KC's Peer-Reviewed Research Articles (year-wise)

KC Santosh, PhD

Chair & Associate Professor

Department of Computer Science, University of South Dakota, Vermillion, SD 57069

Email: santosh.kc@ieee.org; Ph. +1(605)677-3184 (O) & +1(301)640-0921 (M); Web: http://kc-santosh.org

Important notes

a) Total publications:

Journal articles: 70 (additional 6, to appear)

Book chapters: 11

Conference proceedings: 100+

To make CV short, a complete list of journal articles (year-wise) is only provided. Book chapters and conference proceedings can be provided upon request. Visit http://kc-santosh.org for more information.

b) *Impact*:

Impact factor = 190+ (source: 2019 JCR reports) Citations = 2000⁺ (h-index = 28 and i-10 index = 61, source: google scholar)

- c) Research areas: Artificial intelligence, machine learning, deep learning, data mining, information retrieval, computer vision, image processing, signal processing, pattern recognition, and big data.
- d) *Applications:* Healthcare informatics and medical imaging, document image analysis, graphics recognition, biometrics, forensics, speech/audio analysis, satellite imaging, and Internet Of Things.

2021: Under review (journal articles)

- 78) P Pirasteh, MR Bouguelia, and **KC Santosh**: Personalized Recommendation: An Enhanced Hybrid Collaborative Filtering, Advances in Computational Intelligence, Springer (2021) (review)
- 77) A Banerjee, N Das, M Nasipuri, and **KC Santosh**: Skin Diseases Detection using LBP and WLD An Ensembling Approach, *Journal of Digital Imaging*, Springer (2020) (review)
- 76) H Mukherjee, A Dhar, Sk Md Obaidullah, **KC Santosh**, S Phadikar, K Roy, and U Pal: LIFA: Language Identification From Audio with LPCC-G Features, *Pattern Recognition*, Elsevier (2020) (review)
- 75) A Chaudhary, V Gupta, S Shubham, N Jain, and **KC Santosh**: Sketching Emotional Anatomy from Social Media amidst COVID-19, *Behavior & Information Technology*, Taylor & Francis (2020) (review)
- 74) S Ghosh, A Chaki, and **KC Santosh**: Improved U-Net architecture with VGG-16 for brain tumor segmentation, *Physical and Engineering Sciences in Medicine*, Springer (2021) (review)

2021: (7) journal articles, (0) book chapters, and (1) conference proceedings

- 73) N Jain, V Gupta, **KC Santosh**: Understanding Cartoon Emotion using Integrated Deep Neural Network on Large Dataset, *Neural Computing and Applications*, Springer (2021)
- 72) M Ghosh, H Mukherjee, Obaidullah Sk, **KC Santosh**, N Das, Kaushik Roy: A deep learning-based approach towards video script identification, *Multimedia tools and applications*, Springer (2021)
- 71) D Ruikar, **KC Santosh**, R Hegadi, L Rupnar, V Chaudhary: 5K⁺ CT Images on Fractured Limbs: A Dataset for Medical Imaging Research, *Journal of Medical Systems*, Springer (2021)
- 70) M Ghosh, S Roy, H Mukherjee, Sk Md Obaidullah, **KC Santosh**, and K Roy: Understanding movie poster: Transfer-deep learning approach for graphic-rich text recognition, *The Visual Computer*, Springer (2021)

