

Hervé Delingette

Equipe-Projet Asclepios - INRIA Sophia-Antipolis
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41 ans, marié

SITUATION ACTUELLE

Directeur de Recherche au sein de l'équipe Asclepios à l'INRIA, Sophia-Antipolis

FORMATION

- 1993-1994 - Doctorat (*Modélisation, Déformation et Reconnaissance d'objets tridimensionnels à l'aide de maillages simplexes*) présenté à l'École Centrale de Paris (en Génie des systèmes) et obtenu avec une mention très honorable et les félicitations du jury.
- 1986-1989 - Diplôme d'ingénieur de l'École Centrale de Paris, option Robotique.
- 1984-1986 - Baccalauréat C (mention *Très Bien*). Classes préparatoires Lycée Carnot (Dijon).

PARCOURS PROFESSIONNEL

- depuis Mai 2005 - Responsable de l'action d'envergure **CARDIOSENSE3D** : modélisation électromécanique du coeur
- Mars 2006 - Habilitation à Diriger des Recherches, Université de Nice Sophia-Antipolis
- Juin 2002 - **Directeur de Recherche à l'INRIA Sophia-Antipolis** au sein de l'équipe Asclepios à l'INRIA Sophia-Antipolis
- Septembre 1994 - Chargé de Recherche deuxième classe au sein de l'équipe Epidaure à l'INRIA Sophia-Antipolis
- Depuis 1994 - Activité de consultant scientifique pour plusieurs entreprises (l'Institut Français du Pétrole, Philips Healthcare Paris, Data Proxima, Median, Quantificare)
- 1992-1993 - Chercheur pendant 7 mois aux laboratoires d'interface homme-machine (HiLabs) de **Nippon Telegraph and Telephone (NTT)** à Yokosuka (Japon) : Modélisation et animation de modèles déformables et adaptatifs
- 1989-1992 - Chercheur au **Robotics Institute de Carnegie-Mellon University** à Pittsburgh (Etats-Unis) au titre de boursier Lavoisier puis de V.S.N.A. : Reconstruction 3D d'échantillons rocheux (Projet **Mars Rover** financé par la **NASA**) et reconnaissance d'objets tridimensionnels

ACTIVITÉ DE RECHERCHE

- Prix d'Excellence**
- Co-lauréat du *prix du meilleur article* de la conférence IEEE Robotics and Automation à Séoul en 1991
 - Co-lauréat du *prix Laval Virtual* section médecine en 1999
 - Prix décernés aux étudiants encadrés: Maxime Sermesant (second prix de thèse SPECIF), O. Clatz (Prix du journal "Le Monde", second prix IEEE EMBS), Clément Forest (Prix du journal "Le Monde").
- Conférences Invitées**
- ICT Bio 2008, ISBI 2007, JNRR 2007, ISSIR 2006, ENRST 2005, CURAC 2004, MJST 2004, CFM 2003...
- Comité de Programme**
- ICCV, CVPR, ECCV, IPMI, MICCAI, ICPR, FIMH, plusieurs workshops
- Comité de Lecture**
- Eurographics, SIGGRAPH, ICCV, CVPR, IPMI, Miccai... Revues : IEEE TMI, IEEE TMBS, IEEE TVCG, Medical Image Analysis, IJCV..
- Chair**
- Area Chair (MICCAI 2004, 2005 et 2006) et session Chair (Miccai 2001, 2004)
- Comité Editorial**
- revue Medical Image Analysis (Elsevier, IF 3.5) depuis 2006
- Organisation de Conférence**
- Co-organisateur de la *conférence IS4TM* à Juan-les-Pins en juin 2003 et de la conférence FIMH 2009 (Program Chair) à Nice
- Encadrement**
- Encadrement de *15 stagiaires niveau MASTER* et co-encadrement de *17 doctorants* et directeur de thèse de 4 thèses en cours
- Responsabilité Locale**
- Depuis 2007, membre du comité NICE pour la sélection scientifique des dossiers des professeurs invités
- Jurys de thèse**
- Depuis 2002, 30 jurys de thèse dont 22 fois en tant que rapporteur (7 fois à l'étranger : Canada, Belgique, Suisse, UK, Danemark, Finlande) et 5 jurys d'habilitation dont 3 fois en tant que rapporteur.
- Responsabilité Nationale**
- *Directeur Scientifique* d'une école d'été internationale CIMPA-UNESCO sur le thème de la Réalité Virtuelle à Nice en 1995
 - *Co-animateur* du groupe de travail "Réalité Virtuelle" du pôle PRC-CHM géré par le CNRS de 1994 à 1998.
 - *Organisation et Animation* de l'action incitative INRIA (1997-1999) sur le thème de la simulation de chirurgie, groupant 5 projets sur 3 sites.
 - Membre de la Commission d'Evaluation de l'INRIA (2004-2006).
- Visibilité Internationale**
- Co-auteur d'un chapitre de livre pour un volume de la série "Handbook of Numerical Analysis"
 - Articles invités dans le magazine "Communications of the ACM" et "Proceedings of the IEEE"
 - Coorganisation du programme scientifique du workshop INRIA-NIH en avril 2007 et du workshop INRIA/Singapour en décembre 2002
 - Coorganization avec A. Frangi du workshop "From Statistical Atlases to Personalized Models : Understanding Complex Diseases in Populations and Individuals" associé à la conférence MICCAI 2006
 - Nombreuses conférences invités lors de visite à des laboratoires de recherche (Carnegie-Mellon University, CaseWestern University, Johns Hopkins University, Stanford University, University of Wisconsin, Université Hébraïque de Jérusalem, Siemens Corporate Research, Philips Research, etc)
- Indice de Citation**
- h-index (source Google Scholar) : 29 (Max citation 402)

