

Stan Ahalt

## PUBLICATIONS

### **Chapters in Edited Books (9):**

Student co-authors are indicated by <sup>†</sup>

1. H. C. Kum, S. Ahalt, and D. Pathak. Privacy-Preserving Data Integration Using Decoupled Data. In *Security and Privacy in Social Network*, by Y. Elovici, Y. Altshuler, A. Cremers, N. Aharony, A. Pentland (editors), Springer publishing, 2012
2. Honglin Li<sup>†</sup>, Yi Zhao<sup>†</sup>, José-Luis Sancho-Gómez, and Stanley Ahalt, "Annotation, Storage, Retrieval and Analysis of Digital Video," *Integrated Media Communication Techniques*, J. F. Tasic, M. Najim, and M. Ansorge (eds), Kluwer, July 2003
3. "2D HRR Radar Data Modeling and Processing," Junshui Ma<sup>†</sup>, Xun Du<sup>†</sup>, and Stanley C. Ahalt, *Radar Signal Processing and Its Applications*, R. Hummel and J. Li (eds), Kluwer, March 2003
4. D. Prabhu, S. Ahalt, and A. Krishnamurthy, "High-Performance Computing in Signal and Image Processing," *Sourcebook of Parallel Computing*, Morgan Kaufman Publishers, pp. 243-248, 2002, ISBN 1-55860-871-0
5. José Luis Sancho<sup>†</sup>, Batu Ulug<sup>†</sup>, Aníbal Figueiras-Vidal, William Pierson<sup>†</sup>, and S. C. Ahalt, "Boundary Methods for Distribution Analysis," *Intelligent Methods in Signal Processing and Communications*, F. P. Gonzalez (ed), Birkhauser, Boston, MA, 1996. (Refereed)
6. Aristedes S. Galanopolous<sup>†</sup>, James E. Fowler, Jr.<sup>†</sup>, and Stanley C. Ahalt, "Vector Quantization using Artificial Neural Network Models," *Signal Processing in Telecommunications*, E. Biglieri and M. Luise (eds), Springer Verlag, London, pp. 346-357, 1996, (Invited and refereed)
7. Stanley C. Ahalt, Stuart A. Collins<sup>†</sup>, Ashok K. Krishnamurthy, and Daniel F. Stewart<sup>†</sup>, "Optical Implementation of Closest Vector Selection, Neural Networks: Applications and Implementation," *Neural Networks*, Omid Omidvar (ed.), Ablex Publishers, 1994, (Invited and refereed)
8. Stanley C. Ahalt, Tzyy-Ping Jung<sup>†</sup>, and Ashok K. Krishnamurthy, "A Comparison of MLP and FSCL-LVQ Neural Networks for Vowel Classification," *Neural Networks*, vol. III, pp. 124-143, Prentice Hall, 1991 (Invited)
9. S. C. Ahalt, F. D. Garber, I. Jouny<sup>†</sup>, and A. K. Krishnamurthy, "Performance of Synthetic Neural Network Classification of Noisy Radar Signals," *Advances in Neural Information Processing Systems*, Morgan Kaufman, New York, vol. 1, pp 281-288, 1989, (Refereed)

### **Bulletins and Technical Reports (24):**

1. Ahalt, S., Band, L., Christopherson, L., Idaszak, R., Lenhardt, C., Minsker, B., Palmer, M., Shelley, M., Tiemann, M., & Zimmerman, A. "Water Science Software Institute: Agile and open source scientific software development". May/June 2014 issue of IEEE Computing in Science and Engineering (CiSE). DOI: 10.1109/MCSE.2014.5
2. Kum HC, Krishnamurthy A, Ashwin, Ahalt SC. "Population Informatics: Tapping the Social Genome to Advance Society. A Vision for Putting "Big Data" to Work for Population Informatics". IEEE Computer Society, 2013. In Press.

3. Kum HC, Pathak D, Krishnamurthy A, Reiter M, Ahalt S. Secure Decoupled Linkage (SDLink) for Building a Social Genome. 2013 IEEE International Conference on Big Data (IEEE BigData 2013). In Press.
4. Hye-chung Kum; Darshana Pathak; Gautam Sanka; Stanley Ahalt, "Privacy beyond anonymity: Decoupling data through encryption," TR12-003, <http://www.cs.unc.edu/xcms/techreports/techreports.html>.
5. Hye-chung Kum; Stanley Ahalt, "Privacy by Design for Secondary Data Analysis," TR12-002, <http://www.cs.unc.edu/xcms/techreports/techreports.html>
6. Mane KK, Schmitt C, Owen P, Gersing K, Ahalt SC, Wilhelmsen K, "Data-driven approaches to augment clinical decision in EMR Era", IEEE Xplore Digital Library, May 28, 2012, Cognitive Information Processing (CIP), 3<sup>rd</sup> International Workshop; Doi: 10.1109/CIP.6232907
7. Linh Bao Ngo, Dantuluri V, Stealey M, Ahalt S, Apon A, "An Architecture for Mining and Visualization of US Higher Education Data", Information Technology: New Generations (ITNG), 2012 9<sup>th</sup> International Conference, DOI: 10.1109/ITNG.2012.151, pp 783-789
8. P. Dreher, S. Ahalt, G. Almes, M. Mundrane, J. Pepin and C. Stewart. "Campus Bridging: Campus Leadership Engagement in Building a Coherent Campus Cyberinfrastructure Workshop Report." April 2011., Final report and recommendations from the October, 2010, workshop on campus bridging sponsored by the NSF Campus Bridging Task Force (<http://pti.iu.edu/campusbridging/leadership>).
9. Kum, H.C., and Ahalt, S. 2011. "Decoupled Data for Privacy Preserving Record Linkage with Error Management", IEEE Socia IComp 2011 Workshop on Security and Privacy in Social Networks, MIT Boston
10. S. Ahalt, A. Apon, D. Lifka, H. Neeman. "NSF-Sponsored Workshop Report: Sustainable Funding and Business Models for Academic Cyberinfrastructure Facilities." November, 2010, Final report for the National Science Foundation-sponsored workshop held May 3-5 at Cornell University, see <http://casc.org/papers.php>
11. S. Ahalt, R. Idaszak, B. Minkser, et. al. "NSF Workshop on Creating Scientific Software Innovation Institutes for Sustained Cyberinfrastructure Achievement and Excellence Final Report," Final report from NSF workshop held Oct. 3 and 4, 2010, in Arlington, VA.
12. P. Dreher, et., al., "Developing a Coherent Cyberinfrastructure from the Campus to the National Facilities: Challenges and Strategies," *A Joint Workshop Report between CCI and the Coalition for Scientific Computation*, February 2009
13. Dooley, R., et. al., "Sustainable cyberinfrastructure software: perspectives and priorities," Coalition for Academic Scientific Computation ([www.casc.org](http://www.casc.org)), 2009.
14. D. E. Hudak, T. Bitterman, N. Ludban, S. C. Ahalt, "Sustainable Software Ideas for the Next Generation Research Grid: Standards, Interoperability and Software Development," Position Paper, *NSF Workshop on Sustainable Software*, Indianapolis, IN, Mar. 26-27, 2009.
15. S. Ahalt, S. Graves, D. Keyes, H. Neeman, T. Sterling. *Final Report of the Arkansas Cyberinfrastructure Initiative External Advisory Committee*, January, 2008. <http://comp.uark.edu/~aapon/EACReportFINALv1.pdf>
16. Nehrbass, J. Chaves, S. Ahalt and A. Krishnamurthy, "MatlabMPI Compilation Technology Report," submitted for publication on the *Online Knowledge Center (OKC)*, January 31, 2005

