

List of Publications

Name: Ari Visa, Prof., Dr. Sci.

Year of birth: 1958

The six most important publications of the applicant in terms of the research plan are: 113B, 4A,8A,9A,12A,36A.

Please, check the research plan and the listed publications of Prof. Peyton and his team: [11],[17],[19] and [20].

Total number of scientific publications: 189

Articles in refereed scientific journals: 36

Articles in refereed scientific edited volumes and conference proceedings: 117

Scientific monographs:1

Other scientific publications: 12

Articles popularizing science:23

1. Articles in refereed scientific journals

- 1A. Visa, A., A Study of Methods to Expand Low Resolution Images by Interpolation, *Graphic Arts in Finland*, Vol. 14 Num. 3, pp.9-12,1985.
- 2A. Visa, A., Texture Classification Based on Neural Networks, *Graphic Arts in Finland*, Volume 20, number 3, pp. 7-12, 1991.
- 3A. Kohonen, T., Oja, E., Simula, O., Visa, A., Kangas, J., Engineering Applications of the Self-Organizing Map, *Proceedings of IEEE*, October, pp. 1-27, 1996.
- 4A. Sipilä, O., Nikkinen, P., Pohjonen, H., Poutanen, V.-P., Visa, A., Savolainen S., Katila, T., Liewendahl, K., Accuracy and Precision of a Registration Procedure for Brain SPET and MRI:Phantom and Simulation Studies, *Nuclear Medicine Communication* Vol 18, pp. 517-526, 1997.
- 5A. Peura, M., Visa, A., Computational Intelligence in Cloud Classification, *SPIE and IS&T: Electronic Imaging Newsletter*, Vol. 7, No. 1, pp. 4-8, 1997.
- 6A. Visa, A., Iivarinen, J., Evaluation of a Trainable Cloud Classifier, *IEEE Transactions on Geoscience and Remote Sensing*, Vol. 35, No. 5, pp. 1307-1315, 1997.
- 7A. Iivarinen, J., Heikkinen, K., Rauhamaa, J., Vuorimaa, P., Visa, A., A Defect Scheme for Web Surface Inspection, *International Journal of Pattern Recognition and Artificial Intelligence*, Vol 14, No 6 (September), pp. 735 -755, 2000.
- 8A. Salli, E., Korvenoja, A., Visa, A., Katila, T., Aronen, H., Reproducibility of fMRI: Effect of the Use of Contextual Information, *Neuroimage*, 13, 459 - 471, 2001.
- 9A. Salli, E., Aronen, H., Savolainen, S., Korvenoja, A., Visa, A., Contextual Clustering for Analysis of Functional MRI Data, *IEEE Transaction on Medical Imaging*, Vol. 20 No. 5, pp. 403-414, 2001.
- 10A. Back, B., Toivonen, J., Vanharanta, H., Visa, A., Toward Computer Aided Analysis of Text, *The Journal of The Economic Society of Finland*, vol. 54, no. 1, pp. 39 – 47, 2001.
- 11A. Eklund, T., Back, B., Vanharanta, H., Visa, A., Benchmarking global pulp and paper companies using self-organizing maps, *Paper and Timber*, vol. 83,No.4, pp.304-316, 2001.
- 12A. Sipilä, O., Visa, A., Salonen, O., Erkinjuntti, T., Katila, T., Experiences on Data Quality in Automatic Tissue Classification, *Pattern Recognition Letters*, Vol 22, pp. 1475- 1482, 2001.
- 13A. Back, B., Toivonen, J., Vanharanta, H., Visa, A., Comparing numerical data and text information from annual reports using off-organizing maps, *International Journal of Accounting Information Systems*, pp. 249-269, 2001.
- 14A. Visa, A., Toivonen, J., Vanharanta, H., Back, B., Contents Matching Defined by Prototypes – Methodology Verification with Books of the Bible, *Journal of Management Information Systems*, Vol 18, no. 4, 2002.
- 15A. Länsiluoto, A., Back, B., Vanharanta, H., Visa, A., An analysis of economical trends in the pulp and paper sector using self-organizing maps, *Paper and Timber*, vol. 84,No.4, pp.246-252, 2002.
- 16A. Eklund, T., Back, B., Vanharanta, H., Visa, A., Using the Self-Organizing Map as a Visualization Tool in Financial Benchmarking, *Journal of Information Visualization*, Vol 2, pp. 171-191, 2003.
- 17A. Kunttu, I., Lepistö, L., Rauhamaa, J. & Visa, A., Binary histogram in image classification for retrieval purposes. In: Skala, V. (ed.). *Journal of WSCG*, 11, 2, pp. 269-273, 2003.
- 18A. Länsiluoto, A., Eklund, T., Back, B., Vanharanta, H. & Visa, A., Industry-specific cycles and companies' financial performance comparison using self-organizing maps. *Benchmarking: An International Journal* 11 3, pp. 267-286, 2004.