ACTIVITÉ DE TRANSFERT

1998-2000	- Projet Européen Roboscope
1997-1999	- Projet Européen (Eureka) MASTER
2003-2006	- Projet Européen (Eureka) ODYSSEUS
2004-2011	- Contrat d'Etude pour Philips HealthCare Paris
2006-2009	- Projet Européen (RTN) 3D Anatomical Human
2008-2011	- Projet Européen (STREPS) Passport
2008-2012	- Projet Européen (IP) Euheart
Depuis 2000	- Co-fondateur de la société QUANTIFICARE
Depuis 1998	- Dépôt de 2 brevets

ACTIVITÉ D'ENSEIGNEMENT

2000-2002	- Co-Responsable du cours d'un module de 24h du DEA I3 à l'université d'Orsay
1995-2006	- Responsable d'un cours de 15h au sein de l'école doctorale de l'université de Nice Sophia-Antipolis (Master IGMV)
Depuis 1995	- Intervenant dans un module de 3ème année de l'Ecole Centrale de Paris commun avec le Master MVA de l'ENS Cachan

LISTE DES PUBLICATIONS

Actes de Conférence

- [1] Hervé Delingette and Alejandro Frangi, editors. *Proceedings of the MICCAI Workshop - From Statistical Atlases to Personalized Models: Understanding Complex Diseases in Populations and Individuals*, 2006.
- [2] N. Ayache and H. Delingette, editors. *Proceedings of the International Symposium on Surgery Simulation and Soft Tissue Modeling*, volume LNCS 2673 of *Lecture Notes in Computer Science*, Juan-les-Pins, France, June 2003. Springer-Verlag.

Thèse

- [1] H. Delingette. *Modélisation, Déformation et Reconnaissance d'objets tridimensionnels à l'aide de maillages simples*. Thèse de sciences, Ecole Centrale de Paris, July 1994.
- [2] Hervé Delingette. *Modélisation de structures déformables*. Habilitation à diriger des recherches, Université Nice Sophia-Antipolis, March 2006.