17. S. C. Ahalt, A. K. Krishnamurthy, J.W. Nehrbass, and J.C. Chaves, "Support for ATR Programs" *PA Document Number- ASC 04-1793*, Disposition Date-8 December 2004
18. A.K. Krishnamurthy, S. C. Ahalt, J.W. Nehrbass and J. C. Chaves, "High Productivity Computing for SIP," *PA Document Number- ASC 04-1758*, Disposition Date- 17 November 2004
19. S.C. Ahalt, A.K. Krishnamurthy, J. W. Nehrbass, and J. C. Chaves, "Signal Mining, Fusion and Validation," *PA Document Number- ASC 04-1755*, Disposition Date-17 November 2004
20. S. C. Ahalt and T. P. Jung' "Large Neural Networks: Simulation and Analyses," Final Report, *Cray Research, Inc.* April 1990
21. S. C. Ahalt, P. Chen' and T. P. Jung' "The Design of the Neural Shell," Final Report, *Cray Research, Inc.*, December 1988
22. J. F. Leathrum, S. C. Ahalt, "Ada Compiler Rehosting: A Planning Project Final Report," *Clemson University, Southeastern Center for Electrical Engineering Education*, July 1985
23. S. C. Ahalt," HDLC Interfaces for Two Microprocessors', *Bell Telephone Laboratory Technical Report*, January 1981
24. S. Ahalt, "Characterizing the Propagation Medium using a Dual Polarized Communications Receiver," *NASA Final Project Report*, August 1980
25. S. Ahalt, L. Band, B. Minsker, M. Palmer, M. Tiemman, R. Idaszak, C. Lenhardt, M. Whitton, S.L. Star and SESYNC "Overview of the Water Science Software Institute And Summary of Prototyping Activities," June 17, 2013
26. S. Ahalt, L. Band, B. Minsker, and M. Palmer "Exploring and Evaluating the Role of Hackathons in a Water Science Software Institute (WSSI)," Full Event Report and Recommendations July 14, 2013, NSF-funded Event, Chapel Hill, NC, April 15-19, 2013

#### **Peer Reviewed Journal Articles (43):**

Student co-authors are indicated by <sup>†</sup>.

1. Lenhardt, W.C., Ahalt, S, Blanton, B, Christopherson, L and Idaszak, R 2014. Data Management Lifecycle and Software Lifecycle Management in the Context of Conducting Science. *Journal of Open Research Software* 2(1):e15, DOI: <http://dx.doi.org/10.5334/jors.ax>
2. Kum HC, Krishnamurthy A, Machanavajjha A, Reiter MK, Ahalt S. Privacy preserving interactive record linkage (PPIRL). *J Am Med Inform Assoc* published online Nov 7, 2013, doi: 10.1136/amiajnl-2013-002165
3. Shoffner M., Owen P., Mostafa J., Lamm B., Wang X., Schmitt C., Ahalt S., "The Secure Medical Research Workspace: An IT Infrastructure to Enable Secure Research on Clinical Data," *Clinical and Translational Science Journal*, 2013 Jun;6(3):222-5. Doi:1111/cts. 12060. Epub 2013 Apr 19.
4. Kum, H.C, Ahalt, S., Carsey, T. 2011. Dealing with Data: Government Records. *Science*, 2011, Jun 10; Vol 332. No. 6035. p 1263. DOI: 10.1126/science.332.6035.1263
5. Oermann EK, Kress MA, Collins BT, Collins SP, Morris D, Ahalt SC, Ewend MG. "Predicting survival in patients with brain metastases treated with radiosurgery using artificial neural networks". *Neurosurgery*, 2013 Jun; 72(6):944-51; discussion 952. Doi: 10.1227/ NEU.0b013e31828ea04b. PMID: 18255705

