

PUBLICATIONS

Journal Papers

- *Nathanaëlle Yeni, Gregorio Petirena, Jean-Marc Tacchella, Remy Guillevin, Jean-Baptiste Martini, Alain Giron, Frédérique Frouin, Elodie Roullot, Marie-Odile Habert, Jean-Yves Delattre, Aurélie Kas. "Early assessment of bevacizumab response using 99mTc-sestamibi single-photon emission tomography in recurrent high grade glioma". Submitted to Clinical Nuclear Medicine.*
- Jessica Lebenberg, Alain Lalande, Patrick Clarysse, Irene Buvat, Christopher Casta, Alexandre Cochet, Constantin Constantinidès, Jean Cousty, Alain de Cesare, Stéphanie Jehan-Besson, Muriel Lefort, Laurent Najman, Elodie Roullot, Laurent Sarry, Christophe Tilmant, Frédérique Frouin, Mireille Garreau. Improved Estimation of Cardiac Function Parameters Using a Combination of Independent Automated Segmentation Results in Cardiovascular Magnetic Resonance Imaging. *PLoS ONE* 10(8): e0135715. doi:10.1371/journal.pone.0135715. August 19, 2015.
- Jean-Marc Tacchella, Elodie Roullot, Muriel Lefort, Mike-Ely Cohen, Rémy Guillevin, Grégorio Petirena, Jean-Yves Delattre, Marie-Odile Habert, Nathanaëlle Yeni, Aurélie Kas and Frédérique Frouin. An Efficient Strategy based on an Individualized Selection of Registration Methods. Application to the Coregistration of MR and SPECT Images in Neuro-Oncology. *Physics in Medicine and Biology*, 59:22, 2014.
- Yasmina Chenoune, Constantin Constantinides, Claire Pelot-Barakat, Racha El Berbari, Muriel Lefort, Elodie Roullot, Elie Mousseaux and Frédérique Frouin. "Methodology for Jointly Assessing Myocardial Infarct Extent and Regional Contraction in 3D CMRI". *IEEE Transactions on Biomedical Engineering*, 59(9):2650-2659, Sept 2012.
- Jessica Lebenberg, Irène Buvat, Alain Lalande, Patrick Clarysse, Christopher Casta, Alexandre Cochet, Constantin Constantinides, Jean Cousty, Alain de Cesare, Stéphanie Jehan-Besson, Muriel Lefort, Laurent Najman, Elodie Roullot, Laurent Sarry, Christophe Tilmant, Mireille Garreau and Frédérique Frouin. Non-supervised ranking of different segmentation approaches. Application to the estimation of the left ventricular ejection fraction from cardiac cine MRI sequences. *IEEE Transactions on Medical Imaging*, 31(8)-1651-1660, May 2012.
- Vincent Villette, Brice Bellessort, Frédérique Poindessous-Jazat, Elodie Roullot, Yvan Peterschmitt, Jacques Epelbaum, Aline Stéphan, Patrick Dutar. A new neuronal target for

beta-amyloid peptide in the hippocampus of a rat model of Alzheimer's disease. *Neurobiology of Aging*, 33(6):1126e1-1126-e14, June 2012.

- Vincent Villette, Frédérique Poindessous-Jazat, Axelle Simon, Clément Léna, Elodie Roullot, Brice Bellessort, Jacques Epelbaum, Patrick Dutar, and Aline Stéphan. Decreased rhythmic GABAergic septal activity and memory-associated theta oscillations after hippocampal amyloid-beta pathology in the rat. *The Journal of Neuroscience*, 30(33):10991-11003, Aug 2010.
- Constantin Constantinides, Racha El Barbari, Alain de Cesare, Yasmina Chenoune, Elodie Roullot, Alain Herment, Elie Mousseaux, Frédérique Frouin. Development and evaluation of an algorithm for the automated segmentation of the left and right ventricles on cine MRI. *IRBM-ITBM (Innovation and Research in Biomedical Engineering)*, 2009.
- Elodie Roullot, Alain Herment, Isabelle Bloch, Alain de Cesare, Mila Nikolova, Elie Mousseaux. Modeling anisotropic undersampling of magnetic resonance angiographies and reconstruction of a high-resolution isotropic volume using half-quadratic regularization techniques. *Signal Processing*, 84(4):743-762, April 2004.
- Alain Herment, Elodie Roullot, Isabelle Bloch, Odile Jolivet, Alain De Cesare, Frédérique Frouin, Jacques Bittoun, Elie Mousseaux. Local reconstruction of stenosed sections of artery using multiple MRA acquisitions. *Magnetic Resonance in Medicine*, 49(4):731-742, 2003.