Chapitres de livres

- [1] Nicholas Ayache, Olivier Clatz, Hervé Delingette, Grégoire Malandain, Xavier Pennec, and Maxime Sermesant. Asclepios: a research project-team at inria for the analysis and simulation of biomedical images. In *From semantics to computer science: essays in honor of Gilles Kahn*. Cambridge University Press, 2008.
- [2] H. Delingette and N. Ayache. Soft tissue modeling for surgery simulation. In N. Ayache, editor, *Computational Models for the Human Body*, Handbook of Numerical Analysis (Ed : Ph. Ciarlet), pages 453–550. Elsevier, 2004.
- [3] A. Pitiot, H. Delingette, and P.M. Thompson. Automated image segmentation: Issues and applications. In Cornelius T. Leondes, editor, *Medical Imaging Systems Technology*, volume 3. World Scientific, 2005.
- [4] Luc Soler, Nicholas Ayache, Stéphane Nicolau, Xavier Pennec, Clément Forest, Hervé Delingette, Didier Mutter, and Jacques Marescaux. Traitements d’images médicales pour la planification, la simulation et l’aide intra-opératoire des actes chirurgicaux. In M. Faupel, P. Smigielski, and R. Grzymala, editors, *Imagerie et Photonique pour les sciences du vivant et la médecine*, pages 19–31. Edition Fontis Media, 2004. ISBN 2-88476-005-9.
- [5] Nicholas Ayache, Stephane Cotin, and Hervé Delingette. Surgery simulation with visual and haptic feedback. In Y. Shirai and S. Hirose, editors, *Robotics Research, the Eighth International Symposium*, pages 311–316. Springer, 1998.
- [6] H. Delingette and G. Subsol. L’image dans la réalité virtuelle. In *Nouvelles Interfaces Homme-Machine*, number 18 in ARAGO. Observatoire Français des Techniques Avancées, 1996.

Articles de Revues Avec Comité de Lecture

- [1] Pierre-Yves Bondiau, Olivier Clatz, Maxime Sermesant, Pierre-Yves Marcy, Hervé Delingette, Marc Frenay, and Nicholas Ayache. Biocomputing: numerical simulation of glioblastoma growth using diffusion tensor imaging. *Phys Med Biol*, 53(4):879–93, Feb 2008.
- [2] H. Delingette. Triangular springs for modeling nonlinear membranes. *IEEE Transactions on Visualization and Computer Graphics*, 14(2), March/April 2008.
- [3] M Pop, M Sermesant, D Lepiller, M V Truong, E R McVeigh, E Crystal, A Dick, H Delingette, N Ayache, and G A Wright. Fusion of optical imaging and mri for the evaluation and adjustment of macroscopic models of cardiac electrophysiology: A feasibility study. *Med Image Anal*, Jul 2008.
- [4] M Sermesant, J M Peyrat, P Chinchapatnam, F Billet, T Mansi, K Rhode, H Delingette, R Razavi, and N Ayache. Toward patient-specific myocardial models of the heart. *Heart Fail Clin*, 4(3):289–301, Jul 2008.
- [5] M. A. Audette, H. Delingette, A. Fuchs, O. Burgert, and K. Chinzei. A topologically faithful, tissue-guided, spatially varying meshing strategy for computing patient-specific head models for endoscopic pituitary surgery simulation. *Journal of Computer Aided Surgery*, 12(1):43–52, January 2007.