6. Apon, Amy, Ahalt, Stan, Dantuluri, Vijay, Gurdgiev, Constantin, Limayem, Moez, Ngo, Linh, Stealey, Michael, "High Performance Computing Instrumentation and Research Productivity in U. S. Universities" *Journal of Information Technology Impact*, vol. 10, No.2, pp.87-98, 2010.
7. Kepner, Jeremy, Ahalt, Stan, "MatlabMPI," *Journal of Parallel and Distributed Computing*, vol, 64, issue 8, August 2004, pp 997-1005
8. Ma, Junshui<sup>†</sup>, Krishnamurthy, Ashok, and Ahalt, Stanley, "SVM Training with Duplicated Samples and its Application in SVM-based Ensemble Methods," *Neurocomputing*, vol. 61, pp. 4555-459, 2004
9. Aradhye, H. B., Bakshi, B. R., Davis, J. F., & Ahalt, S. C., "Clustering in Wavelet Domain: A Multiresolution ART Network for Anomaly Detection" *AICHE JOURNAL*. 50,(2004) 2455-2466.
10. Junshui Ma<sup>†</sup>, Xun Du<sup>†</sup>, Stanley C. Ahalt, "2D HRR Radar Data Modeling and Processing," *Multidimensional Systems and Signal Processing*, 14, 25-48, 2003, Kluwer Academic Publishers.
11. Junshui Ma<sup>†</sup>, Jose L. Sancho-Gomez, and Stanley C. Ahalt, "Non-linear Multi-class Discriminant Analysis," *IEEE Transactions on Signal Processing Letters*, July, 2003
12. C. He<sup>†</sup>, Y.F. Zheng, and S.C. Ahalt, "Object Tracking using the Gabor Wavelet Transform and the Golden Section Algorithm," *IEEE Transactions on Multimedia*, Vol. 4, No. 4, December, 2002, pp. 528-538
13. Junshui Ma<sup>†</sup>, Xun Du<sup>†</sup>, and Stanley C. Ahalt, "2D HRR Radar Data Modeling and Processing," *Multidimensional Systems and Signal Processing Special Issue on Radar Signal Processing and Its Applications*, Dec. 2002
14. Adriana Dapena and Stanley C. Ahalt, "A Hybrid DCT-SVD Image Coding Algorithm," *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 12, no. 2, pp 114-121, Feb. 2002
15. Junshui Ma<sup>†</sup>, Jose L. Sancho-Gomez, and Stanley Ahalt, "Non-linear Multi-class Discriminant Analysis," *IEEE Signal Processing Letters*, 9 Oct. 2002
16. He, C.<sup>†</sup>, Zheng, Y.F., and Ahalt, S., "Object Tracking using the Gabor Wavelet Transform and the Golden Section Algorithm," *IEEE Transactions on Multimedia.*, July, 2002
17. J. L. Sancho, William E. Pierson<sup>†</sup>, Batu Ulug, Stanley C. Ahalt, and A. R. Figueiras-Vidal, "Class Separability Estimation and Incremental Learning using Boundary Methods," *Neurocomputing*, vol. 35, no. 1-4, pp 3 –26, Nov., 2000
18. M. J. Collins<sup>†</sup> and A. K. Krishnamurthy and S. C. Ahalt, "Generating Gestural Scores from Articulatory Data using Temporal Decomposition," *IEEE Transactions on Speech and Audio Processing*, vol. 7, no. 2, pp. 230-234, March, 1999
19. Xun Du<sup>†</sup>, Stanley C. Ahalt, and Bruce E. Stribling, "3-D Orientation Vector Estimation for Sub-Components of Space Object Imagery," *Optical Engineering, Special Issue on Advances in Recognition Techniques*, March, 1998
20. M. Hisham Choueiki<sup>†</sup>, Clark A. Mount-Campbell, and Stanley C. Ahalt, "Implementing a Weighted Least Squares Procedure to Solve the Short-Term Load Forecasting Problem with Neural Networks," *IEEE Transactions on Power Systems*, vol. 12, no. 4, pp. 1689-1694, November 1997
21. M. Hisham Choueiki<sup>†</sup>, Clark A. Mount-Campbell, and Stanley C. Ahalt, "Building a Quasi Optimal Neural Network to Solve the Short-Term Load Forecasting Problem," *IEEE Transaction on Power Systems*, vol. 12, no. 4, pp. 1432-1439, November 1997

22. M. H. Choueiki, C. A. Mount-Campbell, and S. C. Ahalt, S. C., "Building a Quasi-Optimal Neural Network to Solve the Short-Term Load Forecasting Problem," *IEEE Power Engineering Review*, 1997, 17 (3), 39.
23. Batuhan Ulug<sup>†</sup>, Stanley C. Ahalt and Rick Mitchell, "Efficient ATR using Compression," *IEEE Transactions on Aerospace and Electronic Systems*, vol. 33, no. 4, pp. 1199-1211, October 1997
24. Aristedes S. Galanopoulos<sup>†</sup>, Randolph L. Moses, and Stanley C. Ahalt, "Diffusion Approximation of Frequency Sensitive Competitive Learning," *IEEE Transactions on Neural Networks*, vol. 8, no. 5, pp. 1026-1030, September 1997
25. L. R. Flake<sup>†</sup>, S. C. Ahalt, and A. K. Krishnamurthy, "Detecting Anisotropic Scattering with Hidden Markov Models," *IEEE Proceedings: Radar, Sonar and Navigation*, vol. 144, no. 2, pp. 81-86, April 1997
26. Tzyy-Ping Jung<sup>†</sup>, Ashok K. Krishnamurthy, Stanley C. Ahalt, Mary E. Beckman, and Sook-hyang Lee<sup>†</sup>, "Deriving Gestural Scores from Articulator-Movement Records using Weighted Temporal Decomposition," *IEEE Transactions on Speech and Audio Processing*, vol. 4, no. 1, pp. 2-18, January 1996
27. James R. Whiteley<sup>†</sup>, James F. Davis, Amit Mehrotra<sup>†</sup>, and Stanley C. Ahalt, "Observations and Problems Applying ART2 for Dynamic Sensor Pattern Interpretation," *IEEE Transactions on Systems, Man, and Cybernetics*, vol. 26, no. 4, pp. 423-437, July 1996
28. Aristedes S. Galanopoulos<sup>†</sup> and Stanley C. Ahalt, "Codeword Distribution for Frequency Sensitive Competitive Learning with One Dimensional Input Data," *IEEE Transactions on Neural Networks*, vol. 7, no. 3, pp. 752-756, May 1996
29. DeLiang Wang, Xiaomei Liu<sup>†</sup>, and Stanley C. Ahalt, "On Temporal Generalization of Simple Recurrent Networks," *Neural Networks*, vol. 9, no. 7, pp. 1099-1118, 1996
30. James E. Fowler<sup>†</sup>, Kenneth C. Adkins<sup>†</sup>, Steven B. Bibyk and Stanley C. Ahalt, "Real-Time Video Compression using Differential Vector Quantization," *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 5, no. 1, pp. 14-24, February 1995
31. Mary E. Beckman, Tzyy-Ping Jung<sup>†</sup>, Sook-hyang Lee<sup>†</sup>, Kenneth de Jong, Ashok K. Krishnamurthy, Stanley C. Ahalt, K. Bretonnel Cohen<sup>†</sup>, and Michael J. Collins<sup>†</sup>, "Variability in the Production of Quantal Vowels Revisited," *Journal of the Acoustical Society of America*, vol. 97, no. 1, pp. 471-491, January 1995
32. Daniel F. Stewart<sup>†</sup>, Lee C. Potter, and Stanley C. Ahalt, "Computationally Attractive Real Gabor Transforms," *IEEE Transactions on Signal Processing*, vol. 43, pp. 77-84, January 1995
33. Matthew J. Sheridan<sup>†</sup>, Stanley C. Ahalt, and David E. Orin, "Fuzzy Control for Robotic Power Grasp," *Journal of Advanced Robotics*, vol. 9, pp. 435-546, October 1995
34. Mark D. Hanes<sup>†</sup>, Stanley C. Ahalt, and Ashok K. Krishnamurthy, "Acoustic to Phonetic Mapping using Recurrent Neural Networks," *IEEE Transactions on Neural Networks*, vol. 5, no. 4, pp. 659-662, July 1994
35. Jouny, F. D. Garber, and S. C. Ahalt, "Classification of Radar Targets using Synthetic Neural Networks," *IEEE Transactions on Aerospace and Electronics Systems*, vol. 29, no. 2, pp. 336-344, 1993

