

Pierre Jannin is a INSERM Research Director at the Medical School of the University of Rennes (France). He is the head of the MediCIS research group from both UMR 1099 LTSI, Inserm research institute and University of Rennes. He was awarded the PhD degree from the University of Rennes in 1988 on multimodal 3D imaging in neurosurgery and the “Habilitation” (HDR) from the University of Rennes in 2005 on information and knowledge assisted neurosurgery. He has about 30 year experience in designing and developing computer assisted surgery systems. His research topics include image-guided surgery, multimodal imaging data fusion, surgical data science, augmented reality, modeling of surgical procedures and processes, study of surgical expertise, surgical training and validation methodology in medical image processing. The main clinical application areas include functional neurosurgery and surgery of low-grade tumors in central areas. He authored or co authored more than 60 peer-reviewed international journal papers and more than 80 international conferences long papers. He is the President of the International Society of Computer Aided Surgery (ISCAS). He is board member of the MICCAI society. He is senior member of the SPIE society. He is Deputy Editor for the International Journal of Computer Assisted Radiology and Surgery. He is member of the Editorial Board of the Journal of Computer Aided Surgery. He is acted as associate editor and reviewer for several journals (e.g., IEEE TMI, MedIA, IJCARS, Neuroimage, Yearbook of Medical Informatics). He is member of several Organizing and Program Committees of international conferences, such as MICCAI, CARS, SPIE Medical Imaging, and MMVR. He is co-founder of IPCAI conferences and was Co-General Chair from 2010 to 2016.

Pierre JANNIN

SITUATION

Nationality: French

Date of Birth: 26 April 1963

3 children

Administrative Position: INSERM Senior Researcher

Professional address : MediCiS, UMR 1099 / LTSI, INSERM, Faculté de Médecine, Université de Rennes 1, 2, Avenue du Pr Léon Bernard, CS34317, 35043 RENNES Cedex France, Tel: (33) 2 23 23 45 88, Secr: (33) 2 23 23 47 18,

Web : <https://medicis.univ-rennes1.fr/members/pierre.jannin/index>

E-mail : pierre.jannin@univ-rennes1.fr

RESEARCH INTERESTS:

- Computer assisted surgery
- Image guided neurosurgery, Deep Brain Stimulation
- Augmented reality and virtuality
- Medical image fusion
- Surgical skill evaluation
- Surgical process models
- Validation in medical image processing and computer assisted surgery

EDUCATION

- *Habilitation*, University de Rennes 1, "From image guided neurosurgery towards an information and knowledge based neurosurgical process", 2005
- *Ph. D.*, University of Rennes I, Signal Analysis and Telecommunications, Thesis : "Modeling, display and analysis of 3D data using Octree in Medical Imaging", 1988
- *M. Sc.* in Automatics and Signal Analysis (option Pattern Recognition), Technological University of Compiègne (1985)
- *M.Sc.* in Computer Science, University of Rennes I, 1984

SELECTED ACADEMIC & PROFESSIONAL APPOINTMENTS

2012-Today	INSERM Senior Researcher and Director	MediCIS UMR 1099 INSERM	Rennes, France
August 2015	Visiting Professor	SINTEF, Norwegian University of Science and Technology	Trondheim, Norway
May-August 2013	Visiting Professor	CAMIT, Kyushu University	Fukuoka, Japan
2005-2011	INSERM Senior Researcher	U746 INSERM	Rennes, France
2009-2010	Visiting Professor	BIC Montreal Neurological Institute McGill University	Montréal, Canada
2005-2010	Associate Member	ICCAS institute	Leipzig, Germany
1996-2004	Senior Researcher	UPRES 2232 and 3192	Rennes, France
1988–1996	Research Engineer	CERIUM	Rennes, France

TEACHING ACTIVITIES:

3D display in medical imaging, Data fusion in medical imaging, Validation in medical image processing, Image Guided Surgery, Surgical Process Modeling, Augmented reality and visualisation systems in surgery, Patient to Physical space Registration:

- n MSc (DEA) Biomedical Engineering, University of Tours-Angers-Nantes-Rennes
- n MSc of Biological Sciences in Medicine, University Rennes 1
- n European School of Medical Physics, Archamps
- n Initiator and manager of a MSc lectures unit on “Image Guided Surgery” and on “Basis in Medical image processing”

SCIENTIFIC ACTIVITIES

- n President of the International Society for Computer Aided Surgery (ISCAS)
- n Board member of the MICCAI Society
- n Area editor of International Journal for Computer Aided Radiology and Surgery (Springer)
- n Co General Chair and co-founder of the IPCAI international conference (Information Processing in Computer Assisted Interventions); proceedings in LNCS, Geneva July 2010, Berlin 2011, Pisa (Italy) 2012, Heidelberg 2013, Fukuoka (Japan) 2014, Barcelona 2015

* IPCAI is a highly selective international conference on computer aided interventions. The selection rate was below 33%, including posters. It consists of long papers with journal-like revision process and unlimited time for discussion during the conference.

- n Reviews for international journals: including IEEE TMI, IEEE TITB, IEEE TBE, IEEE EMB, Medical Image Analysis, IEEE TNS, IRBM, Academic Radiology, Cellular and Molecular Biology, Computer Methods and Programs in Biomedicine, IMIA Medical Informatics Yearbook, IJCARS, CAS, and Neuroimage
- n Reviewing for international conferences: MICCAI, CARS, SPIE, ACCV, MMVR, ...

- n Congress Organizing Committee, Program committee and executive committee member of Computer Assisted Radiology and Surgery conference (CARS)
- n Co-chair of the 2013 MICCAI workshop and tutorial committee (Nagoya, Japan)
- n Program committee member of SPIE Medical Imaging conference (Visualization, Image-Guided Procedures, and Display) from 2005, MICCAI conference from 2011, and Medicine Meets Virtual Reality (MMVR) conference from 2011.
- n Member of the committee for patents and technological transfer at the University of Rennes 1 from 2002 to 2012

SELECTION OF THE 5 MOST REPRESENTATIVE PUBLICATIONS

- Germain Forestier, Florent Lalys; Louis Collins; Jurgen Meixensberger; Shafik Wassef; Thomas Neumuth; Benoit Goulet; Laurent Riffaud; **Pierre Jannin**, Multi-site study of surgical practice in neurosurgery based on Surgical Process Models, *Journal of Biomedical Informatics*, 2013, Oct;46(5):822-9
- **Jannin P.** , Grova C., Maurer C.. Model for designing and reporting reference based validation procedures in medical image processing. *Int Journ. Comput. Assisted Radiol and Surg.* 2006 1(2)2:1001-115
- Paul P, Fleig O and **Jannin P.** Augmented Virtuality based on Stereoscopic Reconstruction in Multimodal Image-Guided Neurosurgery: Methods and Performance Evaluation, *IEEE Transactions on Medical Imaging*, Special Issue on Intra-Operative Image Processing for Surgical Guidance, July 2005, 24(11), pp 1500-1511.
- **Jannin P**, Raimbault M, Morandi X, Riffaud L and Gibaud B. “Modelling Surgical Procedures for Multimodal Image-Guided Neurosurgery”. *Journal of Computer Aided Surgery*, 2003;8(2):98-106.
- **Jannin P**, Morandi X, Fleig OJ, Le Rumeur E, Toulouse P, Gibaud B and Scarabin JM. « Integration of sulcal and functional information for multimodal neuronavigation”, *Journal of Neurosurgery*, 2002;96:713-723.

AWARDS

- 2016: Best paper award on clinical impact at the Information Processing in Computer Assisted Interventions international conference (IPCAI) Heidelberg, Germany June 2016
- 2016: Young scientist award from the “Image Guided Procedures, Robotic Interventions, and Modeling” conference at SPIE Medical Imaging conference in San Diego (USA), Feb 2016
- 2016: Third place award at M2CAI workshop at MICCAI 2016 in Athens for the challenge on surgical phase recognition on endoscopic videos, Sep 2016
- 2015: Best paper award at Artificial Intelligence in Medicine Europe conference (AIME) Avia, Italy June 2015 "Optimal sub-sequence matching for the automatic prediction of surgical tasks"
- 2014: Best paper award CARS 2014 international conference: D'Albis T, Haegelen C, Essert C, Fernández-Vidal S, Lalys F, **Jannin P**, PyDBS: an automated image processing workflow for deep brain stimulation surgery. *Int J Comput Assist Radiol Surg.* 2014 May 6. PMID: 24799270
- 2013: Best research project award at “Loading the future” Pole de compétitivité AcouStiC project

Teaching activities

	Manager of a lecture unit in M.Sc. 2 Signal and Images in Biology and Medecine on “Image Guided Surgery” One week per year :
From 2006	“Image-Patient registration: methods and validation” 3h “Surgical process models” 3h “Intraoperative visualization” 3h
From 2008	Manager of a lecture unit in M.Sc. Signal and Images in Biology and Medecine on “Basis on Image processing” 30 hours per year
2014	“Image guided neurosurgery and neuroimaging” for Excellence Courses at CominLabs (4h)
2006-2000	M.Sc. Signal and Images in Biology and Medecine « 3D Visualization in medical imaging » 2h per year
2006-2002	M.Sc. Signal and Images in Biology and Medecine « Validation in medical image processing » 2h per year
2008-2001	Professor at the European School of Medical Physics (Archamps, France) « Data fusion in medical imaging : Methods, applications and validation », 3h per year
2003-1999	M.Sc. Biological and Medical Science « 3D display and data fusion » 4 h per year
2002-1999	DES/DIS X Ray technology and radioprotection « 3D display», 2h. per year
2004-1994	School of Medical Electroradiology at Pontchaillou Hospital Rennes « Data fusion in medical imaging » 2h per year, « 3D display», 5 h per year

Ph D and M Sc Student Supervision

	<ul style="list-style-type: none">• Current: O. Dergachyova (2014-2017), P.L. Henaux (2015-2018), Chantal Julliard (2016-2019)• Previous: F. Monge (2012-2016), Hualme A., (2013-2016): Co supervision with TIMC-IMAG (UJF Grenoble), F. Despinoy (2013-2015): Co supervision with LIRRM (Montpellier, France), D. Bouget (2012-2015), C. Haegelen (2009-2014), L. Riffaud (2009-2012), Lalys F. (2009-2012), Trelhu B. (2007-2011), Neumuth T. (2005-2009): Co supervision with Leipzig University (D), Grunert R. (2005-2008): Co supervision with Leipzig University (D), Paul P (2003-2006), Raimbault M (2001-2004), Broche B (2000-2004), Grova C (1999-2002), Fleig O (1999-2002)
Ph D	
M Sc	> 25 students from : M. Sc. STIR “Signal Processing and Telecommunications”, M. Sc. SIBM “Signal and Images in Biology and Medicine ”, M. Sc. “Statistics” Paris VII, M. Sc. « Computer Science », UT de Compiègne, Institut Supérieure d'Electronique de Paris, IFSIC de Rennes , ...

