

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 more than 30 year experience in designing and developing computer assisted surgery systems. His research topics include surgical data science, surgical robotics, image-guided surgery, augmented and virtual reality, modeling of surgical procedures and processes, study of surgical expertise, surgical training and validation methodology in medical image processing. He authored or co authored more than 100 peer-reviewed international journal papers. He was the President of the International Society of Computer Aided Surgery (ISCAS) from 2014 to 2018 and the General Secretary from 2004 to 2014. He was board member of the MICCAI society from 2014 to 2018. He is an elected MICCAI Fellow since 2018. He is senior member of the SPIE society. He is the Editor in Chief of Computer Assisted Surgery journal (Taylor&Francis). He is Deputy Editor for the International Journal of Computer Assisted Radiology and Surgery (Springer). 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 was President of CARS 2019 conference in Rennes (France) and Program Co-Chair of MICCAI 2017 in Quebec (Canada). He is co-founder of IPCAI conferences and was Co-General Chair from 2010 to 2016.

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Researcher ID F-5538-2010

citations : 5071; Google scholar h-index: 39 (Oct 2021)

Pierre JANNIN

SITUATION

Nationality: French

Date of Birth: 26 April 1963

3 children

Administrative Position: INSERM Research Director

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,

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ORCID : <https://orcid.org/0000-0002-7415-071X>

Researcher ID F-5538-2010

RESEARCH INTERESTS:

- Computer assisted surgery
- Surgical Data Science
- AI: Machine and Deep Learning, Ontologies
- Augmented reality and virtuality
- Medical image processing
- Surgical skill simulation, training and evaluation
- Surgical process models
- Surgical robotics
- 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
July 2019	Visiting Professor	University of Verona	Verona, Italy
April 2018	Visiting Professor	The University of Tokyo	Tokyo, Japan
July-August 2017	Visiting Professor	Robarts Research Institute, University of Western Ontario	London, Ontario, Canada
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, Simulation for Surgical Training, Surgical Data Science:

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

SCIENTIFIC ACTIVITIES

- President of the International Society for Computer Aided Surgery (ISCAS) from 2014 to 2018 and General Secretary from 2004 to 2014
- Board member of the MICCAI Society from 2014 to 2018
- Editor in Chief of Computer Assisted Surgery journal (Taylor&Francis) from 2020

- Area editor of International Journal for Computer Aided Radiology and Surgery (Springer)
- 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.
- 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
- Reviewing for international conferences: MICCAI, CARS, SPIE, ACCV, MMVR, ...
- Congress Organizing Committee, Program committee and executive committee member of Computer Assisted Radiology and Surgery conference (CARS)
- Program Co-Chair of MICCAI 2017 (Quebec City, Canada)
- President of the Annual Conferences of the International Society for Computer Aided Surgery from 2014 to 2018
- Co-chair of the 2013 MICCAI workshop and tutorial committee (Nagoya, Japan)
- 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.
- 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

- Lena Maier-Hein, Swaroop S. Vedula, Stefanie Speidel, Nassir Navab, Ron Kikinis, Adrian Park, Matthias Eisenmann, Hubertus Feussner, Germain Forestier, Stamatia Giannarou, Makoto Hashizume, Darko Katic, Hannes Kenngott, Michael Kranzfelder, Anand Malpani, Keno März, Thomas Neumuth, Nicolas Padoy, Carla Pugh, Nicolai Schoch, Danail Stoyanov, Russell Taylor, Martin Wagner, Gregory D. Hager and Pierre **Jannin** Surgical data science for next generation interventions NATURE BIOMEDICAL ENGINEERING, VOL 1, SEPTEMBER 2017, 691–696
- 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):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, 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 FROM SUPERVISED RESEARCHERS AND STUDENTS

- 2022: Basic Scientist Travel Award of the ESSKA Congress- European Society of Sports Traumatology, Knee Surgery, and Arthroscopy Alexandre Tronchet: « Virtual reality simulation in the learning of a procedure in arthroscopic knee surgery: diagnosis and partial meniscectomy »

- 2019: Award of the French Academy of Surgery for Innovation in Computer Aided Interventions. Clément Baumgarten: « AI in Functional Neurosurgery »
- 2016: Best paper award on clinical impact at the Information Processing in Computer Assisted Interventions international conference (IPCAI) Heidelberg, Germany June 2016 Olga Dergachyova
- 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: Clément Baumgarten
- 2016: Third place award at M2CAI workshop at MICCAI 2016 in Athens for the challenge on surgical phase recognition on endoscopic videos, Sep 2016: Olga Dergachyova
- 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 »: Germain Forestier
- 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

From 2006	Manager of a lecture unit in M.Sc. 2 Signal and Images in Biology and Medecine on “Image Guided Surgery” One week per year : “Image-Patient registration: methods and validation” 3h, “Surgical process models” 3h, “Intraoperative visualization” 3h, « Simulation for Surgical training » 1h, « Surgical Data Science » 1h
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