Conferences Papers

- Jean-Marc Tacchella, Nathanaelle Yeni, Elodie Roullot, Muriel Lefort, Mike-Ely Cohen, Remy Guillevin, Grégorio Petrirena, Jean-Yves Delattre, Marie-Odile Habert, Aurélie Kas, Frederique Frouin. A Framework using Multimodal Imaging for Longitudinal Monitoring of Patients in Neuro-oncology. Application to a SPECT/MRI study. *International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), August 26-30th, 2014, Chicago, IL, USA.*
- J.-M. Tacchella, E. Roullot, M.-E. Cohen, M. Lefort, M. Reynal, J.-B. Martini, R. Guillevin, J.-Y. Delattre, G. Petrirena, M.-O. Habert, N. Yeni, A. Kas, F. Frouin. Robust Coregistration of Sestamibi SPECT and MR Images in Patients with High Grade Glioma: a revisited approach. *ESMRMB'2013, October 3-5th 2013, Toulouse, France.*
- J. Lebenberg, F. Frouin, P. Clarysse, I. Buvat, C. Casta, A. Cochet, C. Constantinides, J. Cousty, A. De Cesare, S. Jehan-Besson, M. Lefort, L. Najman, E. Roullot, L. Sary, C. Tilmant, A. Lalande, M. Garreau. "Combining Multiple Automated Segmentations of the Left Ventricle in Cardiac MRI: a statistical validation". *ESMRMB'2013, October 3-5th 2013, Toulouse, France.*
- Jean-Marc Tacchella, Elodie Roullot, Muriel Lefort, Myke-Ely Cohen, Rémy Guillevin, Gregorio Petrirena, Jean-Yves Delattre, Marie-Odile Habert, Nathanaëlle Yeni, Aurélie Kas, Frédérique Frouin. A New Strategy to Improve Coregistration of SPECT and MR Images in

Patients with High Grade Glioma. *International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, July 3-7th, 2013, Osaka, Japan.

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- Constantin Constantinides, Elodie Roullot, Muriel Lefort, Frédérique Frouin. Fully Automated Segmentation of the Left Ventricle Applied to Cine MR Images: Description and Results on a Database of 45 Subjects. *International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, August 28th – September 1st, 2012, San Diego, CA, USA.
- Jessica Lebenberg, Irène Buvat, Mireille Garreau, Christopher Casta, Constantin Constantinides, Jean Cousty, Alexandre Cochet, Stéphanie Jehan-Besson, Christophe Tilmant, Muriel Lefort, Elodie Roullot, Laurent Najman, Laurent Sarry, Patrick Clarysse, Alain de Cesare, Alain Lalande and Frédérique Frouin. Comparison of different segmentation approaches without using gold standard. Application to the estimation of the left ventricle ejection fraction from cardiac cine MRI sequences. *International Conference of the Engineering in Medicine and Biology Society (EMBC)*, August 30th – September 3rd, 2011, Boston, MA, USA.
- Elodie Roullot, Vincent Villette, Frédérique Poindessous-Jazat, Aline Stéphan, Patrick Dutar, Jacques Epelbaum. Segmentation of rat neuronal cells in 3D microscopic images for the quantification of calbindin, somatostatin and parvalbumin expression levels in the study of Alzheimer's disease. *Colloque RITS (Recherche en Imagerie et Technologies pour la Santé)*, 5-8 avril 2011, Rennes.
- Yasmina Chenoune, Constantin Constantinides, Elodie Roullot, Elie Mousseaux, Frédérique Frouin. Segmentation et Recalage 3D d'IRM Cardiaques pour la Quantification Automatique du Rehaussement Tardif. *Colloque GRETSI*, septembre 2011, Bordeaux.
- Yasmina Chenoune, Constantin Constantinides, Racha El Berbari, Elodie Roullot, Frédérique Frouin, Alain Herment, Elie Mousseaux. Rigid Registration of Delayed-Enhancement and Cine Cardiac MR Images using 3D Normalized Mutual Information. *Computing in Cardiology*, Sept 2010.
- Constantin Constantinides, Yasmina Chenoune, Elie Mousseaux, Frédérique Frouin, Elodie Roullot. "Automated heart localization for the segmentation of the ventricular cavities on cine magnetic resonance images". *Computing in Cardiology*, 26-29th Sept, 2010, Belfast, UK.
- Constantin Constantinides, Yasmina Chenoune, Nadjia Kachenoura, Elodie Roullot, Elie Mousseaux, Alain Herment, Frédérique Frouin. "Semi-automated cardiac segmentation on cine magnetic resonance images using GVF-snake deformable models". *The MIDAS Journal* -

