

DIMITRIOS TZOVARAS

Date of Birth: February 2, 1970
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◆ EDUCATION

- 1992-1997 **Ph.D. in the Electrical and Computer Engineering**, Electrical and Computer Engineering Department of the Polytechnic School of the Aristotle University of Thessaloniki. **Supervisor: Prof. Michael G. Strintzis**. Ph.D. thesis title: "**2D and 3D Image Compression**".
- 1987-1992 **Electrical and Computer Engineering Degree**, Electrical and Computer Engineering Department of the Polytechnic School of the Aristotle University of Thessaloniki. **Final Grade 9, rank 4/200**. Diploma thesis title: "**Stereoscopic Image Compression Using Neural Networks**".

◆ RESEARCH – PROFESSIONAL EXPERIENCE

- ◆ **Researcher Grade C' (Assistant Professor)**, Centre for Research and Technology – Hellas, Informatics and Telematics Institute (CERTH/ITI) since 10/1/2003.
- ◆ **Researcher Grade D' (Lecturer)**, Centre for Research and Technology – Hellas, Informatics and Telematics Institute (CERTH/ITI) since 10/1/2000.

Scientific responsible in the following R&D projects of CERTH/ITI:

- 2004- **ASK-IT**: Ambient Intelligence System of Agents for Knowledge-based and Integrated Services for Mobility Impaired Users, IP, IST FP6, funding: 160.000 Euro.
- 2004- **3DTV**: Integrated Three-Dimensional Television - Capture, Transmission and Display, NoE, IST FP6, funding: 330.000 Euro
- 2003- **IntelCities**: Intelligent Cities, IP, IST FP6, CERTH/ITI funding : 60.000 Euro
- 2003- **Sensation**: Advanced Sensor Development for Attention, Stress, Vigilance and Sleep / wakefulness Monitoring, IP, IST FP6, CERTH/ITI funding : 70.000 Euro
- 2003- **SIMILAR**: The European Research Taskforce Creating Human-Machine Interfaces SIMILAR to humans, NoE, IST FP6, CERTH/ITI funding : 270.000 Euro
- 2003- **VRLAB**: Experimental Remote Control Laboratories using Virtual Reality Technologies, GSRT-InfoSoc - "e-learning", CERTH/ITI funding:105.000 Euro
- 2003- **REACH**: New Forms of Distributed Organization and Access to Cultural Heritage, GSRT-RTD CONS NP – Culture, CERTH/ITI funding:160.000 Euro
- 2003- **APEIRO**: Interactive Presentation and Simulation of Ancient Greek Technologies, GSRT-RTD CONS NP – Culture, CERTH/ITI funding:160.800 Euro
- 2003- **VR@THEATER**: Virtual Reality Toolbox for Theater Professionals, GSRT-

- RTD CONS NP – Culture, CERTH/ITI funding: 125.000 Euro
- 2002- **POLEIS**: Virtual Cultural Visits, GSRT PABET, CERTH/ITI funding: 45.000 Euro
- 2002- **VRSENSE**: An Advanced Design Tool for Virtual Reality Applications, GSRT PRAXE, CERTH/ITI funding: 30.000 Euro
- 2002- **A Virtual Environment** for Component Fitting with Application to Industrial Planning, CERTH/ITI funding: 30.000 Euro
- 2001- **"ENORASI: Virtual Environments for the Training of Visually Impaired"** (IST-2000-25231), total budget for CERTH/ITI : 286.858 EURO.
- 2001- **"REGNET: Regional Networks of Cultural Heritage"** (IST-2000-26336), total budget for CERTH/ITI : 83.500 EURO.
- 2001- **"Telemedicine Services Provision Using the WAP Protocol"**, (Greek Secretariat for Research and Technology (GSRT), Greece-Cyprus Cooperation Programme).
- 2001 **"Study for the Design of Informatics Companies Providing E-Commerce Services"**, (Work contract from B.C.I. (Balkan Consulting & Investment) company).

Participation into the following projects :

- 2000 **"Transportation and Re-Installation of the Informatics and Telematics Institute in Themi-Thessaloniki"** (GSRT EPET-II).
- 2000- **"Supply and Installation of the Basic Infrastructure of the Informatics and Telematics Institute"**, (GSRT EPET-II).

- ◆ **Post Doctoral Research cooperation**, Centre for Research and Technology – Hellas, Informatics and Telematics Institute, (CERTH/ITI) for the period 1/5/1999 – 10/1/2000.

