

Elsa D. ANGELINI, Ph.D.

Associate Professor

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Fields of Interest

Signal and image processing, applied mathematics, quantitative methods of analysis, denoising, pattern recognition and segmentation problems, wavelet and time-frequency analysis tools, computer vision, scientific visualization. Clinical applications related to multi-dimensional imaging modalities for denoising, enhancement and segmentation. Assessment of image quality for different clinical protocols and diagnostic applications. Quantification of anatomical structures and physiological functions and validation with clinical studies. Anatomical modeling, meshing, and deformation.

Education

- 2011** **Habilitation à Diriger des Recherches (HDR), University of Nice Sophia Antipolis.**
Title of the HDR thesis: "Geometrical models, formulation of constraints, information extraction, for the segmentation of healthy and pathological medical images ».
- 1998–2002** **PhD Research, Department of Biomedical Engineering, Columbia University, New York, NY, USA.** (Graduate Research Assistant and Teaching Assistant fellowships):
- In charge of a project for denoising and segmentation of real-time 3D cardiac ultrasound with multi-dimensional complex wavelet transforms.
 - Collaboration with ITK Kitware development project. Implemented and tested a hybrid segmentation tool for multidimensional segmentation.
 - Passed the qualifying examination in April 1999. Dissertation proposal passed in December 2000. Dissertation presented and passed in May 2002.
- 1997– 1998** **Master of Science, Department of Biomedical Engineering, Columbia University, New York, NY, USA.** (Whitaker fellowship):
- In charge of project for knee joint cartilage segmentation from MRI. Developed an algorithm for cartilage surface extraction using statistical shape models (PCA).
- 1993–1996** **Bachelor of Science, Ecole Centrale de Nantes, France.**
Major in Signal and Image Processing. Graduated with Honors.

Work Experience

- 2004-2012** **Professor, Telecom ParisTech, Paris, France.**
On leave since January 2012. Double affiliation remains.
- Co-director of the Medical Image Processing Group, at Telecom ParisTech.
 - co-Chair of the Bioimaging Track of the international Master Program BME-Paris (www.bme-paris.org).
 - Teaching basic and advanced signal and image processing methods and medical image technologies (Master-level courses at Telecom ParisTech, University of Paris 6 and ENSAM ParisTech).

- 2010 (Mar.-Aug.)** - Research projects on: variational segmentation methods (level sets and deformable models), segmentation and simulation of real-time three-dimensional ultrasound, denoising of medical images with multi-scale analysis functions (wavelet, brushlet), fuzzy image processing of brain MRI, tracking methods for vessel segmentation, anatomical modeling from adult and fetal imaging, biological image processing for microscopy.
Visiting Scientist, CSIRO-Australian e-Health Research Center, Brisbane, Australia
 Sabbatical working on two projects: (1) longitudinal detection of anatomical changes on brain MRI for aging population with Alzheimer disease, (2) GPU-based ultrasound image simulation for prostate biopsy from MRI and CT data.
- 2007-2012** **Visiting Professor of Biomedical Engineering, Columbia University, New York, NY USA.**
 - Collaboration with the Heffner Biomedical Imaging Laboratory (A. Laine). Several visiting periods per year. Joint projects and co-supervision of PhD students.
- 2002-2004** **Post-Doctoral Fellow, Department of Biomedical Engineering, Columbia University, New York, NY, USA.**
 - Research projects on modeling of cardiac wall deformations with real-time three dimensional ultrasound, neural network classification of genomic images and protein crystals identification.
- Oct 96–Sept 97** **Crédit Lyonnais, New York, NY, USA.**
 Consulting in risk management. Validated mathematical models and pricing software tools for derivative products.
- Apr 96-Sept 96** **Neuromuscular Research Center, Boston University, Boston, MA, USA.**
 Developed a software analysis tool for diagnosis of Carpal Tunnel Syndrome. Set up of clinical experiments, acquired EMG data on volunteers, processed and classified EMG signals with Time-Frequency analysis tools.