PhD defense	Emran Mohammad Abu Anas (University of British Columbia, Canada) Novembre 2016, Roche B. (Université de Clermont Ferrand) Novembre 2016, Ferrante E. (Université Paris-Saclay, Centrale Supélec) Mai 2016, Bernhardt S. (IRCAD, Université de Strasbourg) Février 2016 (Rapporteur), Rafii-Tari H. (Imperial College of London) Décembre 2015 (Rapporteur), Charrière K. (Telecom Bretagne) Novembre 2015 (Rapporteur), Jaberzadeh A. (Université de Strasbourg) Février 2015 (Rapporteur) Daga P. (University College of London, Great Britain) Avril 2014, Shakir D. (Technische Universität München, Germany) Mars 2014, Banihachemi JJ. (Université de Grenoble) Octobre 2013, Sanches R. (Université de Montpellier) Aout 2013, Wolf R. (Université de Grenoble) Juin 2013, Caire F. (Université de Bordeaux) Décembre 2012, Bigdelou A. (Technische Universität München, Germany) November 2012, Zhang-Ge L. (Université d'Angers) November 2012, Malarne P. (Université Libre de Bruxelles) October 2011, Teodorescu R. (Université de Besançon) April 2011, Verscheure L. (Université de Lille) October 2010, Vigneron L. (Université Liège, Belgique) February 2009, Wannous (Université de Poitiers) December 2008, Traub J. (Technische Universität München, Germany) November 2008, Gorges S. (INRIA – Université de Nancy) May 2007, Voros S. (Université Pierre et Marie Curie) December 2006
Habilitation defense	Vermandel M. (Université Lille 2) Septembre 2013, Essert C. (Université Louis Pasteur de Strasbourg) September 2011

Scientific societies

From June 2014	President of the International Society for Computer Aided Surgery (ISCAS)
From Feb 2014	Board member of the MICCAI Society
2004-June 2014	General secretary of the International Society for Computer Aided Surgery (ISCAS)
Memberships	ISCAS, MICCAI, IEEE, SSH, SPIE (senior member), CRITT Santé Bretagne

Publications

- *Original publications in peer-reviewed journals*
 - 2017
 1. G. Forestier, F. Petitjean, L. Riffaud, P. **Jannin** , Automatic matching of surgeries to predict surgeons next actions, *Artificial Intelligence in Medicine*, Elsevier, 2017. DOI : <https://doi.org/10.1016/j.artmed.2017.03.007>
 2. A. Huaultmé, S. Voros, L. Riffaud, G. Forestier, A. Moreau-Gaudry, P. **Jannin** Distinguishing surgical behavior by sequential pattern discovery, *Journal of Biomedical Informatics*, Elsevier, 2017, 67, pp.34 - 41.
 3. Pujol S, Cabeen R, Sébille SB, Yelnik J, François C, Fernandez Vidal S, Karachi C, Zhao Y, Cosgrove GR, **Jannin P**, Kikinis R, Bardinet E. In vivo Exploration of the Connectivity between the Subthalamic Nucleus and the Globus Pallidus in the Human Brain Using Multi-Fiber Tractography. *Front Neuroanat*. 2017 Jan 19;10:119
 - 2016
 4. Baumgarten C, Zhao Y, Sauleau P, Malrain C, **Jannin P**, Haegelen C., Image-guided preoperative prediction of pyramidal tract side effect in deep brain stimulation: proof of concept and application to the pyramidal tract side effect induced by pallidal stimulation. *J Med Imaging (Bellingham)*. 2016 Apr;3(2)
 5. Baumgarten C, Zhao Y, Sauleau P, Malrain C, **Jannin P**, Haegelen C. , Improvement of Pyramidal Tract Side Effect Prediction Using a Data-Driven Method in Subthalamic Stimulation. *IEEE Trans Biomed Eng*. 2016 Dec 9
 6. Frederic Monge, Dzhoshkun I. Shakir, Florence Le Jeune, Xavier Morandi, Nassir Navab, Pierre **Jannin**, Acquisition Models in Intraoperative Positron Surface Imaging, *Int J Comput Assist Radiol Surg*. 2016 (accepted)
 7. Bouget D, Allan M., Stoyanov D., **Jannin P**. Vision-based and marker-less surgical tool detection and tracking: a review of the literature, *Medical Image Analysis*, 2016 (accepted)
 8. M. Uemura, P. **Jannin**, M. Yamashita, M. Tomikawa, M. Hashizume, Procedural surgical skill assessment in laparoscopic training environments *Int J Comput Assist Radiol Surg*. 2016 Apr;11(4):543-52
 9. Dergachyova O, Bouget D, Huaultmé A, Morandi X, **Jannin P**, Automatic data-driven real-time segmentation and recognition of surgical workflow. *Int J Comput Assist Radiol Surg*. 2016 PMID: 26995598
 10. Sauleau P, Drapier S, Duprez J, Houvenaghel JF, Dondaine T, Haegelen C, Drapier D, **Jannin P**, Robert G, Le Jeune F, Vérin M. Weight Gain following Pallidal Deep Brain Stimulation: A PET Study. *PLoS One*. 2016 Apr 12;11(4)
 11. Ory S, Le Jeune F, Haegelen C, Vicente S, Philippot P, Dondaine T, **Jannin P**, Drapier S, Drapier D, Sauleau P, Vérin M, Péron J. Pre-frontal-insular-cerebellar modifications correlate with disgust feeling blunting after subthalamic stimulation: A positron emission tomography study in Parkinson's disease. *J Neuropsychol*. 2015 Dec 16. doi: 10.1111/jnp.12094
 12. Despinoy F, Bouget D, Forestier G, Penet C, Zemiti N, Poignet P, **Jannin P**. Unsupervised Trajectory Segmentation for Surgical Gesture Recognition in Robotic Training. *IEEE Trans Biomed Eng*. 2016 PMID: 26513773
 13. Houvenaghel JF, Le Jeune F, Dondaine T, Esquevin A, Robert GH, Péron J, Haegelen C, Drapier S, **Jannin P**, Lozachmeur C, Argaud S, Duprez J, Drapier D, Vérin M, Sauleau P. Reduced Verbal Fluency following Subthalamic Deep Brain Stimulation: A Frontal-Related Cognitive Deficit? *PLoS One*. 2015 Oct 8;10(10):e0140083. doi: 10.1371/journal.pone.0140083. eCollection 2015. PMID: 26448131
 - 2015
 9. Bouget, D.; Benenson, R. ; Omran, M. ; Riffaud, L. ; Schiele, B. ; **Jannin**, P. Detecting surgical tools by modelling local appearance and global shape *IEEE Transactions on Medical Imaging* 2015 Dec;34(12):2603-17
 10. Essert C, Fernandez-Vidal S, Capobianco A, Haegelen C, Karachi C, Bardinet E, Marchal M, **Jannin P**. Statistical study of parameters for deep brain stimulation automatic preoperative planning of electrodes trajectories. *Int J Comput Assist Radiol Surg*. 2015 Dec;10(12):1973-83
 11. Machno A, **Jannin P**, Dameron O, Korb W, Scheuermann G, Meixensberger J. Ontology for assessment studies of human-computer-interaction in surgery. *Artif Intell Med*. 2015 Feb;63(2):73-84

12. Morineau T, Riffaud L, Morandi X, Villain J, **Jannin P**. Work domain constraints for modelling surgical performance. *Int J Comput Assist Radiol Surg*. 2015 Oct;10(10):1589-97
13. Langner-Lemercier S, Drapier S, Naudet F, Le Clanche N, Houvenaghel JF, Sauleau P, **Jannin P**, Haegelen C, Le Jeune F, Vérin M. Preoperative brain metabolism and quality of life after subthalamic nucleus stimulation in Parkinson's disease. *J Neurol*. 2015 Apr;262(4):881-9
14. D'Albis T, Haegelen C, Essert C, Fernández-Vidal S, Lalys F, **Jannin P**, PyDBS: an automated image processing workflow for deep brain stimulation surgery. *Int J Comput Assist Radiol Surg*. 2015 Feb;10(2):117-28
15. Katic D, Julliard C, Wekerle A, Kenngott H, Müller-Stich B, Dillmann R, Speidel S, **Jannin P**, Gibaud B. Lapontospm - an Ontology for Laparoscopic Surgeries and Its Application to Surgical Phase Recognition. *Int J Computer Assisted Radiology and Surgery*. 2015. 2015 Sep;10(9):1427-34
16. Forestier G, Riffaud L, **Jannin P**. Automatic phase prediction from low-level surgical activities. *Int J Comput Assist Radiol Surg*. 2015 Jun;10(6):833-41

- 2014

17. Forestier G, Petitjean F, Riffaud L, **Jannin P**. Non-linear temporal scaling of surgical processes. *Artif Intell Med*. 2014 Nov;62(3):143-52
18. Yiming Xiao, **Pierre Jannin**, Tiziano D'Albis, Nicolas Guizard, Claire Haegelen, Lalys Florent, Marc Verin, D. Louis Collins, Investigation of morphometric variability of subthalamic nucleus, red nucleus and substantia nigra in advanced Parkinson's disease patients using automatic segmentation and PCA-based analysis, *Human Brain Mapping*, 2014 35(9):4330-44
19. Estelle Michinov, Eric Jamet, Virginie Dodeler, Claire Haegelen, **Pierre Jannin** Assessing Neurosurgical Non-Technical Skills: An exploratory study of a new behavioral marker system, *Journal of Evaluation in Clinical Practice*, 2014, 20(5): 582-588
20. L. Maier-Hein, A. Groch, A. Bartoli, S. Bodenstedt, G. Boissonnat, P.-L. Chang, N. T. Clancy, D. S. Elson, S. Haase, E. Heim, J. Hornegger, **P. Jannin**, H. Kenngott, T. Kilgus, B. Müller-Stich, D. Oladokun, S. Röhl, T. R. dos Santos, H.-P. Schlemmer, A. Seitel, S. Speidel, M. Wagner, and D. Stoyanov, Comparative Validation of Optical Techniques for Laparoscopic 3D Surface Reconstruction, *IEEE Transactions on Medical Imaging* 2015 Oct;33(10):1913-30
21. Florent Lalys, Claire Haegelen, **Pierre Jannin**, Analysis of electrode deformations in Deep Brain Stimulation surgery, *International Journal of Computer Assisted Radiology and Surgery*, 2014, Jan;9(1):107-117
22. Florent Lalys, **Pierre Jannin**, Surgical Process Modelling: a review, *International Journal of Computer Assisted Radiology and Surgery*, 2014 May;9(3):495-511