- 69) F Aleneziand **KC Santosh**: Geometric Regularized Hopfield Neural Network for Medical Image Enhancement, International Journal of Biomedical Imaging, (2021)
- 68) S Ghosh, A Bandyopadhyay, S Sahay, R Ghosh; I Kundu, and **KC Santosh**: Colorectal Histology Tumor Detection using Ensemble Deep Neural Network, *Engineering Applications of Artificial Intelligence*, Elsevier (2021)
- 67) Md N Yousuf Ali, Md L Rahman, J Chaki, N Dey, and **KC Santosh**: Machine Translation using Deep Learning for UniversalNetworking Language based on their Structure, *International Journal of Machine Learning & Cybernetics*, Springer (2021)
 - Book chapter: 0
 - Conference proceedings: CCIB(1).
- 2020: (18) journal articles, (2) book chapters, and (14) conference proceedings
 - 66) B Cankaya, B Eren Tokgoz, A Dag, and **KC Santosh**: Development of a Machine-Learning-Based Decision Support Mechanism for Predicting Chemical Tanker Cleaning Activity, *Journal of Modelling in Management*, (2020)
 - 65) H Mukherjee, P Sreerama, K Roy, Z Temesgen, and **KC Santosh**: Automatic lung health screening using respiratory sounds, *Journal of Medical Systems*, Springer (2020) URL: https://doi.org/10.1007/s10916-020-01681-9
 - 64) A Maiti, B Chaterjee, and **KC Santosh**: Skin Cancer Classification through Quantized color features and Generative Adversarial Network, *International Journal of Ambient Computing and Intelligence* (2020).
 - 63) H Mukherjee, A Dhar, Sk Obaidullah, **KC Santosh**, S Phadikar, and Kaushik Roy: Identifying Language from Songs, *Multimedia tools and applications*, Springer (2020) URL: https://doi.org/10.1007/s11042-020-10163-6
 - 62) A Banerjee, N Das, and **KC Santosh**: Weber Local Descriptor for Image Analysis and Recognition: A Review, *The Visual Computer*, Springer (2020)

 URL: https://doi.org/10.1007/s00371-020-02017-x
 - 61) H Mukherjee, S Ghosh, A Dhar, Sk Obaidullah, **KC Santosh**, K Roy: Shallow Convolutional Neural Networks for COVID-19 Outbreak Screening using Chest X-rays, *Cognitive Computation*, Springer (2020)
 - URL: https://doi.org/10.1007/s12559-020-09775-9
 - 60) H Mukherjee, S Ghosh, A Dhar, Sk Obaidullah, **KC Santosh**, K Roy: Deep Neural Network to Detect COVID-19: One Architecture for both Chest X-rays and CT Scans, *Applied Intelligence*, Springer (2020) URL: https://doi.org/10.1007/s10489-020-01943-6
 - 59) HR Bhapkar P Mahalle, N Dey, **KC Santosh**: Revisited COVID-19 mortality and recovery rates: are we missing recovery time period? *Journal of Medical Systems*, Springer (2020) URL: https://doi.org/10.1007/s10916-020-01668-6
 - 58) S Aryal, **KC Santosh**, and R Dazeley: usfAD: A robust unsupervised stochastic forest-based anomaly detector *International Journal of Machine Learning & Cybernetics*, Springer (2020) URL: https://doi.org/10.1007/s13042-020-01225-0
 - 57) N Dey, **KC Santosh**: COVID-19: Psychological and Psychosocial Impact, Fear, and Passion, *Digital Government*: Research and Practice, ACM (2020)

 URL: https://doi.org/10.1145/3428088
 - 56) S Mitra, **KC Santosh**, and MK Naskar: Niblack Binarization on Document Images: Area Efficient, Low Cost, and Noise Tolerant Stochastic Architecture, *International Journal of Pattern Recognition & Artificial Intelligence*, World Scientific (2020)
 URL: https://doi.org/10.1142/S0218001421540136
 - 55) **KC Santosh**: COVID-19 Prediction Models and Unexploited Data, *Journal of Medical Systems*, Springer Vol. 44 (2020)
 - URL: https://doi.org/10.1007/s10916-020-01562-1

- 54) **KC Santosh**: AI-driven tools for coronavirus outbreak: Need of active learning and cross-population train/test models on multitudinal/multimodal data, *Journal of Medical Systems*, Springer Vol. 44 (2020) URL: https://doi.org/10.1007/s10916-020-01562-1
- 53) D Das, **KC Santosh**, and U Pal: Truncated Inception Net: COVID-19 Outbreak Screening using Chest X-rays, *Physical and Engineering Sciences in Medicine*, Springer (2020) URL: https://doi.org/10.1007/s13246-020-00888-x
- 52) D Elliott, **KC Santosh**, and C Anderson: Gradient boosting in crowd ensembles for Q-learning using weight sharing, *International Journal of Machine Learning & Cybernetics*, Springer (2020) URL: https://doi.org/10.1007/s13042-020-01115-5
- 51) S Das, Sk Md Obaidullah, **KC Santosh**, K Roy, and C K Saha: Cardiotocograph-based labor stage classification from uterine contraction pressure during ante-partum and intra-partum period a fuzzy theoretic approach, *Health Information Science and Systems*, Springer (2020) URL: https://doi.org/10.1007/s13755-020-00107-7
- 50) R Guha, N Das, M Kundu, M Nasipuri, and **KC Santosh**: DevNet: an efficient CNN architecture for handwritten Devanagari character recognition, *International Journal of Pattern Recognition & Artificial Intelligence*, World Scientific, 2020
 URL: https://doi.org/10.1142/S0218001420520096
- 49) S Aryal, AA Baniya, and **KC Santosh**: A Novel Data Pre-processing Technique: Making Data Mining Robust to Different Units and Scales of Measurement, *The Australian Journal of Intelligent Information Processing Systems* (2020)
 - Book chapter: Medical imaging and COVID-19 (2)
 - Conference proceedings: ICPR (1), CBMS (5), and RTIP2R (7, best paper award (1)) CVIP(1).
- 2019: (11) journal articles, (6) book chapters, and (27) conference proceedings
 - 48) S Ghosh, A Pal, S Jaiswal, **KC Santosh**, N Das, and M Nassipuri: segFast-02: Semantic-based image segmentation using encoder-decoder compression architecture, *International Journal of Machine Learning & Cybernetics*, Springer (2019)