Language & Computer Skills

Spoken Languages	French: Mother tongue.
	English: Fluent (lived for 8 years in the United States).
	Spanish: Fair knowledge.
Scientific Software	AVS, IDL, Matlab.
Programming Languages	C, C++, Fortran.

Academic & Professional Honors

2012	Senior Member of the IEEE Society.
2001	Region finalist of the student paper competition of the IEEE-EMBS annual meeting.
1997-1998	Graduate fellowship from the Whitaker Foundation for first year of graduate studies.

Professional Activities

2012-2015	Elected Europe representative for the Administrative Committee of the IEEE EMB Society.
2010-present	Chair (2013) and member the steering committee of the IEEE Transactions on Medical Imaging.
2011-present	Member (elected) of the IEEE SPS Bioimaging and Signal processing (BISP) Technical Committee.
2007-present	Chair (2013) and Member (nominated) of the IEEE EMBS Biomedical Imaging and Image Processing (BIIP) Technical Committee.
2010-2015	Elected member of the CNRS Scientific Advisory Board for the Computer Science Dpt. (INS2I).
2009-2012	Elected representative of the professors and researchers on the ParisTech Board.
2008-2011	External member of the Evaluation Commission of the INRIA.

Grant Reviews:

Reviewer for the ANR (French Agence Nationale de la Recherche)
Reviewer for the City University of Hong Kong, Research Grant Council.
Laboratories evaluation committee for the AERES.

Journal Editorial:

Associate Editor of the IEEE Transactions on Biomedical Engineering (2008-2012)

Journal Reviews:

IEEE Transactions on Image Processing, IEEE Transactions on Medical Imaging, IEEE Transactions on Biomedical Engineering, IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, Signal, Image and Video Computing (Springer), Medical Image Analysis (Springer), Signal Image and Video Processing (Springer).

Conference Reviews:

ISBI, MICCAI, ICCV, ICPR, MMBIA, FIMH.

Conference Organization Committees:

2008 Organizing committee of ISBI' 08 conference (finance chair),
2008 Organizing committee of MICCAI' 08 (co-chair of Workshops)
2015 General Chair of the IEEE ISBI conference (Brooklyn, NY, USA)

Conference Program Committees

2013 SPIE Medical Imaging, FIMH'13.
2012-2013 SPIE Medical Imaging, MICCAI'12.
2011 FIMH'11, MICCAI' 11, EMBC'11.
2009 FIMH'09, Int. Symposium on Visual Computing (ISVC'09).
2008 MICCAI'08.
2007 FIMH'07, MICCAI' 07 and MMBIA'07.
2006 EMBC'06.

Publications

PhD & HDR Thesis

E. D. Angelini, "Spatio-Temporal Analysis of Three-Dimensional Real-Time Ultrasound for Quantification of Ventricular Function," Department of Biomedical Engineering, Columbia University, New York, 2002.

E. D. Angelini, "Geometrical models, constraints design, information extraction for pathological and healthy medical image", University of Nice Sophia Antipolis, 2011.

Journal Papers

P. Schmitt, E. Mandonnet, A. Perdreau, **E. D. Angelini**. "Effects of slice thickness and head rotation when measuring glioma sizes on MRI: In support of volume segmentation versus two largest diameters", Journal of Neuro-oncology, 2013, *in press*.

J. Anquez, **E. D. Angelini**, G. Grangé, I. Bloch, "Automatic segmentation of ante-natal 3D ultrasound images", IEEE Transactions on Biomedical Engineering , 2013, *in press*.

A. Katouzian, **E. Angelini**, S. G. Carlier, J. S. Suri, N. Navab, A. F. Laine, "A state of the art review on segmentation algorithms in intravascular ultrasound (IVUS) images", IEEE Transactions on Information Technology in BioMedicine, vol. 16, No 5, pp. 823 – 834, 2012.

