., Han, F.L. (2020). Tourist behavior recognition through scenic spot image retrieval based on image processing. Traitement du Signal, Vol. 37, No. 4, pp. 619-626. https://doi.org/10.18280/ts.370410
55	Li, A.H., An, L., Che, Z.H.	A Facial expression recognition model based on texture and shape features	Facial expression recognition, texture features, shape features, Gaussian Markov random field (GMRF) model, support vector machine (SVM) classifier	37, 4, 627-632	https://doi.org/10.18280/ts.370411	Li, A.H., An, L., Che, Z.H. (2020). A Facial expression recognition model based on texture and shape features. Traitement du Signal, Vol. 37, No. 4, pp. 627-632. https://doi.org/10.18280/ts.370411
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57	Bulut, G.G., Çatalbaş, M.C., Güler, H.	Chaotic systems based real-time implementation of visual cryptography using LabVIEW	chaotic circuit, chaotic system, real-time application, image encryption	37, 4, 639-645	https://doi.org/10.18280/ts.370413	Bulut, G.G., Çatalbaş, M.C., Güler, H. (2020). Chaotic systems based real-time implementation of visual cryptography using LabVIEW. Traitement du Signal, Vol. 37, No. 4, pp. 639-645. https://doi.org/10.18280/ts.370413
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59	Zhang, H., Lu, X.X., Yin, X.Y.	Reverse synchronous transmission of electrical signals based on parallel injection and series pickup	parallel injection, series pickup, electrical signal, reverse synchronous transmission (RST), alternative current (AC) impedance	37, 4, 655-660	https://doi.org/10.18280/ts.370415	Zhang, H., Lu, X.X., Yin, X.Y. (2020). Reverse synchronous transmission of electrical signals based on parallel injection and series pickup. Traitement du Signal, Vol. 37, No. 4, pp. 655-660. https://doi.org/10.18280/ts.370415
60	Singh, G., Agrawal, S., Sohi, B.S.	Handwritten Gurmukhi digit recognition system for small datasets	DCT, DWT, support vector machine, deep convolutional neural networks, Gurmukhi handwritten digit recognition	37, 4, 661-669	https://doi.org/10.18280/ts.370416	Singh, G., Agrawal, S., Sohi, B.S. (2020). Handwritten Gurmukhi digit recognition system for small datasets. Traitement du Signal, Vol. 37, No. 4, pp. 661-669. https://doi.org/10.18280/ts.370416
61	Rashid, A., Salamat, N., Surya Prasath, V.B.	Dynamic increased capacity approach steganography in spatial domain	Gray Level Modification (GLM), information security, Least Significant Bit (LSB), spatial domain, steganography	37, 4, 671-678	https://doi.org/10.18280/ts.370417	Rashid, A., Salamat, N., Surya Prasath, V.B. (2020). Dynamic increased capacity approach steganography in spatial domain. Traitement du Signal, Vol. 37, No. 4, pp. 671-678. https://doi.org/10.18280/ts.370417
62	Yan, X.D., Song, X.G.	An image recognition algorithm of bolt loss in underground pipelines based on local binary pattern operator	image recognition, local binary pattern (LBP) operator, feature extraction, support vector machine (SVM), underground pipelines	37, 4, 679-685	https://doi.org/10.18280/ts.370418	Yan, X.D., Song, X.G. (2020). An image recognition algorithm of bolt loss in underground pipelines based on local binary pattern operator. Traitement du Signal, Vol. 37, No. 4, pp. 679-685. https://doi.org/10.18280/ts.370418
63	Özyurt, F., Avcı, E., Sert, E.	UC-Merced image classification with CNN feature reduction using wavelet entropy optimized with genetic algorithm	CNN, feature reduction, entropy, genetic algorithm, UC Merced dataset	37, 3, 347-353	https://doi.org/10.18280/ts.370301	Özyurt, F., Avcı, E., Sert, E. (2020). UC-Merced image classification with CNN feature reduction using wavelet entropy optimized with genetic algorithm. Traitement du Signal, Vol. 37, No. 3, pp. 347-353. https://doi.org/10.18280/ts.370301
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66	Said, Z., El Hassouani, Y.	A new approach for extracting and characterizing fetal electrocardiogram	wavelet transform, source separation time–scale, electrocardiogram characterization	37, 3, 379-386	https://doi.org/10.18280/ts.370304	Said, Z., El Hassouani, Y. (2020). A new approach for extracting and characterizing fetal electrocardiogram. Traitement du Signal, Vol. 37, No. 3, pp. 379-386. https://doi.org/10.18280/ts.370304

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71	Song, X.R., Gao, S., Chen, C.B., Wang, S.L.	A novel face recognition algorithm for imbalanced small samples	feature extraction, face recognition, convolutional neural network (CNN), imbalanced small samples	37, 3, 425-432	https://doi.org/10.18280/ts.370309	Song, X.R., Gao, S., Chen, C.B., Wang, S.L. (2020). A novel face recognition algorithm for imbalanced small samples. Traitement du Signal, Vol. 37, No. 3, pp. 425-432. https://doi.org/10.18280/ts.370309
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77	Bhatt, T.D.	Sequences with perfect periodic auto and cross correlation properties	periodic autocorrelation, cross-correlation, periodic ambiguity function, zero-correlation zone (ZCZ), synthesized sequences	37, 3, 477-484	https://doi.org/10.18280/ts.370315	Bhatt, T.D. (2020). Sequences with perfect periodic auto and cross correlation properties. Traitement du Signal, Vol. 37, No. 3, pp. 477-484. https://doi.org/10.18280/ts.370315
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80	Huang, W., Li, N., Qiu, Z.J., Jiang, N., Wu, B., Liu, B.	An automatic recognition method for students' classroom behaviors based on image processing	classroom behavior analysis, head pose, facial expression, image processing	37, 3, 503-509	https://doi.org/10.18280/ts.370318	Huang, W., Li, N., Qiu, Z.J., Jiang, N., Wu, B., Liu, B. (2020). An automatic recognition method for students' classroom behaviors based on image processing. Traitement du Signal, Vol. 37, No. 3, pp. 503-509. https://doi.org/10.18280/ts.370318
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82	Cao, X.P., Li, T., Bai, J.W., Wei, Z.K.	Identification and classification of surface cracks on concrete members based on image processing	surface cracks on concrete members, image processing, image segmentation, crack identification and classification	37, 3, 519-525	https://doi.org/10.18280/ts.370320	Cao, X.P., Li, T., Bai, J.W., Wei, Z.K. (2020). Identification and classification of surface cracks on concrete members based on image processing. Traitement du Signal, Vol. 37, No. 3, pp. 519-525. https://doi.org/10.18280/ts.370320
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84	Göğüş, F.Z., Tezel, G., Özşen, S., Küçüktürk, S., Vatansev, H., Koca, Y.	Identification of apnea-hypopnea index subgroups based on multifractal detrended fluctuation analysis and nasal cannula airflow signals	obstructive sleep apnea hypopnea syndrome (OSAHS), positive airway pressure (pap), apnea-hypopnea index (AHI), multifractal detrended fluctuation analysis, nasal cannula airflow signals, feature extraction, feature selection, random forest	37, 2, 145-156	https://doi.org/10.18280/ts.370201	Göğüş, F.Z., Tezel, G., Özşen, S., Küçüktürk, S., Vatansev, H., Koca, Y. (2020). Identification of apnea-hypopnea index subgroups based on multifractal detrended fluctuation analysis and nasal cannula airflow signals. Traitement du Signal, Vol. 37, No. 2, pp. 145-156. https://doi.org/10.18280/ts.370201
85	Li, N.N., Yue, S.Y., Jiang, B.	Adaptive and feature-preserving bilateral filters for three-dimensional models	bilateral filtering, mesh denoising, scale parameters, feature preservation	37, 2, 157-168	https://doi.org/10.18280/ts.370202	Li, N.N., Yue, S.Y., Jiang, B. (2020). Adaptive and feature-preserving bilateral filters for three-dimensional models. Traitement du Signal, Vol. 37, No. 2, pp. 157-168. https://doi.org/10.18280/ts.370202
86	Khezzar, Z.A., Benzid, R., Saidi, L.	New thresholding technique in DCT domain for interference mitigation in GNSS receivers	GNSS interference mitigation, DSSS, Discrete cosine transform, Universal threshold, statistical sampling theory, Tukey window, narraw band interference (NBI)	37, 2, 169-180	https://doi.org/10.18280/ts.370203	Khezzar, Z.A., Benzid, R., Saidi, L. (2020). New thresholding technique in DCT domain for interference mitigation in GNSS receivers. Traitement du Signal, Vol. 37, No. 2, pp. 169-180. https://doi.org/10.18280/ts.370203
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90	Kishore, D., Rao, C.S.	A multi-class SVM based content based image retrieval system using hybrid optimization techniques	CBIT, CS-SCHT, exact Legendre moments, HSV color quantization, differential evolution, multi-class SVM, firefly algorithm	37, 2, 217-225	https://doi.org/10.18280/ts.370207	Kishore, D., Rao, C.S. (2020). A multi-class SVM based content based image retrieval system using hybrid optimization techniques. Traitement du Signal, Vol. 37, No. 2, pp. 217-226. https://doi.org/10.18280/ts.370207
91	Liu, Z.H., Lyu, J., Zhao, H.L., Liu, J.	Prediction of graphic interaction time of virtual reality system based on improved Fitts' law	virtual reality (VR), human computer interaction (HCI), Fitts' law, arbitrary shape	37, 2, 227-234	https://doi.org/10.18280/ts.370208	Liu, Z.H., Lyu, J., Zhao, H.L., Liu, J. (2020). Prediction of graphic interaction time of virtual reality system based on improved Fitts' law. Traitement du Signal, Vol. 37, No. 2, pp. 227-234. https://doi.org/10.18280/ts.370208