Participation into the following R&D projects:

- 1999- **"Value added e-Services for the Reconstruction Programmes of the Balkan Economies"**, (GSRT, EPET-II).
- 1999-2000 **"GAIA: Design and Development of Educational Multimedia Software for the Greek Curriculum"**, (Greek Ministry of Education, EPEAEK).
- 1999-2000 **"High Speed 3D and Color Interface to the Real World"** (IST-1999-10087).

- ◆ **Gnomon Informatics** software house, Medical Image Analysis, 1998-1999.
- ◆ **Informatics Technology Support Center**, Aristotle University of Thessaloniki, 1998-1999.
- ◆ Member of the research group of the **Information Processing Laboratory, of the Electrical and Computer Engineering Department of the Aristotle University of Thessaloniki**, supervised by Prof. Michael G. Strintzis.

Participation in the following R&D projects:

- 1997-1999 **"VIDAS: VIdeo ASsisted with audio coding and representation"**, (ACTS II, 1996-2000).
- 1995-1997 **"NIKA: Generalised Medical Image Analysis and Management System"**,

(GSRT, EPET-II).

- 1996-1999 **"Object Based Coding of Image Sequences"**, (GSRT-YPER).
- 1995-1999 **"Distance Learning Using Facial Image Sequence Coding and 3D Modeling"**, (GSRT-PENED).
- 1996-1999 **"PANORAMA: Package for New Autostereoscopic Multiview Systems and Applications"**, (EC ACTS 097).
- 1995-1998 **"SAMMIE: Software Applied to Multimodal Images and Education"**, (TELEMATICS for health).
- 1993-1998 **"Video Coding in Multimedia Communication"**, (COST 211quat, 1993-1998).
- 1992-1998 **"Stereoscopic Television"**, (COST 230, 1992-1998).
- 1992-1996 **"DISTIMA: Digital Stereoscopic Imaging and Applications"**, (EC RACE-II)

- ◆ Cooperation with engineering firms in Katsikas, Ioannina, Greece, 1994-2000.
- ◆ Public Electricity Company, Greece, 1989.

◆ TEACHING EXPERIENCE

- 2001-2003 **"Computers I"** and **"Computers II"**, University of Macedonia, Department of Economics, Visiting Professor (407).
- 1992-2000 Teacher in more than twenty seminars at the **Aristotle University of Thessaloniki**, in the **"Psyfion"** and **"Aristotelis"** KEK and the **University of Macedonia**.
- 1993-1998 "Pattern Recognition", **Electrical and Computer Engineering Department, Polytechnic School, Aristotle University of Thessaloniki**.
- 1992-1998 "Time Series Analysis", **Electrical and Computer Engineering Department, Polytechnic School, Aristotle University of Thessaloniki**.
- 1992-1994 "Numerical Analysis", **Electrical and Computer Engineering Department, Polytechnic School, Aristotle University of Thessaloniki**.

◆ FOREIGN LANGUAGES

- English Very good knowledge. First Certificate in English (University of Cambridge)

◆ HONORS AND AWARDS

- 1987-1992 Scholarship from the Foundation for National Scholarships
- 1990-1992 Scholarship from the Greek Chamber of Technology

◆ REVIEWER

Dr. Tzovaras has served as a reviewer for a large number of scientific journals and international conferences (IEEE Trans. Image Processing, IEEE Trans. Circuits and Systems for Video Technology, IEEE Trans. Medical Imaging, etc.).

He has also served as an evaluator for the 8th Call of the IST Programme of the FP6 and the Greek Secretariat for Research and Technology Programmes.

◆ TECHNICAL SKILLS

Operating Systems: UNIX, WINDOWS, DOS
Programming Languages: C, C++, VRML, PHP, PASCAL, FORTRAN
Data Processing: MATLAB
Word Processing: LaTeX, WORD

◆ SCIENTIFIC INTERESTS

- Virtual reality, multimodal interfaces, human-computer interaction, multimedia, visualizations, image and video compression and coding, content-based search and retrieval, image processing, computer vision, interactive TV, stereoscopic TV, e-commerce, parallel processing, grid applications.

◆ TECHNICAL ACTIVITIES

- Member of the Technical Chamber of Greece.
- Member SPIE, 1997-1999.