- [6] Olivier Clatz, Stéphane Litrico, Hervé Delingette, Philippe Paquis, and Nicholas Ayache. Dynamic model of communicating hydrocephalus for surgery simulation. *IEEE Transactions on Biomedical Engineering*, 54(4):755–758, April 2007.
- [7] A. Pitiot, H. Delingette, and P.M. Thompson. Learning shape correspondence for n-d curves. *International Journal of Computer Vision (IJCV)*, 71(1):71–88, January 2007.
- [8] Hervé Delingette, Xavier Pennec, Luc Soler, Jacques Marescaux, and Nicholas Ayache. Computational models for image guided, robot-assisted and simulated medical interventions. *Proceedings of the IEEE*, 94(9):1678–1688, September 2006.
- [9] Valérie Moreau-Villéger, Hervé Delingette, Maxime Sermesant, Hiroshi Ashikaga, Elliot McVeigh, and Nicholas Ayache. Building maps of local apparent conductivity of the epicardium with a 2D electrophysiological model of the heart. *IEEE Transactions on Biomedical Engineering*, 53(8):1457–1466, August 2006.
- [10] Maxime Sermesant, Hervé Delingette, and Nicholas Ayache. An electromechanical model of the heart for image analysis and simulation. *IEEE Transactions in Medical Imaging*, 25(5):612–625, 2006.
- [11] A. Pitiot, H. Delingette, and P.M. Thompson. Automated image segmentation: Issues and applications. In Cornelius T. Leondes, editor, *Medical Imaging Systems Technology*, volume 3. World Scientific, 2005.
- [12] Olivier Clatz, Hervé Delingette, Ion-Florin Talos, Alexandra J. Golby, Ron Kikinis, Ferenc Jolesz, Nicholas Ayache, and Simon Warfield. Robust non-rigid registration to capture brain shift from intra-operative MRI. *IEEE Transactions on Medical Imaging*, 24(11):1417–1427, Nov. 2005.
- [13] Olivier Clatz, Maxime Sermesant, Pierre-Yves Bondiau, Hervé Delingette, Simon K. Warfield, Grégoire Malandain, and Nicholas Ayache. Realistic simulation of the 3D growth of brain tumors in mr images coupling diffusion with mass effect. *IEEE Transactions on Medical Imaging*, 24(10):1334–1346, October 2005.
- [14] H. Delingette and N. Ayache. Hepatic surgery simulation. *Communications of the ACM*, 48(2):31–36, February 2005.
- [15] C. Forest, H. Delingette, and N. Ayache. Removing tetrahedra from manifold tetrahedralisation : application to real-time surgical simulation. *Medical Image Analysis*, 9(2):113–122, April 2005.
- [16] J. Montagnat and H. Delingette. 4D deformable models with temporal constraints : application to 4D cardiac image segmentation. *Medical Image Analysis*, 9(1):87–100, February 2005.
- [17] M. Sermesant, K. Rhode, G. Sanchez-Ortiz, O. Camara, R. Andriantsimiavona, S. Hegde, D. Rueckert, P. Lambiase, C. Bucknall, E. Rosenthal, H. Delingette, D. Hill, N. Ayache, and R. Razavi. Simulation of cardiac pathologies using an electromechanical biventricular model and XMR interventional imaging. *Medical Image Analysis*, 9(5):467–480, 2005.
- [18] A. Pitiot, H. Delingette, P. M. Thompson, and N. Ayache. Expert knowledge guided segmentation system for brain MRI. *NeuroImage*, 23(supplement 1):S85–S96, 2004. Special Issue: Mathematics in Brain Imaging.

- [19] Olivier Clatz, Hervé Delingette, Eric Bardinet, Didier Dormont, and Nicholas Ayache. Création d'un modèle biomécanique spécifique du cerveau par l'analyse d'images et son application à la neurochirurgie stéréotaxique. *Mécanique et Industrie*, 4(4):429–433, 2003. Numéro spécial CFM 2003.
- [20] J. Montagnat, M. Sermesant, H. Delingette, G. Malandain, and N. Ayache. Anisotropic filtering for model-based segmentation of 4D cylindrical echocardiographic images. *Pattern Recognition Letters - Special Issue on Ultrasonic Image Processing and Analysis*, 24(4-5):815–828, February 2003.
- [21] G. Picinbono, H. Delingette, and N. Ayache. Non-linear anisotropic elasticity for real-time surgery simulation. *Graphical Models*, 65(5):305–321, September 2003.
- [22] Maxime Sermesant, Clément Forest, Xavier Pennec, Hervé Delingette, and Nicholas Ayache. Deformable biomechanical models: Application to 4D cardiac image analysis. *Medical Image Analysis*, 7(4):475–488, December 2003. PMID: 14561552.
- [23] G. Picinbono, H. Delingette, and N. Ayache. Modèle déformable élastique non-linéaire pour la simulation de chirurgie en temps réel. *Les Comptes Rendus de l'Académie des Sciences (CRAS), C.R. Biologies*, 325(4):335–344, 2002.
- [24] G. Picinbono, J-C. Lombardo, H. Delingette, and N. Ayache. Improving realism of a surgery simulator: linear anisotropic elasticity, complex interactions and force extrapolation. *Journal of Visualisation and Computer Animation*, 13(3):147–167, July 2002.
- [25] David Rey, Gérard Subsol, Hervé Delingette, and Nicholas Ayache. Automatic detection and segmentation of evolving processes in 3D medical images: Application to multiple sclerosis. *Medical Image Analysis*, 6(2):163–179, June 2002.
- [26] H. Delingette and J. Montagnat. Shape and topology constraints on parametric active contours. *Computer Vision and Image Understanding*, 83(2):140–171, 2001.
- [27] J. Montagnat, H. Delingette, and N. Ayache. A review of deformable surfaces: topology, geometry and deformation. *Image and Vision Computing*, 19(14):1023–1040, December 2001.
- [28] L Soler, H Delingette, G Malandain, J Montagnat, N Ayache, C Koehl, O Dourthe, B Malassagne, M Smith, D Mutter, and J Marescaux. Fully automatic anatomical, pathological, and functional segmentation from ct scans for hepatic surgery. *Comput Aided Surg*, 6(3):131–42, 2001.
- [29] S. Cotin, H. Delingette, and N. Ayache. A hybrid elastic model allowing real-time cutting, deformations and force-feedback for surgery training and simulation. *The Visual Computer*, 16(8):437–452, 2000.
- [30] S. Cotin, H. Delingette, and N. Ayache. Real-time elastic deformations of soft tissues for surgery simulation. *IEEE Transactions On Visualization and Computer Graphics*, 5(1):62–73, January-March 1999.
- [31] H. Delingette. General object reconstruction based on simplex meshes. *International Journal of Computer Vision*, 32(2):111–146, September 1999.
- [32] J.-L. Dugelay, K. Fintzel, S. Valente, and H. Delingette. Clonage de visage et spatialisation video : Outils pour la téléconférence virtuelle. *Traitement du Signal*, 16(1):60–72, July 1999.