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93	Al-Ameen, Z.	Satellite image enhancement using an ameliorated balance contrast enhancement technique	ABCETP, contrast enhancement, image enhancement, satellite imaging	37, 2, 245-254	https://doi.org/10.18280/ts.370210	Al-Ameen, Z. (2020). Satellite image enhancement using an ameliorated balance contrast enhancement technique. Traitement du Signal, Vol. 37, No. 2, pp. 245-254. https://doi.org/10.18280/ts.370210
94	Wu, H., Sun, X.Y., Liu, Y.N., Wang, D.G., Wei, B.	Fusion between shape prior and graph cut for vehicle image segmentation	shape prior, graph cut, image segmentation, vehicle images	37, 2, 255-262	https://doi.org/10.18280/ts.370211	Wu, H., Sun, X.Y., Liu, Y.N., Wang, D.G., Wei, B. (2020). Fusion between shape prior and graph cut for vehicle image segmentation. Traitement du Signal, Vol. 37, No. 2, pp. 255-262. https://doi.org/10.18280/ts.370211
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97	Kaur, A., Verma, K., Bhondekar, A.P., Shashvat, K.	Comparison of classification models using entropy based features from sub-bands of EEG	EEG classification, approximate entropy, sample entropy, fuzzy approximate entropy, random forest, AdaBoost, gradient boosting, na ïve Bayes, linear discriminant analysis, quadratic discriminant analysis	37, 2, 279-289	https://doi.org/10.18280/ts.370214	Kaur, A., Verma, K., Bhondekar, A.P., Shashvat, K. (2020). Comparison of classification models using entropy based features from sub-bands of EEG. Traitement du Signal, Vol. 37, No. 2, pp. 279-289. https://doi.org/10.18280/ts.370214
98	Katouli, M., Rahmani, A.E.	Brain tumor diagnosis in MRI images using image processing techniques and pixel-based clustering	brain tumor, super pixel, spectral clustering, filter Gabor	37, 2, 291-300	https://doi.org/10.18280/ts.370215	Katouli, M., Rahmani, A.E. (2020). Brain tumor diagnosis in MRI images using image processing techniques and pixel-based clustering. Treatment du Signal, Vol. 37, No. 2, pp. 291-300. https://doi.org/10.18280/ts.370215
99	Li, Y.B.	Key technologies for dynamic imaging of disaster-causing concealed water bodies in underground coalmines based on transient electromagnetic method	underground coal mine, high power, transient electromagnetic method (TEM), dynamic imaging	37, 2, 301-306	https://doi.org/10.18280/ts.370216	Li, Y.B. (2020). Key technologies for dynamic imaging of disaster-causing concealed water bodies in underground coalmines based on transient electromagnetic method. Traitement du Signal, Vol. 37, No. 2, pp. 301-306. https://doi.org/10.18280/ts.370216
100	Dahmani, M., Guerti, M.	Cross-recurrence plots and quantification of glottal signal for pathological voice assessment	assessment, cross recurrence quantification analysis, glottal signal, vocal folds	37, 2, 307-317	https://doi.org/10.18280/ts.370217	Dahmani, M., Guerti, M. (2020). Cross-recurrence plots and quantification of glottal signal for pathological voice assessment. Traitement du Signal, Vol. 37, No. 2, pp. 307-317. https://doi.org/10.18280/ts.370217
101	Beirami, B.A., Mokhtarzade, M.	An automatic method for unsupervised feature selection of hyperspectral images based on fuzzy clustering of bands	hyperspectral classification, band selection; statistical attributes, fuzzy c-means clustering, virtual dimensionality, principal component analysis	37, 2, 319-324	https://doi.org/10.18280/ts.370218	Beirami, B.A., Mokhtarzade, M. (2020). An automatic method for unsupervised feature selection of hyperspectral images based on fuzzy clustering of bands. Traitement du Signal, Vol. 37, No. 2, pp. 319-324. https://doi.org/10.18280/ts.370218
102	Wang, Y.	Moving vehicle detection and tracking based on video sequences	video sequence, vehicle tracking algorithm, vehicle detection algorithm, intelligent transportation	37, 2, 325-331	https://doi.org/10.18280/ts.370219	Wang, Y. (2020). Moving vehicle detection and tracking based on video sequences. Traitement du Signal, Vol. 37, No. 2, pp. 325-331. https://doi.org/10.18280/ts.370219
103	Alphonse, P.J.A., Sriharsha, K.V.	Depth perception in a single RGB camera using body dimensions and centroid property	stereo imaging, anthropometric, perspective errors, body dimensions, centroid, surveillance, vision	37, 2, 333-340	https://doi.org/10.18280/ts.370220	Alphonse, P.J.A., Sriharsha, K.V. (2020). Depth perception in a single RGB camera using body dimensions and centroid property. Traitement du Signal, Vol. 37, No. 2, pp. 333-340. https://doi.org/10.18280/ts.370220
104	Mao, C.Z., Meng, W.L., Shi, C,Y., Wu, C.C., Zhang, J.	A crop disease image recognition algorithm based on feature extraction and image segmentation	image recognition, image segmentation, feature extraction, crop diseases	37, 2, 341-346	https://doi.org/10.18280/ts.370221	Mao, C.Z., Meng, W.L., Shi, C,Y., Wu, C.C., Zhang, J. (2020). A crop disease image recognition algorithm based on feature extraction and image segmentation. Traitement du Signal, Vol. 37, No. 2, pp. 341-346. https://doi.org/10.18280/ts.370221
105	Chergui, A., Ouchtati, S., Mavromatis, S., Bekhouche, S.E., Lashab, M., Sequeira, J.	Kinship verification through facial images using CNN-based features	kinship verification, deep learning, VGG-Face, fisher score, SVM	37, 1, 1-8	https://doi.org/10.18280/ts.370101	Chergui, A., Ouchtati, S., Mavromatis, S., Bekhouche, S.E., Lashab, M., Sequeira, J. (2020). Kinship verification through facial images using CNN-based features. Traitement du Signal, Vol. 37, No. 1, pp. 1-8. https://doi.org/10.18280/ts.370101
106	Akgun, O.	Spectral and statistical analysis for damage detection in ceramic materials	ceramic materials, crack analysis, impulse noise method, Wigner Ville distribution, bispectrum, trispectrum, mean value, Peak to RMS	37, 1, 9-16	https://doi.org/10.18280/ts.370102	Akgun, O. (2020). Spectral and statistical analysis for damage detection in ceramic materials. Traitement du Signal, Vol. 37, No. 1, pp. 9-16. https://doi.org/10.18280/ts.370102
107	Keivani, M., Mazloum, J., Sedaghatfar, E., Tavakoli, M.B.	Automated analysis of leaf shape, texture, and color features for plant classification	plants, GIST, best-guide binary particle swarm optimization, geometrics, machine learning	37, 1, 17-28	https://doi.org/10.18280/ts.370103	Keivani, M., Mazloum, J., Sedaghatfar, E., Tavakoli, M.B. (2020). Automated analysis of leaf shape, texture, and color features for plant classification. Traitement du Signal, Vol. 37, No. 1, pp. 17-28. https://doi.org/10.18280/ts.370103
108	Tang, X., Zeng, T., Ding, B.X., Tan, Y.	A salient object detection algorithm based on hierarchical cognitive mechanism	cognitive mechanism, salient object detection, RGB-D image, saliency map	37, 1, 29-35	https://doi.org/10.18280/ts.370104	Tang, X., Zeng, T., Ding, B.X., Tan, Y. (2020). A salient object detection algorithm based on hierarchical cognitive mechanism. Traitement du Signal, Vol. 37, No. 1, pp. 29-35. https://doi.org/10.18280/ts.370104
109	Abdellaoui, M., Douik, A.	Human action recognition in video sequences using deep belief networks	human action recognition, deep belief network, restricted Boltzmann machine, deep learning	37, 1, 37-44	https://doi.org/10.18280/ts.370105	Abdellaoui, M., Douik, A. (2020). Human action recognition in video sequences using deep belief networks. Traitement du Signal, Vol. 37, No. 1, pp. 37-44. https://doi.org/10.18280/ts.370105
110	Yan, X.D., Song, X.G.	An image recognition algorithm for defect detection of underground pipelines based on convolutional neural network	image recognition, convolution neural network (CNN), cost function, recursive neural network (RNN), underground pipelines	37, 1, 45-50	https://doi.org/10.18280/ts.370106	Yan, X.D., Song, X.G. (2020). An image recognition algorithm for defect detection of underground pipelines based on convolutional neural network. Traitement du Signal, Vol. 37, No. 1, pp. 45-50. https://doi.org/10.18280/ts.370106

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112	Akbari, H., Esmaili, S.S.	A novel geometrical method for discrimination of normal, interictal and ictal EEG signals	ictal EEG signal, geometrical features, computer-aided diagnosis, SVM, KNN	37, 1, 59-68	https://doi.org/10.18280/ts.370108	Akbari, H., Esmaili, S.S. (2020). A novel geometrical method for discrimination of normal, interictal and ictal EEG signals. Traitement du Signal, Vol. 37, No. 1, pp. 59-68. https://doi.org/10.18280/ts.370108
113	Yang, B.H.	An adaptive filtering algorithm for non-Gaussian signals in alpha-stable distribution	Alpha (α)-stable distribution, non-Gaussian distribution, fractional lower-order statistics (FLOS), adaptive filtering algorithm, least mean square (LMS), subspace minimum norm (SMN) algorithm	37, 1, 69-75	https://doi.org/10.18280/ts.370109	Yang, B.H. (2020). An adaptive filtering algorithm for non-Gaussian signals in alpha-stable distribution. Traitement du Signal, Vol. 37, No. 1, pp. 69-75. https://doi.org/10.18280/ts.370109