◆ PUBLICATIONS (http://www.iti.gr/db.php/en/publications/Dimitrios_Tzovaras.html)

Book Chapters

- [1] **D. Tzovaras**, G. Nikolakis, G. Fergadis, S. Malassiotis and M. Stavrakis, "Virtual Environments for the Training of Visually Impaired", S Keates, PJ Clarkson, PM Langdon and P Robinson (eds.), *Universal Access and Assistive Technology*, SPRINGER-VERLAG LONDON LIMITED, London, March 2002.
- [2] Ioannis Tsampoulatidis, **Dimitrios Tzovaras** and M.G.Strintzis: "Ontology-Based E-government Thematic Services Based on Topic Maps", *On the Move to Meaningful Internet Systems 2004*, eds. R. Meersman, Z. Tari and A. Corsaro, Springer-Verlag Heidelberg, October 2004.
- [3] N. Karatzoulis, K. Davarakis and **D. Tzovaras**, "Synthesis and Analysis Techniques for the Human Body: R&D Projects", in *Strintzis and Sarris Editors, 3D Modeling and Animation: Synthesis and Analysis Techniques for the Human Body* IDEA Group Publishing, 2004.
- [4] G. Nikolakis, G. Fergadis, **D. Tzovaras** and M. G. Strintzis, "A Mixed Reality Learning Environment for Geometry Education", in *Lecture Notes in Artificial Intelligence*, Springer Verlag, 2004.
- [5] P.Daras, D. Zarpalas, **D.Tzovaras**, D. Simitopoulos and M.G.Strintzis: "Combined Indexing and Watermarking of 3D Models using the Generalized 3D Radon Transform", in *Multimedia Security Handbook*, B.Fuhrts and D.Kirouski Eds, CRC Press, pp 733-758, ISBN 0-8493-2773-3, December 2004.
- [6] G. A. Triantafyllidis, N. Thomos, G. Nikolakis, **D. Tzovaras**, G. Litos and M. G. Strintzis, "User Interface environment and Image Communication in Mobile Tele-Echography", *M-Health: Emerging Mobile Health Systems*, Kluwer Academics, accepted for publication.

Refereed Journals:

- [1] **D. Tzovaras**, M. G. Strintzis, H. Sahinoglou, "Evaluation of Multiresolution Techniques for Motion and Disparity Estimation", *Signal Processing:Image Communication*, Vol. 6, No. 1, Mar. 1994, pp. 59-67.
- [2] N. Grammalidis, S. Malassiotis, **D. Tzovaras**, and M. G. Strintzis, "Stereo Image Sequence Coding based on 3-D Motion Estimation and Compensation", *Signal Processing:Image Communication*, Vol. 7, 1995, pp. 129-145.