E. Altendorf, E. Decenciere, D. Jeulin, P. De Sa Peixoto, A. Deniset-Besseau, **E. Angelini**, G. Mosser, M.-C. Schanne-Klein, "Imaging and 3D Morphological Analysis of Collagen Fibrils", Journal of Microscopy, vol. 247, No 2, pp. 161-175, 2012.

E Angelini, J. Delon, A. Boubacar Bah, L. Capelle, E. Mandonnet, "Differential MRI Analysis for Quantification of Low Grade Glioma Growth", Medical Image Analysis, vol. 12, No 1, pp. 114-126, 2012.

T. Ius, **E. Angelini**, M. Thiebaut de Schotten, E. Mandonnet, H. Duffau, "Evidence for potentials and limitations of brain plasticity using an atlas of functional resectability of WHO grade II gliomas: towards a "minimal common brain", Neuroimage, Vol 56, No 3, pp. 992-1000, 2011.

M. de Moraes Marim, M. Atlan, **E. Angelini**, J.-C. Olivo-Marin, "Off-axis compressed holographic microscopy in low-light conditions", Optics Letter, vol. 36, n°1, pp. 79-81, 2011.

M. Marim, M. Atlan, **E. Angelini**, J.C. Olivo-Marin, "Compressed Sensing with off-axis, frequency-shifting holography", Optics Letters, vol. 35, n°6, pp. 871-873, 2010.

Q. Duan, **E. Angelini**, A. Laine, "Real-time segmentation by Active Geometric Functions", Computer Methods and Programs in Biomedicine, vol. 98, n°3, Pages 223-230, 2010.

D. Lesage, **E. D. Angelini**, G. Funka-Lea, I. Bloch, " A review of 3D vessel lumen segmentation techniques: Models, features and extraction Schemes", Medical Image Analysis, Vol. 13, pp. 819-845, 2009.

L. Bibin, J. Anquez, **E. D. Angelini**, I. Bloch. "Hybrid 3D pregnant woman and fetus modeling from medical imaging for dosimetry studies". International Journal of Computer Assisted Radiology and Surgery, vol. 5, n° 1, pp. 49-56, 2009.

O. Nempont, J. Atif, **E. Angelini**, I. Bloch, "A new fuzzy connectivity measure for fuzzy sets and associated fuzzy attribute openings, Journal of Mathematical Imaging and Vision, vol. 34, pp. 107-136, 2009.

Q. Duan, **E. D. Angelini**, S. L. Herz, C. M. Ingrassia, K. D. Costa, J. W. Holmes, S. Homma, and A. F. Laine,, "Region-based endocardium tracking on real-time three-dimensional ultrasound", Ultrasound in Medicine and Biology, Vol. 35, No. 2, pp. 256–265, 2009.

A. Moreno, S. Chambon, A. Santhanam, J. Rolland, **E. Angelini** and I. Bloch, "Combining a breathing model and tumor-specific rigidity constraints for registration of CT-TEP thoracic data", *Computer Assisted Surgery*, Vol. 13, No. 5, pp 281-298, 2008.

J. Puentes, B. Batrancourt, J. Atif, L. Lecornu, **E. Angelini**, I. Bloch, C. Roux, "Integrated Multimedia Electronic Patient Record and Graph-Based Image Information for Cerebral Tumors", *Computers in Biology and Medicine*, Vol. 38, pp 425-437, 2008.

E. D. Angelini, O. Clatz, E. Mandonnet, E. Konukoglu, L. Capelle and H. Duffau, "Glioma dynamics and computational models: A review of segmentation, registration and in silico growth algorithms and their clinical validations", *Current Medical Imaging Review*, Vol. 3, No. 4, pp:262-276, 2007.

E. Angelini, T. Song, B. Mensh, and A. Laine, "Brain MRI Segmentation with Multiphase Minimal Partitioning: A Comparative Study", *International Journal of Biomedical Imaging*, Vol. 2007, Article ID 10526, 15 pages, 2007.