- 2013

23. Germain Forestier, Florent Lalys; Louis Collins; Jurgen Meixensberger; Shafik Wassef; Thomas Neumuth; Benoit Goulet; Laurent Riffaud; **Pierre Jannin**, Multi-site study of surgical practice in neurosurgery based on Surgical Process Models, *Journal of Biomedical Informatics*, 2013, Oct;46(5):822-9
24. JC. Gentric, **P. Jannin**, B. Trelhu, L. Riffaud, H. Raoult, JC. Ferré, JY. Gauvrit Effects of low dose protocols in endovascular treatment for intracranial aneurysms: Development of Workflow Task Analysis during Cerebral Endovascular Procedures", *American Journal of Roentgenology*, 2013, Aug;201(2):W322-5
25. Marta Kersten-Oertel, **Pierre Jannin**, D. Louis Collins, The State of the Art of Visualization in Mixed Reality Image Guided Surgery, *Computerized Medical Imaging and Graphics* 2013 ; 37(2) :98-112
26. Jean Christophe Gentric, Brivael Trelhu, **Pierre Jannin**, Laurent Riffaud, Jean-Christophe Ferré, Jean-Yves Gauvrit, Development Of Workflow Task Analysis during Cerebral Diagnostic Angiographies; Time-Based Comparison of Junior and Senior Tasks. *Journal of Neuroradiology* , 2013, Dec;40(5):342-7
27. Lalys F, Bouget D, Riffaud L, **Jannin P**, Automatic knowledge-based recognition of low-level tasks in ophthalmological procedures., *Int J Comput Assist Radiol Surg*. (2013) 8: 39-49.
28. Haegelen C, Coupé P, Fonov V, Guizard N, **Jannin P**, Morandi X, Collins DL.. Automated segmentation of basal ganglia and deep brain structures in MRI of Parkinson's disease., *Int J Comput Assist Radiol Surg*. (2013) 8: 99-110
29. Morineau T, Morandi X, Le Moëllic N, **Jannin P**, A cognitive engineering framework for the specification of information requirements in medical imaging: application in image-guided neurosurgery. *Int J Comput Assist Radiol Surg*. 2013 Mar;8(2):291-300
30. Cristian A. Linte, Katherine P. Davenport, Kevin Cleary, Craig Peters, Kirby G. Vosburgh, Nassir Navab, Philip Eddie Edwards, **Pierre Jannin**, Terry M. Peters, David R. Holmes III, and Richard A. Robb, On

mixed reality environments for minimally invasive therapy guidance: Systems architecture, successes and challenges in their implementation from laboratory to clinic, *Computerized Medical Imaging and Graphics* 2013 Mar;37(2):83-97

- 2012

31. Lalys F, Haegelen C, Mehri M, Drapier S, Vérin M, **Jannin P**. Anatomico-clinical atlases correlate clinical data and electrode contact coordinates: Application to subthalamic deep brain stimulation., *J Neurosci Methods*. 2012, 212(2):297-307
32. Lalys F, Riffaud L, Bouget D, **Jannin P**. A framework for the recognition of high-level surgical tasks from video images for cataract surgeries. *IEEE Trans Biomed Eng*. 2012, 59(4):966-76
33. Forestier G.; Lalys F ; Riffaud L.; Trelhu B.; **Jannin P**. Classification of Surgical Processes using Dynamic Time Warping, *Journal of Biomedical Informatics*, 2012, 45, pp. 255-264.
34. Neumuth T, Loebe F, **Jannin P**. Similarity Metrics for Surgical Process Models. *Artificial Intelligence in Medicine*, 2012 Jan;54(1):15-27.
35. **Jannin P**. Validation in medical image processing: Methodological issues for proper quantification of uncertainties. *Current Medical Imaging Reviews*, 8(4), 2012 , pp. 322-330(9)
36. Kersten-Oertel M, **Jannin P**, Collins DL., DVV: A Taxonomy for Mixed Reality Visualization in Image Guided Surgery. *IEEE Trans Vis Comput Graph*. 2012 18 (2): 332-52.
37. Essert, C., Haegelen C., Lalys F, Abadie A. and **Jannin P**. Automatic computation of electrode trajectories for Deep Brain Stimulation: a hybrid symbolic and numerical approach. *Int J Comput Assist Radiol Surg*. (2012) 7: 517-532

- 2011

38. de Guibert C., Maumet C., **Jannin P**, Ferre J. C., Treguier C., Barillot C., Le Rumeur E., Allaire C., Biraben A. Abnormal functional lateralization and activity of language brain areas in typical specific language impairment (developmental dysphasia). *Brain*. 2011, 134(Pt10): 3044-58
39. Neumuth T, **Jannin P**, Schlomberg J, Meixensberger J, Wiedemann P, Burgert O. Analysis of surgical intervention populations using generic Surgical Process Models, *Int Journ. Comput. Assisted Radiol and Surg*. 2011 Jan;6(1):59-71.

- 2010

40. Riffaud L., Neumuth T, Morandi X., Trantakis C., Meixensberger J, Burgert O, Trelhu B., **Jannin P**, Recording of surgical processes: a study comparing senior and junior neurosurgeons during lumbar disc herniation surgery, *Neurosurgery*, 2010, 67(2):325-332.
41. Lalys F, Haegelen C., Ferre J.C., El-Ganaoui O., **Jannin P**, Construction and assessment of a 3T MRI brain template, *Neuroimage*, 2010, 49(1):345-354.
42. de Guibert C., Maumet C., Ferre J.C., **Jannin P**, Biraben A., Allaire C., Barillot C., Le Rumeur E., FMRI language mapping in children: A panel of language tasks using visual and auditory stimulation without reading or metalinguistic requirements, *NeuroImage*, 2010, 51(2):897-909.
43. Duhamel B., Ferre J. C., **Jannin P**, Gauvrit J. Y., Verin M., Millet B., Drapier D., Chronic and treatment-resistant depression: A study using arterial spin labeling perfusion MRI at 3Tesla, *Psychiatry Res*, 2010, 182(2):111-6.
44. Grunert R., Korb W., **Jannin P**, Dengl M., Mockel H., Neumuth T, Strauss G., Trantakis C., and Meixensberger, J., Systematic user-based assessment of Navigated Control Spine, *Biomedizinische Technik. Biomedical engineering Biomed Tech* , 2010, (Berl). 55(6):351-359

- 2009

45. Paul P, Morandi X., **Jannin P**, A Surface Registration Method for Quantification of Intraoperative Brain Deformations in Image-Guided Neurosurgery, *IEEE Trans on Information Technology in BioMedicine*, 2009, 13(6):976-983.
46. Morineau T, Morandi X., Le Moellic N., Diabira S., Riffaud L., Haegelen C., Henaux PL., **Jannin P**, Decision Making During Preoperative Surgical Planning, *Human Factors: The Journal of the Human Factors and Ergonomics Society*, 2009; 51: 67-77.

47. Neumuth T., **Jannin P.**, Strauss G., Meixensberger, Burgert O. Validation of Knowledge Acquisition for Surgical Process Models, *Journal of the American Medical Informatics Association*, 2009 Jan-Feb;16(1):72-80.
 · 2008
48. Duchesne S., **Jannin P.** Proposing a manuscript peer-review checklist, *NeuroImage*, 2008, 39(4):1783-7.
 · 2007
49. **Jannin P.**, Morandi X. Surgical models for computer-assisted neurosurgery, *NeuroImage* 2007, 3(37) : 783-791.
 · 2006
50. **Jannin P.** , Grova C., Maurer C.. Model for designing and reporting reference based validation procedures in medical image processing. *Int Journ. Comput. Assisted Radiol and Surg.* 2006 1(2):1001-115
 · 2005
51. Haegelen C, Verin M, Broche BA, Prigent F, **Jannin P.**, Gibaud B, Morandi X. Does subthalamic nucleus stimulation affect the frontal limbic areas? A single-photon emission computed tomography study using a manual anatomical segmentation method. *Surg Radiol Anat.* 2005 Sep 14;:1-6
52. Paul P, Fleig O and **Jannin P.** Augmented Virtuality based on Stereoscopic Reconstruction in Multimodal Image-Guided Neurosurgery: Methods and Performance Evaluation, *IEEE Transactions on Medical Imaging*, July 2005, 24(11), pp 1500-1511.
53. Aubert-Broche B, **Jannin P.**, Biraben A, Bernard AM, Haegelen C, Prigent-Lejeune F, and Gibaud B. Evaluation of intra-scan intra-subject interhemispheric asymmetry detection methods in brain SPECT - application in epilepsy. *Journal of Nuclear Medicine*, 2005 Apr;46(4):707-713.
54. Grova C, **Jannin P.**, Buvat I, Benali H, Bansard JH, Biraben A, and Gibaud B. From anatomic standardization analysis of perfusion SPECT data to perfusion pattern modelling: evidence of functional networks in healthy subjects and temporal lobe epilepsy patients. *Academic Radiology*, 2005 May;12(5):554-65.
 · 2003
55. Grova C, **Jannin P.**, Biraben A, Buvat I, Benali H, Bernard AM, Scarabin JM and Gibaud B. A methodology for generating normal and pathological brain perfusion spect images for evaluation of mri/spect fusion methods: application in epilepsy. *Phys. Med. Biol.*, 2003;48(24):4023-4043.
56. **Jannin P.**, Raimbault M, Morandi X, Riffaud L and Gibaud B. Modeling Surgical Procedures for Multimodal Image-Guided Neurosurgery, *Journal of Computer Aided Surgery*, 2003;8(2):98-106.
57. Aubert-Broche B, Grova C, **Jannin P.**, Buvat I, Benali H and Gibaud B. Detection of inter- hemispheric asymmetries of brain perfusion in SPECT, *Phys. Med. Biol.*, 2003;48(11):1505-1517.
58. Toulouse P, Agulhon C, Taussig D, Napuri S, Biraben A, **Jannin P.**, Carsin M and Scarabin JM. Magnetoencephalographic studies of two cases of diffuse subcortical laminar heterotopia or so-called double cortex, *Neuroimage*, 2003;19(4):1251-9.
 · 2002
59. **Jannin P.**, Morandi X, Fleig OJ, Le Rumeur E, Toulouse P, Gibaud B and Scarabin JM. Integration of sulcal and functional information for multimodal neuronavigation, *Journal of Neurosurgery*, 2002;96:713-723.
 · 2001
60. **Jannin P.**, Seigneuret E, Morandi X, Fleig OJ, Riffaud L, Le Goualher G, Brassier G and Scarabin JM. Guidage sulcal en neuro-navigation dans la chirurgie des cavernomes supratentoriels, *Neurochirurgie*, 2001;46(6):534-540.
61. **Jannin P.**, Grova C and Gibaud B. Fusion de données en imagerie médicale: une revue méthodologique basée sur le contexte clinique“, *ITBM-RBM Innovation et technologie en biologie et médecine*, 2001 ;22(4) :196-215.