- [3] **D. Tzovaras**, N. Grammalidis, and M. G. Strintzis, "Joint Three-Dimensional Motion/Disparity Segmentation for Object-Based Stereo Image Sequence Coding", *SPIE Optical Engineering Journal, Special Section on Visual Communications and Image Processing*, Vol.35, No.1, Jan. 1996, pp.137-144.
- [4] **D. Tzovaras**, N. Grammalidis, M. G. Strintzis, "Object-Based Coding of Stereo Image Sequences using Joint 3-D Motion/Disparity Compensation", *IEEE Trans. on Circuits and Systems for Video Technology*, Vol. 07, No. 2, Apr.1997, pp. 312-328.
- [5] S. N. Efstratiadis, **D. Tzovaras**, M. G. Strintzis, "Hierarchical Partition Priority Wavelet Image Compression", *IEEE Trans. on Image Processing*, Vol. 5, No. 7, July 1996, pp. 1111-1124.
- [6] **D. Tzovaras**, N. Grammalidis, and M. G. Strintzis, "3-D Camera Motion Estimation and Foreground / Background Separation for Stereoscopic Image Sequences," *Optical Engineering*, vol. 36, No. 2, Feb. 1997, pp. 574-579.
- [7] A. Safflekos, **D. Tzovaras**, S. Malassiotis and M. G. Strintzis, "Coding of 3D Moving Medical Data using a 3D Warping Technique," *Signal Processing, (Fast Communications Section)*, 55(2), Dec. 1996, pp. 247-252.
- [8] **D. Tzovaras**, N. Grammalidis and M. G. Strintzis, "Disparity Field and Depth Map Coding for Multiview 3D Image Generation," *Signal Processing : Image Communication*, Vol. 11, No. 3, Jan 1998, pp. 205-231.
- [9] **D. Tzovaras**, S. Vachtsevanos and M. G. Strintzis, "Optimization of Quadtree Segmentation and Hybrid 2D and 3D Motion Estimation in a Rate-Distortion Framework," *IEEE Trans. on Selected Areas in Communications, Special Issue on Very Low Bit Rate Coding*, Vol. 15, No. 9, Dec. 1997, pp. 1726-1738.
- [10] **D. Tzovaras**, N. Grammalidis, M. G. Strintzis and S. Malassiotis, "Coding for the Storage and Communication of Visualizations of 3D Medical Data," *Signal Processing: Image Communication*, Vol. 13, No. 1, Jul. 1998, pp. 65-87.
- [11] M. G. Strintzis and **D. Tzovaras**, "Optimal Construction of Subband Coders Using Lloyd-Max Quantizers," *IEEE Trans. on Image Processing*, Vol. 7, No.5, May 1998, pp. 649-667.
- [12] M. G. Strintzis and **D. Tzovaras**, "Optimal Pyramidal Decomposition for Progressive Multidimensional Signal Coding using Optimal Quantizers," *IEEE Trans. on Signal Processing, Special Issue on Theory and Applications of Filter Banks and Wavelets*, Vol. 46, No. 4, Apr. 1998, pp. 1054-1068.
- [13] **D. Tzovaras** and M. G. Strintzis, "Motion and Disparity Field Estimation using Rate-Distortion Optimization", *IEEE Trans. On Circuits and Systems for Video Technology*, Vol. 8, No. 2, Apr. 1998, pp. 171-181.
- [14] **D. Tzovaras**, S. Vachtsevanos and M. G. Strintzis, "Optimization of Wireframe Model Adaptation and Motion Estimation in a Rate-Distortion Framework", *International Journal of Imaging Systems and Technology (IJIST) Special Issue in Image Sequence Processing, Motion Estimation, and Compression of Image Sequences*, Vol.9, Jan. 1998, pp.238-247.
- [15] M. G. Strintzis and **D. Tzovaras**, "Optimal Pyramidal and Subband Decompositions for the Hierarchical Representation of Vector Valued Signals", *Signal Processing*, Vol. 65, No. 1, July 1998.
- [16] I. Kompatsiaris, **D. Tzovaras** and M.G. Strintzis, "Flexible 3D Motion Estimation and Tracking for Multiview Image Sequence Coding", *Signal Processing: Image Communication, Special Issue on 3D Video Technology*, no. 14, 1998, pp. 95-110.
- [17] **D. Tzovaras** and M. G. Strintzis, "Use of Non Linear Principal Component Analysis and Vector Quantization for Image Sequence Coding", *IEEE Trans. Image Processing, Special Issue on Applications of Neural Networks to Image Processing*, Vol. 7, No. 8, Aug. 1998, pp. 1228-1222.
- [18] I. Kompatsiaris, **D. Tzovaras** and M.G. Strintzis, "3-D Model-Based Segmentation of Videoconference Image Sequences", *IEEE Trans. on Circuits and System for Video Technology*, Vol. 8, No. 5, September 1998.
- [19] **D. Tzovaras**, I. Kompatsiaris and M. G. Strintzis, "3D Object Articulation and Motion Estimation in Model-Based Stereoscopic Videoconference Image Sequence Analysis and Coding", *Image Communication*, Vol. 14, No. 9, August 1999.
- [20] **D. Tzovaras**, N. Ploskas, M.G. Strintzis: "Rigid 3D Motion Estimation Using Neural Networks and Initially Estimated 2D Motion Data", *IEEE Trans. on Circuits and Systems for Video Technology*, Vol.10, No.1, pp.158-166, February 2000.
- [21] **D. Tzovaras** and M.G. Strintzis: "Optimal Construction of Reduced Pyramids for Lossless and Progressive Image Coding", *IEEE Trans. on Circuits and Systems II*, Vol.47, No.4, pp.332-340, April 2000.
- [22] I. Kompatsiaris, **D. Tzovaras**, V. Koutkias and M.G. Strintzis: "Deformable Boundary Detection of Stents in Angiographic Images", *IEEE Trans. on Medical Imaging*, Vol. 19, No.6, pp. 652-662, June 2000.