- 19A. Kloptchenko, A., Eklund, T., Karlsson, J., Back, B., Vanharanta, H., Visa, A., Combining data and text mining techniques for analysing financial reports. *Intelligent systems in accounting, finance and management* 12 1, pp. 29-41, 2004.
- 20A. Kloptchenko, A., Magnusson, C, Back, B. , Visa, A. & Vanharanta, H., Mining textual contents of financial reports. *International journal of digital accounting research* 4 7, pp. 1-29, 2004.
- 21A. Magnusson, C., Arppe, A., Eklund, T., Back, B., Vanharanta, H. & Visa, A., The language of quarterly reports as an indicator of change in the company's financial status. *Information and Management* 42 4, pp. 503-633, 2005.
- 22A. Kunttu, I., Lepistö, L. & Visa, A., Efficient Fourier shape description for industrial defect images using wavelets. *Optical Engineering* 44 SPIE. 8, 3 p, 2005
- 23A. Rock image classification using color features in Gabor space, Lepistö, L., Kunttu, I., Visa, A., *Journal of Electronic Imaging*, Vol. 14, Nr. 4, , October-December, 040503, p.3, , 2005.
- 24A. Classification of natural rock images using classifier combinations, Lepistö, L., Kunttu, I., Visa, A., *Optical engineering*, Vol. 45, Nr. 9, September, 097201, p. 7, 2006.
- 25A. Kunttu, I., Lepistö, L., Rauhamaa, J. & Visa, A., Multiscale Fourier descriptors for defect image retrieval. *Pattern Recognition Letters* 27, 2, pp. 123-132, 2006.
- 26A. Kunttu, I., Lepistö, L., Rauhamaa, J. & Visa, A., Fourier-Based Object Description in Defect Image retrieval. *Machine Vision and Applications*, 17, pp. 211-218, 2006.
- 27A. Toivonen, J., Kleemola, A., Vanharanta, H., Visa, A., Improving Logistical decision Making – Applications for Analysing Qualitative and Quantitative Information, *Journal of Purchasing and Supply Management*, Elsevier, pp. 123- 134, 2006.
- 28A. Vihonen J., Ala-Kleemola T., Jylhä J., Kerminen R., Rauhamaa J., and Visa A., Metadata in sequential real-time 2D detection. *IEEE Signal Processing Letters* 14 6, pp. 413-416, 2007.
- 29A. Durfee, A., Visa, A., Vanharanta, H., Schneberger, S. & Back, B., Mining text with the prototype-matching method. *Information Resource Management Journal*, IGI Publishing, 3, pp. 19-31, 2007.
- 30A. Nikhil, Visa, A., Yli-Harja, O., Lin, Chiu-Yue, Puhakka, J.A., Application of the Clustering Hybrid Regression Approach to Model Xylose-Based Fermentative Hydrogen Production, ACS Publications, *Energy Fuels*, 22(1), pp 128-133, 2008.
- 31A. Pertilä, P.E., Korhonen, T., Visa, A., Measurement Combination for Acoustic Source Localization in a Room Environment, *EURASIP Journal on Audio, Speech and Music Processing*, vol 2008, article id278185, p18, 2008.
- 32A. Nikhil, A. Visa, O. Yli-Harja, C-Y Lin, J. A. Puhakka, Application of CHR approach to model xylose-based fermentative hydrogen production. *Energy and Fuels*, vol. 22 (1), 128–133, 2008.
- 33A. Nikhil, Koskinen, P. E. P., Visa, A., Kaksonen, A. H., Puhakka, J. A. and Yli-Harja, O. Clustering hybrid regression: a novel computational approach to study and model biohydrogen production through dark fermentation. *Bioprocess and Biosystems Engineering*, 31, 631-64, 2008.
- 34A. Nikhil, Özkaya, B., Visa, A., Lin, C.-Y., Puhakka, J.A., Yli-Harja, O., An artificial neural network based model for predicting H₂ production rates in a sucrose-based bioreactor system, *International Journal of Mathematical, Physical and Engineering Sciences*, VOL 2, NUM 2, pp. 80-85, 2008.
- 35A. Eklund, T., Back, B., Vanharanta, H. & Visa, A., A face validation of a SOM-based financial benchmarking model, *Journal of emerging technologies in accounting* , vol. 5, pp.109-127, 2008.
- 36A. Vihonen J., Jylhä J., Ala-Kleemola T., Ruotsalainen M., Huutilainen, T., Rauhamaa J., and Visa A., Directional filtering for sequential image analysis, *IEEE Signal Processing Letters* vol.15, pp. 902-905, 2008.