114	Nandan, D.	An efficient antilogarithmic converter by using correction scheme for DSP processor	antilogarithmic converter, computer arithmetic, DSP processor, error analysis, FIR filter, logarithmic converter, logarithmic multiplication	37, 1, 77-83	https://doi.org/10.18280/ts.370110	Nandan, D. (2020). An efficient antilogarithmic converter by using correction scheme for DSP processor. Traitement du Signal, Vol. 37, No. 1, pp. 77-83. https://doi.org/10.18280/ts.370110
115	Jin, D.B., Xu, S.Q., Tong, L.J., Wu, L.Y., Liu, S.M.	A deep learning model for striae identification in end images of float glass	striae identification, end image, float glass, deep learning (DL), liquid layers, U-Net	37, 1, 85-93	https://doi.org/10.18280/ts.370111	Jin, D.B., Xu, S.Q., Tong, L.J., Wu, L.Y., Liu, S.M. (2020). A deep learning model for striae identification in end images of float glass. Traitement du Signal, Vol. 37, No. 1, pp. 85-93. https://doi.org/10.18280/ts.370111
116	Mokhnache, A., Ziet, L.	Cryptanalysis of a pixel permutation based image encryption technique using chaotic map	chaos, chosen-plaintext attack, brute-force attack, image encryption	37, 1, 95-100	https://doi.org/10.18280/ts.370112	Mokhnache, A., Ziet, L. (2020). Cryptanalysis of a pixel permutation based image encryption technique using chaotic map. Traitement du Signal, Vol. 37, No. 1, pp. 95-100. https://doi.org/10.18280/ts.370112
117	Jia, B.X., Meng, B., Zhang, W.N., Liu, J.	Query rewriting and semantic annotation in semantic-based image retrieval under heterogeneous ontologies of big data	semantic web, ontology mapping, query rewriting, big data, semantic annotation	37, 1, 101-105	https://doi.org/10.18280/ts.370113	Jia, B.X., Meng, B., Zhang, W.N., Liu, J. (2020). Query rewriting and semantic annotation in semantic-based image retrieval under heterogeneous ontologies of big data. Traitement du Signal, Vol. 37, No. 1, pp. 101-105. https://doi.org/10.18280/ts.370113
118	Bhange, D., Dethe, C.	Performance optimization of LS/LMMSE using swarm intelligence in 3D MIMO-OFDM systems	bit error rate, 3D-PACE, multi input multi output, orthogonal frequency division multiplexing, particle swarm optimization	37, 1, 107-112	https://doi.org/10.18280/ts.370114	Bhange, D., Dethe, C. (2020). Performance optimization of LS/LMMSE using swarm intelligence in 3D MIMO-OFDM systems. Traitement du Signal, Vol. 37, No. 1, pp. 107-112. https://doi.org/10.18280/ts.370114
119	Li, X.J., Li, S.F., Liu, S.N., Liu, L.F., He, D.J.	A malicious webpage detection algorithm based on image semantics	deep learning, malicious attack, image semantics, backpropagation neural network (BPNN)	37, 1, 113-118	https://doi.org/10.18280/ts.370115	Li, X.J., Li, S.F., Liu, S.N., Liu, L.F., He, D.J. (2020). A malicious webpage detection algorithm based on image semantics. Traitement du Signal, Vol. 37, No. 1, pp. 113-118. https://doi.org/10.18280/ts.370115
120	Das, M., Kumar, R., Sahana, B.C.	Implementation of effective hybrid window function for E.C.G signal denoising	additive white gaussian noise, electrocardiogram denoising, finite impulse response low pass filter, window functions	37, 1, 119-128	https://doi.org/10.18280/ts.370116	Das, M., Kumar, R., Sahana, B.C. (2020). Implementation of effective hybrid window function for E.C.G signal denoising. Traitement du Signal, Vol. 37, No. 1, pp. 119-128. https://doi.org/10.18280/ts.370116
121	Aslam, L., Saeed, A., Qureshi, I.M., Amir, M., Khan, W.	Novel image steganography based on preprocessing of secrete messages to attain enhanced data security and improved payload capacity	data security, hidden communication, Steganography	37, 1, 129-136	https://doi.org/10.18280/ts.370117	Aslam, L., Saeed, A., Qureshi, I.M., Amir, M., Khan, W. (2020). Novel image steganography based on preprocessing of secrete messages to attain enhanced data security and improved payload capacity. Traitement du Signal, Vol. 37, No. 1, pp. 129-136. https://doi.org/10.18280/ts.370117
122	Chen, X.B., Zhao, L., Hao, Y., Yu, L.H., Lv, C.C.	An evaluation algorithm for the interoperability of global navigation satellite systems	global navigation satellite systems (GNSSs), Compass/BeiDou Navigation Satellite System (Compass), interoperability, evaluation, service performance	37, 1, 137-144	https://doi.org/10.18280/ts.370118	Chen, X.B., Zhao, L., Hao, Y., Yu, L.H., Lv, C.C. (2020). An evaluation algorithm for the interoperability of global navigation satellite systems. Traitement du Signal, Vol. 37, No. 1, pp. 137-144. https://doi.org/10.18280/ts.370118
123	Hamdini, R., Diffellah, N., Namane, A.	Robust local descriptor for color object recognition	color object recognition, hue, oriented descriptor, SVM, visual information	36, 6, 471-482	https://doi.org/10.18280/ts.360601	Hamdini, R., Diffellah, N., Namane, A. (2019). Robust local descriptor for color object recognition. Traitement du Signal, Vol. 36, No. 6, pp. 471-482. https://doi.org/10.18280/ts.360601
124	Ouchtati, S., Chergui, A., Mavromatis, S., Aissa, B., Rafik, D., Sequeira J.	Novel method for brain tumor classification based on use of image entropy and seven Hu's invariant moments	artificial neural networks, medical images processing, images classification, brain tumor	36, 6, 483-491	https://doi.org/10.18280/ts.360602	Ouchtati, S., Chergui, A., Mavromatis, S., Aissa, B., Rafik, D., Sequeira J. (2019). Novel method for brain tumor classification based on use of image entropy and seven Hu's invariant moments. Traitement du Signal, Vol. 36, No. 6, pp. 483-491. https://doi.org/10.18280/ts.360602
125	Gündoğdu, S., Doğan, E.A., Gülbetekin, E., Çolak, Ö.H., Polat, Ö.	Evaluation of the EEG signals and eye tracker data for working different N-back modes	electroencephalography, eye tracking, wavelet transforms, n-back test	36, 6, 493-500	https://doi.org/10.18280/ts.360603	Gündoğdu, S., Doğan, E.A., Gülbetekin, E., Çolak, Ö.H., Polat, Ö. (2019). Evaluation of the EEG signals and eye tracker data for working different N-back modes. Traitement du Signal, Vol. 36, No. 6, pp. 493-500. https://doi.org/10.18280/ts.360603
126	Ye, Z.X., Chen, Q., Zhang, Y., Zou, J.F., Zheng, Y.	Identification of vortex structures in flow field images based on convolutional neural network and dynamic mode decomposition	image processing, vortex identification, Convolutional Neural Network (CNN), Dynamic Mode Decomposition (DMD)	36, 6, 501-506	https://doi.org/10.18280/ts.360604	Ye, Z.X., Chen, Q., Zhang, Y., Zou, J.F., Zheng, Y. (2019). Identification of vortex structures in flow field images based on convolutional neural network and dynamic mode decomposition. Traitement du Signal, Vol. 36, No. 6, pp. 501-506. https://doi.org/10.18280/ts.360604
127	Fekri-Ershad, S.	Gender classification in human face images for smart phone applications based on local texture information and evaluated Kullback-Leibler divergence	gender classification, human recognition, improved local binary patterns, facial images, kullback-leibler divergence ratio, smart phone applications	36, 6, 507-514	https://doi.org/10.18280/ts.360605	Fekri-Ershad, S. (2019). Gender classification in human face images for smart phone applications based on local texture information and evaluated Kullback-Leibler divergence. Traitement du Signal, Vol. 36, No. 6, pp. 507-514. https://doi.org/10.18280/ts.360605
128	Xiu, G.Y., Yuan, C.Y., Chen, X.H., Li, X.S.	An innovative beam hardening correction method for computed tomography systems	Computed Tomography (CT), equivalent tissue length, trinomial fitting, water, bone	36, 6, 515-520	https://doi.org/10.18280/ts.360606	Xiu, G.Y., Yuan, C.Y., Chen, X.H., Li, X.S. (2019). An innovative beam hardening correction method for computed tomography systems. Traitement du Signal, Vol. 36, No. 6, pp. 515-520. https://doi.org/10.18280/ts.360606
129	Tuncer, S.A., Alkan, A.	Spinal cord based kidney segmentation using connected component labeling and K-means clustering algorithm	biomedical imaging, clustering algorithms, image processing, image segmentation	36, 6, 521-527	https://doi.org/10.18280/ts.360607	Tuncer, S.A., Alkan, A. (2019). Spinal cord based kidney segmentation using connected component labeling and K-means clustering algorithm. Traitement du Signal, Vol. 36, No. 6, pp. 521-527. https://doi.org/10.18280/ts.360607
130	Ganguly, S., Ghosh, J., Srinivas, K., Kumar, P.K., Mukhopadhyay, M.	Compressive sensing based two-dimensional DOA estimation using L-shaped array in a hostile environment	compressive sensing, l-shaped array antenna, orthogonal matching pursuit algorithm, sparse sampling, two-dimensional DOA estimation	36, 6, 529-538	https://doi.org/10.18280/ts.360608	Ganguly, S., Ghosh, J., Srinivas, K., Kumar, P.K., Mukhopadhyay, M. (2019). Compressive sensing based two-dimensional DOA estimation using L-shaped array in a hostile environment. Traitement du Signal, Vol. 36, No. 6, pp. 529-538. https://doi.org/10.18280/ts.360608
131	Zhang, J.H., Zhu, Q., Song, L.	A wavelet-based self-adaptive hierarchical thresholding algorithm and its application in image denoising	wavelet analysis, image denoising, parametric construction of biorthogonal wavelet, self-adaptive hierarchal thresholding	36, 6, 539-547	https://doi.org/10.18280/ts.360609	Zhang, J.H., Zhu, Q., Song, L. (2019). A wavelet-based self-adaptive hierarchical thresholding algorithm and its application in image denoising. Traitement du Signal, Vol. 36, No. 6, pp. 539-547. https://doi.org/10.18280/ts.360609