- [23] G.A.Triantafyllidis, **D.Tzovaras** and M.G.Strintzis: "Occlusion and Visible Background and Foreground areas in Stereo: A Bayesian Approach", *IEEE Trans. on Circuits and Systems for Video Technology, Special Issue on 3D Video Technology*, Vol.10, No.4, pp.563-576, June 2000.
- [24] **D.Tzovaras** and M.G.Strintzis: "Lossless Coding of Multichannel Signals Using Optimal Vector Hierarchical Decomposition", *IEEE Trans. on Image Processing*, Vol. 9, No. 10, pp.1811-1817, October 2000.
- [25] N.V.Boulgouris, **D.Tzovaras** and M.G.Strintzis: "Lossless Image Compression Based on Optimal Prediction, Adaptive Lifting and Conditional Arithmetic Coding", *IEEE Trans.on Image Processing*, Vol.10, No.1, pp. 1-14, January 2001.
- [26] **D.Tzovaras**, N.V.Boulgouris, K.Argyaki and M.G.Strintzis: "Rate-distortion Optimal Fast Thresholding for MPEG-2 Image Sequence", *European Transactions on Telecommunications*, Vol. 12, No. 3, pp.189-195, May 2001.
- [27] I. Kompatsiaris, **D.Tzovaras** and M.G.Strintzis: "Hierarchical Representation and Coding of Surfaces using 3D Polygon Meshes", *IEEE Trans. on Image Processing*, vol 10, no. 8, pp.1133-1151, August 2001.
- [28] G.Triantafyllidis, **D.Tzovaras**, D.Sampson and M.G.Strintzis: "Combined Frequency and Spatial Domain Algorithm for the Removal of Blocking Artifacts", *EURASIP Journal on Applied Signal Processing (JASP), Special Issue on Image Analysis for Multimedia Interactive Services, Part II*, vol. 2002(6), pp. 601-612, June 2002.
- [29] G.A.Triantafyllidis, **D.Tzovaras** and M.G.Strintzis: "A Bayesian Approach for Segmentation in Stereo Image Sequences", *EURASIP Journal on Applied Signal Processing (JASP), Special Issue on Signal Processing for 3D Imaging and Virtual Reality*, Vol. 2002, No. 10, October 2002.
- [30] G.A.Triantafyllidis, **D.Tzovaras** and M.G.Strintzis: "Blocking Artifact Detection and Reduction in Compressed Data", *IEEE Trans. on Circuits and Systems for Video Technology*, Vol.12, No.10, pp.877-890, October 2002.
- [31] N.Ploskas, D. Simitopoulos, **D.Tzovaras**, G.A.Triantafyllidis and M.G.Strintzis: "Rigid and Non-Rigid 3D Motion Estimation from Multiview Image Sequences", *Elsevier Signal Processing: Image Communication Journal*, Vol. 18, Issue 3, pp.185-202, March 2003.
- [32] F.Tsalakanidou, **D.Tzovaras** and M.G.Strintzis: "Use of Depth and Color Eigenfaces for Face Recognition", *Elsevier Mathematics & Computer Science: Pattern Recognition Letters*, vol. 24/9-10, pp. 1427-1435, June 2003.
- [33] G.A.Triantafyllidis, M.Varnuska, D.Sampson, **D.Tzovaras** and M.G.Strintzis: "An Efficient Algorithm for the Enhancement of JPEG Coded Images", *Computers & Graphics: An International Journal of Systems & Applications in Computer Graphics*, vol. 27(4), pp. 529-534, August 2003.
- [34] **D.Tzovaras**, G.Nikolakis, G.Fergadis, S.Malasiotis and M.Stavrakis: "Design and Implementation of Haptic Virtual Environments for the Training of Visually Impaired", *IEEE Trans. on Neural Systems and Rehabilitation Engineering*, Vol. 12, No. 2, pp.266-278, June 2004.
- [35] I.Kolonias, **D.Tzovaras**, S.Malasiotis and M.G.Strintzis: "Fast Content-Based Search of VRML Models Based on Shape Descriptors", *IEEE Trans. on Multimedia*, Vol. 7, No 3, pp. 114-126, February 2005.
- [36] P. Daras, D. Zarpalas, **D.Tzovaras** and M.G.Strintzis: "Efficient 3D Model Search and Retrieval Using Generalized 3D Radon Transforms", *IEEE Trans. on Multimedia*, accepted for publication.
- [37] K. Moustakas, **D.Tzovaras**, and M.G.Strintzis: "Stereoscopic Video Generation Based on Efficient Structure and Motion Estimation from a Monoscopic Image Sequence", *IEEE Transactions on Circuits and Systems for Video Technology*, accepted for publication.