E. Angelini, S. Homma, G. Pearson, J. Holmes, A. Laine "Segmentation of Real-time three-dimensional ultrasound for quantification of ventricular function: a clinical study on right and left ventricles," *Ultrasound in Medicine and Biology*, vol. 31, issue 9, pp 1143-1158, 2005.

P.-H. G. Chao, Z. Tang, **E. Angelini**, A. C. West, K. D. Costa and C. T. Hung, "Dynamic osmotic loading of chondrocytes using a novel microfluidic device " *Journal of Biomechanics* 38(6), 1273-1281, 2005.

E. Angelini, E. Ciaccio, "Optimized region finding and edge detection of knee cartilage surfaces from magnetic resonance images", *Annals of Biomedical Engineering*, vol. 31, issue 3, pp 336-345, 2003.

E. D. Angelini, A. Laine, S. Takuma, J. Holmes, and S. Homma, "LV volume quantification via spatio-temporal analysis of real-time 3D echocardiography," *IEEE Transactions on Medical Imaging*, vol.20, issue 6, pp 457-469, 2001.

Book Chapters

A. Katouzian, **E. Angelini**, B. Sturm, E. Konofagou, S. Carlier, A. Laine, "Applications of Multiscale Overcomplete Wavelet-based Representations in Intravascular Ultrasound (IVUS) Images", in *Ultrasound Imaging (Advances and Applications)*, Eds. J. M. Sanches, A. F. Laine, J. S. Suri, Springer, pp. 313-336, 2012.

Q. Duan, **E. Angelini**, O. Gerard, K. D. Costa, J. W. Holmes, S. Homma and A. Laine, "Cardiac Motion Analysis Based on Optical-Flow of Real-Time 3-D Ultrasound Data", Chapter 9 in *Advances in Diagnostic and Therapeutic Ultrasound Imaging*, Eds. J. S. Suri, C. Kathuria, R.-F. Chang, F. Molinari, A. Fenster, Artech House, pp. 227-246, 2008.

C. Cavaro-Menard, A. Nait-Ali, J-Y Tanguy, **E. Angelini**, C. Le Bozec, J-J Le Jeune, "Specificities of Physiological Signals and Medical Images", *Compression of Biomedical Images and Signals*, Wiley, pp. 43-74, 2008.

Q. Duan, **E. Angelini**, S. Homma and A. Laine, "Tracking Endocardium using Optical Flow along Isovalue Curve", Chapter 14 in *Principles and Advanced Methods in Medical Imaging and Image Analysis*, Eds. A. P. Dhawan, H. K. Huang, D.-S. Kim, World Scientific Publishing, Singapore, pp. 337-360, 2008.

E. Angelini, Y. Jin, and A. Laine, "State-of-the-Art of Levelset Methods in Segmentation and Registration of Medical Imaging Modalities," in *Handbook of Biomedical Image Analysis- Registration Models*, Ed.: D. L. W. Jasjit Suri, Swamy Laximinarayan, Kluwer Academic/ Plenum Publishers, pp. 47-102, 2005.

Y. Jin, **E. Angelini**, and A. Laine, "Wavelets in Medical Image Processing: Denoising, Segmentation, and Registration," in *Handbook of Biomedical Image Analysis Vol 1- Segmentation Models - Part a*, Ed.: D. L. W. Jasjit Suri, Swamy Laximinarayan Kluwer Academic/ Plenum Publishers, pp. 305-358, 2005..

E. D. Angelini and A. Laine, "Spatio-temporal directional analysis of real-time three dimensional cardiac ultrasound," in *Wavelets in Signal and Image Analysis*, F. Meyer and A. Petrosian, Eds.: Kluwer Academic Publishers, 2001.