- [33] N. Ayache, S. Cotin, H. Delingette, J.-M. Clément, J. Marescaux, and M. Nord. Simulation of endoscopic surgery. *Journal of Minimally Invasive Therapy and Allied Technologies (MITAT)*, 7(2):71–77, July 1998.
- [34] H. Delingette. Towards realistic soft tissue modeling in medical simulation. *Proceedings of the IEEE : Special Issue on Surgery Simulation*, pages 512–523, April 1998.
- [35] J Marescaux, J M Clement, V Tasseti, C Koehl, S Cotin, Y Russier, D Mutter, H Delingette, and N Ayache. Virtual reality applied to hepatic surgery simulation: the next revolution. *Annals of Surgery*, 228(5):627–34, November 1998.
- [36] J. Montagnat and H. Delingette. Globally constrained deformable models for 3D object reconstruction. *Signal Processing*, 71(2):173–186, 1998.
- [37] L. Soler, G. Malandain, and H. Delingette. Segmentation automatique : application aux angioscanners 3D du foie. *Traitement du signal*, 15(5):411–431, 1998.
- [38] G. Quatrehomme, S. Cotin, G. Subsol, H. Delingette, Y. Garidel, G. Grévin, and M. Fidrich. A fully three-dimensional method for facial reconstruction based on deformable models. *Journal of Forensic Sciences*, 42(4):649–652, July 1997.
- [39] H. Delingette, M. Hébert, and K. Ikeuchi. Shape representation and image segmentation using deformable surfaces. *Image and Vision Computing*, 10(3):132–144, April 1992.
- [40] M. Hébert, H. Delingette, and K. Ikeuchi. Shape representation and image segmentation using deformable surfaces. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 17(7), June 1995.

Articles de Revues Sans Comité de Lecture

- [1] H. Delingette. Réalité virtuelle et médecine. *Revue de la société des électriciens et des électroniciens (REE)*, 8:43–45, September 1997.
- [2] Olivier Clatz, Emmanuel Mandonnet, Stéphane Chanalet, Christine Lebrun, Ender Konukoglu, Hervé Delingette, Nicholas Ayache, and Pierre-Yves Bondiau. Modèles biomathématiques de croissance des gliomes : Recherche en informatique et perspectives en neuro-oncologie. *Neurologies*, 9(93):665–667, 2006.
- [3] Hervé Delingette and Nicholas Ayache. La simulation de chirurgie hépatique. *Pour la Science*, 52(52):106–109, July 2006.
- [4] Luc Soler, Nicholas Ayache, Stéphane Nicolau, Xavier Pennec, Clément Forest, Hervé Delingette, and Jacques Marescaux. Traitement d’images médicales pour la planification, la simulation et l’aide intra-opératoire des actes chirurgicaux. *La Revue de l’Electricité et de l’Electronique*, pages 64–71, janvier 2004.
- [5] H. Delingette. Réalité virtuelle et médecine. *Centraliens*, (552):17–18, February 2004.