36. Stuart A. Collins, Stanley C. Ahalt, Ashok K. Krishnamurthy, and Daniel Stewart<sup>†</sup>, "Optical Implementation and Applications of Closest Vector Selection in Neural Networks," *Applied Optics - Special Issue on Neural Networks*, vol. 32, no. 8, pp. 1297-1303, 1993
37. James E. Fowler<sup>†</sup>, Matthew R. Carbonara<sup>†</sup>, and Stanley C. Ahalt, "Image Coding using Differential Vector Quantization," *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 3, no. 5, pp. 350-367, 1993
38. Stanley C. Ahalt, James F. Leathrum, "A Code Generation Methodology using Tree Parsers and High-Level Intermediate Representations," *Journal of Programming Languages*, Chapman and Hall Publishers, London, vol. 1, pp. 103-126, 1993
39. Stanley C. Ahalt, Prakoon Chen<sup>†</sup>, Cheng-Taou Chou<sup>†</sup>, Suresh Kuttuva<sup>†</sup>, and Thomas E. Little<sup>†</sup>, "The Neural Shell: A Neural Network Simulation Tool," *International Journal for Engineering Applications of Artificial Intelligence, Special Issue on Neural Networks and Parallel Processing*, vol. 5, no. 3, pp. 183-192, 1992
40. Stanley C. Ahalt, Prakoon Chen<sup>†</sup>, Cheng-Taou Chou<sup>†</sup>, and Tzyy-Ping Jung<sup>†</sup>, "Implementation of a Vector Quantization Codebook Design Technique Based on a Competitive Learning Artificial Neural Network," *The Journal of Supercomputing*, no. 5, pp. 307-330, 1992
41. Mark D. Hanes<sup>†</sup>, Stanley C. Ahalt, Khalid Mirza<sup>†</sup>, and David E. Orin, "Power Grasp Force Distribution Control using Artificial Neural Networks," *The Journal of Robotic Systems*, vol. 9, no. 5, pp. 635-661, 1992
42. Christopher Mills<sup>†</sup>, Stanley C. Ahalt, and Jim Fowler<sup>†</sup>, "Compiled Instruction Set Simulation," *The Journal of Software-Practice and Experience*, vol. 21, no. 8, pp. 877-899, March 1991
43. Ashok K. Krishnamurthy, Stanley C. Ahalt, Douglas E. Melton<sup>†</sup>, and Prakoon Chen<sup>†</sup>, "Neural Networks for Vector Quantization of Speech and Images," *IEEE Journal on Selected Areas in Communication*, vol. 8, no. 8, pp. 1449-1457, October 1990
44. Stanley C. Ahalt, Ashok K. Krishnamurthy, Prakoon Chen<sup>†</sup>, and Douglas E. Melton<sup>†</sup>, "Competitive Learning Algorithms for Vector Quantization" *Neural Networks* vol. 3 no. 3, pp. 277-290, May 1990

#### **Editor Reviewed Journal Articles (4):**

Student co-authors are indicated by <sup>†</sup>

1. S. Ahalt, "SIP Forum 2000" in *ASC MSRC Journal*, vol. 4.2, Fall, 2000, p.21 (edited journal).
2. M. D. Hanes<sup>†</sup>, S. C. Ahalt, K. Mirza, and D. E. Orin, "The use of ANN for Robot Grasping Control," *Visions*, Issue 3.4, pp. 7-11, Fall 1990. (*Visions* is the quarterly publication of the Ohio Supercomputer Center.)
3. D. Olson, S. C. Ahalt, R. Barga, and G. Wilcox, "Artificial Neural Network Simulation on Cray Systems," *Cray Channels*, vol. 11, no. 2, pp. 20-23, 1989. (*Cray Channels* is a publication of Cray Research, Inc.)
4. M. D. Hanes<sup>†</sup> and S. C. Ahalt, "Cray Supercomputers and Neural Networks," *Visions*, Issue 3.3, pp. 12-15, Summer 1990. (*Visions* is the quarterly publication of the Ohio Supercomputer Center.)

#### **Papers in Proceedings (89):**

Student co-authors are indicated by <sup>†</sup>

1. Kum, H.C., and Ahalt, S. (2013). "Privacy-by-Design: Understanding Data Access Models for Secondary Data", American Medical Informatics Association (AMIA) joint summits on translation science: clinical research informatics.
2. Kum, H.C., Pathak D., Sanka, G., and Ahalt, S. (2013). "Privacy Beyond Anonymity : Decoupling Data using Encryption", American Medical Informatics Association (AMIA) joint summits on translation science: clinical research informatics.
3. Hye-chung Kum, Stanley C. Ahalt, "Decoupled Data for Privacy Preserving Record Linkage with Error Management," *Proceedings of the First International Workshop on Security and Privacy in Social Networks*, Boston, MA, Oct. 9-11, 2011
4. Linh Bao Ngo, Vijay Dantuluri, Michael Stealey, Stan Ahalt, and Amy Apon, "An Architecture for Mining and Visualization of U.S. Higher Educational Data," *Proceedings of the 9th International Conference on Information Technology : New Generations*, ITNG 2012, April 16-18, 2012, Las Vegas, Nevada, USA
5. B. Elton, S. Samsi, H. B. Smith, L. Humphrey, S. Ahalt, A. Chalker. "Using Star-P on DoD High Performance Computing Systems," *Department of Defense High Performance Computing Modernization Program: Users Group Conference 2009*, San Diego, CA, June 14-18, 2009.
6. B. Elton, S. Samsi, H. B. Smith, S. Ahalt, A. Chalker. "A Scalability Study on DSRC HPC Systems of Radio Frequency Tomography Code Written StarP/ MATLAB," *Department of Defense High Performance Computing Modernization Program: Users Group Conference 2009*, San Diego, CA, June 14-18, 2009.
7. B. H. Elton, S. Samsi, H. B. Smith, L. Humphrey, S. Ahalt, A. Chalker, N.Srivastava, R. Astala,"Very High Level Languages (VHLL) for No Pain Scalable Computing on High Performance Systems" *Thirteenth Annual High Performance Embedded Computing (HPEC) Workshop* , MIT Lincoln Laboratory, Boston, MA, 22 September 2009.
8. B. Guilfoos, S. Samsi, J. Chaves, J. Unpingco, J. Nehrbass, A. Chalker, S. Ahalt, A. Krishnamurthy. "Web interface for querying/searching RDF database," *Proceeding of the HPCMP Users Group Conference*, 2007.
9. B. Elton, J. Nehrbass, S. Ahalt, J. Gardiner, L. Humphrey. "The SIP High Productivity Toolset for Parameter Sweeps and Monte Carlo Runs," *Proceedings of the HPCMP Users Group Conference 2007, HPCMP: A Bridge to Future Defense*, June 18-21, 2007.
10. J. Gardiner, L. Humphrey, J. Unpingco, S. Ahalt. "Computationally Intensive SIP Algorithms on HPC," *HPCMP Users Group Conference 2007*, Pittsburgh, PA, June 18-21, 2007.
11. Brian Guilfoos, Judy Gardiner, Juan Carlos Chaves, John Nehrbass, Stanley Ahalt, Ashok Krishnamurthy, Jose Unpingco, Alan Chalker, Laura Humphrey, and Siddharth Samsi , "Applications in Parallel MATLAB", *HPCMP Users Group Conference (HPCMP-UGC'06)*
12. H. Li and S. Ahalt, "Hierarchical Institution for Video Annotation," *IEEE International Conference on Electro and Information Technology*, May, 2005, Lincoln, NE.
13. Yi Zhao, Ahalt, S.C., Jianyu Dong, "Optimal Interleaving for 3-D Zerotree Wavelet Video Packets Over Burst Lossy Channels" *Proceedings. (ICASSP apos;05). IEEE International Conference on Acoustics, Speech, and Signal Processing*, Volume 2, Issue , March 18-23, pp. 333 – 336, 2005.