132	Özbay, E., Çınar, A.	A comparative study of object classification methods using 3D Zernike moment on 3D point clouds	3D, classification, machine learning, point cloud, pointnet, zernike moment	36, 6, 549-555	https://doi.org/10.18280/ts.360610	Özbay, E., Çınar, A. (2019). A comparative study of object classification methods using 3D Zernike moment on 3D point clouds. Traitement du Signal, Vol. 36, No. 6, pp. 549-555. https://doi.org/10.18280/ts.360610

133	Pei, J.Y., Shan, P.	A micro-expression recognition algorithm for students in classroom learning based on convolutional neural network	convolutional neural network (CNN), micro-expression recognition, deep learning, face detection, classroom learning	36, 6, 557-563	https://doi.org/10.18280/ts.360611	Pei, J.Y., Shan, P. (2019). A micro-expression recognition algorithm for students in classroom learning based on convolutional neural network. Traitement du Signal, Vol. 36, No. 6, pp. 557-563. https://doi.org/10.18280/ts.360611
134	Kuraparthi, S., Kollati, M., Kora, P.	Robust optimized discrete wavelet transform-singular value decomposition based video watermarking	ABC, DWT, imperceptibility, robustness, SVD transform	36, 6, 565-573	https://doi.org/10.18280/ts.360612	Kuraparthi, S., Kollati, M., Kora, P. (2019). Robust optimized discrete wavelet transform-singular value decomposition based video watermarking. Traitement du Signal, Vol. 36, No. 6, pp. 565-573. https://doi.org/10.18280/ts.360612
135	Meng, W.L., Mao, C.Z., Zhang, J., Wen, J., Wu, D.H.	A fast recognition algorithm of online social network images based on deep learning	online social network (OSN), image recognition, deep learning, image classification, support vector machine (SVM)	36, 6, 575-580	https://doi.org/10.18280/ts.360613	Meng, W.L., Mao, C.Z., Zhang, J., Wen, J., Wu, D.H. (2019). A fast recognition algorithm of online social network images based on deep learning. Traitement du Signal, Vol. 36, No. 6, pp. 575-580. https://doi.org/10.18280/ts.360613
136	Özdemir, H., Sever, R., Polat, Ö.	GA-based optimization of SURF algorithm and realization based on Vivado-HLS	speeded-up robust features, high-level synthesis, genetic algorithm, optimization, character recognition	36, 5, 377-382	https://doi.org/10.18280/ts.360501	Özdemir, H., Sever, R., Polat, Ö. (2019). GA-based optimization of SURF algorithm and realization based on Vivado-HLS. Traitement du Signal, Vol. 36, No. 5, pp. 377-382. https://doi.org/10.18280/ts.360501
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138	Zhang, F., Zhang, C., Yang, H.M., Zhao, L.	Point cloud denoising with principal component analysis and a novel bilateral filter	point cloud, 3D scanner, principal component analysis (PCA), bilateral filter	36, 5, 393-398	https://doi.org/10.18280/ts.360503	Zhang, F., Zhang, C., Yang, H.M., Zhao, L. (2019). Point cloud denoising with principal component analysis and a novel bilateral filter. Traitement du Signal, Vol. 36, No. 5, pp. 393-398. https://doi.org/10.18280/ts.360503
139	Beirami, B.A.,Mokhtarzade, M.	Spatial-spectral random patches network for classification of hyperspectral images	hyperspectral classification, random patches network, Gabor filter, support vector machine	36, 5, 399-406	https://doi.org/10.18280/ts.360504	Beirami, B.A.,Mokhtarzade, M. (2019). Spatial-spectral random patches network for classification of hyperspectral images. Traitement du Signal, Vol. 36, No. 5, pp. 399-406. https://doi.org/10.18280/ts.360504
140	Herbadji, D., Derouiche, N., Belmeguenai, A., Herbadji, A., Boumerdassi, S.	A tweakable image encryption algorithm using an improved logistic chaotic map	image encryption, chaos, logistic map, tweakable	36, 5, 407-417	https://doi.org/10.18280/ts.360505	Herbadji, D., Derouiche, N., Belmeguenai, A., Herbadji, A., Boumerdassi, S. (2019). A tweakable image encryption algorithm using an improved logistic chaotic map. Traitement du Signal, Vol. 36, No. 5, pp. 407-417. https://doi.org/10.18280/ts.360505
141	Zhang, C., Pan, S., Qi, Y.W., Yang, Y.D.	A footprint extraction and recognition algorithm based on plantar pressure	footprint recognition, plantar pressure, clustering, image segmentation	36, 5, 419-424	https://doi.org/10.18280/ts.360506	Zhang, C., Pan, S., Qi, Y.W., Yang, Y.D. (2019). A footprint extraction and recognition algorithm based on plantar pressure. Traitement du Signal, Vol. 36, No. 5, pp. 419-424. https://doi.org/10.18280/ts.360506
142	Gupta, A.K., Chakraborty, C., Gupta, B.	Monitoring of epileptical patients using cloud-enabled health-IoT system	DWT-SVD, EEG monitoring, epilepsy, health-IOT, STFT, watermarking	36, 5, 425-431	https://doi.org/10.18280/ts.360507	Gupta, A.K., Chakraborty, C., Gupta, B. (2019). Monitoring of epileptical patients using cloud-enabled health-IoT system. Traitement du Signal, Vol. 36, No. 5, pp. 425-431. https://doi.org/10.18280/ts.360507
143	Farooq, U., Rather, G.M.	Design and analysis of rectangular microstrip antenna (RMSA) for millimeter wave communication applications	millimeter wave, microstrip antenna, equivalent circuit, VSWR, next generation networks, 5G	36, 5, 433-438	https://doi.org/10.18280/ts.360508	Farooq, U., Rather, G.M. (2019). Design and analysis of rectangular microstrip antenna (RMSA) for millimeter wave communication applications. Traitement du Signal, Vol. 36, No. 5, pp. 433-438. https://doi.org/10.18280/ts.360508
144	Li, H., Ge, X.	Design and application of an image classification algorithm based on semantic discrimination	image classification, distance metric learning (DML), maximum-margin criterion (mmc), semantic discrimination	36, 5, 439-444	https://doi.org/10.18280/ts.360509	Li, H., Ge, X. (2019). Design and application of an image classification algorithm based on semantic discrimination. Traitement du Signal, Vol. 36, No. 5, pp. 439-444. https://doi.org/10.18280/ts.360509
145	Wajeed, M.A., Sreenivasulu, V.	Image based tumor cells identification using convolutional neural network and auto encoders	convolutional neural network, region-convolutional neural network, tumor cells, pre processing, clustering, classification, tumor prediction	36, 5, 445-453	https://doi.org/10.18280/ts.360510	Wajeed, M.A., Sreenivasulu, V. (2019). Image based tumor cells identification using convolutional neural network and auto encoders. Traitement du Signal, Vol. 36, No. 5, pp. 445-453. https://doi.org/10.18280/ts.360510
146	Singh, M.K., Nandan, D., Kumar, S.	Statistical analysis of lower and raised pitch voice signal and its efficiency calculation	acoustic feature, statistical analysis, feature extraction, SVM classifier, speaker identification	36, 5, 455-461	https://doi.org/10.18280/ts.360511	Singh, M.K., Nandan, D., Kumar, S. (2019). Statistical analysis of lower and raised pitch voice signal and its efficiency calculation. Traitement du Signal, Vol. 36, No. 5, pp. 455-461. https://doi.org/10.18280/ts.360511
147	Li, Y., Shi, D.L., Bu, F.J.	Automatic recognition of rock images based on convolutional neural network and discrete cosine transform	deep learning, image classification, convolutional neural network (CNN), discrete cosine transform (DCT)	36, 5, 463-469	https://doi.org/10.18280/ts.360512	Li, Y., Shi, D.L., Bu, F.J. (2019). Automatic recognition of rock images based on convolutional neural network and discrete cosine transform. Traitement du Signal, Vol. 36, No. 5, pp. 463-469. https://doi.org/10.18280/ts.360512
148	Moezzi R., Hlava J., Vu T.M.	Implementation of X-parameters principle for non-linear vibroacoustic membrane using two-port measurement	x-parameters, poly-harmonic distortion (PHD), s-parameters, lumped model, nonlinear acoustics, scattering matrix	36, 4, 297-301	https://doi.org/10.18280/ts.360401	Moezzi, R., Hlava, J., Vu, T.M. (2019). Implementation of X-parameters principle for non-linear vibroacoustic membrane using two-port measurement. Traitement du Signal, Vol. 36, No. 4, pp. 297-301. https://doi.org/10.18280/ts.360401
149	Kaya, D., Tuncer, S.A.	Generating random numbers from biological signals in labVIEW environment and statistical analysis	True Random Number Generator (TRNG), Biological Signal, Electromyographic (EMG) Signal, LabVIEW, statistical test	36, 4, 303-310	https://doi.org/10.18280/ts.360402	Kaya, D., Tuncer, S.A. (2019). Generating random numbers from biological signals in LabVIEW environment and statistical analysis. Traitement du Signal, Vol. 36, No. 4, pp. 303-310. https://doi.org/10.18280/ts.360402
150	Liu, Q., He, X., Guan, F.W., Zhao, Y.C., Jiang, F., Tian, F.X., Wang, S.X.	Method and implementation of improving the pointing accuracy of an optical remote sensor using a star sensor	Star Sensor, Spatial Optical Remote Sensor, External Orientation Element, Pointing Accuracy	36, 4, 311-317	https://doi.org/10.18280/ts.360403	Liu, Q., He, X., Guan, F.W., Zhao, Y.C., Jiang, F., Tian, F.X., Wang, S.X. (2019). Method and implementation of improving the pointing accuracy of an optical remote sensor using a star sensor. Traitement du Signal, Vol. 36, No. 4, pp. 311-317. https://doi.org/10.18280/ts.360403