· 2000

62. **Jannin P**, Fleig OJ, Seigneuret E, Grova C, Morandi X and Scarabin JM. A Data Fusion Environment for Multimodal and Multi-Informational Neuro-Navigation, *Journal of Computer Aided Surgery*, 2000;5(1):11-17.
63. Le Rumeur E, Allard M, Poiseau E and **Jannin P**. Role of the fMRI sensory stimulation type for the understanding of normal and lesional cortex connections for presurgical brain mapping, *Journal of Neurosurgery*, 2000;93:427-431.

· Before ...

64. **Jannin P, et al.** A Ray traced Texture Mapping for Enhanced Virtuality in Image Guided NeuroSurgery. *Health Care in the Information Age : Future Tools for Transforming Medicine, Study in Health Technology and Informatics*, Vol. 29, IOS Press, Amsterdam, Janv 1996, pp 553-563.
65. **Jannin P**, Prévost G, Le Noach R and Coatrieux JL. Conception d'architectures spécialisées pour des stations de travail interactives à base d'octrees en imagerie médicale, *Revue Innovation Technologique en Biologie et Médecine*, 1991;12(2):223-232.

· Editorials in international peer reviewed journals

66. Stoyanov D, Collins DL, Sakuma I, Abolmaesumi P, **Jannin P**. Information processing in computer-assisted interventions: 5th international conference, 2015. *Int J Comput Assist Radiol Surg*. 2015 Sep;9(5):755-7
67. Barratt D, **Jannin P**, Fichtinger G, Cotin S. Information processing in computer-assisted interventions: 4th international conference, 2014. *Int J Comput Assist Radiol Surg*. 2014 Sep;9(5):755-7 Fourth International Conference, IPCAI 2013, Heidelberg, Germany, June 26, 2013, Proceedings Series: Lecture Notes in Computer Science, Vol. 7915, Subseries: Image Processing, Computer Vision, Pattern Recognition, and Graphics, Barratt, D.; Cotin, S.; Fichtinger, G.; **Jannin, P**; Navab, N. (Eds.) 2013, X, 111 p.
68. Lemke H., Vannier M., Cleary K , **Jannin P**. CARS 2012: Computer Assisted Radiology and Surgery - Proceedings of the 26th International Congress and Exhibition Pisa, Italy, June 27 - 30, 2012, Springer, Volume 7, Supplement 1 / juin 2012 Third International Conference, IPCAI 2012, Pisa, Italy, June 27, 2012, Proceedings Series: Lecture Notes in Computer Science, Vol. 7330, Subseries: Image Processing, Computer Vision, Pattern Recognition, and Graphics, Abolmaesumi, P.; Joskowicz, L.; Navab, N.; **Jannin, P**. (Eds.) 2012, 2012, XIII, 180 p.
69. **Jannin P**, Krupinski E, Warfield S. Validation in medical image processing. *IEEE Trans Med Imaging*. 2006 Nov;25(11):1405-9.
70. **Jannin P**, Cleary K, Joskowicz L. ISCAS at CARS 2006. *Comput Aided Surg*. 2006 May;11(3):107-8
71. **Jannin P**, Fitzpatrick JM, Hawkes DJ, Pennec X, Shahidi R and Vannier MW. Editorial: Validation of Medical Image Processing in Image-Guided Therapy, *IEEE Transactions on Medical Imaging*, 2002;21(11): 1445-1449.

· Book chapters

72. Marta Kersten-Oertel, Pierre **Jannin**, and D. Louis Collins « Augmented Reality for Image-Guided Surgery », *Fundamentals of Wearable Computers and Augmented Reality*, Second Edition / Chapter 20 July 29, 2015 CRC Press ISBN 9781482243505
73. **Jannin, P.** (2014). "S'orienter-t-on vers une Modélisation des Compétences Chirurgicales ?" *Réalités Industrielles des Annales des mines* (Novembre 2014): 51-56.
74. Scarabin JM, Mercier Ph, Delion M, Barillot C, **Jannin P**, Gibaud B, Berton E. (2012) "From Bourgerly's anatomy to multiparameter, 3D, digital imaging, individual for each patient. In 'Stereotaxy and epilepsy surgery' Jean-Marie Scarabin (Ed), published by John Libbey Eurotext Editions, 2012, pp. 41-90.
75. Korb W, **Jannin P.** (2010) « Bewertung der Mensch-Maschine-Interaktion » in "Computerassistierte Chirurgie" Elsevier (2010)
76. Bidaut L., **Jannin P.**, (2008) "Biomedical multimodality imaging for clinical and research applications: principles, techniques and validation" in Lemoigne Y and Caner A (Eds). "Molecular Imaging: Computer reconstruction and practice" Springer, Dordrecht (Netherlands), NATO Science for Peace and Security Series, p. 249-281
77. **Jannin P.**, Korb W. (2008) "Assessment in Image Guided Interventions" in Peters TM and Cleary K (Eds). "Image-Guided Intervention Technology and Applications." Springer-Verlag Berlin Heidelberg: 2008. p. 531-549

78. **Jannin P**, Grova C and Gibaud B. (2001) Medical applications of NDT data fusion, in Applications of NDT data fusion, Edited by Gros X.E., Kluwer academic publishers, p. 227-267

· *Books sections from selective international peer-reviewed conferences*

· 2016

79. Baumgarten C, Zhao Y, Sauleau P, Malrain C, **Jannin P**, Haegelen C., Image-guided preoperative prediction of pyramidal tract side effect in deep brain stimulation: proof of concept and application to the pyramidal tract side effect induced by pallidal stimulation. SPIE Med Imaging Conference (San Diego, US). Feb. 2016 **Best paper award**
80. Dergachyova O, Bouget D, Huaultmé A, Morandi X, **Jannin P.**, Automatic data-driven real-time segmentation and recognition of surgical workflow. *Int J Comput Assist Radiol Surg.* 2016 **Best paper award**

· 2015

80. Forestier G, Petitjean F, Riffaud L, **Jannin P.** Optimal Sub-Sequence Matching for the Automatic Prediction of Surgical Tasks. . AIME 2015 conference on Artificial Intelligence in Medicine; 2015 17-20 June 2015; Pavia (Italy). **Best paper award**
81. Beatriz Graciano Fouquier A, Bardinet E, Touvet F, Durrelman S, **Jannin P**, Yelnik J, Karachi C, Welter M, Fernandez Vidal S. Could Atlas-Based Preoperative Planning Simplify Electrophysiological Exploration During Deep Brain Stimulation Surgery ? Intertional conference of computer assisted radiology and surgery (CARS); 2015 June 2015; Barcelona Spain.
82. Essert C, Fernandez-Vidal S, Capobianco A, Haegelen C, Karachi C, Bardinet E, Marchal M, **Jannin P.** Statistical Study of Parameters for Deep Brain Stimulation Automatic Pre-Operative Planning of Electrodes Trajectories. International Conference on Information Processing in Computer-Assisted Interventions (IPCAI); 2015 June 2015; Barcelona, Spain.

· 2014

83. Tiziano D'Albis, Claire Haegelen, Caroline Essert, Sara Fernandez-Vidal, Florent Lalys, Pierre **Jannin** PyDBS: An automated image-processing workflow for planning and postoperative assessment of deep brain stimulation, International Conference of Computer Assisted Radiology and Surgery (CARS), Fukuoka (Japan) June 2014 **Best paper award**
84. M. Uemura, P. **Jannin**, M. Yamashita, M. Tomikawa, M. Hashizume, Procedural surgical skill assessment in laparoscopic training environments International Conference of Computer Assisted Radiology and Surgery (CARS), Fukuoka (Japan) June 2014
85. David Bouget, Florent Lalys, Pierre **Jannin**, Fast surgery type classification from 2D videos using a hierarchical Bag-Of-Words, International Conference of Computer Assisted Radiology and Surgery (CARS), Fukuoka (Japan) June 2014
86. Fabien Despinoy , Alonso Sanchez , Pierre **Jannin**, and Philippe Poignet., Comparative assessment of a novel optical human-machine interface for laparoscopic telesurgery., International Conference of Information Processing in Computer Assisted Interventions (IPCAI), Fukuoka (Japan) June 2014
87. Alexandre Bilger, Eric Bardinet, Sara Fernandez-Vidal, Christian Duriez, Pierre **Jannin**, Stephane Cotin (2014) Intra-operative Registration for Stereotactic Procedures driven by a combined Biomechanical Brain and CSF Model. In ISBMS-International Symposium on Biomedical Simulation. Strasbourg, France.
88. Alexandre Bilger, Eric Bardinet, Sara Fernandez-Vidal, Christian Duriez, Pierre **Jannin**, Stephane Cotin (2014) Intra-operative Registration for Deep Brain Stimulation Procedures based on a Full Physics Head Model. In MICCAI 2014 Workshop on Deep Brain Stimulation Methodological Challenges-2nd edition. Boston, USA.
89. Olga Dergachyova, Yulong Zhao, Claire Haegelen, Pierre **Jannin**, Caroline Essert (2014) Automatic Pre-operative Planning of DBS Electrodes Placement using Anatomic-Clinical Atlases. In MICCAI 2014 Workshop on Deep Brain Stimulation Methodological Challenges-2nd edition. Boston, USA