- Current: T. Casy, T. Martin, A. Tronchet
 - Previous: M. Leloux (2018-2021), D. Tanguy (2019-2021), M. Peralta (2017-2020), Marie-Stephanie Bracq (2016-2019) : Co supervision with CRPCC (Univ. Rennes 2), Gurvan Lecuyer (2016-2019), P.L. Henaux (2015-2019), O. Dergachyova (2014-2017), F. Monge (2012-2016), A. Huaulme, (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	<p>> 40 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 , ...</p>
PhD defense	<p>Eléonore Ferrier-Barbut (Sorbonne Université) Février 2022 (Président), Tong Yu (Université de Strasbourg) Décembre 2021 (Rapporteur), Virginia Mamone (University of Pisa, Italy) Juin 2021 (Rapporteur), Allan Javaux (University of Leuven, Belgium) Septembre 2020 (Rapporteur), Giacomo De Rossi (University of Verona, Italy) May 2020 (Rapporteur), Gauthier Gras (ICL, London, UK) Jan 2019 (Rapporteur), Ninon Candalh-Touta (Sorbonne Université, Paris) October 2018 (Rapporteur), Hamza Waleed Ghandorh (University of Western Ontario, London, Canada) Feb 2018, Ketan Bacchuwar (ESIEE, Paris) May 2018, Hennadii Madan (University of Lubjana, Slovenia) July 2018 (Rapporteur), Pedro Patlan-Rosales (Inria, Rennes) January 2018, Zoheir Dib (LATIM, Université de Brest) September 2017 (Rapporteur), Mc Leod J. (University of Western Ontario, London, Canada) November 2017 (Rapporteur), Saeed Mahdizadeh Bakhshmand (University of Western Ontario, London, Canada) July 2017 (Rapporteur), Patrick Wucherer (TUM Munich, Germany) December 2016, Emran Mohammad Abu Anas (University of British Columbia, Canada) Novembre 2016 (Rapporteur), Roche B. (Université de Clermont Ferrand) Novembre 2016, Claude G. (INSA, IRISA, Inria, Rennes) July 2016, Dolz J. (INSERM, Lille) June 2017 (Rapporteur), 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) Decembre 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</p>
Habilitation defense	<p>Lamard V. (Université de Brest) 2021, Forestier G. (Université de Haute Alsace) November 2017, Malti A. (Université de Tiemcen, Algérie) September 2017 (Rapporteur), Vermandel M. (Université Lille 2) Septembre 2013, Essert C. (Université Louis Pasteur de Strasbourg) September 2011</p>

Scientific societies

2014 - 2018	President of the International Society for Computer Aided Surgery (ISCAS)
2014 - 2018	Board member of the MICCAI Society
2004 - 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

- 2022
 1. Maier-Hein L, Eisenmann M, Sarikaya D, Marz K, Collins T, Malpani A, et al (last co-author). Surgical data science - from concepts toward clinical translation. *Med Image Anal.* 2022;76:102306.
 2. Baxter JSH, Jannin P. Bias in machine learning for computer-assisted surgery and medical image processing. *Comput Assist Surg (Abingdon).* 2022;27(1):1-3.
 3. Tronchot A, Berthelemy J, Thomazeau H, Huaulme A, Walbron P, Sirveaux F, Jannin P. Validation of virtual reality arthroscopy simulator relevance in characterising experienced surgeons. *Orthop Traumatol Surg Res.* 2021;107(8):103079.
 4. Guerin S, Huaulme A, Lavoue V, Jannin P, Timoh KN. Review of automated performance metrics to assess surgical technical skills in robot-assisted laparoscopy. *Surg Endosc.* 2022;36(2):853-70.