14. H. Li, Y. Zhao, and S. Ahalt, "High-Level Video Annotation using a Syntactic Approach," *International Conference on Computing, Communications, and Control Technologies: CCT'04*, August, 2004, Austin, TX.
15. H. Li, Y. Zhao, and S. Ahalt, "Hierarchical Video Semantic Annotation – The Vision and Techniques," *International Conference on Computing, Communications, and Control Technologies: CCT'04*, August, 2004, Austin, TX.
16. P. Khot<sup>†</sup>, A. K. Krishnamurthy, S. C. Ahalt, J. W. Nehrbass, and J. C. Chaves, "A Parallel Data Mining Toolbox using Matlab/MPI," *Proceedings of the High Performance Embedded Computing Workshop (HPEC 2003)*, September 23-25, 2003, MIT Lincoln Laboratory, Lexington, MA
17. J. Nehrbass, M. Soumekh, S. Ahalt, A. K. Krishnamurthy, "Parallel Performance of Pure M-files versus C-code as Applied to Formation of Wide-Bandwidth and Wide-Beamwidth SAR Imagery," *Proceedings of the High Performance Embedded Computing workshop (HPEC 2003)*, September 23-25, 2003, MIT Lincoln Laboratory, Lexington, MA
18. J. Kepner and S. Ahalt, "Parallel Image Processing with MatlabMPI," *DOD HPCMP User's Group Conference*, June 12, 2003, Bellevue, WA
19. Junshui Ma<sup>†</sup>, Simon Perkins, and James Theiler Stanley Ahalt, "Modified Kernel-based Nonlinear Feature Extraction," *Proceedings of the 2002 International Conference on Machine Learning and Applications (ICMLA'02)*, Las Vegas, USA, June 24-27, 2002
20. J. C. Chaves, H. Li<sup>†</sup>, Y. Zhao<sup>†</sup>, and S. C. Ahalt, "Video Markup Language (VideoML) - an XML-based Markup Language for Video Annotation and Analysis," *Proceedings of the 2002 HPCMO Users Group Conference*, June 18-21, 2002 Austin, TX
21. Honglin Li<sup>†</sup>, Yi Zhao<sup>†</sup>, José-Luis Sancho-Gómez and Stanley C. Ahalt, "Spatio-temporal Structure Analysis on Motion Imagery using a Syntactic Approach" *Proceedings of the World Affairs Congress*, June 12-14, 2002, Orlando, FL
22. H. Li<sup>†</sup>, J. Ma<sup>†</sup>, Y. Zhao<sup>†</sup>, and S. C. Ahalt, "Kernel-based Feature Extraction," *Proceedings of SPIE Vol. 4726, Automatic Target Recognition XI, Aerosense*, April 2002, Orlando, FL
23. S. C. Ahalt, X. Du<sup>†</sup>, and H. Li<sup>†</sup>, "Content-based Image and Video Compression," *Proceedings of SPIE Vol. 4727, Algorithms for Synthetic Aperture Radar Imagery, IX, Aerosense*, April 2002, Orlando, FL
24. H. Li<sup>†</sup>, J. L. Sancho Gomez, and S. C. Ahalt, "Kernel-based Discriminant Feature Extraction using Representative Data," *Proceedings of SPIE Vol. 4729, Signal Processing, Sensor Fusion, and Target Recognition XI, Aerosense*, April 2002, Orlando, FL
25. Y. Zhao<sup>†</sup>, H. Li<sup>†</sup>, and S. C. Ahalt, " Multiclass Kernel-based Feature Extraction," *Proceedings of SPIE Vol. 4730, Data Mining and Knowledge Discovery: Theory, Tools, and Technology IV, Aerosense*, April 2002, Orlando, FL
26. Junshui Ma<sup>†</sup> and Stan Ahalt, "Parameter Estimation Algorithms Based on a Physics-based HRR Moving Target Model," *Proceedings of Algorithms for Synthetic Aperture Radar Imagery VII, SPIE Aerosense*, April 2001, Orlando, FL
27. He, Chao / Dong, Jianyu / Zheng, Yuan F. / Ahalt, Stanley C. "Object Tracking using the Gabor Wavelet Transforms and the Golden Section Algorithm," *ICRA2001* in Seoul, Korea
28. Junshui Ma<sup>†</sup>, Honglin Li<sup>†</sup>, and Stanley C. Ahalt, " Using Support Vector Machines as HRR Signature Classifiers" *Proceedings of the 2001 SPIE Aerosense Conference*, Orlando, FL, April 15-19, 2001