· 2012

90. Linte CA, Davenport KP, Cleary K, Peters C, Vosburgh KG, Edwards P, **Jannin** P, Peters TM, Holmes Iii DR, Robb RA., Augmented environments for minimally invasive therapy: implementation barriers from technology to practice., *Stud Health Technol Inform.* 2012;173:263-9., MMVR 2012, Newport Beach (USA) February 2012
91. Bouget D, Lalys F, **Jannin** P, Surgical tools recognition and pupil segmentation for cataract surgical process modeling, *Stud Health Technol Inform.* 2012; 173:78-84., MMVR 2012, Newport Beach (USA) February 2012
92. C. Essert, M. Marchal, S. Fernandez-Vidal, T. D'Albis, E. Bardinnet, C. Haegelen, M.-L. Welter, J. Yelnik, P. **Jannin**. Automatic Parameters Optimization for Deep Brain Stimulation Trajectory Planning. Proceedings of MICCAI workshop DBSMC 2012, Nice, France, Oct. 2012.
93. Maroua Mehri; Florent Lalys; Camille Maumet; Claire Haegelen; Pierre **Jannin** Analysis of electrodes' placement and deformation in deep brain stimulation from medical images *SPIE medical imaging*, Feb 2012, San diego, CA, United States. pp. 8316-32

· 2011

94. Florent Lalys, Claire Haegelen, Alexandre Abadie, and Pierre **Jannin**, Correlating clinical scores with anatomical electrodes locations for assessing deep brain stimulation, Springer, Lecture Notes in Computer Science, 2nd International Conference on Information Processing in Computer-Assisted Interventions, IPCAI'2011, Berlin (D) June 2011
95. H. Yang, M.A. Audette, A. Enquobahrie, J. Finet, S. Barre, P. **Jannin**, M. Ewend The Application of textbook-based surgical ontologies to neurosurgery simulation requirements *International Journal of Computer Assisted Radiology and Surgery*, 2011, (CARS) 2011, Berlin, (D)
96. Florent Lalys, David Bouget, Pierre **Jannin**, An application-dependent framework for the recognition of high-level surgical tasks in the OR, Springer, Lecture Notes in Computer Science, MICCAI conference, Toronto (CAN) September 2011
97. Germain Forestier, Florent Lalys, Laurent Riffaud, Brivael Trelhu, and Pierre **Jannin** Assessment of surgical skills using Surgical Processes and Dynamic Time Warping, 2nd M2CAI workshop at MICCAI conference, Toronto (CAN) September 2011

· 2010

98. Lalys, Florent, Riffaud, Laurent, Morandi, Xavier, et **Jannin**, Pierre
Surgical phases detection from microscope videos by combining SVM and HMM, LNCS, MICCAI workshop in Medical Computer Vision, MICCAI MCV'10, Beijing (China) September 2010
99. Lalys, Florent, Haegelen, Claire, Baillieul, M., Abadie, Alexandre, et **Jannin**, Pierre, Anatomico-clinical atlases in subthalamic Deep Brain Stimulation correlating clinical data and electrode contacts coordinates, 7th Annual World Congress for Brain Mapping and Image Guided Therapy, IBMISPS'2010
100. Lalys, Florent, Riffaud, Laurent, Morandi, Xavier, et **Jannin**, Pierre Automatic phases recognition in pituitary surgeries by microscope images classification, Springer, Lecture Notes in Computer Science, 1st International Conference on Information Processing in Computer-Assisted Interventions, IPCAI'2010, Geneva (CH) June 2010
101. P. **Jannin**, N. Le Moëllic, T. Morineau, X. Morandi, Assessment of medical imaging based on work domain analysis, CARS 2010: Computer Assisted Radiology and Surgery, Geneva (CH)
102. C. Essert, C. Haegelen, P. **Jannin**. Automatic Computation of Electrodes Trajectory for Deep Brain Stimulation. In proceedings of Medical Imaging and Augmented Reality (MIAR 2010), Beijing, China, Sept. 2010. LNCS 6326, p. 149-158. ISSN: 0302-9743, ISBN:978-3-642-15698-4, doi: 10.1007/978-3-642-15699-1_16.

· 2009

103. Florent Lalys, Claire Haegelen, Alexandre Abadie, and Pierre **Jannin**, Post-operative assessment in Deep Brain Stimulation based on multimodal images: registration workflow and validation, Proc. SPIE Medical Imaging 7261, 72612M (2009), DOI:10.1117/12.810475, San Diego (USA) February 2009
104. N. Geißler, G. Strauss, P. **Jannin**, W. Korb, Effects of automation to the surgeons. , *WC 2009, IFMBE Proceedings*, vol. 25, no. XIII, O. Dössel and W C. Schlegel, 2009 p. 954-957
105. Le Moëllic, N., Morineau, T., Morandi X., Diabira S., Riffaud L., Haegelen, C., Hénaux P.-L., **Jannin P.** (2009) Problem-solving during Pre-operative Surgical Planning. International Conference on Medical Image Computing and Computer Assisted Intervention. Workshop on modeling and monitoring of computer assisted interventions. MICCAI, London: 20-24 sept.
106. T. Neumuth, G. Strauss, J. Meixensberger, O. Burgert, P. **Jannin** Are live observations as accurate as video observations for Surgical Process Modeling? CARS 2009: Computer Assisted Radiology and Surgery, Proceedings Berlin (D)

· 2008

1. J. Traub, A. Ahmadi, N. Padoy, L. Wang, S.M. Heining, E. Euler, **P. Jannin**, N. Navab, Workflow Based Assessment of the Camera Augmented Mobile C-arm System International Workshop on Augmented Reality environments for Medical Imaging and Computer-aided Surgery (AMI-ARCS 2008), New York, NY, USA, September 2008
2. O. El Ganaoui, X. Morandi, S. Duchesne, P. **Jannin**. Preoperative Brain Shift: Case studies. *SPIE Medical Imaging 2008 – Visualization and image guided procedures*.
3. J. Ferré, B. Duhameau, P. **Jannin**, D.Drapier, B. Millet, J.-Y. Gauvrit, M. Carsin Dépression chronique et résistante : étude par IRM de perfusion par arterial spin labeling à 3T. *Journal of Neuroradiology* Volume 35, Issue 1 Pages 5-6
4. B. Duhameau, J.C. Ferre, B. Millet, P. **Jannin**, D. Drapier, Study of Chronic and Resistant Depression in RMN With Arterial Spin Labeling , 161TH ANNUAL MEETING of the AMERICAN PSYCHIATRIC ASSOCIATION, Washington, DC, May 3-8, 2008

· 2007

103. Neumuth T, Mudunuri R, **Jannin P**, Meixensberger J, Burgert O: *SWAN-Suite: The tool landscape for surgical workflow analysis*, in J. Troccaz, P. Merloz (Eds.): Computer Assisted Medical and Surgical Interventions (SURGETICA), 9782840235262, 2007, pp.199-204.

· 2006

104. Grunert R, Strauss G, Moeckel H, Hofer M, Poessneck A, Fickweiler U, Thalheim M, Schmiedel R, **Jannin P**, Schulz T, Oeken J, Dietz A, Korb W Elephant - An anatomical Electronic Phantom as simulation-system for otologic surgery. Conf Proc IEEE Eng Med Biol Soc. 2006;1:4408-11.
105. Paul P, Quere A, Arnaud E, Morandi X, **Jannin P**. A surface registration approach for video-based analysis of intraoperative brain surface deformations, MICCAI, Workshop AMI-ARCS, October 6th, 2006, Copenhagen (D).
106. Neumuth T, Schumann S, Strauß, Gero, **Jannin**, Pierre, Meixensberger, Jürgen, Dietz, Andreas, Lemke, Heinz U., Burgert, Oliver: Visualization Options for Surgical Workflows, *International Journal of Computer Assisted Radiology and Surgery*, vol. 1, no. sup. 1, 2006, pp. 438-440 (CARS) 2006, Osaka, Japan
107. Burgert, Oliver, Neumuth, Thomas, Lempp, Frieder, Mudunuri, Raj, Meixensberger, Jürgen, Strauß, Gero, Dietz, Andreas, **Jannin**, Pierre, Lemke, Heinz U.: Linking Top-level Ontologies and Surgical Workflows, *International Journal of Computer Assisted Radiology and Surgery*, vol. 1, no. sup. 1, 2006, 437-438 (CARS) 2006, Osaka, Japan
108. W. Korb, R. Grunert, O. Burgert, A. Dietz, S. Jacobs, V. Falk, J. Meixensberger, G. Strauß, C. Trantakis, H. Lemke and P. **Jannin**, An Assesment Model of the Efficacy of Image Guided Therapy , *International Journal of Computer Assisted Radiology and Surgery*, vol. 1, no. sup. 1, 2006, pp. 515 (CARS) 2006, Osaka, Japan.
109. R. Grunert, M. Hofer, H. Möckel, M. Thalheim, G. Strauß, J. Meixensberger, T. Schulz, P. **Jannin**, A. Dietz and W. Korb, Accuracy of anatomical Rapid Prototyping Models for preoperative surgical planning, *International Journal of Computer Assisted Radiology and Surgery*, vol. 1, no. sup. 1, 2006, pp. 499-500 (CARS) 2006, Osaka, Japan
110. Neumuth T, Durstewitz N, Fischer M, Strauß G, Dietz A, Meixensberger J, **Jannin P**, Cleary K, Lemke HU, Burgert O, Structured Recording of Intraoperative Surgical Workflows”. in S.C Horii, O.M.Ratib (Eds): *SPIE Medical Imaging 2006 – PACS and Imaging Informatics*, SPIE 2006

· 2005

111. J Cohen-Adad, P Paul, X Morandi, P **Jannin** Knowledge modeling in image-guided neurosurgery: application in understanding intraoperative brain shift, in S.C Horii, O.M.Ratib (Eds): *SPIE Medical Imaging 2005 – Visualization and image guided procedures*, SPIE 2005
112. Raïmbault M, Rakotomalala R, Morandi X, and **Jannin P**. Mise en évidence d'invariants dans une population de cas chirurgicaux, *Revue des Nouvelles Technologies de l'Information*, Cloppet F, Petit JM, Vincent N (eds), 2005, Editions Cépaduès, Toulouse, France pp 339-344.
113. Raïmbault M, Morandi X, and **Jannin P**, Towards models of surgical procedures: analyzing a database of neurosurgical cases, *SPIE Medical Imaging 2005*, Février 2005, San Diego USA [5748-13]
114. Paul P, Fleig O, Morandi X, and **Jannin P**, Virtualité augmentée en neurochirurgie guidée par l'image, *Surgetica* 2005, Janvier 2005, Chambéry, France.