Full-Length Conference Papers

- M. Gargouri, J. Tierny, E. Jolivet, P. Petit, **E. D. Angelini**, "Accurate and robust shape descriptors for the identification of rib cage structures in CT-images with Random Forests", IEEE International Symposium on Biomedical Imaging (ISBI), San Francisco, CA, USA, April 2013.
- A. Mikhno, **E. Angelini**, A. F. Laine, B. Bai, "Locally weighted Total Variation denoising for ringing artifact suppression in PET reconstruction using PSF modeling", IEEE International Symposium on Biomedical Imaging (ISBI), San Francisco, CA, USA, April 2013.
- Y. Tapio Häme, **E. Angelini**, E. Hoffman, G Barr, A. F. Laine, "Robust quantification of pulmonary emphysema with a hidden Markov measure field model", IEEE International Symposium on Biomedical Imaging (ISBI), San Francisco, CA, USA, April 2013.
- Y. Le Montagner, **E. Angelini**, J.-C. Olivo-Marin, "Phase retrieval with sparsity priors and application to microscopy video reconstruction", IEEE International Symposium on Biomedical Imaging (ISBI), San Francisco, CA, USA, April 2013.
- S. Dahdouh, A. Serrurier, G. Grangé, **E. Angelini**, I. Bloch, "Segmentation of fetal envelope from 3D Ultrasound images based on pixel intensity statistical distribution and shape priors", IEEE International Symposium on Biomedical Imaging (ISBI), San Francisco, CA, USA, April 2013.
- A. Lorsakul, Q. Duan, C. Russo, **E. Angelini**, S. Homma, A. Laine, "Impact of temporal resolution on the LV myocardial strain assessment on real-time 3D ultrasound", IEEE EMBC, San Diego, CA, August. 2012.
- Y. Le Montagner, **E. Angelini**, J.-C. Olivo-Marin, "Video reconstruction using compressed sensing measurements and 3D Total Variation regularization for bio-imaging applications", IEEE International Conference on Image Processing (ICIP), Orlando, FL, USA, Sept. 2012.
- G. Pizaine, R. Prevost, **E. Angelini**, I. Bloch, S. Makram-Ebeid, "Segmentation-free and multiscale-gree extraction of medial information using gradient vector flow- Application to vascular structures". IEEE International Symposium on Biomedical Imaging (ISBI), Barcelona, Spain, 2012.
- M. Charbit, **E. D. Angelini**, S. Audiere, "Maximum-likelihood estimation of Young's modulus in transient elastography with unknown line-of-sight orientation", IEEE International Symposium on Biomedical Imaging (ISBI), Barcelona, Spain, 2012.
- A. Katouzian, **E. Angelini**, B. Sturm, A. Laine, "Brushlet segmetnati for automatic detection of lumen borders in IVUS images: a comparison study", IEEE International Symposium on Biomedical Imaging (ISBI), Barcelona, Spain, 2012.
- S. Audiere, **E. D. Angelini**, M. Charbit, V. Miette "Evaluation of In vivo liver tissue characterization with spectral RF analysis versus elasticity", MICCAI, Toronto, Canada, LNCS 6891, pp. 387-395, 2011.
- A. Lorsakul, Q. Duan, M. J. Po, **E. Angelini**, S. Homma, A. F. Laine, "Parameterization of real-time 3D speckle tracking framework for cardiac strain assessment", IEEE EMBC conference, Boston, USA, 2011.
- Y. Le Montagner, M. Marim, **E. Angelini**, J.-C. Olivo-Marin, "Numerical evaluation of sampling bounds for near-optimal reconstruction in Compressed Sensing", International Conference on Image Processing (ICIP), Brussels, Belgium, 2011.
- J. Wiat, S. Watanabe, I. Bloch, J. Anquez, J.P. de la Plata Alcalde, **E. D. Angelini**, T. Boubekeur, N. Faraj, "Exposure to fetus to RF. Preliminary results assessed with different realistic 3D numerical models", 33rd Annual Meeting of the Bioelectromagnetics Society, Halifax, Canada, 2011.
- Y. Le Montagner, M. Marim, **E. D. Angelini**, J.-C. Olivo-Marin, "Numerical evaluation of subsampling effects on image reconstruction in Compressed-Sensing microscopy", SPIE Wavelet XIII, Vol. 8138 / Applications of Sparse Representations in Bioimaging, San Diego, CA, USA, 2011.
- J. P. De La Plata, J. Anquez, L. Bibin, T. Boubekeur, **E. Angelini**, I. Bloch, "FEMONUM: A Framework for Whole Body Pregnant Woman Modeling from Ante-Natal Imaging Data", Eurographics, 2011. Honorable mention of the Dirk Bartz Prize for Visual Computing in Medicine 2011
- Y. Le Montagner, **E. Angelini**, J.-C. Olivo-Marin, "Comparison of reconstruction algorithms in Compressed Sensing applied to biomedical imaging", IEEE International Symposium on Biomedical Imaging (ISBI), Chicago, USA, pp. 105-108, 2011.
- G. Pizaine, **E. Angelini**, I. Bloch, S. Makram-Ebeid, "Vessel geometry modeling and segmentation using convolution surfaces and an implicit medial axis", IEEE International Symposium on Biomedical Imaging (ISBI), Chicago, USA, pp. 1421-1424, 2011.