Conferences:

- [1] **D. Tzovaras**, M. G. Strintzis and I. Pitas, "Image Coding Using Non-linear Principal Component Analysis and Vector Quantization", in *Proc. ISSSE'92 Int'l Conference*, Paris, Sept 1992.
- [2] **D. Tzovaras**, M. G. Strintzis, and I. Pitas, "Stereo Quantization Error Analysis for Convergent Camera Configurations", in *XXIVth General Assembly of the International Union of Radio Science (URSI)*, Kyoto, Japan, Aug. 1993.
- [3] **D. Tzovaras**, M. G. Strintzis, H. Sahinoglou, I. Pitas, "Use of Multiresolution Techniques for Vector Field Coding in Motion and Disparity Estimation", in *Proc. International Congress on Communication and Control*, Rhodes, Greece, Jun. 1993.

- [4] **D. Tzovaras**, M. G. Strintzis, H. Sahinoglou, I. Pitas, "Multiresolution Block Matching Techniques for Motion and Disparity Estimation", in *Picture Coding Symposium '93, (PCS '93)*, Lausanne, Switzerland, March 1993.
- [5] **D. Tzovaras**, S. N. Efstratiadis and M. G. Strintzis, "Wavelet Image Compression using IIR Minimum Variance Filters, Partition Priority, and Multiple Distribution Entropy Coding", in *SPIE Conference on Visual Communications and Image Processing*, Chicago, pp. 489-500, Sep. 1994.
- [6] **D. Tzovaras**, N. Grammalidis and M. G. Strintzis, "Object-Based Coding of Stereo Image Sequences using Joint 3D Motion/Disparity Segmentation", in *Visual Communications and Image Processing '95*, Taiwan, May 1995.
- [7] N. Grammalidis, S. Malassiotis, **D. Tzovaras**, and M. G. Strintzis, "3-D Motion Estimation and Compensation for Stereoscopic Image Sequence Coding", in *Proc. 4th European Workshop on 3DTV*, Rome, 1993.
- [8] **D. Tzovaras**, N. Grammalidis, S. Malassiotis, M. G. Strintzis, "Coding for Monoscopic and Stereoscopic 3-D Medical Data Visualization", in *Int'l. Workshop on Image Processing*, Budapest, Hungary, Jun. 1994.
- [9] **D. Tzovaras**, N. Grammalidis, S. Malassiotis, L. Kontis, C. Chrysafis, G. Georgiou, H. Sahinoglou and M. G. Strintzis, "Coding and Transmission of Medical Imagery", in *Proc. 3rd Int'l Conference on Medical Informatics*, Thessaloniki, May 13-15, 1994.
- [10] **D. Tzovaras** and M. G. Strintzis, "Image Sequence Coding Based on 3D Model Objects", in *Proc. International Congress on Communication and Control 95, Rhodes, Greece, Jun. 1995*.
- [11] N. Grammalidis, **D. Tzovaras** and M. G. Strintzis, "Temporal Frame Interpolation for Stereoscopic Sequences using Object-based Motion Estimation and Occlusion Detection", in *Proc. International Congress on Communication and Control 95, Rhodes, Greece, Jun. 1995*.
- [12] N. Grammalidis, **D. Tzovaras** and M. G. Strintzis, "Temporal Frame Interpolation for Stereoscopic Sequences using Object-based Motion Estimation and Occlusion Detection", in *Int'l Conf. on Image Processing (ICIP'95)*, Washington, D.C., USA, Oct. 1995.
- [13] M. G. Strintzis, **D. Tzovaras**, N. Grammalidis, "Depth Map and Disparity Field Coding for the Communication of Multiview Images", Invited paper, in *Int'l Conference on Digital Signal Processing (DSP' 95)*, Nicosia, Cyprus, Jun. 1995.
- [14] **D. Tzovaras** and M. G. Strintzis, "Triangular Hierarchical Interpolation Algorithm for Lossless 2-D and 3-D Medical Data Compression", in *Int'l Workshop on Stereoscopic and Three Dimensional Imaging*, (Santorini), Greece, 6-8 Sep. 1995.
- [15] **D. Tzovaras**, N. Grammalidis and M. G. Strintzis, "Depth Map Coding for Stereo and Multiview Image Sequence Transmission", in *Int'l Workshop on Stereoscopic and Three Dimensional Imaging*, (Santorini), Greece, 6-8 Sep. 1995.
- [16] **D. Tzovaras**, N. Grammalidis, M. G. Strintzis, S. Malassiotis and H. Sahinoglou, "Coding for the Transmission and Storage of 3-D Medical Data", in *Proc. 1995 IEEE Medical Imaging Conference*, San Francisco, Oct. 25-28, 1995.
- [17] **D. Tzovaras** and M. G. Strintzis, "Image Sequence Coding Based on 3D Model Objects", in *Proc. 8th International Symposium on Theoretical Electrical Engineering*, Thessaloniki, Greece, Sep. 1995.
- [18] **D. Tzovaras** and M. G. Strintzis, "Use of Three Cameras to Improve Disparity Estimation for Spatial Image Interpolation and Coding", in *Picture Coding Symposium, PCS' 96*, Melbourne, Australia, Apr. 1996.
- [19] **D. Tzovaras** and M. G. Strintzis, "Motion Estimation Using Rate Distortion Theory for Very Low Bit Rate Image Sequence Coding", in *Int'l Conf. on Communications*, Istanbul, Turkey, 13-17 Apr. 1996.
- [20] M. G. Strintzis and **D. Tzovaras**, "Optimal Subband Image Coders With Lloyd-Max Quantizers," *IMAGE COM. 96 Conference*, Bordeaux, France, May 1996.
- [21] **D. Tzovaras**, and M. G. Strintzis, "3-D Camera Motion Estimation for Stereoscopic Image Sequences," *IMAGE' COM 96 Conference*, Bordeaux, France, May 1996.