- [6] L Soler, H Delingette, G Malandain, N Ayache, C Koehl, J M Clement, O Dourthe, and J Marescaux. An automatic virtual patient reconstruction from CT-scans for hepatic surgical planning. *Stud Health Technol Inform*, 70:316–22, 2000.
- [7] S Cotin, H Delingette, M Bro-Nielsen, N Ayache, J M Clement, V Tasseti, and J Marescaux. Geometric and physical representations for a simulator of hepatic surgery. *Stud Health Technol Inform*, 29:139–51, 1996.
- [8] S. Cotin, H. Delingette, N. Ayache, J.M. Clement, J. Marescaux, and M. Nord. Simulation active de chirurgie endoscopique. *Revue Européenne de Technologie Biomédicale (RBM)*, 19(5):167–172, 1997.

Conférences Internationales Avec Comité de Lecture

- [1] Hervé Delingette. Biquadratic and quadratic springs for modeling st venant kirchhoff materials. In *Fourth International Symposium on BioMedical Simulation (ISBMS'08)*, volume 5104 of *Lecture Notes in Computer Science*, pages 40–48, London, UK, July 2008. Springer-Verlag.
- [2] Barbara André and Hervé Delingette. Versatile design of changing mesh topologies for surgery simulation. In *Fourth International Symposium on BioMedical Simulation (ISBMS'08)*, volume 5104 of *Lecture Notes in Computer Science*, pages 147–156, London, UK, July 2008. Springer-Verlag.
- [3] Florence Billet, Maxime Sermesant, Hervé Delingette, and Nicholas Ayache. Cardiac motion recovery by coupling an electromechanical model and cine-mri data: First steps. In K. Miller and P.M.F. Nielsen, editors, *Proc. of the Workshop on Computational Biomechanics for Medicine III. (Workshop MICCAI-2008)*, September 2008.
- [4] Jean-Marc Peyrat, Hervé Delingette, Maxime Sermesant, Xavier Pennec, Chenyang Xu, and Nicholas Ayache. Registration of 4D Time-Series of Cardiac Images with Multichannel Diffeomorphic Demons. In Dimitris Metaxas, Leon Axel, Gabor Fichtinger, and Gábor Székely, editors, *Proc. Medical Image Computing and Computer Assisted Intervention (MICCAI'08)*, volume 5242 of *Lecture Notes in Computer Science*, pages 972–979, New York, USA, September 2008. Springer-Verlag.
- [5] Damien Lepiller, Maxime Sermesant, Mihaela Pop, Hervé Delingette, Graham A. Wright, and Nicholas Ayache. Cardiac electrophysiology model adjustment using the fusion of mr and optical imaging. In Dimitris N. Metaxas, Leon Axel, Gabor Fichtinger, and Gábor Székely, editors, *MICCAI*, volume 5241 of *Lecture Notes in Computer Science*, pages 678–685. Springer, 2008.
- [6] N. Toussaint, T. Mansi, H. Delingette, N. Ayache, and M. Sermesant. An Integrated Platform for Dynamic Cardiac Simulation and Image Processing: Application to Personalised Tetralogy of Fallot Simulation. In *Proc. Eurographics Workshop on Visual Computing for Biomedicine (VCBM)*, Delft, The Netherlands, 2008.
- [7] Jérémie Allard, Stéphane Cotin, François Faure, Pierre-Jean Bessoussan, François Poyer, Christian Duriez, Hervé Delingette, and Laurent Grisoni. Sofa: an open source framework for medical simulation. In *Studies in health technology and informatics, Medicine Meets Virtual Reality (MMVR)*, pages 13–18, 2007.