- 2021
 5. Maier-Hein L, Eisenmann M, Sarikaya D, Marz K, Collins T, Malpani A, et al. Surgical data science - from concepts toward clinical translation. *Med Image Anal.* 2021;76:102306.
 6. Tronchot A, Berthelemy J, Thomazeau H, Huaulme A, Walbron P, Sirveaux F, et al. Validation of virtual reality arthroscopy simulator relevance in characterising experienced surgeons. *Orthop Traumatol Surg Res.* 2021;107(8):103079.
 7. Huaulme A, Sarikaya D, Le Mut K, Despinoy F, Long Y, Dou Q, et al. Micro-surgical anastomose workflow recognition challenge report. *Comput Methods Programs Biomed.* 2021;212:106452.
 8. Derathe A, Reche F, Jannin P, Moreau-Gaudry A, Gibaud B, Voros S. Explaining a model predicting quality of surgical practice: a first presentation to and review by clinical experts. *Int J Comput Assist Radiol Surg.* 2021;16(11):2009-19.
 9. Peralta M, Jannin P, Haegelen C, Baxter JSH. Data imputation and compression for Parkinson's disease clinical questionnaires. *Artificial Intelligence in Medicine.* 2021;114.
 10. Martin T, Peralta M, Gilmore G, Sauleau P, Haegelen C, Jannin P, et al. Extending convolutional neural networks for localizing the subthalamic nucleus from micro-electrode recordings in Parkinson's disease. *Biomed Signal Proces.* 2021;67.
 11. Martin T, Gilmore G, Haegelen C, Jannin P, Baxter JSH. Adapting the listening time for micro-electrode recordings in deep brain stimulation interventions. *Int J Comput Assist Radiol Surg.* 2021
 12. Godefroy V, Tanguy D, Bouzigues A, Sezer I, Ferrand-Verdejo J, Azuar C, et al. Frontotemporal dementia subtypes based on behavioral inhibition deficits. *Alzh Dement-Dadm.* 2021;13(1).
 13. Bracq MS, Michinov E, Le Duff M, Arnaldi B, Gouranton V, Jannin P. "Doctor, please": Educating Nurses to Speak Up With Interactive Digital Simulation Tablets. *Clin Simul Nurs.* 2021;54:97-104.
 14. Le Lous M, Klein M, Tesson C, Berthelemy J, Lavoue V, Jannin P. Metrics used to evaluate obstetric ultrasound skills on simulators: A systematic review. *Eur J Obstet Gynecol Reprod Biol.* 2021;258:16-22.
 15. Le Lous M, Despinoy F, Klein M, Fustec E, Lavoue V, Jannin P. Impact of Physician Expertise on Probe Trajectory During Obstetric Ultrasound: A Quantitative Approach for Skill Assessment. *Simul Healthc.* 2021;16(1):67-72.
 16. Collins JW, Marcus HJ, Ghazi A, Sridhar A, Hashimoto D, Hager G, et al. Ethical implications of AI in robotic surgical training: A Delphi consensus statement. *Eur Urol Focus.* 2021.
 17. Bracq MS, Michinov E, Le Duff M, Arnaldi B, Gouranton V, Jannin P. Training situational awareness for scrub nurses: Error recognition in a virtual operating room. *Nurse Educ Pract.* 2021;53:103056.
 18. Baxter JSH, Bui QA, Maguet E, Croci S, Delmas A, Lefaucheur JP, et al. Automatic cortical target point localisation in MRI for transcranial magnetic stimulation via a multi-resolution convolutional neural network. *Int J Comput Assist Radiol Surg.* 2021;16(7):1077-87.

- 2020
 19. Maier-Hein L, Reinke A, Kozubek M, Martel AL, Arbel T, Eisenmann M, et al. BIAS: Transparent reporting of biomedical image analysis challenges. *Med Image Anal.* 2020;66.

20. Bretonnier M, Michinov E, Le Pabic E, Henaux PL, Jannin P, Morandi X, et al. Impact of the complexity of surgical procedures and intraoperative interruptions on neurosurgical team workload. *Neurochirurgie*. 2020;66(4):203-11.
21. Huaulme A, Jannin P, Reche F, Faucheron JL, Moreau-Gaudry A, Voros S. Offline identification of surgical deviations in laparoscopic rectopexy. *Artificial Intelligence in Medicine*. 2020;104.
22. Nakazawa A, Harada K, Mitsuishi M, Jannin P. Real-time surgical needle detection using region-based convolutional neural networks. *Int J Comput Assist Radiol Surg*. 2020 Jan;15(1):41-47.
23. Lecuyer G, Ragot M, Martin N, Launay L, Jannin P. Assisted phase and step annotation for surgical videos. *International Journal of Computer Assisted Radiology and Surgery*. 2020;15(4):673-80.
24. Peralta M, Bui QA, Ackaouy A, Martin T, Gilmore G, Haegelen C, et al. SepaConvNet for Localizing the Subthalamic Nucleus Using One Second Micro-electrode Recordings. *Ieee Eng Med Bio*. 2020:888-93.
25. Peralta M, Baxter JSH, Khan AR, Haegelen C, Jannin P. Striatal shape alteration as a staging biomarker for Parkinson's Disease. *Neuroimage-Clin*. 2020;27.
26. Derathé A, Reche F, Moreau-Gaudry A, Jannin P, Gibaud B, Voros S. Predicting the quality of surgical exposure using spatial and procedural features from laparoscopic videos. *Int J Comput Assist Radiol Surg*. 2020 Jan;15(1):59-67.