29. Xun Du<sup>†</sup>, Honglin Li<sup>†</sup>, and Stanley C. Ahalt, "Content-Based Image Compression," *Proceedings of the 2001 SPIE Aerosense Conference: Algorithms for Synthetic Aperture Radar Imagery VIII*, Orlando, FL, April 15-19, 2001
30. H. B. Aradhye<sup>†</sup>, J. F. Davis, B. R. Bakshi, and S. C. Ahalt, "ART-2 and Multiscale ART-2 for On-line Process Fault Diagnosis - Validation via Industrial Case Studies," *Proceedings of the 4<sup>th</sup> IFAC Workshop on On-Line Fault Detection and Supervision in the Chemical Process Industries*, June 7-8, 2001, Jejudo Island, Korea
31. Adriana Dapeena and Stanley C. Ahalt, "An Online Image Compression Algorithm using Singular Value Decomposition and Adaptive Vector Quantization," *Proceedings of EUSIPCO 2000*, 5 – 8 September, Tampere, Finland
32. Junshui Ma<sup>†</sup> and Stan Ahalt, "Derivation of Physics-based HRR Moving Target Models," *Proceedings of Signal Processing, Sensor Fusion, and Target Recognition IX, SPIE Aerosense*, April 2000, Orlando, FL
33. Junshui Ma<sup>†</sup> and Stan Ahalt, "An Analysis of Complex HRR Range Signatures" *Proceedings of Targets and Backgrounds VI: Characterization, Visualization, and the Detection Process, SPIE Aerosense*, April 2000, Orlando, FL
34. Stanley C. Ahalt, Xun Du<sup>†</sup>, and Adriana Dapena, "Content-Based Image Compression for ATR Applications," *Proceedings of Algorithms for Synthetic Aperture Radar Imagery VII, SPIE Aerosense*, April 2000, Orlando, FL
35. X. Du<sup>†</sup>, J. Ma<sup>†</sup>, S. C. Ahalt, and B. E. Stribling, "Eigen-indexing in Satellite Recognition," Conference on "Automatic Target Recognition IX, SPIE's AeroSense '99, Orlando, Florida, April 5-9, 1999
36. Loevenbruck, H., Collins, M. J<sup>†</sup>, Beckman, M. E., Krishnamurthy, A.K., and Ahalt, S.C.(1999). "An Investigation of the Temporal Coordination of Articulatory Gestures in Consonant Clusters and Sequences of Consonants," O. Fujimura, B. D. Joseph, & B. Palek, eds., *Proceedings of LP'98*, pp. 547-73. Prague: The Karolinum Press.
37. B. Ulug and S. C. Ahalt, "HRR ATR using VQ Classification" Conference on Automatic Target Recognition IX, SPIE's AeroSense '99, Orlando, Florida, April 5-9, 1999
38. M. Qasem<sup>†</sup>, X. Du<sup>†</sup>, and S. C. Ahalt, "Efficient Codebook Search for Vector Quantization: Exploiting Inherent Codebook Structure," Conference on Visual Information Processing VIII, SPIE's AeroSense '99, Orlando, Florida, April 5-9, 1999
39. W. E. Pierson<sup>†</sup>, B. Ulug, and S. C. Ahalt, "Boundary Methods for Mode Estimation," Conference on Algorithms for Synthetic Aperature Radar Imagery VI, SPIE AeroSense '99, Orlando, Florida, April 5-9, 1999
40. H. Loevenbruck and M. Collins<sup>†</sup> and M. Beckman and A. Krishnamurthy and S. C. Ahalt, "Syllable Structure and Gesture Timing," *Proceedings of Linguistics and Phonetics*, Columbus, OH, Sept 19-20, 1998
41. J. L. Sancho<sup>†</sup>, W. E. Pierson<sup>†</sup>, B. Ulug<sup>†</sup>, S. C. Ahalt, and Figueiras-Vidal, A.R. "Feature Set Evaluation and Robust Neural Networks using Boundary Methods," *Proceedings of the World Multiconference on Systems, Cybernetics, and Informatics and The International Conference on Information Systems Analysis and Synthesis*, Orlando, FL, July 12 - 16, 1998

42. Stanley Ahalt and Xun Du<sup>†</sup> and Bruce Stribling, "Advanced Techniques for Estimating and Refining Orientation Vectors of Space Object Imagery," *Proceedings of the 1998 Space Control Conference*, Lexington, MA, April, 1998
43. Stanley Ahalt and Xun Du<sup>†</sup> and Bruce Stribling, "Estimating and Refining Orientation Vectors for Sub-Components of Space Object Imagery," *Proceedings of the 1998 SPIE Conference on Automatic Target Recognition*, Orlando, FL, April, 1998
44. B. Pierson<sup>†</sup>, B. Ulug<sup>†</sup>, S. C. Ahalt, J. L. Sancho<sup>†</sup> and A. Figueiras-Vidal, "Theoretical and Complexity Issues for Feature Set Evaluation using Boundary Methods," *Proceedings of the 1998 SPIE Conference on Automatic target Recognition VII, ATR Theory and Performance Estimation*, April 13 - 17, 1998, Orlando, FLA.
45. X. Du<sup>†</sup>, S. C. Ahalt, and Bruce Stribling, "Advanced Techniques for Estimating & Refining Orientation Vectors of Space Object Imagery," *Proceedings of the 16<sup>th</sup> MIT/LL Space Control Conference*, Apr. 15, 1998
46. X. Du<sup>†</sup>, S. C. Ahalt, and Bruce Stribling, "Estimating and Refining Orientation Vectors for Sub-Components of Space Object Imagery," *Proceedings of SPIE* vol.3371, (Orlando, FLA), Apr. 13, 1998
47. X. Du<sup>†</sup>, S. C. Ahalt, and B. Stribling, "3-D Orientation Vector Estimation for Sub-components of Space Object Imagery" *Proceedings of the 1997 MIT/LL Space Control Conference*, pp. 110-128, Lexington, MA, March 25-27, 1997 (refereed)
48. B. Pierson<sup>†</sup>, B. Ulug<sup>†</sup>, S. C. Ahalt, J. L. Sancho<sup>†</sup> and A. Figueiras-Vidal, "Using Boundary Methods as Ordering Indices on ATR Feature Sets," *Proceedings of the 1997 SPIE Conference on Automatic Target Recognition VII, ATR Theory & Performance Estimation*, vol. 3070, pp. 173-184, Orlando, FL, April 1997 (abstract refereed)
49. J. E. Fowler<sup>†</sup> and S. C. Ahalt, "Adaptive Vector Quantization of Image Sequences using Generalized Threshold Replenishment," *Proceedings of the IEEE ICASSP*, pp. 3085-3088, Berlin, Germany, April 1997 (refereed)
50. J. E. Fowler<sup>†</sup> and S. C. Ahalt, "Image-Sequence Coding with Generalized Threshold Replenishment - A New Algorithm For Adaptive Vector Quantization," *Proceedings of the 1997 SPIE Conference on Visual Information Processing*, vol. 3074, pp. 64-71, Orlando, FL, April 1997 (abstract refereed)
51. X. Du<sup>†</sup>, J. Zhao<sup>†</sup>, S. C. Ahalt and B. Stribling, "3-D Orientation Vector Estimation for Sub-components of Space Object Imagery," *Proceedings of the 1997 SPIE Conference on Signal Processing, Sensor Fusion, and Target Recognition*, pp. 395-405, Orlando, FL, April 1997 (abstract refereed)
52. J. E. Fowler<sup>†</sup> and S. C. Ahalt, "Adaptive Vector Quantization using Generalized Threshold Replenishment," *Proceedings of the 1997 Data Compression Conference*, pp. 317-326, Snowbird, UT, March 1997 (refereed)
53. J. L. Sancho<sup>†</sup>, A. R. Figueiras, B. Ulug<sup>†</sup>, W. Pierson<sup>†</sup>, and S. C. Ahalt, "Distribution Analysis using Boundary Methods," *Proceedings of the 1996 IEE Conference on Mathematics in Signal Processing*, University of Warwick, England, December 17-19, 1996 (refereed)
54. M. D. Hanes<sup>†</sup>, D. E. Orin, and S. C. Ahalt, "Fuzzy and Neural Network Control of Object Acquisition for Power Grasp," *Proceedings of the 1996 SPIE Conference on Applications and Science of Artificial Neural Networks II*, vol. 2760, pp. 262-272, Orlando, FL, April 1996 (abstract refereed)