G. Pizaine, **E. D. Angelini**, I. Bloch, S. Makram-Ebeid, "Implicit medial representation for vessel segmentation", SPIE Medical Imaging, Vol 7962, Orlando, FL, USA, 2011

J.P. de la Plata Alcalde, L. Bibin, J. Anquez, Tamy Boubekour, **E. D. Angelini**, I. Bloch, "Physics-based Modeling of the Pregnant Woman", International Symposium on Biomedical Simulation (ISBMS), Phoenix, USA, Jan. 2010.

M. Marim, **E. D. Angelini**, and J.-C. Olivo-Marin, "Compressed Sensing in microscopy with random projections in the Fourier domain", IEEE Intern. Conf. on Image Processing, (ICIP), Cairo, Egypt, Nov. 2009.

J. Anquez, T. Boubekour, L. Bibin, **E. D. Angelini**, I. Bloch. "Utero-fetal unit and pregnant woman modeling using a computer graphics approach for dosimetry studies", MICCAI, London, UK, pp. 1025-1032, Sept. 2009.

D. Lesage, **E. D. Angelini**, G. Funke-Lea, I. Bloch, "Bayesian maximal paths for coronary artery segmentation from 3D CT angiograms", MICCAI, London, UK, pp. 222-229, Sept. 2009.

A. Katouzian, **E. D. Angelini**, A. F. Laine, "Classification of blood regions in IVUS images using three dimensional brushlet expansions ", International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), Minneapolis, USA, Sept. 2009

S. Audiere, M. Yassine, M. Charbit, **E. D. Angelini**, V. Miette, L. Sandrin, "Ultrasound-based tool for vibration-controlled transient elastography real-time assistance: automatic liver localization and skin capsule distance measurement", IEEE International Ultrasonics Symposium, Roma, Italy, Sept. 2009.

M. Marim, **E. D. Angelini**, and J.-C. Olivo-Marin, "Compressed sensing in biological microscopy", SPIE International Symposium, Wavelets XIII, conf 7446, San Diego, Aug. 2009.

M. Marim, **E. Angelini** and J.-C. Olivo-Marin, " A compressed sensing approach for biological microscopic image processing", IEEE International Symposium on Biomedical Imaging (ISBI), Boston, USA, pp. 1374-1377, July 2009.

J. Anquez, **E. Angelini** and I. Bloch, " Automatic segmentation of head structures on fetal MRI", IEEE International Symposium on Biomedical Imaging (ISBI), Boston, USA, pp. 109-112, July 2009.

D. Lesage, **E. Angelini**, I. Bloch and G. Funke-Lea, "Design and study of flux-based features for 3D vascular tracking", IEEE International Symposium on Biomedical Imaging (ISBI), Boston, USA, pp. 286-289, July 2009.