2. Articles in refereed scientific edited volumes and conference proceedings

- 1B. Visa, A., Segmentation and Chaincoding of Large Images by Windowing, Proc. of 6th International Conference on Pattern Recognition, Munich, Germany, October 19-22, pp. 1209, 1982.
- 2B. Visa, A., The Characterization and Measurement of Paper Formation with Visible Light, Eusipco-86, The Hague, The Netherlands, September 2-5, pp. 635 -637, 1986.
- 3B. Visa, A., Experiences of Knowledge Based Segmentation of Density Images, Proc. of IAPR Workshop on Computer Vision - Special Hardware and Industrial Applications, October 12-14, Tokyo, Japan, pp.290-293, 1988.
- 4B. Visa, A., How do Variations in Resolution Influence on Gray Tone Spatial Dependence Matrix Method's Capability to Classify Stochastic Textures?, Proc. of 5th International Conference on Image Analysis and Processing, Positano, Italy, September 20-22, pp. 119-123, 1989.
- 5B. Visa, A., Identification of Stochastic Textures with Multiresolution Features and Self-organizing Maps, Proc. of 10th International Conference on Pattern Recognition, Atlantic City, New Jersey, USA, June, 16-21, pp. 518-522, 1990.
- 6B. Visa, A., A Texture Classifier Based on Neural Network Principles, Proc. of International Joint Conference on Neural Networks, San Diego, California, June 17-21, Vol. I, pp. 491-496, 1990.
- 7B. Visa, A., Stability Study of Learning Vector Quantization, Proc. of International Neural Network Conference, Paris, July 9-13, pp. 729-732, 1990.
- 8B. Visa, A., Texture Boundary Detection Based on LVQ Method, Proc. of V European Signal Processing Conference, Barcelona, September 18 -21, pp.991-994 ,1990.
- 9B. Visa, A., Langinmaa, A., Lindquist, U., Comparison of Stochastic Textures, TAPPI International Printing and Graphic Arts Conference, November 6-8, Vancouver, British Columbia, Canada, pp. 91-97, 1990.
- 10B. Visa, A., Langinmaa, A., A Texture Based Approach to Evaluate Solid Print Quality, IARIGAI, Pittsburgh, 12-18 May, pp.168 - 173 , 1991.
- 11B. Visa, A., Texture Classification and Neural Network Methods, The International Society for Optical Engineering, Orlando, April 1-4, SPIE Vol. 1469 Applications of Artificial Neural Networks II, pp 820-831. 1991.
- 12B. Visa, A., Valkealahti, K., Simula, O., Cloud Detection Based on Texture Segmentation by Neural Network Methods, International Joint Conference on Neural Networks (IJCNN), 18-21 November, Singapore, pp.1001-1006, 1991.
- 14B. Visa, A., Grenoble, Neural Networks on Characterisation of Paper Properties, The European Research Symposium "Image Analysis for Pulp and Paper Research and Production", 12-13 September, Center Technique du Papier, Grenoble, France, p. 5 , 1991.
- 15B. Visa, A., Topological Feature Map and Automatic Feature Selection, in Proc of SPIE Aerospace Sensing, Vol 1709 Science of Neural Networks, Orlando, Florida, April 21-24, pp.642-649 ,1992.
- 16B. Valkealahti, K., Visa, A., Simula, O., Applications of Texture Segmentation Based on Self-Organizing Feature Maps, in Proc. of Suomen Tekoälytutkimuksen Päivät 1992 (STeP92), Suomen tekoälyseura, 9.-11. June, Otaniemi, Espoo, pp. 189-193, 1992.
- 17B. Visa, A., Unsupervised Image Segmentation Based on a Self-Organizing Feature Map and a Texture Measure, in Proc. of 11th IAPR International Conference on Pattern Recognition, The Hague, The Netherlands, August 30-September 3, pp. 101-104, 1992.