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- Constantin Constantinides, Racha El Berbari, Elie Mousseaux, Elodie Roullot, Alain de Cesare, Alain Herment, Frédérique Frouin. Développement et Evaluation d'un algorithme de segmentation automatique des ventricules gauche et droit sur des images IRM. *Colloque RITS (Recherche en Imagerie et Technologies pour la Santé), mars 2009, Lille.*
- Elodie Roullot. A Unifying Framework for Color Image Calibration. *International Conference on Systems, Signals and Image Processing (IWSSIP), June 2008, Bratislava, Slovak Republic.* Pages 97-100.
- Elodie Roullot, Jean-Eric Autegarden, Patrick Devriendt, Francisque Leynadier. Segmentation of Erythema from Skin Photographs for Assisted Diagnosis in Allergology. *International Conference on Advances in Pattern Recognition (ICAPR), August 2005, Bath, UK.*
- Alain Herment, Elodie Roullot, Isabelle Bloch, Claire Pellot, Andrew Todd-Pokropek, ElieMousseaux. Improvement of the SNR-resolution compromise in MRA using spatial segmented k-space acquisitions. *International Symposium on Biomedical Imaging (ISBI), 2002.*
- Elodie Roullot, Alain Herment, Isabelle Bloch, Mila Nikolova, ElieMousseaux. Regularized Reconstruction of 3D High-Resolution Magnetic Resonance Images from Acquisitions of Anisotropically Degraded Resolutions. *International Conference on Pattern Recognition (ICPR), Sept 2000, Barcelona, Spain.*
- Elodie Roullot, Alain Herment, Isabelle Bloch, Mila Nikolova, Elie Mousseaux. Reconstruction régularisée d'images de résonance magnétique 3D de haute résolution à partir d'acquisitions de résolutions anisotropes. *Reconnaissance de Formes et Intelligence Artificielle (RFIA), 2000, Paris, France.*

Abstracts

- Constantin Constantinides, Frédérique Frouin, Muriel Lefort, Elodie Roullot. « Localisation et segmentation automatiques du ventricule gauche en IRM cardiaque ciné ». *Journées Françaises de Radiologie / Journée GRIC (Groupe de Recherche en Imagerie Cardiaque), 2012, Paris, France.*

PhD Dissertation

- Elodie Roullot. *Analyse d'acquisitions multiples anisotropes en Angiographie par Résonance Magnétique 3D : modélisation et reconstruction régularisée pour l'amélioration de la résolution spatiale.* Thèse de doctorat : Sciences pour l'Ingénieur, Spécialité Signal et Image. Paris, Télécom Paristech, 2001, 199 pages. Disponible au format PDF sur : <<http://tel.archives-ouvertes.fr/docs/00/04/67/17/PDF/tel-00005773.pdf>>.

Reviews et expert assessments

- Expert for the ANR (Agence Nationale de la Recherche, France) - Programme MN (Modèles Numériques), 2012.
- Reviewer for IEEE EMBC conference (Engineering in Medicine and Biology), 2012-2013.
- Reviewer for IRBM journal (Innovation and Research in BioMedical Engineering), 2013-2014.
- Reviewer for ISBI conference (International Symposium on Biomedical Engineering), 2014.