· 2004

115. C. Grova, **P. Jannin**, I. Buvat, H. Benali, and B. Gibaud, Evaluation of registration of ictal SPECT/MRI data using statistical similarity methods," in *MICCAI 2004 - Part II*, vol. LNCS-3217, Lecture Notes in Computer Sciences, C. Barillot, D. R. Haynor, and P. Hellier, pages 687-695, Eds.: Springer-Verlag, 2004.
116. P. Paul, O. Fleig, S. Tranchant, and **P. Jannin**, Performance evaluation of a stereoscopic based 3D surface localiser for image-guided neurosurgery, in *MICCAI 2004 - Part II*, vol. LNCS-3217, Lecture Notes in Computer Sciences, C. Barillot, D. R. Haynor, and P. Hellier, Eds.: Springer-Verlag, 2004.
117. Raïmbault M, **Jannin P**, Morandi X, Riffaud L and Gibaud B, Models of surgical procedures for multimodal image-guided neurosurgery, *Stud Health Technol Inform.* 2003;95:50-5. PMID: 14663962

· 2003

118. Grova C, **Jannin P**, Buvat I, Benali H, Bansard JY, Biraben A and Gibaud B. From anatomic standardization analysis of perfusion SPECT data to perfusion pattern modelling. In *MICCAI 2003, Montreal (Canada), Lecture Notes in Computer Science*, volume 2879, pages 328-335. Springer Verlag, 2003.

· 2002

119. **Jannin P**, Fitzpatrick JM, Hawkes DJ, Pennec X, Shahidi R and Vannier MW. White paper: Validation of Medical Image Processing in Image-guided Therapy. In *Computer Assisted Radiology and Surgery 2002*, Elsevier Science H.U. Lemke and al. Editors 2002.
120. Aubert-Broche B, Grova C, **Jannin P**, Buvat I, Benali H and Gibaud B. Detection of inter-hemispheric asymmetries of brain perfusion in SPECT, *MICCAI 2002 Tokyo (Japan)*, Lecture Notes in Computer Science, volume 2488-I, pages 500-507. Springer 2002.
121. Scarabin JM, Broche B, Grova C, Argaud C, Schaeffer M and **Jannin P**. Perfusion weighted MRI: A new tool for epilepsy surgery. In *Computer Assisted Radiology and Surgery 2002*, Elsevier Science H.U. Lemke and al. Editors 2002.
122. Grova C, **Jannin P**, Biraben A, Buvat I, Benali H, Bernard AM, Scarabin JM and Gibaud B. Validation of MRI/SPECT similarity-based registration methods using realistic simulations of normal and pathological SPECT data. In *Computer Assisted Radiology and Surgery 2002*, Elsevier Science H.U. Lemke and al. Editors 2002.
123. **Jannin P**, Raïmbault M, Fleig OJ, Morandi X, Scarabin JM and Gibaud B. Neuronavigation multi-modalité. In J. Troccaz and P. Mermoz, editors, *Surgetica, Grenoble*, pages 174-180, 2002.
124. Raïmbault M, **Jannin P**, Morandi X, Riffaud L and Gibaud B. Modèles de procédures chirurgicales pour la neurochirurgie guidée par l'image. In J. Troccaz and P. Mermoz, editors, *Surgetica, Grenoble*, pages 217-223, 2002.

· 2001

125. **Jannin P**, Raïmbault M, Morandi X and Gibaud B. Modeling Surgical Procedures for Multimodal Image-Guided Neurosurgery, *MICCAI 2001 Utrecht The Netherlands*, W Niessen and M Viergever (Eds), Lecture Notes in Computer Science, 2208, pp 565-572.
126. Grova C, Biraben A, Scarabin JM, **Jannin P**, Buvat I, Benali H and Gibaud B. A methodology to validate MRI / SPECT registration methods using realistic simulated SPECT data. *MICCAI 2001 Utrecht The Netherlands*, W Niessen and M Viergever (Eds), Lecture Notes in Computer Science, 2208, pp 275-282.

127. **Jannin P**, Raimbault M, Morandi X, Seigneuret E and Gibaud B. Design of a neurosurgical gestures model for multimodal image guided surgery", Computer Assisted Radiology and Surgery 2001 Elsevier Science H.U. Lemke and al. Editors, pp 102-107.

128. Fleig OJ, Devernay F, Scarabin JM and **Jannin P**. Stereoscopic reconstruction of the surgical field in neurosurgery". Computer Assisted Radiology and Surgery, 2001 Elsevier Science H.U. Lemke and al. Editors, pp 259-264.

· 2000

129. **Jannin P**, Fleig OJ, Seigneuret E, Morandi X, Raimbault M and Scarabin JM. Multimodal and Multi-Informational Neuro-Navigation , Computer Assisted Radiology and Surgery 2000 (San Francisco/USA) , H.U. Lemke and al. Editors, pp 167-172.

· 1999

130. **Jannin P**, Grova C, Schwartz D, Barillot C and Gibaud B. Visual qualitative comparison between functional neuro-imaging (MEG, fMRI, SPECT), Computer Assisted Radiology and Surgery 1999, H.U. Lemke and al. Editors pp 238-243.

131. Scarabin JM, Croci S, **Jannin P**, Romeas R, Maurincomme E, Behague M and Carsin M. A new concept of stereotactic room with multimodal imaging, Computer Assisted Radiology and Surgery 1999, H.U. Lemke and al. Editors pp 841-845.

· 1997

132. **Jannin P**, Bouliou A *et al.* Visual matching between real and virtual image guided neurosurgery , SPIE Medical Imaging. 1997, Vol 3031, p518-526.

133. Scarabin JM, **Jannin P**, Schwartz D and Morandi X. MEG and 3D Navigation in Image Guided Neurosurgery », Computer Assisted Radiology and Surgery 1997, H.U. Lemke and al. Editors, pp. 767-771.

· Before

134. **Jannin P**, Scarabin JM, Rolland Y and Schwartz D, A real 3D approach for the simulation of neuro-surgical stereotactic act, SPIE Medical Imaging VIII : Image Capture, Formatting, and Display, Yongmin Kim, Editor, Vol. 2164, 1994, pp 155-166.

135. **Jannin P**, Mével G, Gandon Y and Cordonnier E. Design of user interface in medical imaging : lessons of a 3D application definition, Medical Imaging VI : Image Capture, Formatting, and Display, Yongmin Kim, Editor, Newport Beach, California, 1992 Proc. SPIE, Vol. 1653, p 410-421.

136. **Jannin P**, Gibaud B, Barillot C, Scarabin JM and Bouliou A. Octree encoding with volume and surface information in medical imaging, 9ème Conférence annuelle de l'Engineering in Medicine and Biology Society" Boston, 1987.

· Other national conference publications

137. Gibaud B, Penet C, **Jannin P**. OntoSPM: a core ontology of surgical procedure models. Surgetica 2014. Chambéry (France)

138. Garraud C, Gibaud B, Penet C, Cazuguel G, Dardenne G, **Jannin P**. An ontology-based software for the analysis of surgical process model. Surgetica 2014. Chambéry (France)

139. Germain Forestier; Florent Lalys; Laurent Riffaud; Brivael Trelhu; Pierre **Jannin**, Clustering de séquences d'activités pour l'étude de procédures neurochirurgicales 12e Conférence Internationale Francophone sur l'Extraction et la Gestion des Connaissances, Feb 2012, Bordeaux, France. pp. 489-494

140. Florent Lalys, Claire Haegelen, Maroua Mehri, Pierre **Jannin**, Anatomico-Clinical Atlases in SubThalamic Deep Brain Stimulation: correlating clinical data and electrode contacts coordinates, Troisième réunion annuelle de l'ITMO Technologies pour la Santé, 2011 October 3-4, Tours

141. Florent Lalys, Laurent Riffaud, David Bouget, Pierre **Jannin**, Recognition of high-level surgical tasks in the OR, Troisième réunion annuelle de l'ITMO Technologies pour la Santé, 2011 October 3-4, Tours

142. Claire Haegelen, Florent Lalys, Pierrick Coupé, Vladimir Fonov, D. Louis Collins, Pierre **Jannin**, Segmentation of deep brain structures on MRI of patients with Parkinson's disease, Troisième réunion annuelle de l'ITMO Technologies pour la Santé, 2011 October 3-4, Tours

143. Florent Lalys, Laurent Riffaud, Xavier Morandi, Pierre **Jannin** Analyse de vidéos de microscopes chirurgicaux pour la reconnaissance automatique d'étapes en combinant SVM et HMM, ORASIS 2011
144. Haegelen, Claire, Lalys, Florent, **Jannin**, Pierre, Abadie, Alexandre, Collins, D. Louis, Brassier, Gilles, et Morandi, Xavier

Validation de la Segmentation des Ganglions de la Base sur un Template IRM 3 Tesla, Société de Neurochirurgie de Langue Française, SNCLF, 2010