55. J. Zhao<sup>†</sup>, S. C. Ahalt, and B. E. Stribling, "3-D Orientation Vector Estimation from Satellite Imagery," *Proceedings of the 1996 SPIE Conference on Signal Processing, Sensor Fusion, and Target Recognition* (Ivan Kadar, Chair), vol. 2755, pp. 472-483, Orlando, FL, April 1996 (abstract refereed)
56. Batu Ulug<sup>†</sup>, S. C. Ahalt, and R. L. Mitchell, "Model-Catalog Compression for Radar Target Recognition," *Proceedings of the 1995 ICASSP*, pp. 3479-3482, Detroit, MI, May 1995 (refereed)
57. Hung-Chih Chiang<sup>†</sup>, Randolph L. Moses, Lee C. Potter, and Stanley C. Ahalt, "Analysis and Modification of Linear Correlators for Image Pattern Classification," *Proceedings of the 1995 ICASSP*, Detroit, MI, May 1995 (refereed).
58. H-C. Chiang<sup>†</sup>, R. L. Moses, L.C. Potter, S. C. Ahalt, "Statistical Properties of Linear Correlators for Image Pattern Classification with Application to SAR Imagery," *Proceedings of the SPIE Conference on Synthetic Aperture Radar Imagery II*, (Dominick A. Giglio, Chair), vol. 2490, pp. 266-277, Orlando, FL, April 1995 (abstract refereed)
59. L. Flake<sup>†</sup>, A. K. Krishnamurthy, and S. C. Ahalt, "Multi-aperture SAR Target Detection using Hidden Markov Models," *Proceedings of the SPIE Conference on Synthetic Aperture Radar Imagery II*, (Dominick A. Giglio, Chair), pp. 300-311, Orlando, FL, April 1995 (abstract refereed)
60. Batuhan Ulug<sup>†</sup>, Jun Zhao<sup>†</sup>, and Stanley C. Ahalt, "The Use of Radial Basis Function Classifiers for SAR Data," *Proceedings of the SPIE Conference on Signal processing, Sensor Fusion, and Target Recognition IV*, (Ivan Kadar, Chair), pp. 583-594, Orlando, FL, April 1995 (abstract refereed)
61. Xiaomei Liu<sup>†</sup>, DeLiang Wang, and Stanley C. Ahalt, "On the Temporal Generalization Capability of Simple Recurrent Networks," *Proceedings of the 1995 SPIE Conference on Applications and Science of Artificial Neural Networks IV*, (Steve Rogers, Chair), pp. 392-403, Orlando, FL, April 17-21, 1995 (invited)
62. J. E. Fowler<sup>†</sup>, and S. C. Ahalt, "Differential Vector Quantization of Real-Time Video," *Proceedings of the IEEE International Conference on Neural Networks*, Orlando, FL, June 28-July 2, 1994 (abstract refereed)
63. J. E. Fowler<sup>†</sup>, K. C. Adkins<sup>†</sup>, S. B. Bibyk, and S. C. Ahalt, "Differential Vector Quantization of Real-Time Video using Entropy-biased ANN Codebooks," *Proceedings of the IEEE International Conference on Neural Networks*, vol. 3, pp 1871-1876, Orlando, FL, June 28-July 2, 1994 (invited)
64. M. D. Hanes<sup>†</sup>, S. C. Ahalt, and D. E. Orin, "Intelligent Control of Object Acquisition for Power Grasp," *IEEE International Symposium on Intelligent Control*, pp. 303-308, Columbus, OH, August 1994 (invited)
65. S. C. Ahalt and J. E. Fowler<sup>†</sup>, "Real-time Video Compression using Entropy-biased ANN Codebooks," *Proceedings of the SPIE Conference on Applications of Neural Networks*, vol. 2243, pp 254-265, Orlando, FL, April 1994 (invited)
66. J. E. Fowler<sup>†</sup>, and S. C. Ahalt, "Differential Vector Quantization of Real-Time Video," *Proceedings of the IEEE Data Compression Conference*, pp. 205-214, Snowbird, UT, March 29-31, 1994 (refereed)
67. C. H. Ying, S. C. Ahalt and R. L. Moses, "Maximum Likelihood Parameter Estimation of Exponential Signals using Artificial Neural Networks," *Proceedings of the World Conference on Neural Networks*, Portland, OR, July 12-16, 1993 (refereed)
68. S. C. Ahalt and J. E. Fowler<sup>†</sup>, "Vector Quantization using Artificial Neural Network Models," *Proceedings of the International Workshop on Adaptive Methods and Emergent Techniques for Signal Processing and Communications*, pp. 42-61, Bayona, Spain, June 16-18, 1993 (invited)