- [8] Jimena Costa, Hervé Delingette, and Nicholas Ayache. Automatic segmentation of the bladder using deformable models. In *Proceedings of IEEE International Symposium on Biomedical Imaging: From Nano to Macro (ISBI'07)*, pages 904–907, Metro Washington DC, USA, 2007.
- [9] Jimena Costa, Hervé Delingette, Sébastien Novellas, and Nicholas Ayache. Automatic segmentation of bladder and prostate using coupled 3D deformable models. In Nicholas Ayache, Sébastien Ourselin, and Anthony Maeder, editors, *Proc. Medical Image Computing and Computer Assisted Intervention (MICCAI'07)*, volume 4791 of *LNCS*, pages 252–260, Brisbane, Australia, October 2007. Springer.
- [10] H. Delingette, M. Sermesant, J.-M. Peyrat, N. Ayache, K. Rhode, R. Razavi, E. McVeigh, D. Chapelle, J. Sainte-Marie, P. Moireau, M. Fernandez, J.-F. Gerbeau, K. Djabella, Q. Zhang, and M. Sorine. Cardiosense3d: Patient-specific cardiac simulation. In *Proceedings of IEEE International Conference on Biomedical Imaging: From Nano to Macro (ISBI'07)*, pages 628–631, Metro Washington DC, USA, 12-15 April 2007.
- [11] François Faure, Jérémie Allard, Stéphane Cotin, Paul Neumann, Pierre-Jean Bensusan, Christian Duriez, Hervé Delingette, and Laurent Grisoni. Sofa: A modular yet efficient simulation framework. In *Surgetica*, 2007.
- [12] E. Konukoglu, O. Clatz, Pierre-Yves Bondiau, Maxime Sermesant, H. Delingette, and N. Ayache. Towards an identification of tumor growth parameters from time series of images. In Nicholas Ayache, Sébastien Ourselin, and Anthony Maeder, editors, *Proc. Medical Image Computing and Computer Assisted Intervention (MICCAI)*, volume 4791 of *LNCS*, pages 549–556, Brisbane, Australia, October 2007. Springer.
- [13] E. Konukoglu, M. Sermesant, O. Clatz, J.-M. Peyrat, H. Delingette, and N. Ayache. A recursive anisotropic fast marching approach to reaction diffusion equation: Application to tumor growth modeling. In *Proceedings of the 20th International Conference on Information Processing in Medical Imaging (IPMI'07)*, volume 4584 of *LNCS*, pages 686–699, 2-6 July 2007.
- [14] Jean-Marc Peyrat, Maxime Sermesant, Hervé Delingette, Xavier Pennec, Chenyang Xu, Elliot McVeigh, and Nicholas Ayache. Statistical comparison of cardiac fibre architectures. In *Proceedings of Functional Imaging and Modeling of the Heart 2007 (FIMH'07)*, volume 4466 of *LNCS*, pages 413–423, 7-9 June 2007.
- [15] M. Sermesant, E. Konukoglu, H. Delingette, Y. Coudiere, P. Chinchaptanam, K.S. Rhode, R. Razavi, and N. Ayache. An anisotropic multi-front fast marching method for real-time simulation of cardiac electrophysiology. In *Proceedings of Functional Imaging and Modeling of the Heart 2007 (FIMH'07)*, volume 4466 of *LNCS*, pages 160–169, 7-9 June 2007.
- [16] M. A. Audette, H. Delingette, A. Fuchs, O. Burgert, and K. Chinzei. A topologically faithful, tissue-guided, spatially varying meshing strategy for computing patient-specific head models for endoscopic pituitary surgery simulation. In *Studies in health technology and informatics, Medicine Meets Virtual Reality (MMVR)*, pages 22–27, 2006.
- [17] Ender Konukoglu, Olivier Clatz, Pierre-Yves Bondiau, Hervé Delingette, and Nicholas Ayache. Extrapolating tumor invasion margins for physiologically determined radiotherapy regions. In *Proc. of the 9th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'06), Part I*, number 4190 in *LNCS*, pages 338–346, 2-4 October 2006.

- [18] Jean-Marc Peyrat, Maxime Sermesant, Hervé Delingette, Xavier Pennec, Chenyang Xu, Elliot McVeigh, and Nicholas Ayache. Towards a statistical atlas of cardiac fiber structure. In *Proc. of the 9th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'06), Part I*, volume 4190 of *LNCS*, pages 297–304. Springer Verlag, 2–4 October 2006. PMID: 17354903.
- [19] Ender Konukoglu, Olivier Clatz, Pierre-Yves Bondiau, Hervé Delingette, and Nicholas Ayache. Extrapolating tumor invasion margins for physiologically determined radiotherapy regions. Presented in DIMACS Workshop: Computational Tumor Modeling, 2006.
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