151	Gorur, K., Bozkurt, M.R., Bascil, M.S., Temurtas, F.	GKP signal processing using deep CNN and svm for tongue-machine interface	Glossokinetic Potential Signals (GKPs), Tongue-Machine Interface (TMI), Convolutional Neural Network (CNN), Support Vector Machine (SVM), Brain-Computer Interface (BCI)	36, 4, 319-329	https://doi.org/10.18280/ts.360404	Gorur, K., Bozkurt, M.R., Bascil, M.S., Temurtas, F. (2019). GKP signal processing using deep CNN and SVM for tongue-machine interface. Traitement du Signal, Vol. 36, No. 4, pp. 319-329. https://doi.org/10.18280/ts.360404
152	Yang, K., Yang, Z.T., Yan, W.N., Zhao, J.K., Du, Y., Liu, S., Liu, K.	Reconstruction algorithm for polychromatic computed tomography images based on equivalent tissue length	Beam Hardening, Computed Tomography (CT), equivalent tissue length, proportional guidance	36, 4, 331-338	https://doi.org/10.18280/ts.360405	Yang, K., Yang, Z.T., Yan, W.N., Zhao, J.K., Du, Y., Liu, S., Liu, K. (2019). Reconstruction algorithm for polychromatic computed tomography images based on equivalent tissue length. Traitement du Signal, Vol. 36, No. 4, pp. 331-338. https://doi.org/10.18280/ts.360405
153	Sajja, T.K., Devarapalli, R.M., Kalluri, H.K.	Lung cancer detection based on ct scan images by using deep transfer learning	Convolutional Neural Network (CNN), lung cancer, transfer learning, alexnet, googlenet, resnet50	36, 4, 339-344	https://doi.org/10.18280/ts.360406	Sajja, T.K., Devarapalli, R.M., Kalluri, H.K. (2019). Lung cancer detection based on CT scan images by using deep transfer learning. Traitement du Signal, Vol. 36, No. 4, pp. 339-344. https://doi.org/10.18280/ts.360406
154	Qin, Z., Zhang, Y., Zhang, S., Zhao, J.W., Wang, T.F., Shen, K.	Identification of microscopic damage law of rocks through digital image processing of computed tomography images	Digital Image Processing (DIP), Geotechnical Engineering, Computed Tomography (CT) Scanning, Representative Elementary Volume (REV), microscopic damages	36, 4, 345-352	https://doi.org/10.18280/ts.360407	Qin, Z., Zhang, Y., Zhang, S., Zhao, J.W., Wang, T.F., Shen, K. (2019). Identification of microscopic damage law of rocks through digital image processing of computed tomography images. Traitement du Signal, Vol. 36, No. 4, pp. 345-352. https://doi.org/10.18280/ts.360407

155	Teki, S.M., Varma, M.K., Yadav, A.K.	Brain tumour segmentation using U-net based adversarial networks	image segmentation, brain tumour, deep learning, adversarial network, neural networks	36, 4, 353-359	https://doi.org/10.18280/ts.360408	Teki, S.M., Varma, M.K., Yadav, A.K. (2019). Brain tumour segmentation using U-net based adversarial networks. Traitement du Signal, Vol. 36, No. 4, pp. 353-359. https://doi.org/10.18280/ts.360408
156	Sheikh, T.A., Bora, J., Hussain, A.	Performance analysis of massive multi-input and multi-output with imperfect channel state information	massive multi-input and multi-output (MIMO), 5G, user scheduling, antenna selection, scale fading, channel estimation error	36, 4, 361-368	https://doi.org/10.18280/ts.360409	Sheikh, T.A., Bora, J., Hussain, A. (2019). Performance analysis of massive multi-input and multi-output with imperfect channel state information. Traitement du Signal, Vol. 36, No. 4, pp. 361-368. https://doi.org/10.18280/ts.360409
157	Li, X., Lin, C., Xu, X.P.	A target tracking model for enterprise production monitoring system based on spatial information and appearance model	target tracking, appearance features, spatial information, multi-plane projection	36, 4, 369-375	https://doi.org/10.18280/ts.360410	Li, X., Lin, C., Xu, X.P. (2019). A target tracking model for enterprise production monitoring system based on spatial information and appearance model. Traitement du Signal, Vol. 36, No. 4, pp. 369-375. https://doi.org/10.18280/ts.360410
158	Eva, O.D., Lazar, A.M.	Amplitude modulation index as feature in a brain computer interface	classification algorithms, EEG rhythms electroencephalography, features extraction, hilbert transform, motor imagery, modulation bands, temporal envelope	36, 3, 201-207	https://doi.org/10.18280/ts.360301	Eva, O.D., Lazar, A.M. (2019). Amplitude modulation index as feature in a brain computer interface. Traitement du Signal, Vol. 36, No. 3, pp. 201-207. https://doi.org/10.18280/ts.360301
159	Zhao Y.M.Zhao, Y.M.	Design and application of an adaptive slow feature extraction algorithm for natural images based on visual invariance	invariant, slow feature (SF), visual computing, receptive field, topology	36, 3, 209-216	https://doi.org/10.18280/ts.360302	Zhao, Y.M. (2019). Design and application of an adaptive slow feature extraction algorithm for natural images based on visual invariance. Traitement du Signal, Vol. 36, No. 3, pp. 209-216. https://doi.org/10.18280/ts.360302
160	Fatima, B., Réda, A.	Multi-modal biometric protection system using surf filter with biohashing algorithm	multi-biometric, security, fusion, biohashing, revocable	36, 3, 217-225	https://doi.org/10.18280/ts.360303	Fatima, B., Réda, A. (2019). Multi-modal biometric protection system using SURF Filter with BioHashing algorithm. Traitement du Signal, Vol. 36, No. 3, pp. 217-225. https://doi.org/10.18280/ts.360303
161	Lu, X.M., Wu, Q., Zhou, Y., Ma, Y., Song, C.C., Ma, C.	A dynamic swarm firefly algorithm based on chaos theory and max-min distance algorithm	K-means clustering (KMC), max-min distance algorithm (MM), firefly algorithm (FA), chaos theory	36, 3, 227-231	https://doi.org/10.18280/ts.360304	Lu, X.M., Wu, Q., Zhou, Y., Ma, Y., Song, C.C., Ma, C. (2019). A dynamic swarm firefly algorithm based on chaos theory and Max-Min distance algorithm. Traitement du Signal, Vol. 36, No. 3, pp. 227-231. https://doi.org/10.18280/ts.360304
162	Kumar, S.K., Reddy, P.D.K., Ramesh, G., Maddumala, V.R.	Image transformation technique using steganography methods using LWT technique	embedding, steganography, extraction, texturization, watermarking	36, 3, 233-237	https://doi.org/10.18280/ts.360305	Kumar, S.K., Reddy, P.D.K., Ramesh, G., Maddumala, V.R. (2019). Image transformation technique using steganography methods using LWT technique. Traitement du Signal, Vol. 36, No. 3, pp. 233-237. https://doi.org/10.18280/ts.360305
163	Li, Z.L., Zhou, Y., Bao, R.	An image classification method based on optimized fuzzy bag-of-words model	fuzzy bag-of-words (FBOW) model, image description, fuzzy system with positive and negative rules, particle swarm optimization (PSO), recursive least squares (RLS) algorithm	36, 3, 239-244	https://doi.org/10.18280/ts.360306	Li, Z.L., Zhou, Y., Bao, R. (2019). An image classification method based on optimized fuzzy bag-of-words model. Traitement du Signal, Vol. 36, No. 3, pp. 239-244. https://doi.org/10.18280/ts.360306
164	Chergui, L., Bouguezel, S.	A new post-whitening transform domain LMS algorithm	eigen-value spread, orthogonal transforms, post-whitening, predictive decorrelation, system identification, TDLMS	36, 3, 245-252	https://doi.org/10.18280/ts.360307	Chergui, L., Bouguezel, S. (2019). A new post-whitening transform domain LMS algorithm. Traitement du Signal, Vol. 36, No. 3, pp. 245-252. https://doi.org/10.18280/ts.360307
165	Gao, Y.H., Lu, H.L.	A novel co-planar waveguide-fed direct current wide band printed dipole antenna	dipole antenna, coplanar waveguide (CPW), base station, radio frequency identification (RFID)	36, 3, 253-257	https://doi.org/10.18280/ts.360308	Gao, Y.H., Lu, H.L. (2019). A novel co-planar waveguide-fed direct current wide band printed dipole antenna. Traitement du Signal, Vol. 36, No. 3, pp. 253-257. https://doi.org/10.18280/ts.360308
166	Shafieian, M., Zavar, M., Rahmanian, M.	Simulation and control of surge phenomenon in centrifugal compressors	centrifugal compressor, surge modeling, nonlinear function, close-coupled valve, Lyapunov, surge protection, control valve, stability	36, 3, 259-264	https://doi.org/10.18280/ts.360309	Shafieian, M., Zavar, M., Rahmanian, M. (2019). Simulation and control of surge phenomenon in centrifugal compressors. Traitement du Signal, Vol. 36, No. 3, pp. 259-264. https://doi.org/10.18280/ts.360309
167	Luo, Z.L., Jia, Y.B., He, J.Z.	An optic disc segmentation method based on active contour tracking	optic disc segmentation, retinal image, active contour tracking, least squares method	36, 3, 265-271	https://doi.org/10.18280/ts.360310	Luo, Z.L., Jia, Y.B., He, J.Z. (2019). An optic disc segmentation method based on active contour tracking. Traitement du Signal, Vol. 36, No. 3, pp. 265-271. https://doi.org/10.18280/ts.360310
168	Rafik, D., Larbi, B.	Autoregressive modeling based empirical mode decomposition (EMD) for epileptic seizures detection using eeg signals	epilepsy, epileptic EEG signals, EMD, autoregressive modeling, classification, seizures	36, 3, 273-279	https://doi.org/10.18280/ts.360311	Rafik, D., Larbi, B. (2019). Autoregressive modeling based empirical mode decomposition (EMD) for epileptic seizures detection using EEG signals. Traitement du Signal, Vol. 36, No. 3, pp. 273-279. https://doi.org/10.18280/ts.360311
169	Shankar, R., Kumar, I., Mishra, R.K.	Pairwise error probability analysis of dual hop relaying network over time selective nakagami-m fading channel with imperfect csi and node mobility	selective decode-and-forward, multiple- input multiple-output, channel state information, diversity order, signal to noise ratio	36, 3, 281-295	https://doi.org/10.18280/ts.360312	Shankar, R., Kumar, I., Mishra, R.K. (2019). Pairwise error probability analysis of dual hop relaying network over time selective Nakagami-m fading channel with imperfect CSI and node mobility. Traitement du Signal, Vol. 36, No. 3, pp. 281-295. https://doi.org/10.18280/ts.360312
