

# Daniel DeMenthon

## a. Professional Preparation

- Ph.D. Computer Science, Université Joseph Fourier, Grenoble, France, 1993
- M.S. Offshore Engineering and Naval Architecture, U.C. Berkeley, 1980
- M.S. Applied Mathematics, Université Claude Bernard, Lyon, France, 1973
- M.S. ME / Fluid Dynamics, Ecole Centrale de Lyon, France, 1972  
([http://en.wikipedia.org/wiki/Ecole\\_Centrale\\_de\\_Lyon](http://en.wikipedia.org/wiki/Ecole_Centrale_de_Lyon))

## b. Appointments

- 2008–Present: Senior Research Scientist, Machine Perception Laboratory, Johns Hopkins University Applied Physics Laboratory
- 2005–2008: Program Director for Computer Vision Research, National Science Foundation
- 2005–2008: Associate Research Professor, Language and Media Processing Laboratory, Institute for Advanced Computer Studies, University of Maryland
- 1997–2005: Adjunct Faculty and Assistant Research Professor, Language and Media Processing Laboratory, Institute for Advanced Computer Studies, University of Maryland
- 1996–1997: Principal Research Scientist, Dynaflo, Inc.
- 1985–1996: Senior Research Engineer, Computer Vision Laboratory, University of Maryland
  
- 1980–1984: Senior Research Scientist, Hydronautics, Inc.
- 1977–1979: Director of Research Center, Creusot-Loire Entreprises, France
- 1974–1979: Process Engineer, Creusot-Loire Entreprises, France

## c.1. Selected Book and Journal Publications (Full List at <http://www.cfar.umd.edu/~daniel>)

P. Burlina, C. Sprouse, D. DeMenthon, R. Mukherjee and T. Abraham, “Towards Mitral Valve Closure Prediction using 3D Echocardiography”, IEEE Transactions on Medical Imaging, 2013.

A. Jorstad, D. DeMenthon, I-Jeng Wang, and P. Burlina, “Distributed Consensus on Camera Pose”, IEEE Transactions on Image Processing, Vol 19, No 8, August 2010.

J. Liang, D. DeMenthon and D. Doermann, ”Mosaicing of Camera-captured Document Images”, Computer Vision and Image Understanding, December 2008.

J. Liang, D. DeMenthon and D. Doermann, “Geometric Rectification of Camera-captured Document Images”, IEEE Trans. Pattern Analysis and Machine Intelligence, vol. 30, no. 4, pp. 591–605, April 2008.

D. DeMenthon and D. Doermann, “Video Retrieval of Near-Duplicates using k-Nearest Neighbor Retrieval of Spatio-Temporal Descriptors”, *Multimedia Tools and Applications*, Sept. 2006.

M. Balcells, D. DeMenthon and D. Doermann, “An Appearance-Based Approach for Consistent Labeling of Humans and Objects in Video”, *Pattern Analysis and Applications*, vol. 7, pp. 373–385, Dec. 2004.

P. David, D. DeMenthon, R. Duraiswami and H. Samet, “SoftPOSIT: Simultaneous Pose and Correspondence Determination”, *International Journal of Computer Vision*, vol. 59, No. 3, pp. 259–284, September–October 2004.

A. Rosenfeld, D. Doermann and D. DeMenthon (editors), *Video Mining*, Kluwer, 2003.

## **c.2. Selected Conference Publications (full List at <http://www.cfar.umd.edu/~daniel>)**

Y. Xu, Y. Quan, Z. Zhang, M. Nishigaki, H. Ji, C. Fermuller, D. DeMenthon, “Contour-based Recognition”, *CVPR 2012*, Providence, RI, June 2012.

M. Nishigaki, C. Fermuller, D. DeMenthon, “The Image Torque Operator: A New Tool for Mid-level Vision”, *CVPR 2012*, Providence, RI, June 2012.

P. Burlina, C. Sprouse, D. DeMenthon, A. Jorstad, R. Juang, F. Contijoch, T. Abraham, D. Yuh, E. McVeigh, “Patient Specific Modeling and Analysis of the Mitral Valve using 3D-TEE”, *Proc. First International Conference on Information Processing for Computer Assisted Surgical Intervention*, 2010.

Z. Lin, L.S. Davis, D. Doermann, D. DeMenthon, “Simultaneous Appearance Modeling and Segmentation for Matching People under Occlusion”, *Asian Conference on Computer Vision (ACCV 2007)*, Tokyo, Japan, Nov. 18–22, 2007.

Z. Lin, L.S. Davis, D. Doermann, D. DeMenthon, “An Interactive Approach to Pose-Assisted and Appearance-based Segmentation of Humans”, *ICCV Workshop on Interactive Computer Vision (ICV 2007)*, Rio de Janeiro, Brazil, October 2007.

Z. Lin, L.S. Davis, D. Doermann, D. DeMenthon, “Hierarchical Part-Template Matching for Human Detection and Segmentation”, *International Conference on Computer Vision (ICCV 2007)*, Rio de Janeiro, Brazil, October 2007.

J. Liang, D. DeMenthon and D. Doermann, “Camera-Based Document Image Mosaicing”, *ICPR 2006*, vol. 2, pp. 476–479, 2006.

P. David and D. DeMenthon, “Object Recognition in High Clutter Images using Line Features”, *ICCV 2005*, Beijing, China, October 2005.