69. J. E. Fowler<sup>†</sup>, M. R. Carbonara<sup>†</sup>, and S. C. Ahalt, "Robust High-Fidelity Coding Technique Based on Entropy Biased ANN Codebooks," *Proceedings of the SPIE Conference on the Science of Artificial Neural Networks II*, pp. 109-117, Orlando, FL, April 1993 (invited)
70. D. Hermann<sup>†</sup>, S. C. Ahalt, and R. Mitchell, "Clustering and Compression of High-Dimensional Sensor Data," *Proceedings of the SPIE Conference on Signal Processing, Sensor Fusion, and Target Recognition II*, pp. 286-297, Orlando, FL, April 1993 (abstract refereed)
71. E. Fowler<sup>†</sup>, and S. C. Ahalt, "Robust Variable Bit-rate Coding using Entropy Biased Codebooks," *Proceedings of the IEEE Data Compression Conference*, pp. 361-370, Snowbird, UT, March 30 - April 1, 1993, (refereed)
72. S. Chakravarti<sup>†</sup>, T. Little<sup>†</sup>, and S. C. Ahalt, "Real-Time Causal Edge Detector Based on Edge Prediction," *International Digital Signal Processing Applications and Technology*, Cambridge, MA, November 2-5, 1992
73. Tom E. Little<sup>†</sup>, and S. C. Ahalt. "A User Customizable X Window System Interface for Neural Network Simulation," *Proceedings of the IEEE Conference on Tools for Artificial Intelligence*, pp. 456-457, Herndon, VA, November 10-13, 1992 (refereed)
74. S. Chakravarti<sup>†</sup>, T. Little<sup>†</sup>, and S. C. Ahalt, "A Real-Time Causal Edge Detector Based on Prediction," *Proceedings of the Canadian Conference on Electrical and Computer Engineering*, pp. MA3.10.1-MA3.10.4, Toronto, Canada, September 13-16, 1992 (refereed)
75. M. R. Carbonara<sup>†</sup>, J. E. Fowler<sup>†</sup>, and S. C. Ahalt, "Compression of Digital Video Data using Artificial Neural Network Differential Vector Quantization," *Proceedings of the Society of Photo-Optical Instrumentation Engineers*, Orlando, FL, April 1992 (abstract refereed)
76. AK. Krishnamurthy, S. B. Bibyk and S. C. Ahalt, "Video Data Compression using Artificial Neural Network Differential Vector Quantization," *Proceedings of the Space Communications Technology Conference*, pp. 95-101, Cleveland, OH, November 1991
77. S. Chakravarti<sup>†</sup>, T. P. Jung<sup>†</sup>, S. C. Ahalt, and A. K. Krishnamurthy, "Comparison of Prediction Methods for Differential Image Processing Applications," *Proceedings of the IEEE International Conference on Systems Engineering*, pp. 210-213, Dayton, OH, August 1991
78. M. D. Hanes<sup>†</sup>, S. C. Ahalt, and D. E. Orin, "Design of a Neural Network Power Grasp Controller," *Mechanics Computing in the 1990's and Beyond: Proceedings of the ASCE Engineering Mechanics Specialty Conference*, vol. 1, pp. 73-77, Columbus, OH, May 1991
79. S. Ahalt, "Vector Quantization using Artificial Neural Network Models," *Proceedings of the International Workshop on Adaptive Algorithms: Applications and Nonclassical Schemes*, pp. 111-130, Bayona, Spain, March 13-15, 1991 (invited)
80. M. D. Hanes<sup>†</sup>, S. C. Ahalt, K. Mirza<sup>†</sup>, and D. E. Orin, "Neural Network Control of Force Distribution for Power Grasp," *Proceedings of the IEEE International Conference on Robotics and Automation*, pp. 746-751, Sacramento, CA, April 7-12, 1991 (refereed)
81. S. C. Ahalt, P. Chen<sup>†</sup>, and C. T. Chou<sup>†</sup>, "The Neural Shell: A Neural Network Simulation Tool," *Proceedings of the 2nd International IEEE Conference on Tools for Artificial Intelligence*, pp. 118-124, Herndon, VA, November 6-9, 1990 (refereed)
82. S. A. Collins, A. K. Krishnamurthy, D. Stewart<sup>†</sup>, and S. C. Ahalt, "An Optical System for Closest Vector Selection with Applications to Neural Networks," *Proceedings of the 15th Congress of the*

*International Commission for Optics in Complex Systems*, SPIE vol. 1319, pp. 204-205, Garmisch-Partenkirchen, Germany, August 5-10, 1990 (refereed)

83. S. C. Ahalt, T. P. Jung<sup>†</sup>, and A. K. Krishnamurthy, "A Comparison of Radar Signal Classifiers," *Proceedings of the IEEE International Conference on Systems Engineering*, pp. 609-612, Pittsburgh, PA, August 1990
84. T. P. Jung<sup>†</sup>, A. K. Krishnamurthy, and S. C. Ahalt, "The Effects of Distortion Measures and Feature Sets on Neural Network Classifiers," *Proceedings of the International Joint Conference on Neural Networks*, pp. 251-256, San Diego, CA, June 1990 (refereed)
85. M. D. Hanes<sup>†</sup>, S. C. Ahalt, K. Mirza<sup>†</sup>, and D. E. Orin, "A Neural Network Interface to the DIGITS System," *Proceedings of the International Joint Conference on Neural Networks*, pp. 343-348, San Diego, CA, June 1990 (refereed)
86. A.K. Krishnamurthy, S.C. Ahalt, P. Chen<sup>†</sup>, and D. Melton<sup>†</sup>, "Vector Quantization using Frequency Sensitive Competitive Learning Neural Networks," *Proceedings of the IEEE International Conference on Systems Engineering*, pp. 131-134, Dayton, Ohio, August, 1989
87. S. C. Ahalt, T. P. Jung<sup>†</sup>, and A. K. Krishnamurthy, "Radar Target Identification using the Learning Vector Quantization Neural Network," *Proceedings of the International Joint Conference on Neural Networks*, pp. 605 (Abstract), Washington, D.C., June 1989 (refereed)
88. S. C. Ahalt, P. Chen<sup>†</sup>, and A. K. Krishnamurthy, "Performance Analysis of Two Image Vector Quantization Techniques," *Proceedings of the International Joint Conference on Neural Networks*, pp. 169-175, Washington, D.C., June 1989 (refereed)
89. S. C. Ahalt and R. O. Claus, "Effect of Spherical Inclusion Defects upon Propagation of Laser Light in Isotropic Solids," *Proceedings of the IEEE 1979 Region 3 Conference*, Roanoke, VA, April 1979

#### **Project Reports:**

1. J. Nehrbass, J. Chaves, S. Ahalt and A. Krishnamurthy, "MatlabMPI Compilation Technology Report," *Online Knowledge Center (OKC)*, January 31, 2005
2. K. Krishnamurthy, S. C. Ahalt, J. W. Nehrbass, and J. C. Chaves, "High Productivity Computing for SIP," *PA Document Number - ASC 04-1758*, Disposition Date - 17 November 2004
3. S. C. Ahalt, A. K. Krishnamurthy, J. W. Nehrbass, and J. C. Chaves, "Support for ATR Programs," *PA Document Number - ASC 04-1793*, Disposition Date - 8 December 2004
4. S. C. Ahalt, A. K. Krishnamurthy, J. W. Nehrbass, and J. C. Chaves, "Signal Mining, Fusion and Validation," *PA Document Number - ASC 04-1755*, Disposition Date - 17 November 2004
5. Kepner, Jeremy, Ahalt, Stan, "MatlabMPI," *Journal of Parallel and Distributed Computing*, vol, 64, issue 8, August 2004, pp997-1005
6. Ma, Junshui, Krishnamurthy, Ashok, and Ahalt, Stanley, "SVM Training with Duplicated Samples and its Application in SVM-based Ensemble Methods," *Neurocomputing*, vol. 61, pp. 4555-459, 2004