 URL: https://doi.org/10.1007/s13042-019-01005-5
 - 47) H Mukherjee, Sk Md Obaidullah **KC Santosh**, S Phadikar, and K Roy: Deep learning for spoken language identification: Can we visualize speech signal patterns?, *Neural Computing and Applications*, Springer (2019)
 - URL: https://doi.org/10.1007/s00521-019-04468-3
 - 46) A Jagtap, RS Hegadi, and **KC Santosh**: Feature Learning for Offline Handwritten Signature Verification Using Convolutional Neural Network, *International Journal of Technology and Human Interaction* (*IJTHI*), 15(4) (2019)
 - URL: https://doi.org/10.4018/IJTHI.2019100105
 - 45) H Mukherjee, A Dhar, Sk Md Obaidullah, **KC Santosh**, S Phadikar, and K Roy: Linear predictive coefficients-based feature to identify top-7 spoken language, *International Journal of Pattern Recognition & Artificial Intelligence*, World Scientific (2019)
 - URL: https://doi.org/10.1142/S0218001420580069
 - 44) S Ukil, S Ghosh, Sk Md Obaidullah, **KC Santosh**, K Roy, and N Das: Improved word level handwritten Indic script identification through integrated small convolutional neural networks, *Neural Computing and Applications*, Springer (2019)
 - URL: https://doi.org/10.1007/s00521-019-04111-1
 - 43) D Ruikar, **KC Santosh**, and RS Hegadi: Automated fractured bone segmentation and labeling from CT images, *Journal of Medical Systems*, Springer (2019) URL: https://doi.org/10.1007/s10916-019-1176-x
 - 42) H Mukherjee, Sk Md Obaidullah **KC Santosh**, S Phadikar, and K Roy: A lazy learning-based language identification from speech using MFCC-2 features, *International Journal of Machine Learning &*

Cybernetics, Springer (2019)

URL: https://doi.org/10.1007/s13042-019-00928-3

- 41) R Saini, P Kumar, B Kaur, P P Roy, D P Dogra, and **KC Santosh**: Kinect sensor-based interaction monitoring system using the BLSTM neural network in healthcare, *International Journal of Machine Learning & Cybernetics*, Springer (2019)
 - URL: https://doi.org/10.1007/s13042-018-0887-5
- 40) S Vaidya, C Mouli, and **KC Santosh**: Imperceptible watermark for a game-theoretic watermarking system, *International Journal of Machine Learning & Cybernetics*, Springer (2019) URL: https://doi.org/10.1007/s13042-018-0813-x
- 39) Sk Md Obaidullah, **KC Santosh**, C Halder, N Das, and K Roy: Automatic Indic script identification from handwritten documents: page, block, line and word-level approach, *International Journal of Machine Learning & Cybernetics*, Springer (2019)

URL: https://doi.org/10.1007/s13042-017-0702-8

38) **KC Santosh**: Speech processing in healthcare: can we integrate?, *Intelligent speech signal processing*, Elsevier press, ISBN: 978-0-12-818130-0 (2019)

URL: https://doi.org/10.1016/B978-0-12-818130-0.00001-5

- Book chapters: Medical Imaging (3) and Document processing (3).
- Conference proceedings: PReMI (1), ICICC (2, best paper award), GREC@ICDAR (2), ICCDC (2), CACCS (1), RTIP2R (15, best paper award), and AISC (2).