170	Eddine Cherif, B.D., Bendiabdellah, A.,Tabbakh, M.	Diagnosis of an inverter IGBT open-circuit fault by hilbert-huang transform application	inverter, IGBT, open-circuit, HHT, EMD, CEEMDAN, IMF, spectral envelope, rms	36, 2, 137-132	https://doi.org/10.18280/ts.360201	Eddine Cherif, B.D., Bendiabdellah, A.,Tabbakh, M. (2019). Diagnosis of an inverter IGBT open-circuit fault by hilbert-huang transform application. Traitement du Signal, Vol. 36, No. 2, pp. 127-132. https://doi.org/10.18280/ts.360201
171	Rad, S.M., Nejad, M.B.	New analog processing technique in multichannel neural signal recording with reduce data rate and reduce power consumption	analog processor, compressive sampling, spike detection, multi-channel neural recording system, reduce power consumption	36, 2, 133-137	https://doi.org/10.18280/ts.360202	Rad, S.M., Nejad, M.B. (2019). New analog processing technique in multichannel neural signal recording with reduce data rate and reduce power consumption. Traitement du Signal, Vol. 36, No. 2, pp. 133-137. https://doi.org/10.18280/ts.360202
172	Zhu, Y.L., Xu, C.G., Xiao, D.G.	Denoising ultrasonic echo signals with generalized s transform and singular value decomposition	echo signals, Generalized S Transform (GST), Singular value Decomposition (SVD), C-scan image	36, 2, 139-145	https://doi.org/10.18280/ts.360203	Zhu, Y.L., Xu, C.G., Xiao, D.G. (2019). Denoising ultrasonic echo signals with generalized s transform and singular value decomposition. Traitement du Signal, Vol. 36, No. 2, pp. 139-145. https://doi.org/10.18280/ts.360203
173	Zou, H.D., Jia, R.Q.	Visual positioning and recognition of gangues based on scratch feature detection	gangue, raw coal, grey level co-occurrence matrix (GLCM), texture feature, scratch feature	36, 2, 147-153	https://doi.org/10.18280/ts.360204	Zou, H.D., Jia, R.Q. (2019). Visual positioning and recognition of gangues based on scratch feature detection. Traitement du Signal, Vol. 36, No. 2, pp. 147-153. https://doi.org/10.18280/ts.360204
174	Sachan, V., Mishra, R.K.	Uplink sum rate and capacity of hybrid precoding mmwave massive MIMO system	MIMO, massive MIMO, millimeter wave, hybrid precoding and combining	36, 2, 155-160	https://doi.org/10.18280/ts.360205	Sachan, V., Mishra, R.K. (2019). Uplink sum rate and capacity of hybrid precoding mmWave massive MIMO system. Traitement du Signal, Vol. 36, No. 2, pp. 155-160. https://doi.org/10.18280/ts.360205
175	Xie, J.B., Li, R.T., Lv, S.W., Wang, Y.J., Wang, Q.Y., Vorotnitsky, Y.I.	Chinese alt text writing based on deep learning	Chinese image captioning, deep convolutional neural network (DCNN), feature extraction, gated recurrent unit (GRU) network	36, 2, 161-170	https://doi.org/10.18280/ts.360206	Xie, J.B., Li, R.T., Lv, S.W., Wang, Y.J., Wang, Q.Y., Vorotnitsky, Y.I. (2019). Chinese alt text writing based on deep learning. Traitement du Signal, Vol. 36, No. 2, pp. 161-170. https://doi.org/10.18280/ts.360206
176	Chouidira, I., Khodja, D.E., Chakroune, S.	Continuous wavelet technique for detection of broken bar faults in induction machine	continuous wavelet (cwt), induction machine diagnosis, signal processing, faults signatures, indicator values	36, 2, 171-176	https://doi.org/10.18280/ts.360207	Chouidira, I., Khodja, D.E., Chakroune, S. (2019). Continuous wavelet technique for detection of broken bar faults in induction machine. Traitement du Signal, Vol. 36, No. 2, pp. 171-176. https://doi.org/10.18280/ts.360207

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178	Chinnam, S.K.R., Sistla, V., Kolli, V.K.K.	SVM-PUK kernel based MRI-brain tumor identification using texture and gabor wavelets	brain tumor, statistical features, principle component analysis, Gabor, support vector machine, Puk kernel	36, 2, 185-191	https://doi.org/10.18280/ts.360209	Chinnam, S.K.R., Sistla, V., Kolli, V.K.K. (2019). SVM-PUK kernel based MRI-brain tumor identification using texture and Gabor wavelets. Traitement du Signal, Vol. 36, No. 2, pp. 185-191. https://doi.org/10.18280/ts.360209
179	HimaBindu, G., Anuradha, C., Chandra Murty, P.S.R.	Assessment of combined shape, color and textural features for video duplication	video, shape, color, Grey-Level Co-Occurrence Matrix (GLCM), Grey-Level Run Length Matrix (GLRLM)	36, 2, 193-199	https://doi.org/10.18280/ts.360210	HimaBindu, G., Anuradha, C., Chandra Murty, P.S.R. (2019). Assessment of combined shape, color and textural features for video duplication. Traitement du Signal, Vol., 36 No. 2, pp. 193-199. https://doi.org/10.18280/ts.360210
180	Loutfi, B., Samir, Z., Ali, D., Zinelaabidine, G.M.	Real time implementation of type-2 fuzzy backstepping sliding mode controller for twin rotor MIMO system (TRMs)	TRMS model, interval type-2 fuzzy logic, sliding mode, backstepping, T2FBSMC	36, 1, 1-11	https://doi.org/10.18280/ts.360101	Loutfi, B., Samir, Z., Ali, D., Zinelaabidine, G.M. (2019). Real time implementation of type-2 fuzzy backstepping sliding mode controller for twin rotor MIMO system (TRMS). Traitement du Signal, Vol. 36, No. 1, pp. 1-11. https://doi.org/10.18280/ts.360101
181	Reddy, C.V.R., Reddy, U.S., Kishore, K.V.K.	Facial emotion recognition using NLPCA and SVM	gabor wavelet, HAAR wavelet, PCA, NLPCA, SVM	36, 1, 13-22	https://doi.org/10.18280/ts.360102	Reddy, C.V.R., Reddy, U.S., Kishore, K.V.K. (2019). Facial emotion recognition using NLPCA and SVM. Traitement du Signal, Vol. 36, No. 1, pp. 13-22. https://doi.org/10.18280/ts.360102
182	Huang, F., Zheng, N.N.	A novel frequent pattern mining algorithm for real-time radar data stream	frequent pattern, data mining, radar data, data stream, index pattern tree (IPT)	36, 1, 23-30	https://doi.org/10.18280/ts.360103	Huang, F., Zheng, N.N. (2019). A novel frequent pattern mining algorithm for real-time radar data stream. Traitement du Signal, Vol. 36, No. 1, pp. 23-30. https://doi.org/10.18280/ts.360103
183	Cai, Q.R.	A secure image encryption algorithm based on composite chaos theory	image encryption, permutation, diffusion, composite chaotic system	36, 1, 31-36	https://doi.org/10.18280/ts.360104	Cai, Q.R. (2019). A secure image encryption algorithm based on composite chaos theory. Traitement du Signal, Vol. 36, No. 1, pp. 31-36. https://doi.org/10.18280/ts.360104
184	Loutfi, B.	Faults detection and diagnosis of multilevel inverter based on signal processing	active power filter, multilevel inverter, PWM-controlled, open transistor fault, THD, mean values	36, 1, 37-44	https://doi.org/10.18280/ts.360105	Loutfi, B. (2019). Faults detection and diagnosis of multilevel inverter based on signal processing. Traitement du Signal, Vol. 6, No. 1, pp. 37-44. https://doi.org/10.18280/ts.360105
185	Oulaya, B., Aissa, B., Salim, O.	Secure transfer of color images using horizontal and vertical scan	image, encryption, decryption, scan pattern, stream cipher, keystream generator, permutation, NLFSR	36, 1, 45-51	https://doi.org/10.18280/ts.360106	Oulaya, B., Aissa, B., Salim, O. (2019). Secure transfer of color images using horizontal and vertical scan. Traitement du Signal, Vol. 36, No. 1, pp. 45-51. https://doi.org/10.18280/ts.360106
186	Liang, H., Zhang, Q., Fu, C., Liang, F., Sun, Y.S.	Surface modelling of jun ware based on ordinary differential equations	ordinary differential equation (ODE), shape modelling, digital modelling, JUN ware	36, 1, 53-58	https://doi.org/10.18280/ts.360107	Liang, H., Zhang, Q., Fu, C., Liang, F., Sun, Y.S. (2019). Surface modelling of Jun ware based on ordinary differential equations. Traitement du Signal, Vol. 1, No. 1, pp. 53-58. https://doi.org/10.18280/ts.360107
187	Shankar, R., Kumar, I., Mishra, R.K.	Outage probability analysis of MIMO-OSTBC relaying network over nakagami-m fading channel conditions	cooperative communication, outage probability, pairwise error probability, channel state information, convex optimization	36, 1, 59-64	https://doi.org/10.18280/ts.360108	Shankar, R., Kumar, I., Mishra, R.K. (2019). Outage probability analysis of MIMO-OSTBC relaying network over Nakagami-m fading channel conditions. Traitement du Signal, Vol. 36, No. 1, pp. 59-64. https://doi.org/10.18280/ts.360108
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189	Kumar K., Mishra R.K.Kumar, K., Mishra, R.K.	A robust mRMR based pedestrian detection approach using shape descriptor	classifier, feature selection, hog, hsg, pedestrian detection, SVM	36, 1, 79-85	https://doi.org/10.18280/ts.360110	Kumar, K., Mishra, R.K. (2019). A robust mRMR based pedestrian detection approach using shape descriptor. Traitement du Signal, Vol. 36, No. 1, pp. 79-85. https://doi.org/10.18280/ts.360110
190	Reddy, U.J., Reddy, B.R.V.R., Reddy, B.E.	Recognition of lung cancer using machine learning mechanisms with fuzzy neural networks	pre-processing, Binarizotion, segmentation, feature extraction, neural network, lung cancer detection	36, 1, 87-91	https://doi.org/10.18280/ts.360111	Reddy, U.J., Reddy, B.R.V.R., Reddy, B.E. (2019). Recognition of lung cancer using machine learning mechanisms with fuzzy neural networks. Traitement du Signal, Vol. 36, No. 1, pp. 87-91. https://doi.org/10.18280/ts.360111