- 18B. Visa, A., Automatic Feature Selection by Self-Organization, *Artificial Neural Networks 2*, I. Aleksander and J. Taylor (Editors), Elsevier Science Publishers B.V., Amsterdam, pp. 803 - 807, 1992.
- 19B. Simula, O., Visa, A., Self-Organizing Feature Maps in Texture Classification and Segmentation, *Artificial Neural Networks 2*, I. Aleksander and J. Taylor (Editors), Elsevier Science Publishers B.V., Amsterdam, pp. 1621 - 1628, 1992.
- 20B. Yläkoski, I., Visa, A., A Two-Stage Classifier for Wood Boards, in *Proc. of The 8th Scandinavian Conference on Image Analysis*, Tromsø, Norway, May 25-28, pp.637-641, 1993.
- 21B. Simula, O., Visa, A., Valkealahti, K., Operational Cloud Classifier Based on Topological Feature Map, in *Proceedings of the International Conference on Artificial Neural Networks*, Amsterdam, September 13 -16, pp.899-902, 1993.
- 22B. Visa, A., Valkealahti, K., Iivarinen, J., Simula, O., Experiences from Operational Cloud Classifier Based on Self-organizing Map, in *Proc of SPIE's International Symposium on Optical Engineering in Aerospace Sensing*, Vol 2243, *Applications of Artificial Neural Networks V*, Orlando, Florida, April 5-8, pp.484-495 ,1994.
- 23B. Iivarinen, J., Valkealahti, K., Visa, A., Simula, O., Feature Selection with Self-Organizing Feature Map, M. Marinaro and P.G., Morasso (Editors), Springer-Verlag, London, pp.334-337, 1994.
- 24B. Visa, A., Texture Segmentation Based on Neural Networks, in *Proc of The 3rd International Conference on Fuzzy Logic, Neural Nets and Soft Computing*, Iizuka, Japan, August 1-7, pp. 145-149, 1994.
- 25B. Iivarinen, J., Peura, M., Visa, A., Verification of a Multispectral Cloud Classifier, in *Proc. of The 9th Scandinavian Conference on Image Analysis*, Uppsala, Sweden, June 6-9, pp.591-599, 1995.
- 26B. Valkealahti, K., Visa, A., Simulated Annealing in Feature Weighting for Classification with Learning Vector Quantization, in *Proc. of The 9th Scandinavian Conference on Image Analysis*, Uppsala, Sweden, June 6-9, pp.965-971, 1995.
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- 28.B Stocker, A., Sipilä, O., Visa, A., Salonen, O., Katila, T., Stability Study of Some Neural Networks Applied to Tissue Characterization of Brain Magnetic Resonance Images, in *Proc. of 13th IAPR International Conference on Pattern Recognition*, Vienna, Austria, August 26-29 pp.472-477, 1996.
- 29B. Peura, M., Visa, A., Kostamo, P., A New Approach to Land-Based Cloud Classification, in *Proc. of 13th IAPR International Conference on Pattern Recognition*, Vienna, Austria, August 26-29 pp.143-147, 1996.
- 30B. Iivarinen, J., Rauhamaa, J., Visa, A., Unsupervised Segmentation of Surface Defects, in *Proc. of 13th IAPR International Conference on Pattern Recognition*, Vienna, Austria, August 26-29 pp. 356-360, 1996.
- 31B. Visa, A., Peura, M., Generalization of Neural Network Based Segmentation Results for Classification Purposes, *Compares - Workshop on Connectionist Methods for Preprocessing and Analysis of Remote Sensing Data*, 17th -19th July, University of York, York, United Kingdom, p. 8, 1996.
- 32B. Iivarinen, J., Visa, A., Shape Recognition of Irregular Objects, in *Proc of SPIE's International Symposium on Optical Engineering in Aerospace Sensing*, Vol 2904, *Intelligent Robots and Computer Vision XV: Algorithms, Techniques, Active vision, Materials Handling*, Boston, Massachusetts, USA, November 18-22, pp. 25-32 ,1996.
- 33B. Iivarinen, J., Rauhamaa, J., Visa, A., An Adaptive Two-Stage Approach to Classification of Surface Defects, in *Proc. of The 10th Scandinavian Conference on Image Analysis*, Lappeenranta, Finland, June 9-11, pp.317-322, 1997.
- 34B. Iivarinen, J., Peura, M., Särelä, J., Visa, A., Comparison of Combined Shape Descriptors for Irregular Objects, in *Proc. of British Machine Vision Conference 1997*, Essex, Great Britain, September 8-11, p. 8. 1997.