2018: (14) journal articles and (6) conference proceedings

- 37) **KC Santosh** and S Antani: Automated chest X-ray screening: can lung section symmetry help detect pulmonary abnormalities? *IEEE Transactions on Medical Imaging* (2018) URL: https://doi.org/10.1109/TMI.2017.2775636
- 36) **KC Santosh** and L Wendling: Angular relational signature-based chest radiograph image view classification, *Medical & Biological Engineering & Computing*, Springer (2018) URL: https://doi.org/10.1007/s11517-018-1786-3
- 35) S F Nimmy, G Sarowar, N Dey, A Ashour, and **KC Santosh**: Investigation of DNA discontinuity for detecting Tuberculosis, *Journal of Ambient Intelligence and Humanized Computing*, Springer (2018) URL: https://doi.org/10.1007/s12652-018-0878-0
- 34) D Ruikar, RS Hegadi, **KC Santosh**: A Systematic Review on Orthopedic Simulators for Psycho-Motor Skill and Surgical Procedure Training, *Journal of Medical Systems*, Springer (2018) URL: https://doi.org/10.1007/s10916-018-1019-1
- 33) S Vajda, A Karagyris, S Jaeger, **KC Santosh**, S Candemir, Z Xue, S Antani, and G Thoma: Feature Selection for Automatic Tuberculosis Screening in Frontal Chest Radiographs, *Journal of Medical Systems*, Springer (2018)

URL: https://doi.org/10.1007/s10916-018-0991-9

- 32) H Mukherjee, Sk Md Obaidullah, **KC Santosh**, S Phadikar, and K Roy: Line spectral frequency-based features and extreme learning machine for voice activity detection from audio signal, *International Journal of Speech Technology*, Springer, (2018)
 - URL: https://doi.org/10.1007/s10772-018-9525-6
- 31) Sk Md Obaidullah, A Bose, H Mukherjee, **KC Santosh**, N Das, and K Roy: Extreme learning machine for handwritten Indic script identification in multi-script documents, *Journal of Electronic Imaging*, SPIE (2018)

URL: https://doi.org/10.1117/1.JEI.27.5.051214

30) Sk Md Obaidullah, C Halder, **KC Santosh**, N Das, and K Roy: Handwritten Indic script identification in multi-script document images: A survey, *International Journal of Pattern Recognition & Artificial Intelligence*, World Scientific (2018)

URL: https://doi.org/10.1142/S0218001418560128

29) C Halder, Sk Md Obaidullah, **KC Santosh**, and K Roy: Content independent writer identification on Bangla script: A document level approach, *International Journal of Pattern Recognition & Artificial Intelligence*, World Scientific (2018)

URL: https://doi.org/10.1142/S0218001418560116

28) Sk Md Obaidullah, C Halder, **KC Santosh**, N Das, and K Roy: PHDIndic_11: Page-level handwritten document image dataset of 11 official Indic scripts for script identification, *Multimedia tools and applications*, Springer (2018)

URL: https://doi.org/10.1007/s11042-017-4373-y

27) **KC Santosh**: Correspondence: Edge map analysis in chest X-rays for automatic pulmonary abnormality screening, *Indian Journal of Tuberculosis*, Elsevier, 64(2) (2018)

URL: https://doi.org/10.1016/j.ijtb.2016.10.001

26) Sk Md Obaidullah, N Das, **KC Santosh**, and K Roy: Automatic Line-Level Script Identification From Handwritten Document Images – A Region-Wise Classification Framework For Indian Subcontinent, *Malaysian Journal of Computer Science* (2018)

URL: http://mjcs.fsktm.um.edu.my/detail.asp?AID=1717

25) **KC Santosh** and P Roy: Arrow detection in biomedical images using sequential classifier, *International Journal of Machine Learning and Cybernetics*, Springer (2018)

URL: https://doi.org/10.1007/s13042-016-0623-y

24) M Bouguelia, S Nowaczyk, and **KC Santosh**: Antanas Verikas. Agreeing to disagree: active learning with noisy labels without crowdsourcing, *International Journal of Machine Learning & Cybernetics*, Springer (2018)

URL: https://doi.org/10.1007/s13042-017-0645-0

• Conference proceedings: SPIE Medical Imaging (1), ICRCICN (1), ICSKIMA (1), ICICBA (1), and AISC (3).