191	Qin, J.L., Shang, S.P.	Design and application of ultrasonic measurement systems for akashiwo sanguinea	ultrasonic measurement, akashiwo sanguinea (a. sanguinea), acoustic doppler velocimenter (ADV), development board (DB), integrated backscattered strength (IBS), algea cell concentration	36, 1, 93-101	https://doi.org/10.18280/ts.360112	Qin, J.L., Shang, S.P. (2019). Design and application of ultrasonic measurement systems for Akashiwo Sanguinea. Traitement du Signal, Vol. 36, No. 1, pp. 93-101. https://doi.org/10.18280/ts.360112
192	Ren, J., Huang, S.Y., Song, W., Han, J.	A novel indoor positioning algorithm for wireless sensor network based on received signal strength indicator filtering and improved taylor series expansion	wireless sensor network (WSN), received signal strength indicator (RSSI), indoor positioning, taylor series expansion (TSE), positioning accuracy	36, 1, 103-108	https://doi.org/10.18280/ts.360113	Ren, J., Huang, S.Y., Song, W., Han, J. (2019). A novel indoor positioning algorithm for wireless sensor network based on received signal strength indicator filtering and improved Taylor series expansion. Traitement du Signal, Vol. 36, No. 1, pp. 103-108. https://doi.org/10.18280/ts.360113
193	Bikku, T., Paturi, R.	Frequency domain steganography with reversible texture combination	texture combination, steganography, embedding, steganalysis, discrete cosine transform	36, 1, 109-117	https://doi.org/10.18280/ts.360114	Bikku, T., Paturi, R. (2019). Frequency domain steganography with reversible texture combination. Traitement du Signal, Vol. 36, No. 1, pp. 109-117. https://doi.org/10.18280/ts.360114
194	Babu, K.S., Vemuru, S.	Spectrum signals handoff inLTE cognitive radio networks using reinforcement learning	cognitive radio network, long-term evolution, spectrum handoff, galactic swarm optimization, reinforcement learning	36, 1, 119-125	https://doi.org/10.18280/ts.360115	Babu, K.S., Vemuru, S. (2019). Spectrum signals handoff in LTE cognitive radio networks using reinforcement learning. Traitement du Signal, Vol. 36, No. 1, pp. 119-125. https://doi.org/10.18280/ts.360115
195	Dai, C.Q., Lv, Y.L., Long, Y.X., Sui, H.T.	A novel image enhancement technique for tunnel leakage image detection	tunnel leakage image, wavelet transform, image enhancement	35, 3-4, 209-222	https://doi.org/10.3166/TS.35.209-222	Dai, C.Q., Lv, Y.L., Long, Y.X., Sui, H.T. (2018). A novel image enhancement technique for tunnel leakage image detection. Traitement du Signal, Vol. 35, No. 3-4, pp. 209-222. https://doi.org/ 10.3166/TS.35.209-222
196	Song, X.R., Gao, S., Chen, C.B.	A novel vehicle feature extraction algorithm based on wavelet moment	feature extraction, modified hu invariant moment, wavelet moment, target recognition	35, 3-4, 223-242	https://doi.org/10.3166/TS.35.223-242	Song, X.R., Gao, S., Chen, C.B. (2018). A novel vehicle feature extraction algorithm based on wavelet moment. Traitement du Signal, Vol. 35, No. 3-4, pp. 223-242. https://doi.org/ 10.3166/TS.35.223-242
197	Jian, C.F., Lu, T., Xiang, X.Y., Zhang, M.Y.	An improved mixed gaussian-based background modelling method for fast gesture segmentation of mobile terminals	mixed gaussian model, background modelling, learning rate, gesture segmentation	35, 3-4, 243-252	https://doi.org/10.3166/TS.35.243-252	Jian, C.F., Lu, T., Xiang, X.Y., Zhang, M.Y. (2018). An improved mixed gaussian-based background modelling method for fast gesture segmentation of mobile terminals. Traitement du Signal, Vol. 35, No. 3-4, pp. 243-252. https://doi.org/ 10.3166/TS.35.243-252
198	Wang, S., Hu, Y.Z.	Binocular visual positioning under inhomogeneous, transforming and fluctuating media	inhomogeneous media, transforming media, media fluctuation, binocular visual positioning, uncertainty, kalman filter, cloud model	35, 3-4, 253-276	https://doi.org/10.3166/TS.35.253-276	Wang, S., Hu, Y.Z. (2018). Binocular visual positioning under inhomogeneous, transforming and fluctuating media. Traitement du Signal, Vol. 35, No. 3-4, pp. 253-276. https://doi.org/10.3166/TS.35.253-276

199	Zeng, X.X., Shao, Z.H., Lin, W.Z., Luo, H.B.	Orientation holes positioning of printed board based on LS-Power spectrum density algorithm	orientation holes positioning, ls-power spectrum density(LS-PSD), image processing technology, region of interest (ROI)	35, 3-4, 277-288	https://doi.org/10.3166/TS.35.277-288	Zeng, X.X., Shao, Z.H., Lin, W.Z., Luo, H.B. (2018). Orientation holes positioning of printed board based on LS-Power spectrum density algorithm, Traitement du Signal, Vol. 35, No. 3-4, pp. 277-288. https://doi.org/10.3166/TS.35.277-288
200	He, L.L., Zhu, H., Gao, Z.X.	A novel asphalt pavement crack detection algorithm based on multi-feature test of cross-section image	asphalt pavement, crack detection, multi-feature test, cross-section image	35, 3-4, 289-302	https://doi.org/10.3166/TS.35.289-302	He, L.L., Zhu, H., Gao, Z.X. (2018). A novel asphalt pavement crack detection algorithm based on multi-feature test of cross-section image. Traitement du Signal, Vol. 35, No. 3-4, pp. 289-302. https://doi.org/ 10.3166/TS.35.289-302
201	Wu, Q.S., Meng, P., Liu, G.	Reconstruction of 3D building model based on the information in floor plan	floor plan, building components, space subdivision, 3D model reconstruction	35, 3-4, 303-316	https://doi.org/10.3166/TS.35.303-316	Wu, Q.S., Meng, P., Liu, G. (2018). Reconstruction of 3D building model based on the information in floor plan. Traitement du Signal, Vol. 35, No. 3-4, pp. 303-316. https://doi.org/10.3166/TS.35.303-316
202	Peng, L.	A brain nuclear magnetic resonance image segmentation algorithm based on non-rigid registration	non-rigid registration, brain NMR image, atlas prior, shape knowledge	35, 3-4, 317-330	https://doi.org/10.3166/TS.35.317-330	Peng, L. (2018). A brain nuclear magnetic resonance image segmentation algorithm based on non-rigid registration. Traitement du Signal, Vol. 35, No. 3-4, pp. 317-330. https://doi.org/10.3166/TS.35.317-330
203	Fu, H.H., Xu, J., Zhang, H., Zhang, M., Xu, X.X.	A novel video target tracking method based on lie group manifold	target tracking, lie group, Riemannian manifold, particle filtering (PF)	35, 3-4, 331-340	https://doi.org/10.3166/TS.35.331-340	Fu, H.H., Xu, J., Zhang, H., Zhang, M., Xu, X.X. (2018). A novel video target tracking method based on lie group manifold. Traitement du Signal, Vol. 35, No. 3-4, pp. 331-340. https://doi.org/ 10.3166/TS.35.331-340
204	Seng, D.W., Zhang, H.Q., Fang, XJ., Zhang, X.F., Chen, J.	An improved fingerprint image matching and multi-view fingerprint recognition algorithm	fingerprint recognition, fingerprint image, direction field, matching, multi-view	35, 3-4, 341-354	https://doi.org/10.3166/TS.35.341-354	Seng, D.W., Zhang, H.Q., Fang, XJ., Zhang, X.F., Chen, J. (2018). An improved fingerprint image matching and multi-view fingerprint recognition algorithm. Traitement du Signal, Vol. 35, No. 3-4, pp. 341-354. https://doi.org/ 10.3166/TS.35.341-354
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207	Huang, Y.L., Meng, S.Y., Li, X.S., Fan, W.Y.	A classification method for wood vibration signals of Chinese musical instruments based on GMM and SVM	gaussian mixture model (GMM), Gabor, Chinese musical instruments, support vector machine (SVM)	35, 2, 137-151	https://doi.org/10.3166/TS.35.137-151	Huang, Y.L., Meng, S.Y., Li, X.S., Fan, W.Y. (2018). A classification method for wood vibration signals of Chinese musical instruments based on GMM and SVM. Traitement du Signal, Vol. 35, No. 2, pp. 137-151. https://doi.org/ 10.3166/TS.35.137-151
208	Kadam, R.S., Kulkarni, A.	Radiation pattern of reconfigurable antenna design for portable device applications	reconfigurable antenna, radiation pattern, portable device	35, 2, 153-168	https://doi.org/10.3166/TS.35.153-168	Kadam, R.S., Kulkarni, A. (2018). Radiation pattern of reconfigurable antenna design for portable device applications. Traitement du Signal, Vol. 35, No. 2, pp. 153-168. https://doi.org/ 10.3166/TS.35.153-168
209	Neelapu, R., Devi, G.L., Rao, K.S.	Deep learning based conventional neural network architecture for medical image classification	deep learning, neural networks, medical image classification, processing, CNN, SVM	35, 2, 169-182	https://doi.org/10.3166/TS.35.169-182	Neelapu, R., Devi, G.L., Rao, K.S. (2018). Deep learning based conventional neural network architecture for medical image classification. Traitement du Signal, Vol. 35, No. 2, pp. 169-182. https://doi.org/ 10.3166/TS.35.169-182
210	Zhang, J., Li, Y.B., Liu, B.X., Wu, Y.Q., Yi, H.C.	Forward modelling of circular loop source and calculation of whole area apparent resistivity based on TEM	circular loop source, forward modelling, whole area apparent resistivity, geo-electric model, numerical calculation, electrical characteristic response	35, 2, 183-198	https://doi.org/10.3166/TS.35.183-198	Zhang, J., Li, Y.B., Liu, B.X., Wu, Y.Q., Yi, H.C. (2018). Forward modelling of circular loop source and calculation of whole area apparent resistivity based on TEM. Traitement du Signal, Vol. 35, No. 2, pp. 183-198. https://doi.org/10.3166/TS.35.183-198