- 2019

27. Le Lous M, Simon O, Lassel L, Lavoue V, Jannin P. Hybrid simulation for obstetrics training: A systematic review. *Eur J Obstet Gynecol Reprod Biol*. 2019 Dec 24;246:23-28
28. Ahrweiller K, Houvenaghel JF, Riou A, Drapier S, Sauleau P, Haegelen C, Jannin P, Vérin M, Palard X, Le Jeune F. Postural instability and gait disorders after subthalamic nucleus deep brain stimulation in Parkinson's disease: a PET study. *J Neurol*. 2019 Nov;266(11):2764-2771
29. Hénau PL, Jannin P, Riffaud L. Nontechnical Skills in Neurosurgery: A Systematic Review of the Literature. *World Neurosurg*. 2019 Oct;130:e726-e736.
30. Huaulmé A, Despinoy F, Perez SAH, Harada K, Mitsuishi M, Jannin P. Automatic annotation of surgical activities using virtual reality environments. *Int J Comput Assist Radiol Surg*. 2019 Oct;14(10):1663-1671
31. Henaux, P.L., et al., Relationships Between Expertise, Crew Familiarity and Surgical Workflow Disruptions: An Observational Study. *World J Surg*, 2019. **43**(2): p. 431-438.
32. Bracq MS, Michinov E, Arnaldi B, Caillaud B, Gibaud B, Gouranton V, Jannin P. Learning procedural skills with a virtual reality simulator: An acceptability study. *Nurse Educ Today*. 2019 Aug;79:153-160
33. Kobayashi S, Cho B, Huaulmé A, Tatsugami K, Honda H, Jannin P, Hashizume M, Eto M. Assessment of surgical skills by using surgical navigation in robot-assisted partial nephrectomy. *Int J Comput Assist Radiol Surg*. 2019 Aug;14(8):1449-1459
34. Duprez J, Houvenaghel JF, Dondaine T, Péron J, Haegelen C, Drapier S, Modolo J, Jannin P, Vérin M, Sauleau P. Subthalamic nucleus local field potentials recordings reveal subtle effects of promised reward during conflict resolution in Parkinson's disease. *Neuroimage*. 2019 Aug 15;197:232-242
35. Marie-Stéphanie Bracq; Estelle Michinov; Pierre **Jannin** Virtual Reality Simulation in Nontechnical Skills Training for Healthcare Professionals: A Systematic Review, *Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare*. 14(3):188–194, JUN 2019

- 2018

36. Holden, M.S., et al., Self-guided training for deep brain stimulation planning using objective assessment. *Int J Comput Assist Radiol Surg*, 2018.
37. Maier-Hein L, Eisenmann M, Reinke A, Onogur S, Stankovic M, Scholz P, Arbel T, Bogunovic H, Bradley AP, Carass A, Feldmann C, Frangi AF, Full PM, van Ginneken B, Hanbury A, Honauer K, Kozubek M, Landman BA, März K, Maier O, Maier-Hein K, Menze BH, Müller H, Neher PF, Niessen W, Rajpoot N, Sharp GC, Sirinukunwattana K, Speidel S, Stock C, Stoyanov D, Taha AA, van der Sommen F, Wang CW, Weber MA, Zheng G, Jannin P, Kopp-Schneider A. Why rankings of biomedical image analysis competitions should be interpreted with care, *Nature Communications* **9**, Article number: 5217 (2018)
38. Huaulme, A., Harada, K., Forestier, G., Mitsuishi, M., & Jannin, P. (2018). Sequential surgical signatures in micro-suturing task. *Int J Comput Assist Radiol Surg*. doi:10.1007/s11548-018-1775-x
39. Haegelen, C., Baumgarten, C., Houvenaghel, J. F., Zhao, Y., Peron, J., Drapier, S., Jannin, P., Morandi, X. (2018). Functional atlases for analysis of motor and neuropsychological outcomes after medial globus pallidus and subthalamic stimulation. *PLoS One*, 13(7), e0200262. doi:10.1371/journal.pone.0200262

40. Gibaud, B., Forestier, G., Feldmann, C., Ferrigno, G., Goncalves, P., Haidegger, T., . . . Jannin, P. (2018). Toward a standard ontology of surgical process models. *Int J Comput Assist Radiol Surg*. doi:10.1007/s11548-018-1824-5
41. Forestier, G., Petitjean, F., Senin, P., Despinoy, F., Huaulme, A., Fawaz, H. I., . . . Jannin, P. (2018). Surgical motion analysis using discriminative interpretable patterns. *Artif Intell Med*, 91, 3-11. doi:10.1016/j.artmed.2018.08.002
42. Forestier, G., Riffaud, L., Petitjean, F., Henaux, P. L., & Jannin, P. (2018). Surgical skills: Can learning curves be computed from recordings of surgical activities? *Int J Comput Assist Radiol Surg*, 13(5), 629-636. doi:10.1007/s11548-018-1713-y
43. Despinoy, F., Zemiti, N., Forestier, G., Sanchez, A., Jannin, P., & Poignet, P. (2018). Evaluation of contactless human-machine interface for robotic surgical training. *Int J Comput Assist Radiol Surg*, 13(1), 13-24. doi:10.1007/s11548-017-1666-6
44. Dergachyova, O., Zhao, Y., Haegelen, C., Jannin, P., & Essert, C. (2018). Automatic preoperative planning of DBS electrode placement using anatomo-clinical atlases and volume of tissue activated. *Int J Comput Assist Radiol Surg*, 13(7), 1117-1128. doi:10.1007/s11548-018-1724-8
45. Dergachyova, O., Morandi, X., & Jannin, P. (2018). Knowledge transfer for surgical activity prediction. *Int J Comput Assist Radiol Surg*, 13(9), 1409-1417. doi:10.1007/s11548-018-1768-9
46. Baumgarten, C., Haegelen, C., Zhao, Y., Sauleau, P., & Jannin, P. (2018). Data-Driven Prediction of the Therapeutic Window during Subthalamic Deep Brain Stimulation Surgery. *Stereotact Funct Neurosurg*, 96(3), 142-150. doi:10.1159/000488683