2017: (5) journal articles and (7) conference proceedings

23) **KC Santosh**, A. Aafaque, S Antani, G Thoma: Line segment-based stitched multipanel figure separation for effective biomedical CBIR, *International Journal of Pattern Recognition & Artificial Intelligence*, World Scientific (2017)

URL: https://doi.org/10.1142/S0218001417570038

22) **KC Santosh** and S Vajda: 'Automated chest X-ray screening: can edge map measure the evidence of pulmonary abnormalities?',

Atlas of Science (June 02, 2016)

URL: https://atlasofscience.org/automated-chest-x-ray-screening-can-edge-map-measure-the-evidence-of-pulmonary-d

21) F Zohora and **KC Santosh**: Foreign Circular Element Detection in Chest X-rays for Effective Automated Pulmonary Abnormality Screening, *International Journal of Computer Vision and Image Processing*, 7(2) (2017)

URL: https://doi.org/10.4018/IJCVIP.2017040103

20) Sk Md Obaidullah, KC Santosh, C Halder, N Das, and K Roy: Word-level Multi-script Indic Document Image Dataset and Baseline Results on Script Identification, *International Journal of Computer Vision and Image Processing*, 7(2) (2017)

URL: https://doi.org/10.4018/IJCVIP.2017040106

19) Sk Md Obaidullah, C Goswami, **KC Santosh**, N Das, C Halder, and K Roy: Separating Indic scripts with mantra for effective handwritten script identification in multiscript documents, *International Journal of Pattern Recognition & Artificial Intelligence*, World Scientific (2017)

URL: https://doi.org/10.1142/S0218001417530032

• Conference proceedings: RTIP2R (7, best paper award (1)).

2016: (4) journal articles and (3) conference proceedings

- 18) **KC Santosh**, S Vajda, S Antani, and G Thoma: Edge map analysis in Chest X-rays for Automatic Abnormality Screening, *International Journal of Computer Assisted Radiology & Surgery*, Springer (2016) URL: https://doi.org/10.1007/s11548-016-1359-6
- 17) **KC Santosh**, N Alam, P Roy, L Wending, S Antani, and G Thoma: A Simple and Efficient Arrowhead Detection in Biomedical Images, *International Journal of Pattern Recognition & Artificial Intelligence*, World Scientific (2016)

URL: https://doi.org/10.1142/S0218001416570020

- 16) KC Santosh, L Wendling, S Antani, and G Thoma: Overlaid Arrow Detection for Labeling Biomedical Image Regions, IEEE Intelligent Systems, (special issue: Pattern Recognition) (2016) URL: http://ieeexplore.ieee.org/document/7412613/
- 15) A Karargyris, J Siegelman, D Tzortzis, S Jaeger, S Candemir, Z Xue, **KC Santosh**, S Vajda, S Antani, L Folio, and G Thoma: Combination of texture and shape features to detect Tuberculosis in digital chest X-rays, *International Journal of Computer Assisted Radiology & Surgery*, Springer (2016) URL: https://doi.org/10.1007/s11548-015-1242-x
 - Conference proceedings: DRR (1), CVIP (1), and ICISO (1).

2015: (5) journal articles and (3) conference proceedings

- 14) **KC Santosh**: g-DICE: Graph mining-based Document Information Content Exploitation, *International Journal on Document Analysis and Recognition*, Springer, 18(4):337 355 (2015) URL: https://doi.org/10.1007/s10032-015-0253-z
- 13) **KC Santosh**, S Candemir, S Jaeger, S Antani, G Thoma, and L Folio: Automatically Detecting Rotation in Chest Radiographs using Principal Rib-Orientation Measure for Quality Control, *International Journal of Pattern Recognition & Artificial Intelligence*, World Scientific, 29(2), 19 pages (2015) URL: https://doi.org/10.1142/S0218001415570013
- 12) **KC Santosh** and L Wending: Character recognition based on Multi-projection Non-linear Profiles Measure, *Frontiers of Computer Science*, Springer, 9(5): 678–690, (2015) URL: https://doi.org/10.1007/s13042-014-0234-4
- 11) **KC Santosh** and L Wendling: Graphical Symbol Recognition, *Wiley Encyclopedia of Electrical and Electronics Engineering*, pp. 1-22 (2015)
 URL: https://doi.org/10.1002/047134608X.W8260
- 10) S Candemir, E Borovikov **KC Santosh**, S Antani, and G Thoma: RSILC: Rotation and Scale Invariant, Line Colour aware Descriptor, *Image and Vision Computing* 42:(1–11) (2015)
 - URL: https://doi.org/10.1016/j.imavis.2015.06.010
- 9) E Philippot, **KC Santosh**, A Belaïd, and Y Belaïd: Bayesian Networks for Incomplete Data Analysis in Form Processing, *International Journal of machine Learning & Cybernetics*, Springer, 6(3):347-363, (2015) URL: https://doi.org/10.1007/s13042-014-0234-4
 - Conference proceedings: ImageCLEF (1) and CBMS (2).