J. Liang, D. DeMenthon and D. Doermann, “Unwarping Images of Curved Documents using Global Shape Optimization”, *Proc. First Int. Workshop on Camera-based Document Analysis and Recognition, ICDAR 2005*, Seoul, Korea, pp. 25–29, August 2005.

J. Liang, D. DeMenthon and D. Doermann, “Unwarping Curved Documents in Images”, *CVPR 2005*, San Diego, June 2005.

- N. Ghanem, D. DeMenthon, D. Doermann and L.S. Davis, “Representation and Recognition of Events in Surveillance Video Using Petri Nets”, Second IEEE Workshop on Event Mining, Washington, DC, July 2004.
- N. Ghanem, D. DeMenthon, D. Doermann and L.S. Davis, “Mining Tool for Surveillance Video”, SPIE 16th International Symposium on Electronic Imaging, Storage and Retrieval Methods and Applications for Multimedia, 5307, pp. 259–270, January 2004.
- D. DeMenthon and D. Doermann, “Video Retrieval using Spatio-Temporal Descriptors”, ACM Multimedia 2003, Berkeley, CA, USA, November 2-8, 2003.
- A. Mohan, R. Duraiswami, D. N. Zotkin, D. DeMenthon, L. S. Davis, “Using Computer Vision to Generate Customized Spatial Audio”, ICME 2003, Baltimore, MD, July 2003.
- P. David, D. DeMenthon, R. Duraiswami and H. Samet, “Simultaneous Pose and Correspondence Determination using Line Features”, CVPR 2003, Madison, WI, vol. II, pp. 424–431, June 2003.
- D. DeMenthon, “Spatio-Temporal Segmentation of Video by Hierarchical Mean Shift Analysis”, SMVP 2002 (Statistical Methods in Video Processing Workshop), Copenhagen, Denmark, June 1-2, 2002.
- P. Gupta, D. Doermann, and D. DeMenthon, “Beam Search for Feature Selection in Automatic SVM Defect Classification”, International Conference on Pattern Recognition, pp. 212–215, 2002.
- L. Latecki, D. DeMenthon and A. Rosenfeld, “Extraction of Key Frames from Videos by Polygon Simplification”, Sixth International, Symposium on Signal Processing and its Applications, vol. 2, pp. 643–646, 2001.
- Y. Qi, D. DeMenthon, and D. Doermann, “Hybrid Independent Component Analysis and Support Vector Machine Learning Scheme for Face Detection”, ICASSP 2001, May 2001.
- D. DeMenthon, L.J. Latecki, A. Rosenfeld, and M. Vuilleumier-Stuckelberg, “Relevance Ranking of Video Data using Hidden Markov Model Distances and Polygon Simplification”, Advances in Visual Information Systems, Lecture Notes in Computer Science 1929, pp. 49–57, Oct. 2000.
- K. Yoon, D. DeMenthon, and D. Doermann, “Event Detection from MPEG Video in the Compressed Domain”, Int. Conf. on Pattern Recognition, Barcelona, Spain, Sept. 2000.
- D. DeMenthon, M. Vuilleumier Stuckelberg, and D. Doermann, “Image Distance using Hidden Markov Models”, Int. Conf. on Pattern Recognition, Barcelona, Spain, Sept. 2000.
- R. Jones, D. DeMenthon, and D. Doermann, “Building Mosaics from Video using MPEG Motion Vectors”, ACM Multimedia, Orlando, 1999.
- V. Kobla, D. DeMenthon and D. Doermann, “Detection of Slow-Motion Replay Sequences for Identifying Sports Videos”, Proceedings of IEEE Workshop on Multimedia Signal Processing, 1999.
- V. Kobla, D. DeMenthon and D. Doermann, “Special Effect Edit Detection using VideoTrails: A Comparison with Existing Techniques”, Proceedings of SPIE Conference on Storage and Retrieval for Image and Video Databases VII, pp. 302–313, 1999.

D. DeMenthon, V. Kobla and D. Doermann, “Video Summarization by Curve Simplification”, ACM Multimedia 98, Bristol, England, pp. 211–218, September 1998.

### **c.3. Selected Patents (Full List at <http://www.cfar.umd.edu/~daniel>)**

D. DeMenthon, “Computer Vision System for Accurate Monitoring of Object Pose”, U.S. Patent 5,388,059, 1995.

D. DeMenthon and Y. Fujii, “Three Dimensional Pointing Device Monitored by Computer Vision”, U.S. Patent 5,297,061, 1994.

D. DeMenthon, “Computer Vision System for Position Monitoring in Three Dimensions using Non-Coplanar Light Sources Attached to a Monitored Object”, U.S. Patent 5,227,985, 1993.

### **d. Synergistic Activities**

Member of Program Committee for major computer vision, document understanding and multimedia conferences including ECCV, CVPR, ACM Multimedia Conference, ICME, ICDAR.

Reviewer for IEEE Transactions on Pattern Analysis and Machine Intelligence, International Journal of Computer Vision, Computer Vision and Image Understanding.

### **e. Hobbies**

Windsurfing, skiing, kayak design & construction.

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