- 2017

47. Lena Maier-Hein, Swaroop S. Vedula, Stefanie Speidel, Nassir Navab, Ron Kikinis, Adrian Park, Matthias Eisenmann, Hubertus Feussner, Germain Forestier, Stamatia Giannarou, Makoto Hashizume, Darko Katic, Hannes Kenngott, Michael Kranzfelder, Anand Malpani, Keno März, Thomas Neumuth, Nicolas Padoy, Carla Pugh, Nicolai Schoch, Danail Stoyanov, Russell Taylor, Martin Wagner, Gregory D. Hager and Pierre **Jannin** Surgical data science for next generation interventions *Nature Biomedical Engineering*, Vol 1, September 2017, 691–696
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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*

- Five (2019)
- S3PM (2019)
- OR 3D Models (2019)
- MedPhysioDBS Note (2019)
- TOSCANA (2018)
- AdCAS (2016)
- Ref-MedAtlas (2015)
- Park-MedAtlas (2019, 2016, 2014) IDDN.FR.001.440011.000.D.P.2014.000.31230
- pyDBS (2019, 2015, 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

- *Patents*

- Proficiency Assessment System and Method for Deep Brain Stimulation 17306370.2 - 1666 (2017)
- Procédé de simulation de stimulation cérébrale, dispositif et programme d'ordinateur correspondant 1000254773 (2014)
- Système de Simulation, dispositifs, méthodes et programmes correspondants. 1000268342 (2014)

- *Grants*

Industrial collaboration and grants :

- Stryker : 2019
- Intuitive: 2019
- 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

International grants :

- IMPACT (Japan) (2017-2019)
- COMET (Austria) (2022-2025)

Public grants :

- AIR DemoES PIA4 (2022-2025)
- National "Grand défis du numérique" CONDOR (2016-2019)
- National "Investissement d'Avenir" IRT B-COM (2013-2016)
- S3PM, SunSET, S3PM-Int: National "Investissement d'Avenir" LabEX CominLabs on Surgical Process Modeling (2013-2016) and non technical surgical skills training (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

Foundation Grants:

- DBS-COMP (2017-2020) Fondation pour la Recherche Médicale
- AFTCYN (2019-2020) INCR
- pyDBS2 (2015-2016) INCR
- M-DBS (2016-2020) INCR

- **Scientific animation**

- *Invited lectures*

- 2021

1. « Responsible research in digital technology for health care » Plenary Keynote Speaker, MICCAI international Conference, Online, 28/09/2021
2. « Un bloc virtuel pour l'apprentissage de compétences non techniques » Congrès National APECO, Saint Malo, 30/11/2021
3. « Le Bloc Opérateur du Futur sera Conscient de la Situation » SOFCOT, 11/11/21, Paris
4. « Automation in Surgery ? How AI can help Decisions and Actions » French/Sweden Research Day, Online, 15/11/21
5. « Automatisation des décisions et actions chirurgicales ? » Joint Working group on Artificial Intelligence between French Academy of Medicine and French Academy of Sciences, 12/10/21
6. « Surgical Skill Analysis and Modeling » Summer School of Surgical Robotics, Montpellier, 22/09/2021
7. « Surgical Skill Analysis » Technical University Dresden, CETI Institute, Germany, 07/09/2021
8. "Situation Awareness for adapted assistance in the Operating Room », Medical Augmented Reality Summer School, Balgrist Hospital Zurich, TUM Munich, 02/09/21
9. "Surgical Skill Analysis" Hamlyn Symposium on Medical Robotics on June 24 2021, at Imperial College London, GB
10. « AI and Robots in surgery » Symposium On Ai & Medicine: Promises And Limits, MIT, CSAIL, Académie Nationale de Médecine, Boston, 05/05/21
11. « Comment l'IA et la science des données chirurgicales pourraient être utiles en chirurgie » Semaine numérique - SNQC21, Québec, Canada, 13/04/2021

- 2020

12. « Surgical Skill Analysis and Modeling » CAMP Laboratory, TUM, Munich, Germany, 15/12/2020
13. « Surgical Skill Analysis: Methods and Applications » CAMI days, Grenoble, France, 09/12/2020
14. "Surgical Data Science" Hamlyn 2020 Winter School on Surgical Imaging and Vision - December 1 2020, at Imperial College London, GB (on-line)
15. « Le Bloc Opérateur du Futur sera Conscient de la Situation », 11^e congrès de la Société Francophone de Chirurgie Oncologique » SFCO, 11/06/20
16. "Situation Awareness for the Operating Room of the Future », University College of London, Workshop AI and surgical training, 10/01/20

- 2019

17. « Educational VR in the Operating Room », Conférence annuelle de la Société Francophone d'Arthroscopie, Rennes (France) 11/12/19
18. « Operating Room of the Future », Digital Revolution, Tokyo Forum, Tokyo (Japan) 07/12/2019
19. « Operating Room of the Future: AI and Human Factors », Seminar at The University of Tokyo, Tokyo (Japan), 05/12/2019
20. « Etude et modélisation des compétences chirurgicales techniques et non techniques », Invité d'Honneur CAOS France, SOFCOT 2019, Palais des congrès, Paris, 13/11/2019
21. « Bloc Chirurgical du Futur : Réalité virtuelle, Robotique et Science des Données Chirurgicales » Journées ITMO Santé, Rennes-France 3/10/19
22. « Surgical Skill Analysis and Modeling » Summer School of Surgical Robotics, Montpellier, 24/09/2019
23. "Surgical Data Science » 23rd July 2019, University of Verona, Italy, GB
24. "Surgical Skill Analysis and Understanding » 9 July 2019, University of Verona, Italy