Q. Duan, K. Parker, A. Lorsakul, **E. Angelini**, E. Hyodo, S. Homma, J. Holmes, A. Laine, "Quantitative Validation of optical flow based myocardial strain measures using sonomicrometry", IEEE International Symposium on Biomedical Imaging (ISBI), Boston, USA, pp. 454-457, July 2009.

L. Bibin, J. Anquez, **E. Angelini**, I. Bloch, "Hybrid 3D modeling of mother and fetus from medical imaging for dosimetry studies, Computer Assisted Radiology and Surgery (CARS), Berlin,Germany, pp. 378-379, June 2009.

A. Katouzian, **E. D. Angelini**, A. Lorsakul, B. Sturm, A. F. Laine, "Lumen border detection of intravascular ultrasound via denoising of directional wavelet representations", Functional Imaging and Modeling of the Heart (FIMH), Nice, France, vol. 1, pp. 104-113, June 2009.

Q. Duan, **E. D. Angelini**, A. Lorsakul, S. Homma, J. Holmes, A. F. Laine, "Coronary occlusion detection with 4D optical flow ", Functional Imaging and Modeling of the Heart (FIMH), Nice, France, vol. 1, pp. 211-219, June 2009.

O. Nempont, J. Atif, **E. Angelini**, I. Bloch, "Structure segmentation and recognition in images guided by structural constraint propagation", European Conference on Artificial Intelligence (ECAI), Patras, Greece, pp. 621-625, July 2008.

O. Nempont, J. Atif, **E. Angelini**, I. Bloch, "Fuzzy attribute openings based on a new fuzzy connectivity class. Application to structural recognition in images", IPMU, Malaga, Spain, pp. 652-659, June 2008.

Q. Duan, **E. D. Angelini**, S. Homma, A. F. Laine, "Real-time segmentation of 4D ultrasound by active geometric functions", IEEE International Symposium on Biomedical Imaging (ISBI), Paris, France, pp. 233-236, May 2008.

D. Lesage, **E. Angelini**, I. Bloch, G. Funke-Lea, "Medial-based Bayesian tracking for vascular segmentation: Application to coronary arteries in 3D CT angiography", IEEE International Symposium on Biomedical Imaging (ISBI), Paris, France, pp. 268-271, May 2008.

V. Israel-Jost, E. Breton, **E. Angelini**, P. Choquet, I. Bloch, "Vectorial multi-phase mouse brain tumor segmentation in T1-T2 MRI", IEEE International Symposium on Biomedical Imaging (ISBI), Paris, France, pp. 5-8, May 2008.

J. Anquez, **E. Angelini**, I. Bloch, "Segmentation of fetal 3D ultrasound images based on statistical prior and deformable model", IEEE International Symposium on Biomedical Imaging (ISBI), Paris, France, pp. 17-20, May 2008.