145. Morineau, T., Le Moëllic N, Morandi, X., & **Jannin P.** L'imagerie médicale en neurochirurgie : du réalisme scientifique au réalisme écologique. In F. Douguet, T. Fillaut & F.-X. Schweyer (Eds). La santé par et à travers l'image. Rennes : Presses de l'EHESP. 2009
146. Moëllic N, Morandi, X., **Jannin**, & Morineau, T. L'effet intermédiaire dans l'expertise médicale et la formation de chunks: une interprétation écologique. Journées EPIQUE, Nice, sept 2009.
147. Brivael Trelhu, Florent Lalys, Laurent Riffaud, Xavier Morandi, **Pierre Jannin**: Analyse de données pour la construction de modèles de procédures neurochirurgicales. *EGC 2009*: 427-432
148. Morineau T, Le Moëllic N, Morandi X, **Jannin P.** La capacité de l'imagerie médicale en neurochirurgie à rendre compte des contraintes du domaine de travail. Journée "Images et acteurs du champ de la santé", UBO, Brest : 4 avril 2008.
149. J-C Ferré, B Godey, P **Jannin**, M Carsin, B Carsin-Nicol, E Le Rumeur Activation du cortex auditif primaire par IRMf silencieuse, *Journées Françaises de Radiologie Paris 2004*
150. Scarabin JM, Croci S, **Jannin P**, Romeas R, Maurincomme E, Behague M and Carsin M. A new concept of stereotactic room with multimodal imaging. In XIIth Meeting of the World Society of Stereotactic and Functional Neurosurgery, Lyon, 1997.
151. Grova C, **Jannin P**, Le Rumeur E and Morandi X. Fusion de données orientée vers la comparaison MEG/IRMf : une approche qualitative. In Réunion Scientifique inaugurale de la Société d'anatomie fonctionnelle cérébrale (SAFC), ENST, Paris, 1999.
152. Grova C, **Jannin P**, Le Rumeur E, Morandi X and Gibaud B. Comparaison qualitative de données anatomo-fonctionnelles (MEG/IRMf) pour la réalisation d'une cartographie anatomo-fonctionnelle. In 10ième Forum du jeune chercheur en Génie Biologique et Médical, Tours, 2000.
153. Grova C, **Jannin P**, Biraben A and Scarabin JM. Fusion de données anatomo-fonctionnelles pour l'aide au diagnostic des épilepsies pharmaco-résistantes: problème de la validation. In Journées Françaises de l'épilepsie, Epilepsies, 12, pages 256-257, 2000.
154. Grova C, **Jannin P**, Biraben A and Scarabin JM. Fusion de données anatomo-fonctionnelles pour l'aide au diagnostic des épilepsies pharmaco-résistantes: problème de la validation. In Réunion de la Société Française de Biophysique et de Médecine Nucléaire (SFBMN), 2000.
155. Grova C, **Jannin P**, Biraben A, Scarabin JM, Benali H and Gibaud B. Generation of realistic models of ictal SPECT using Monte-Carlo simulations. In Human Brain Mapping, Neuroimage, 13 (6), page S137, 2001.
156. Grova C, **Jannin P**, Biraben A, Scarabin JM, Buvat I, Benali H and Gibaud B. Méthodologie de validation de méthodes de recalage TEMP / IRM à l'aide de simulations réalistes de données TEMP. In 11ième Forum Des Jeunes Chercheurs En Génie Biologique et Médical, Compiègne, 2001.
157. Grova C, **Jannin P**, Scarabin JM and Gibaud B. Multimodal data fusion: state of the art, issues and perspectives. Application: SPECT/MRI data fusion in epilepsy. In Neurophysiologie Clinique / Clinical Neurophysiology, 32 (2), page 9, 2001.
158. Broche B, Grova C, **Jannin P**, Buvat I, Benali H and Gibaud B. Détection d'asymétries inter-hémisphériques sur la perfusion cérébrale en TEMP. In Réunion annuelle de la Société d'Anatomie Fonctionnelle Cérébrale, Paris, 2002.
159. **Jannin P**, Fleig OJ, Morandi X, Riffaud L, Raimbault M, Scarabin JM, and Gibaud B. Neuronavigation multi-modalité. In Réunion annuelle de la Société d'Anatomie Fonctionnelle Cérébrale, Paris, 2002.
160. Morandi X, Raimbault M, Riffaud L, Gibaud B, Seigneuret E and **Jannin P** Modélisation de procédures chirurgicales pour la neurochirurgie guidée par l'image. In Société de Neurochirurgie de Langue Française, Paris, 2002.
161. Le Rumeur E, Taussig D, Morandi X, Trebon P, Riffaud L, Seigneuret E, **Jannin P**, Allard M. Cartographie et latéralité des aires corticales du langage : étude comparative par IRM fonctionnelle chez des volontaires sains et des patients porteurs de lésion périsylvienne et/ou d'épilepsie chronique partielle pharmaco-résistante. 10^{ème} congrès du Groupe de Recherche sur les Applications du Magnétisme en Médecine; Angers, Février 2003

- **Technological transfert and industrial collaboration**

- *Software protected at APP*

- AdCAS (2016)
- Park-MedAtlas (2014) IDDN.FR.001.440011.000.D.P.2014.000.31230
- pyDBS (2013) IDDN.FR.001.490012.000.S.P.2013.000.31230
- ProcSide (Surgical Process Modeling Acquisition software): 2012
- Vignes (image guided neurosurgery): 2008
- SIM3D (3D visualization), SIMMORPHO (segmentation), SIMAP (registration and visualization of both pre and intra operative images), SIMIV (display and interaction in medical imaging) : 1997,1998

- *Grants*

Industrial collaboration and grants :

- Carl Zeiss : 4 3-year PhD fundings:1998, 2001, 2009, 2012
- Medtronic SNT : 1 Ph D funding in 2003
- Adicor Rennes : 1 M Sc funding

Public grants :

- National "Investissement d'Avenir" IRT B-COM (2013-2016)
- National "Investissement d'Avenir" LabEX CominLabs on Surgical Process Modeling (2013-2016) and (2016-2019)
- National ANR "Projet blanc" on Planning for Deep Brain Stimulation (2011-2014)
- ODL INRIA for software development in Image Guided Neurosurgery (2008-2010)
- Projet de Recherche d'Intérêt Régional « PlogICI » (2004-2006)
- RNTS « Plamaivic » (2002-2004) : Validation on medical image processing
- Région Bretagne on multimodal neuronavigation (99-00)

Private Grant

- pyDBS2 (2015-2016) INCR
- M-DBS (2016-2020) INCR

- *Development of medical applications used in clinical routine*

Design and development of image guided neurosurgery systems used at the Neurosurgery department of Rennes's hospital (France),

- Unix software for 3D MR and CT image guided stereotactic biopsies used from 1993 until 2003,
- Unix software for 3D MR image guided depth electrodes implantation (SEEG) used from 1995,
- Multimodal neuronavigation (planning and surgery) used from 2000

- **Scientific animation**

- *Invited lectures*

- 2016

162.P. Jannin "Webinar from the International Society for Simulation in Healthcare" - "Analyzing and Modeling Surgical Processes: Application for Simulation" on Nov 3rd 2016

163.P. Jannin "MICCAI CARE Workshop (Computer Assisted Robotic Endoscopy)" - "Surgical Process Modeling: Methods and Applications" on October 17th 2016 Athens, Greece

164.P. Jannin "Asian Conference on Computer Aided Surgery ACCAS 2016" - "Surgical Skill Analysis and Modeling" on October 14th 2016, in Daejeon, Korea

165.P. Jannin "IROS 2016" - "Computer Aided Surgery" on October 13th 2016, in Daejeon, Korea

166.P. Jannin "Hamlyn 2015 Winter School" - "Model-Guided Neurosurgery: Methods and Applications for Deep Brain Simulation" on December 8 2015, at Imperial College London, GB

- 167.P. Jannin Première conférence "Surgical Data Science" - "Surgical Skills Modeling and Monitoring" on June 8 2016, Heidelberg, Allemagne
- 168.P. Jannin "Surgical Skills Modeling and Monitoring" on June 8 2016, Heidelberg, Allemagne
- 169.P. Jannin "The Hamlyn Symposium on Medical Robotics - Workshop on Surgical Imaging, Guidance and Augmented Reality" - "Surgical Imaging and Data for Deep Brain Stimulation" on June 28 2016, at Imperial College London, GB
- 170.P. Jannin "ICCAS Digital Operating Room Summer School" - "Surgical Process Modeling: Methods and Applications" on September 15th 2016 Leipzig, Germany
- 171.P. Jannin "ICCAS Digital Operating Room Summer School" - "Surgical Data Science and DPM for Decision Making Support and Knowledge Discovery in Deep Brain Stimulation" on September 16th 2016 Leipzig, Germany
172. P. Jannin ICCAS Summer School "Surgical Skills Modeling and Monitoring" on June 8 2016, Heidelberg, Allemagne
173. « Training of Surgical Procedural Knowledge » Seminar at Kyushu University, Fukuoka (Japon), 18/05/2016
174. "Surgical Process Modeling: Methods and Applications" January 14 2016, UFR27 : Mathématiques et Informatique Université Paris 1 Panthéon Sorbonne, Paris, France

- 2015

175. "Model-Guided Neurosurgery: Methods and Applications for Deep Brain Simulation" Hamlyn 2015 Winter School on Surgical Imaging and Vision - December 8 2015, at Imperial College London, GB
176. "Surgical Skills Modeling and Monitoring" 7th Summer School on SURGICAL ROBOTICS - september 8 2015, Montpellier, FRANCE
177. "Model-Guided Neurosurgery: Methods and Applications for Deep Brain Simulation" 3rd Biomedical Image Analysis Summer School : Modalities, Methodologies & Clinical Research - Paris, July 6-10, 2015, FRANCE
178. « Model Guided Surgery » International Joint Conference on Medical Innovation, 4th International Workshop of HALIDAT-GC, 2nd International Symposium of WaFLES, Chiba University, Chiba (Japan), 06/03/2015
179. « Models for Surgical Assistance and Evaluation: Applications in Neurosurgery » Seminar at Université de Montpellier 2, LIRRM, Montpellier (France), 18/03/2015

- 2014

180. «Modélisation des Processus Chirurgicaux: *Surgical Process Modelling*» GDR STIC-Santé, GT «Modélisation et Simulation, Paris (F) 05/06/2014
181. « Surgical Skill Models for Computer Assisted Surgery » SINTEF and Dept. of Medical Technology, NTNU (Université Technologique de Trondheim), Trondheim (N), 21/05/2014
182. « Images et modèles pour assister la préparation et l'évaluation de la stimulation cérébrale profonde : le projet ACouStiC » TECHNOFERENCE # 8 E-Santé, Pole de compétitivité Images et Réseaux, Laval (F) 27/02/2014

- 2013

183. « Surgical Skill Models for Computer Assisted Surgery » Hamlyn Distinguished Lecture Series, The Hamlyn Centre, Imperial College London (UK), 26/11/2013
184. « Surgical Skill Models in Computer Assisted Surgery » MITI, Klinikum rechts der Isar Technische Universität München, Munich (Germany), 20/11/2013
185. « Models for Surgical Assistance and Evaluation » IRCAD, Strasbourg (France), 08/11/2013