25. "What's next for surgeons » Congrès de la Société Francophone de Chirurgie Oncologique, 17 May 2019, Montpellier, FR
26. "Surgical Training: Challenges and Possible Solutions », SPIGC/CRAS Italian Congress of Young Surgeons, 21 March 2019, Genova, Italy
27. "Surgical Skill Analysis and Modeling » Feb 2019, 28/02/19 Stanford University USA
28. "Surgical Skill Analysis and Modeling » Feb 2019, Sorbonne University, Paris, FR

- 2018

29. "Learning Procedural Skills" Hamlyn Symposium on Medical Robotics "Workshop on Autonomous Surgical Robots" on June 28 2018, at Imperial College London, GB
30. « Surgical Skill Analysis and Modeling: Cognition for Surgical Robotics » Summer School on Control for Surgical Robots (COSUR 18), Verona Italy, July 9-13 2018
31. « Validation and Evaluation Methodology for Image Guided Interventions» Seminar at The University of Tokyo, Tokyo (Japon), 23/04/2018
32. « Surgical Skill Analysis and Modeling» Seminar at The University of Tokyo, Tokyo (Japon), 16/04/2018

- 2017

33. « Surgical Skill Analysis and Modeling » ORF Simulation Forum Speaker Series CSTAR University of Western Ontario, London, Ontario (CAN), 10/08/2017
34. « Surgical Data Science for Decision Making Support and Knowledge Discovery in Deep Brain Stimulation » BIRC Speaker Series Roberts Research Institute, London, Ontario (CAN), 11/08/2017
35. « Surgical Skill Analysis and Modeling » SickKids Hospital, Toronto, Ontario (CAN), 08/08/2017
36. "Surgical Workflow Analysis for Skill Analysis and Situation Awareness" The Hamlyn Symposium on Medical Robotics - Workshop on Surgical Workflow and Process Modeling - on June 28 2017, at Imperial College London, GB
37. « Surgical Analysis and Modeling » Seminar at Kyushu University, Fukuoka (Japon), 23/05/2017
38. « Surgical Data Science for Decision Making Support and Knowledge Discovery in Deep Brain Stimulation » ESIEE, Paris, 19/01/2017

- 2016

39. "Analyzing and Modeling Surgical Processes: Application for Simulation" Webinar from the International Society for Simulation in Healthcare" - on Nov 3rd 2016
40. "Surgical Process Modeling: Methods and Applications" MICCAI CARE Workshop (Computer Assisted Robotic Endoscopy) - on October 17th 2016 Athens, Greece
41. "Surgical Skill Analysis and Modeling" Asian Conference on Computer Aided Surgery ACCAS 2016 - on October 14th 2016, in Daejeon, Korea
42. "Computer Aided Surgery" IROS 2016 conference - on October 13th 2016, in Daejeon, Korea
43. "Model-Guided Neurosurgery: Methods and Applications for Deep Brain Stimulation" Hamlyn 2015 Winter School - on December 8 2015, at Imperial College London, GB
44. "Surgical Skills Modeling and Monitoring" Première conférence "Surgical Data Science" - on June 8 2016, Heidelberg, Allemagne
45. "Surgical Imaging and Data for Deep Brain Stimulation" The Hamlyn Symposium on Medical Robotics - Workshop on Surgical Imaging, Guidance and Augmented Reality - on June 28 2016, at Imperial College London, GB
46. "Surgical Process Modeling: Methods and Applications" ICCAS Digital Operating Room Summer School - on September 15th 2016 Leipzig, Germany
47. "Surgical Data Science and DPM for Decision Making Support and Knowledge Discovery in Deep Brain

Stimulation" ICCAS Digital Operating Room Summer School" - on September 16th 2016 Leipzig, Germany

48. "Surgical Skills Modeling and Monitoring" ICCAS Summer School on June 8 2016, Heidelberg, Allemagne
49. « Training of Surgical Procedural Knowledge » Seminar at Kyushu University, Fukuoka (Japan), 18/05/2016
50. "Surgical Process Modeling: Methods and Applications" January 14 2016, UFR27 : Mathématiques et Informatique Université Paris 1 Panthéon Sorbonne, Paris, France

- 2015

51. "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
52. "Surgical Skills Modeling and Monitoring" 7th Summer School on SURGICAL ROBOTICS - september 8 2015, Montpellier, FRANCE
53. "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
54. « 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
55. « Models for Surgical Assistance and Evaluation: Applications in Neurosurgery » Seminar at Université de Montpellier 2, LIRRM, Montpellier (France), 18/03/2015