2014: (2) journal articles and (4) conference proceedings

- 8) **KC Santosh**, L Wending, and B Lamiroy: BoR: Bags-of-Relations for Symbol Retrieval, *International Journal of Pattern Recognition and Artificial Intelligence*, World Scientific, 28(6):30 pages (2014) URL: https://doi.org/10.1142/S0218001414500177
- 7) **KC Santosh**, B Lamiroy, and L Wendling: Integrating Vocabulary Clustering with Spatial Relations for Symbol Recognition, *International Journal of Document Analysis and Application*, Springer, 17(1):61-78, (2014) *the most popular publication* (no. 1) *in April* 2014
 URL: https://doi.org/10.1007/s10032-013-0205-4
 - Conference proceedings: ICPR (1), CBMS (1), ICFHR (1), and RAIT (1).

2013: 1 journal article and 6 conference proceedings

6) **KC Santosh**, L Wendling, and B Lamiroy: DTW-Radon Shape Descriptor for Pattern Recognition, *International Journal of Pattern Recognition and Artificial Intelligence*, World Scientific, 27(2):30 pages (2013)

URL: https://doi.org/10.1142/S0218001413500080

• Conference proceedings: ICDAR (3), MVA (2), and IbPRIA (1).

2012: (2) journal articles, (1) book chapter, and (1) conference proceeding

- 5) **KC Santosh**, C Nattee, and B Lamiroy: Relative Positioning of Stroke Based Clustering: A New Approach to On-line Handwritten Devanagari Character Recognition, *International Journal of Image & graphics* (**IJIG**), World Scientific, 12(2), 25 pages (2012) *the most read (no. 1) articles in October*, 2012 URL: https://doi.org/10.1142/S0219467812500167
- 4) **KC Santosh**, B Lamiroy, and L Wendling: Symbol Recognition using Spatial Relations, *Pattern Recognition Letters* (**PRL**), Elsevier, 33(3): 331-341 (2012)

URL: https://doi.org/10.1016/j.patrec.2011.09.040

- Book chapter: INTECH (1)
- Conference proceeding: GREC (1)

2018: (3) conference proceedings

• Conference proceedings: ICDAR (1), ACIVS (1), and GREC (1).

2010: (1) journal article and (3) conference proceedings

3) **KC Santosh**: Use of Dynamic Time Warping for Object Shape Classification through Signature, *Kathmandu University Journal of Science, Engineering and Technology*, 6(1): 33-49 (2010)

URL: https://www.nepjol.info/index.php/KUSET/article/view/3308/2848

• Conference proceedings: ICFHR (1), ICPR (1), and GREC (1).

2009: (2) journal articles and (3) conference proceedings

2) KC Santosh and C Nattee: A Comprehensive Survey on On-line Handwriting Recognition Technology and its Real Application to the Nepalese Natural Handwriting, Kathmandu University Journal of Science, Engineering and Technology 5(1): 31-55 (2009)

URL: https://hal.inria.fr/inria-00354242v2

- 1) **KC Santosh** and C Nattee: Template-based Nepali Handwritten Alphanumeric Character Recognition, *Thammasat International Journal of Science and Technology* 12 (1), 20-30 (2009) URL: https://www.tci-thaijo.org/index.php/SciTechAsia/article/view/41524
 - Conference proceedings: ICDAR (1), EGC (1), and GREC (1).

2006: (3) conference proceedings

• Conference proceedings: KICSS (1, best paper award), PRICAI (1), and CIS (1).