186. « Modélisation des Compétences Chirurgicales » CGEJET, Ministère de l'industrie, Paris (France), 09/10/2013
187. « Surgical Process Modeling for Intelligent CAI: Methods and Applications » Invited talk at The 6th International Workshop on Medical Imaging and Augmented Reality, MIAR 2013, Nagoya, Japan September 22 2013
188. « Introduction to Workflow Modeling » International Conference of Computer Assisted Radiology and Surgery, Heidelberg (Allemagne), 27/06/2013
189. « Models for Surgical Assistance and Evaluation: Applications in Neurosurgery » Seminar at Kyushu University, Fukuoka (Japon), 05/06/2013
190. «Surgical Process Modeling» Conference Medicine Meets Virtual Reality, Newport Beach (USA), February 2013
191. «Surgical Process Modeling: Methods And Applications « Scuola Di Dottorato In Scienze Della Vita E Della Salute, Dottorato In Tecnologie Applicate Alle Scienze Chirurgiche, University Of Torino, February 1st 2013
- 2012
192. «Surgical Process Modeling: Where are we ? Where do we go ?» ICCAS Leipzig Forum CAS, Leipzig, Germany, October 8 2012
193. «Knowledge Models for Deep Brain Stimulation» First International Symposium on Deep Brain Connectomics, Clermont-Ferrand, France, September 28-29 2012
194. «Model Based Computer Assisted Surgery: A New Paradigm for Surgical Decision Making Support» Invited Plenary Talk at "51st Annual Conference of Japanese Society for Medical and Biological Engineering, Fukuoka, Japan, May 12th, 2012
195. «Surgical Process Modeling: Methods and Applications» First International Workshop on Cognitive Robotics in Surgery, Heidelberg, Germany, January 26-28 2012
- 2011
196. «Assessment methodology in computer assisted surgical interventions « Conference Medicine Meets Virtual Reality, Newport Beach (USA), February 2011
197. «Surgical Process Models» European Science Foundation Exploratory Workshop on IMAGE-GUIDED LAPAROSCOPIC THERAPIES, June 15th , Caceres (Spain)
198. «Management and Assessment of OR Systems Integration via Surgical Process Models » 1st Educational Course on Computer Surgery MICARS, October 20-21, 2011, Barcelona (Spain)
- 2010
199. «Model Guided Neurosurgery» Joint Technical Lecture, IEEE EMB/RA/CS Societies Chapter of IEEE Kingston Section and School of Computing PerKLab at Queen's University, Kingston, Ontario, Canada, July 14, 2010
200. «Model Guided Neurosurgery» Thayer School of Engineering, Dartmouth College, Hanover, NH, USA, March, 5th, 2010
201. « An Introduction to Surgical Process Modeling» Montreal Neurological Institute, Montreal, Canada, February, 2nd, 2010
- 2009
202. « Models in Deep Brain Stimulation» Montreal Neurological Institute, Montreal, Canada, November 2009
203. « Models in Computer Assisted Neurosurgery» 2nd INRIA-NIH Biomedical Computing Workshop, Paris
- 2008
204. «Model Guided Therapy» Computer Assisted Radiology and Surgery. June 25, 2008, Barcelona (E)
- 2007

205. "Model guided Surgery" and "Validation in medical image processing" Montreal Neurological Institute, Montreal, Canada, July 2007
206. "Modeling surgical procedures". Workshop on Surgical Workflows, Computer Assisted Radiology and Surgery. Saturday, June 30, 2007, Berlin (D)
- 2006
207. "Models of surgical procedures in Computer Assisted NeuroSurgery", IST 2006, November 22, Helsinki
208. "From intuitive to scientific computer assisted neurosurgery". Computer Assisted Radiology and Surgery. Saturday, July 1, 2006, Osaka (J)
209. "Validation of Medical Image Processing". Joint Workshop on Intelligent Media Integration and Nagoya-MIC. Tuesday, July 4, 2006, Nagoya (J)
210. "Information Guided Neurosurgery: From Multimodal Images to Surgical Knowledge". Joint Workshop on Intelligent Media Integration and Nagoya-MIC. Tuesday, July 4, 2006, Nagoya (J)
211. "Models of surgical procedures in computer assisted neurosurgery". Annual Meeting of the International Brain Mapping and Intra operative Surgical Planning Society, Clermont Ferrand (F) Thursday, September 7, 2006
212. Processus neurochirurgical assisté par l'information et la connaissance. 13emes Rencontres INRIA – Industrie. Les Sciences et Technologies de l'Information et de la Communication au service de la Médecine. Rocquencourt, 24 janvier 2006
213. La Neurochirurgie Assistée par l'Information et la Connaissance : Arguments pour la modélisation des procédures, Société Française de Neurochirurgie, Meeting of the French neurological surgeons College, 29 Mars 2006 Caen
- 2005
214. "From Intuitive to Scientific Computer Assisted Surgery". 4th Leipzig Forum CAS, December 12th, 2005, Leipzig (D)
215. "Validation of medical image processing for computer aided surgery: terminology and methodology", Eight Israeli Symposium on Computer-Aided Surgery, Medical Robotics, and Medical Imaging (ISRACAS), Thursday May 19, 2005, Medical Center Auditorium, Rabin Medical Center (Bellinson) Petach Tikva, ISRAEL
- 2004-2003
216. « Fusion d'images réelles et virtuelles en neurochirurgie » Atelier des Technologies de l'Information et de la Communication (TIC) et de la Santé, 14 septembre 2004, ESIEA, Laval, France
217. « Validation in Medical Image Processing » 2nd Forum « Computer und Roboter-Assistierte Chirurgie », Leipzig, 13-14 october 2003
218. « Validation of image processing in image guided therapy » at the international session of the German Congress for Computer Assisted Surgery, CURAC 2003, Nuremberg, November 2003
219. « Principes du recalage d'images et introduction à la fusion », French Forum on Research in Medical Imaging, Journées de Recherche en Imagerie Médicale, Forum des Jeunes Chercheurs en GBM, INSERM, Nantes, May 2003
220. « Validation en traitement d'images médicales » Action Spécifique du CNRS ICOMIM « Intégration de Connaissances et Modélisation en Imagerie Médicale », Paris, June 2003
- Before
221. « Image Guided Surgery in France » British Congress of Radiology. UK Radiological Congress, Birmingham, UK, June 2002
222. « Image Guided Surgery in France and in Rennes », Deutsches Krebsforschungszentrum DKFZ (German Cancer Research Center), Heidelberg, Germany, October 2002
223. « MEG, Data Fusion and Neurosurgery: Rennes approach », European Workshop on MEG and EEG, Erlangen, Germany, May 1999
224. « Multimodal data fusion in medical imaging », 14th Symposium of the BVZF/SBPH, Bruges, Belgium, October 1998
225. « Fusion de données multimodalité en imagerie médicale », Congrès de Radiophysique, Lille, January 1997

- *Multicenter projects*
 - Manager of the validation part for image registration in the national RNTS “Plamaivic” project (2002-2004)
- *Organization of workshops/conferences (non exhaustive):*
 - Co-General chair of the IPCAI from 2010 international conferences (LNCS proceedings)
 - President of the 20th Annual Conference of the International Society for Computer Aided Surgery Heidelberg (Germany) June 2016
 - President of the 19th Annual Conference of the International Society for Computer Aided Surgery Barcelona (Spain) June 2015
 - Program chair of the 7th International Conference on Medical Imaging and Augmented Reality, MIAR 2016, August 24-26, 2016, University of Bern, Bern, Switzerland.
 - Congress Organizing and Program Committee member of Computer Assisted Radiology and Surgery from 2005
 - Co-chair of the 2013 MICCAI workshop and tutorial committee (Nagoya, Japan)
 - Organization, management and co-chair of “1st ISCAS SURGICAL WORKSHOP ON COMPUTER-AIDED ENT AND MAXILLOFACIAL SURGERY”(CME credits) at CARS 2009 in Berlin (D)
 - Organization, management and co-chair of “2nd ISCAS SURGICAL WORKSHOP ON NeuroSURGERY”(CME credits) at CARS 2010 in Geneva
 - Organization, management and presentation of a workshop (2 hours) on “Validation in medical image registration” at SPIE Medical Imaging 2007 conference in San Diego
 - Organization, management and co-chair of “Modeling and Monitoring of Computer Assisted Interventions (M2CAI)” at MICCAI from 2009
 - Program Committee member of SPIE Medical Imaging and Medicine Meets Virtual Reality (MMVR) conference
 - Program Committee member of ICS4Med 2011 - 1st International Workshop on Interactive Computing Systems for Medicine and Health Care
- *Journals*
 - Area editor of “International Journal for Computer Aided Radiology and Surgery” (Springer)
 - Editorial board member of “Computer Aided Surgery” (Informa publisher)
 - Reviewer and associate editor for IEEE Transactions on Medical Imaging, IEEE Engineering in Medicine and Biology, IEEE Transactions in Information Technology in Biomedicine, Medical Image Analysis, Academic Radiology, American Journal of NeuroRadiology, Neuroimage, IEEE Transactions in Biomedical Engineering, IMIA Yearbook of Medical Informatics and for international conferences CARS, SPIE Medical Imaging, MICCAI, Asian Conference on Computer Vision (ACCV), and IPCAI
- *Miscellaneous*
 - SPIE courses: “Validation in Medical Image Processing” SPIE 2008, 2009 and 2010 at SPIE Medical Imaging San Diego-Orlando (USA)
 - Tutorial at Computer Assisted Radiology and Surgery. “Tutorial on Assessment of Medical Image Processing for CAS - Validation in Medical Image Processing Tools for CAS” 2008, Barcelona (E), 2009, Berlin (D), 2010 Geneva, 2011 Berlin (D)
 - Management and Chair of 4 special sessions on Validation in Medical Image Processing at the CARS conference Computer Assisted Radiology and Surgery (CARS 2002 Paris, CARS 2003 London, CARS 2004 Chicago, CARS 2005 Berlin)
 - Organization, management and presentation of a tutorial (4 hours) on Validation in medical image processing at MICCAI 2003 conference in Montreal
 - Member of the patent and technological transfer committee of the University of Rennes from 2002
- Project reviews
 - Expert for a working group on new neurosurgical procedures accreditation at the ANAES governmental organization. Paris, May 2004
 - Expert for ANR Call “Technologies pour la Santé” 2007

- Expert for ANR Call “Blanc” 2011
- Expert for Région Rhone-Alpes 2012
- Expert for BPI France 2014
- Expert Wellcome Trust 2016
- Expert German Research Foundation AO SFB 2015
- Expert Swiss National Science Foundation 2015
- Expert IBSAM AO Ville de Brest 2015

Large-public Communication

- *Media coverage*
 1. « Immersion au coeur de la réalité mixte », Sciences et Avenir, March 2016
 2. « Neurochirurgie assistée par ordinateur », Ouest-France, March 2016
 3. « Neurochirurgie guidée en 3D », Rennes Métropole, Feb-March 2016
 4. « Têtes chercheuses - Pierre Jannin: Créateur d'outils “intelligents” pour les neurochirurgiens », Sciences et Santé, Nov. 2014
 5. Article de vulgarisation "Fusion d'images : des outils au service des neurochirurgiens" pour INTERSTICES, journal web de l'INRIA Juin 2006
- *Invited talks*
 1. Festival Utopiales Table ronde « Le voyage fantastique », Nantes, Octobre 2016
 2. Inserm Science tour, Rennes, Octobre 2014
 3. Présentations en Lycée: Lycée Pasteur 1ère S, Nov 2015 Paris, Lycée Victor et Hélène Basch 2nde Rennes Mars 2012
 4. Présentation à la «Fête de la Science» 10/2013, Rennes
 5. Présentation à la «Fête de la Science» «Quartiers des Sciences», Table ronde «L'imagerie et le numérique au service de la santé» 15/10/2011, Paris
 6. Présentation sur la Fusion d'images médicales pour la neurochirurgie 15 et 16 Octobre 2005 pour les 30 ans de l'IRISA