- 2014

56. «Modélisation des Processus Chirurgicaux: *Surgical Process Modelling*» GDR STIC-Santé, GT «Modélisation et Simulation, Paris (F) 05/06/2014
57. « Surgical Skill Models for Computer Assisted Surgery » SINTEF and Dept. of Medical Technology, NTNU (Université Technologique de Trondheim), Trondheim (N), 21/05/2014
58. « 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

59. « Surgical Skill Models for Computer Assisted Surgery » Hamlyn Distinguished Lecture Series, The Hamlyn Centre, Imperial College London (UK), 26/11/2013
60. « Surgical Skill Models in Computer Assisted Surgery » MITI, Klinikum rechts der Isar Technische Universität München, Munich (Germany), 20/11/2013
61. « Models for Surgical Assistance and Evaluation » IRCAD, Strasbourg (France), 08/11/2013
62. « Modélisation des Compétences Chirurgicales » CGEIET, Ministère de l'industrie, Paris (France), 09/10/2013
63. « 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
64. « Introduction to Workflow Modeling » International Conference of Computer Assisted Radiology and Surgery, Heidelberg (Allemagne), 27/06/2013
65. « Models for Surgical Assistance and Evaluation: Applications in Neurosurgery » Seminar at Kyushu University, Fukuoka (Japan), 05/06/2013
66. "Surgical Process Modeling" Conference Medicine Meets Virtual Reality, Newport Beach (USA), February 2013

67. "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

68. "Surgical Process Modeling: Where are we ? Where do we go ?" ICCAS Leipzig Forum CAS, Leipzig, Germany, October 8 2012

69. "Knowledge Models for Deep Brain Stimulation" First International Symposium on Deep Brain Connectomics, Clermont-Ferrand, France, September 28-29 2012

70. "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

71. "Surgical Process Modeling: Methods and Applications" First International Workshop on Cognitive Robotics in Surgery, Heidelberg, Germany, January 26-28 2012

• 2011

72. "Assessment methodology in computer assisted surgical interventions " Conference Medicine Meets Virtual Reality, Newport Beach (USA), February 2011

73. "Surgical Process Models" European Science Foundation Exploratory Workshop on IMAGE-GUIDED LAPAROSCOPIC THERAPIES, June 15th , Caceres (Spain)

74. "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

75. "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

76. "Model Guided Neurosurgery" Thayer School of Engineering, Dartmouth College, Hanover, NH, USA, March, 5th, 2010

77. " An Introduction to Surgical Process Modeling" Montreal Neurological Institute, Montreal, Canada, February, 2nd, 2010

• 2009

78. " Models in Deep Brain Stimulation" Montreal Neurological Institute, Montreal, Canada, November 2009

79. " Models in Computer Assisted Neurosurgery" 2nd INRIA-NIH Biomedical Computing Workshop, Paris

• 2008

80. "Model Guided Therapy" Computer Assisted Radiology and Surgery. June 25, 2008, Barcelona (E)

• 2007

81. "Model guided Surgery" and "Validation in medical image processing" Montreal Neurological Institute, Montreal, Canada, July 2007

82. "Modeling surgical procedures". Workshop on Surgical Workflows, Computer Assisted Radiology and Surgery. Saturday, June 30, 2007, Berlin (D)

• 2006

83. "Models of surgical procedures in Computer Assisted NeuroSurgery", IST 2006, November 22, Helsinki

84. "From intuitive to scientific computer assisted neurosurgery". Computer Assisted Radiology and Surgery. Saturday, July 1, 2006, Osaka (J)

85. "Validation of Medical Image Processing". Joint Workshop on Intelligent Media Integration and Nagoya-MIC. Tuesday, July 4, 2006, Nagoya (J)

86. "Information Guided Neurosurgery: From Multimodal Images to Surgical Knowledge". Joint Workshop on Intelligent Media Integration and Nagoya-MIC. Tuesday, July 4, 2006, Nagoya (J)
 87. "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
 88. 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
 89. 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
 90. "From Intuitive to Scientific Computer Assisted Surgery". 4th Leipzig Forum CAS, December 12th, 2005, Leipzig (D)
 91. "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
 92. « 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
 93. « Validation in Medical Image Processing » 2nd Forum « Computer und Roboter-Assistierte Chirurgie », Leipzig, 13-14 october 2003
 94. « 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
 95. « 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
 96. « Validation en traitement d'images médicales » Action Spécifique du CNRS ICOMIM « Intégration de Connaissances et Modélisation en Imagerie Médicale », Paris, June 2003
 - Before
 97. « Image Guided Surgery in France» British Congress of Radiology. UK Radiological Congress, Birmingham, UK, June 2002
 98. « Image Guided Surgery in France and in Rennes», Deutsches Krebsforschungszentrum DKFZ (German Cancer Research Center), Heidelberg, Germany, October 2002
 99. « MEG, Data Fusion and Neurosurgery: Rennes approach », European Workshop on MEG and EEG, Erlangen, Germany, May 1999
 100. « Multimodal data fusion in medical imaging », 14th Symposium of the BVZF/SBPH, Bruges, Belgium, October 1998
 101. « Fusion de données multimodalités 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):*
 - 2022
 - Program Committee Member MICCAI 2022 Singapore (Singapore)
 - 2021
 - Program Committee Member MICCAI 2021 Strasbourg (France)