- [22] **D. Tzovaras**, and M. G. Strintzis, "Coding of Multichannel Images Using Optimal Vector Hierarchical Decomposition," *4th Bayona Workshop on Intelligent Methods in Signal Processing and Communications*, Bayona-Vigo, SPAIN, June 1996.
- [23] **D. Tzovaras**, and M. G. Strintzis, "Use of Non-Linear Principal Component Analysis and Vector Quantization for Image Coding," *4th Bayona Workshop on Intelligent Methods in Signal Processing and Communications*, Bayona-Vigo, SPAIN, June 1996.
- [24] **D. Tzovaras**, and M. G. Strintzis, "Optimal Vector Pyramidal and Subband Decompositions for the Coding of Multichannel Signals," *IEEE Workshop on Digital Signal Processing (DSPWS'96)*, Norway, Sep. 1996.
- [25] M. G. Strintzis and **D. Tzovaras**, "Optimal Hierarchical Decompositions for Signals Coded Using Lloyd-Max Quantizers," *IEEE Workshop on Digital Signal Processing (DSPWS' 96)*, Norway, Sep. 1996.
- [26] A. Saflekos, **D. Tzovaras**, S. Malassiotis and M. G. Strintzis, "Lossless and Lossy Coding of 3D Moving Heart Muscle MRI Data," *in the Int'l Conf. IEEE Computers in Cardiology*, USA, Sep. 1996.
- [27] **D. Tzovaras**, N. Grammalidis and M. G. Strintzis, "Disparity Field and Depth Map Coding for Multiview Image Sequence Compression," *in IEEE Conf. on Image Processing (ICIP'96)*, Lausanne, Sep. 1996.
- [28] M. G. Strintzis and **D. Tzovaras**, "Optimal Subband Image Coders Using Lloyd-Max Quantizers," *in IEEE Conf. on Image Processing (ICIP'96)*, Lausanne, Sep. 1996.
- [29] M. G. Strintzis, **D. Tzovaras**, T. Sevintikidis and G. Gioumousia, "Optimal Pyramidal and Subband Decompositions for Hierarchical Coding of Noisy and Quantized Images," *in IEEE Conf. on Image Processing (ICIP'96)*, Lausanne, Sep. 1996.
- [30] **D. Tzovaras** and M. G. Strintzis, "Optimal Vector Pyramidal and Subband Decompositions for the Coding of Multichannel Images," *in Int'l Workshop on Image Processing '96*, Manchester, UK, Nov. 1996.
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