- O. Nempont, J. Atif, **E. Angelini**, I. Bloch, "A new fuzzy connectivity class. Application to structural recognition in images.", IAPR International Conference on Discrete Geometry for Computer Imagery (DGCI), Lyon, France, vol. LNCS 4992, pp. 446-457, Apr. 2008.
- A. Moreno, S. Chambon, A. P. Santhanam, R. Brocardo, P. Kupelian, J. P. Rolland, **E. Angelini**, I. Bloch, "Thoracic CT-PET registration using a 3D breathing model", International Conference on Medical Image Computing and Computerized Medical Imaging (MICCAI), LNCS, Brisbane, Australia, pp.626-633, Oct. 2007.
- A. Moreno, S. Chambon, A. Santhanam, J. Rolland, **E. Angelini** and I. Bloch, "CT-PET landmark-based registration using a dynamic lung model", International Conference on Image Analysis and Processing (ICIAP), Modena, Italy, pp. 691-696, Sept. 2007.
- R. El Berbari, I. Bloch, A. Redheuil, **E. Angelini**, E. Mousseaux, F. Frouin and A. Herment, "An automated myocardial segmentation in cardiac MRI", Engineering in Medicine and Biology Conference, IEEE EMBS Annual International Conference (EMBC), Lyon, France, Aug. 2007.
- J. Anquez, **E. Angelini**, I. Bloch, V. Merzoug, A. E. Bellaiche-Millischer and C. Adamsbaum, "Interest of the steady state free precession (SSFP) sequence for 3D modeling of the whole fetus", IEEE EMBS Annual International Conference (EMBC), Lyon, France, Aug. 2007.
- O. Nempont, J. Atif, **E. Angelini**, I. Bloch. "Combining radiometric and spatial structural information in a new metric for minimal surface segmentation", International Conference on Information Processing in Medical Imaging (IPMI), LNCS 4584, Kerkrade, The Netherlands, pp. 283-295, July 2007.
- Q. Duan, P. Moireau, **E. D. Angelini**, D. Chapelle, A. Laine, "Simulation of 3D ultrasound with a realistic electro-mechanical model of the heart", International Workshop on Functional Imaging and Modeling of the Heart (FIMH), Springer LNCS 4466, Salt Lake City, USA, pp. 463-473, June 2007.
- R. El Berbari, I. Bloch, A. Redheuil, **E. Angelini**, E. Mousseaux, F. Frouin, A. Herment, "Automated segmentation of the left ventricle including papillary muscles in cardiac magnetic resonance images", International Workshop on Functional Imaging and Modeling of the Heart (FIMH), Springer LNCS 4466, Salt Lake City, USA, pp. 453-462, June 2007.
- H. Khotanlou, J. Atif, **E. Angelini**, H. Duffau and I. Bloch, "Adaptive segmentation of internal brain structures in pathological MR images depending on tumor types", International Symposium on Biomedical Imaging (ISBI), Arlington, VA, USA, pp: 588-591, Apr. 2007.
- J. Atif, C. Hudelot, O. Nempont, N. Richard, B. Batrancourt, **E. Angelini** and I. Bloch, "GRAFIP: A framework for the representation of healthy and pathological cerebral information", International Symposium on Biomedical Imaging (ISBI), Arlington, VA, USA, pp: 205-208, Apr. 2007.
- Q. Duan; **E. Angelini**, S. Homma, A. Laine, "Validation of optical-flow for quantification of myocardial deformations on simulated RT3D ultrasound", International Symposium on Biomedical Imaging (ISBI), Arlington, VA, USA, pp. pp. 944 – 947, Apr. 2007.
- E. Angelini**, J. Atif, J. Delon, E. Mandonnet, H. Duffau and L. Capelle, "Detection of glioma evolution on longitudinal MRI studies International Symposium on Biomedical Imaging (ISBI), Arlington USA, pp. 49-52, Apr. 2007.
- J. Atif, C. Hudelot, G. Fouquier, I. Bloch and **E. Angelini** "From generic knowledge to specific reasoning for medical image interpretation using graph-based representations", International Joint Conference on Artificial Intelligence (IJCAI), Hyderabad, India, pp. 224-229, 2007.
- Q. Duan, **E. Angelini**, S. Homma, A. Laine, "Tracking the endocardium using optical flow along iso-value curves", IEEE EMBS Annual International Conference (EMBC), New York, NY, USA, pp. 707-710, 2006.
- E. Angelini**, O. Gerard, "Review of myocardial motion estimation methods from optical flow tracking on ultrasound data", IEEE EMBS Annual International Conference (EMBC), New York, NY, USA, pp.1537-1540, 2006.
- J. Atif, O. Nempont, O. Colliot, **E. Angelini**, I. Bloch, "Level set deformable models constrained by fuzzy spatial relation," Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems (IPMU), Paris, France, pp. 1534-1541, 2006.
- J. Puentes, B. Batrancourt, L. Lecornu, J. Atif, G. Coatrieux, **E. Angelini**, I. Bloch, C. Roux, "Enhancing electronic patient record functionality through information extraction from images," IEEE International Conference On Information & Communication Technologies, Damascus, Syria, vol.1, pp. 978-983, 2006.

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