211	Mostefa, T., Tarak, B., Hachemi, G.	An automatic diagnosis method for an open switch fault in unified power quality conditioner based on artificial neural network	UPQC, active power filter, ANN, fault detection, open switch fault, FFT, skewness	35, 1, 7-21	https://doi.org/10.3166/TS.35.7-21	Mostefa, T., Tarak, B., Hachemi, G. (2018). An automatic diagnosis method for an open switch fault in unified power quality conditioner based on artificial neural network. Traitement du Signal, Vol. 35, No. 1, pp. 7-21. https://doi.org/ 10.3166/TS.35.7-21
212	Devi, B.R.	Texture feature-based image searching system using wavelet transform approach	feature extraction, image searching, pyramid structure wavelet transform model (PSWTM), wavelet transform, feature-based image searching system (FBISS), precision, recall, similarity matching	35, 1, 23-33	https://doi.org/10.3166/TS.35.23-33	Devi, B.R. (2018). Texture feature-based image searching system using wavelet transform approach. Traitement du Signal, Vol. 35, No. 1, pp. 23-33. https://doi.org/ 10.3166/TS.35.23-33
213	Song, J.B., Song, R., Xiong, Z.	Acoustic radiation features and structural-acoustic sensitivity of channel beam	channel beam, indirect boundary element, structural noise, structural-acoustic sensitivity	35, 1, 35-45	https://doi.org/10.3166/TS.35.35-45	Song, J.B., Song, R., Xiong, Z. (2018). Acoustic radiation features and structural-acoustic sensitivity of channel beam. Traitement du Signal, Vol. 35, No. 1, pp. 35-45. https://doi.org/10.3166/TS.35.35-45
214	Sachan, V., Kumar, I., Shankar, R., Mishra, R.K.	Analysis of transmit antenna selection based selective decode forward cooperative communication protocol	multiple input multiple output, space- time-block-code, selective decode and forward, pairwise error probability	35, 1, 47-60	https://doi.org/10.3166/TS.35.47-60	Sachan, V., Kumar, I., Shankar, R., Mishra, R.K. (2018). Analysis of transmit antenna selection based selective decode forward cooperative communication protocol. Traitement du Signal, Vol. 35, No. 1, pp. 47-60.https://doi.org/10.3166/TS.35.47-60
215	Huang, X.L., Zhang, T.F., Deng, Z.H., Li, Z.	Design of moving target detection and tracking system based on cortex-A7 and openCV	behavior analysis, camshift, cortex-A7, embedded system, target tracking, opencv	35, 1, 61-73	https://doi.org/10.3166/TS.35.61-73	Huang, X.L., Zhang, T.F., Deng, Z.H., Li, Z. (2018). Design of moving target detection and tracking system based on cortex-A7 and OpenCV. Traitement du Signal, Vol. 35, No. 1, pp. 61-73. https://doi.org/10.3166/TS.35.61-73
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217	Lu, M., Li, H., Zhang, Y.F., Xie, Q., Cai, X.H.	Vector control of brushless double fed generator based on control winding orientation on smooth switch from stand-alone mode to grid-tied mode	brushless double fed induction generator (BDFIG), power winding (PW), control winding (CW), field-orientation	35, 1, 85-95	https://doi.org/10.3166/TS.35.85-95	Lu, M., Li, H., Zhang, Y.F., Xie, Q., Cai, X.H. (2018). Vector control of brushless double fed generator based on control winding orientation on smooth switch from stand-alone mode to grid-tied mode. Traitement du Signal, Vol. 35, No. 1, pp. 85-95. https://doi.org/ 10.3166/TS.35.85-95
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220	Hu, T., Lv, J., Xie, Q.S., Sun, H., Yuan, Q.N.	A novel human behaviour information coding method based on eye-tracking technology	information identification, information coding, motion capture, fixation duration, virtual reality	34, 3-4, 153-173	https://doi.org/10.3166/TS.35.153-173	Hu, T., Lv, J., Xie, Q.S., Sun, H., Yuan, Q.N. (2017). A novel human behaviour information coding method based on eye-tracking technology. Traitement du Signal, Vol. 34, No. 3-4, pp. 153-173. https://doi.org/10.3166/TS.35.153-173

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222	Wang, J., Ding, R., Yang, Y.D., Pan, S.	A novel signal processing technique for travelling detection pulse radar in 3D geographic scene	pulse radar, traveling detection, geographic scene, signal processing, speed compensation	34, 3-4, 183-196	https://doi.org/10.3166/TS.35.183-196	Wang, J., Ding, R., Yang, Y.D., Pan, S. (2017). A novel signal processing technique for travelling detection pulse radar in 3D geographic scene. Traitement du Signal, Vol. 34, No. 3-4, pp. 183-196. https://doi.org/10.3166/TS.35.183-196
223	Narayana, V.L., Gopi, A.P.	Visual cryptography for gray scale images with enhanced security mechanisms	visual cryptography, dwt, digital watermarking	34, 3-4, 197-208	https://doi.org/10.3166/TS.35.197-208	Narayana, V.L., Gopi, A.P. (2017). Visual cryptography for gray scale images with enhanced security mechanisms. Traitement du Signal, Vol. 34, No. 3-4, pp. 197-208. https://doi.org/10.3166/TS.35.197-208
224	Bi, Q.L., Liu, Z.J., Wang, M.H., Lai, M.L., Xiao, L.M., Yan, Y.P., Liu, X.G.	An automatic camera calibration method based on checkerboard	computer vision, camera calibration, checkerboard, corner recognition, corner matching	34, 3-4, 209-226	https://doi.org/10.3166/TS.35.209-226	Bi, Q.L., Liu, Z.J., Wang, M.H., Lai, M.L., Xiao, L.M., Yan, Y.P., Liu, X.G. (2017). An automatic camera calibration method based on checkerboard. Traitement du Signal, Vol. 34, No. 3-4, pp. 197-208. https://doi.org/10.3166/TS.35.209-226
225	Deore, S. P., Pravin, A.	Ensembling: Model of histogram of oriented gradient based handwritten devanagari character recognition system	devanagari character, K-NN, SVM, NN, HWCR	34, 1-2, 7-20	https://doi.org/10.3166/TS.34.7-20	Deore, S. P., Pravin, A. (2017). Ensembling: Model of histogram of oriented gradient based handwritten devanagari character recognition system. Traitement du Signal, Vol. 34, No. 1-2, pp. 7-20. https://doi.org/10.3166/TS.34.7-20
226	Rout, G., Roy, J.S.	A new student-teacher mentoring algorithm for online feedback using statistical signal processing	online feedback, student-teacher mentoring, mentoring algorithm, statistical signal processing	34, 1-2, 21-32	https://doi.org/10.3166/TS.34.21-32	Rout, G., Roy, J.S. (2017). A new student-teacher mentoring algorithm for online feedback using statistical signal processing. Traitement du Signal, Vol. 34, No. 1-2, pp. 21-32. https://doi.org/10.3166/TS.34.21-32
227	Yang, K., Xue, L.Y., Yin, K., Liu, S., Meng, J.	Microbubble generation and trapping induced by femtosecond laser and acoustic signal analysis	femtosecond laser, microbubble, self-focusing, laser-induced optical breakdown (LIOB), high-speed camera, high-frequency ultrasonic imager	34, 1-2, 33-44	https://doi.org/10.3166/TS.34.33-44	Yang, K., Xue, L.Y., Yin, K., Liu, S., Meng, J. (2017). Microbubble generation and trapping induced by femtosecond laser and acoustic signal analysis. Traitement du Signal, Vol. 34, No. 1-2, pp. 33-44. https://doi.org/10.3166/TS.34.33-44
228	Sailaja, R., Rupa, C., Chakravarthy, A.S.N.	Robust and indiscernible multimedia watermarking using light weight mutational methodology	three lines maximum, lifting wavelet transform, singular value decomposition, peak signal to noise ratio, normalized Correlatio	34, 1-2, 45-55	https://doi.org/10.3166/TS.34.45-55	Sailaja, R., Rupa, C., Chakravarthy, A.S.N. (2017). Robust and indiscernible multimedia watermarking using light weight mutational methodology. Traitement du Signal, Vol. 34, No. 1-2, pp. 45-55. https://doi.org/10.3166/TS.34.45-55
229	Tian, H.Q., Dang, X.Q., Wang, J.H., Wu, D.M.	Registration method for three-dimensional point cloud in rough and fine registrations based on principal component analysis and iterative closest point algorithm	intraoperative registration, principal component analysis (PCA), iterative closest point (ICP) algorithm, point cloud, gaussian noise	34, 1-2, 57-75	https://doi.org/10.3166/TS.34.57-75	Tian, H.Q., Dang, X.Q., Wang, J.H., Wu, D.M. (2017). Registration method for three-dimensional point cloud in rough and fine registrations based on principal component analysis and iterative closest point algorithm. Traitement du Signal, Vol. 34, No. 1-2, pp. 57-75. https://doi.org/10.3166/TS.34.57-75
230	Benkaddour, M.K., Bounoua, A.	Feature extraction and classification using deep convolutional neural networks, PCA and SVC for face recognition	biometrics, face recognition, feature extraction, convolutional neural network, CNN, support vector machines (SVM), svc, principal component analysis, PCA	34, 1-2, 77-91	https://doi.org/10.3166/TS.34.77-91	Benkaddour, M.K., Bounoua, A. (2017). Feature extraction and classification using deep convolutional neural networks, PCA and SVC for face recognition. Traitement du Signal, Vol. 34, No. 1-2, pp. 77-91. https://doi.org/10.3166/TS.34.77-91
231	Jiang, C.H., Zhang, C., Zhang, Y.H., Xu, H.	An improved particle swarm optimization algorithm for parameter optimization of proportional–integral–derivative controller	flying time, adaptive weight, constriction factor, Improved Particle Swarm Optimization (IPSO), Proportional–Integral–Derivative (PID) controller	34, 1-2, 93-110	https://doi.org/10.3166/TS.34.93-110	Jiang, C.H., Zhang, C., Zhang, Y.H., Xu, H. (2017). An improved particle swarm optimization algorithm for parameter optimization of proportional–integral–derivative controller. Traitement du Signal, Vol. 34, No. 1-2, pp. 93-110. https://doi.org/10.3166/TS.34.93-110