- 2020
- Program Committee Member MICCAI 2020 Lima (Peru)
- 2019
- President of CARS conference 2019, Rennes (France) 17-21 June 2019
- Program Committee Member MICCAI 2019 Shenzhen (China)
- 2018
- President of the 22nd Annual Conference of the International Society for Computer Aided Surgery Berlin (Germany) June 2018
- 2017
- Program chair of the MICCAI 2017 international conference (Quebec City-Canada)
- President of the 21st Annual Conference of the International Society for Computer Aided Surgery Barcelona (Spain) June 2017
- 2016
- President of the 20th Annual Conference of the International Society for Computer Aided Surgery Heidelberg (Germany) June 2016
- Co-General chair of the IPCAI 2016 international conferences(LNCS proceedings)
- Program chair of the 7th International Conference on Medical Imaging and Augmented Reality, MIAR 2016, August 24-26, 2016, University of Bern, Bern, Switzerland.
- 2015
- President of the 19th Annual Conference of the International Society for Computer Aided Surgery Barcelona (Spain) June 2015
- Co-General chair of the IPCAI 2015 international conferences(LNCS proceedings)
- *Before ...*
- Co-General chair of the IPCAI from 2010 to 2016 international conferences (LNCS proceedings)
- Congress Organizing and Program Committee member of Computer Assisted Radiology and Surgery from 2005 to 2020
- Organization, management and co-chair of “Modeling and Monitoring of Computer Assisted Interventions (M2CAI)” at MICCAI London 2009, Toronto 2011, Nice 2012, Nagoya, 2013, Boston 2014, Athens 2016
- Co-chair of the 2013 MICCAI workshop and tutorial committee (Nagoya, Japan)
- Organization, management and co-chair of “2nd ISCAS SURGICAL WORKSHOP ON NeuroSURGERY”(CME credits) at CARS 2010 in Geneva
- 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 presentation of a workshop (2 hours) on “Validation in medical image registration” at SPIE Medical Imaging 2007 conference in San Diego
- 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*
- Editor-in-chief of “Computer Aided Surgery” (Taylor&Francis publisher) from 2020
- Area editor of “International Journal for Computer Aided Radiology and Surgery” (Springer)
- 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. « Emission 30 minutes santé » INSERM Mars 2022
2. « Votre santé m'intéresse » BFM-TV 17 Janvier 2018
3. « Les Matinales » France 3 Bretagne TV November 9 2017
4. « Simuler pour mieux soigner », L'Express, March 2017
5. « Immersion au coeur de la réalité mixte », Sciences et Avenir, March 2016
6. « Neurochirurgie assistée par ordinateur », Ouest-France, March 2016
7. « Neurochirurgie guidée en 3D », Rennes Métropole, Feb-March 2016
8. « Têtes chercheuses - Pierre Jannin: Créateur d'outils “intelligents” pour les neurochirurgiens », Sciences et Santé, Nov. 2014
9. Article de vulgarisation "Fusion d'images : des outils au service des neurochirurgiens" pour INTERSTICES, journal web de l'INRIA Juin 2006

· *Invited talks*

1. « L'intelligence artificielle au service de la neurochirurgie » West Data Festival, Laval (France) 05/02/20
2. « Le Bloc opératoire du futur » Les Matinales, Le Pool, Rennes, 21/11/2019
3. « Le Bloc Opératoire du Futur : Réalité virtuelle, Robotique et Science des Données Chirurgicales » Maison associatif de la Santé - France Asso Santé - Harmonie Mutuelle , Rennes, 5/11/2019
4. MeetUp Machine Learning Le Pool « Science des données chirurgicales » Rennes, September 2019
5. Lycée Bréquigny Rennes Février 2019
6. Festival Utopiales Table ronde « Les serious games », Nantes, Octobre 2018
7. « Ouvrir les champs de l'imaginaire: quand l'intelligence artificielle se met au service de la médecine et de la neurochirurgie » Les Jeudis de l'Espace des Sciences, Théâtre de Saint Malo, 11/10/18
8. TedX Rennes, 8/04/18
9. Pint of Science, Semaine du cerveau « French Brain Week », March 14th, 2017, Rennes
10. Semaine du cerveau « French Brain Week », March 13rd, 2017, Rennes

11. Festival Utopiales Table ronde « Le voyage fantastique », Nantes, Octobre 2016
12. Inserm Science tour, Rennes, Octobre 2014
13. Présentations en Lycée: Lycée Pasteur 1ère S, Nov 2015 Paris, Lycée Victor et Hélène Basch 2nde Rennes Mars 2012
14. Présentation à la «Fête de la Science» 10/2013, Rennes
15. Présentation à la «Fête de la Science» 10/2005, Rennes
16. 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
17. Présentation sur la Fusion d'images médicales pour la neurochirurgie 15 et 16 Octobre 2005 pour les 30 ans de l'IRISA