- 35B. Iivarinen, J., Visa, A., An Adaptive Texture and Shape Defect Classification, in Proc. of 14th IAPR International Conference on Pattern Recognition, Brisbane, Australia, August 16-20 pp. 117-122, 1998.
- 36B. Visa, A., A Genetic Algorithm Based Method to Improve Image Segmentation, in Proc. of 14th IAPR International Conference on Pattern Recognition, Brisbane, Australia, August 16-20 pp. 1015-1017, 1998.
- 37B. Iivarinen, J., Visa, A., Unsupervised Image Segmentation with The Self-Organizing Map and Statistical Methods, in Proc of SPIE's International Symposium on Optical Engineering in Aerospace Sensing, Vol 2904, Intelligent Robots and Computer Vision XV: Algorithms, Techniques, Active vision, Materials Handling, Boston, Massachusetts, USA, November 18-22, pp. 516-526 ,1998.
- 38B. Saarelainen, E.J., Saarinen, P.J., Veistaro, M., Visa, A., Prediction of Nozzle Clogging - A Neural Computing Approach, in Proc of 82nd Steelmaking Conference, Chicago, IL, USA, March 21-24, pp. 89-97, 1999.
- 39B. Autio, J., Rantanen, L., Visa, A., Lukkarinen, S., The classification and characterisation of rock texture analysis by co-occurrence matrices and the Hough transform, in Proc of Geovision 99 (International Symposium on Imaging Applications in Geology), Liege, Belgium, May 6-7, pp 5 - 8, 1999.
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- 43B. Ari Visa, Jarmo Toivonen, Barbro Back, Hannu Vanharanta, Knowledge Discovery From Text Documents Based On Context Maps, in Proceedings of the Thirty-third Annual Hawai'I International Conference on System Sciences (HICSS), Maui, Hawai'I, January 4-7, p. (CD-ROM), 2000.
- 44B. Visa, A., Jarmo Toivonen, Barbro Back, Hannu Vanharanta, Toward text understanding: characterization and classification of text documents by word map, in Proceedings of SPIE's International Symposium on Optical Engineering in Aerospace Sensing, Vol 4057, Data Mining and Knowledge Discovery: Theory, Tools, and Technology II, Orlando, Florida, April 24-25, pp.299-306 ,2000.
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Sensing, Vol 4057, Data Mining and Knowledge Discovery: Theory, Tools, and Technology II, Orlando, Florida, April 16-20, pp.149-156 ,2001.

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