Publications imXgam – 30 Apr 2025

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1. Tracing specificity of immune landscape remodeling associated with distinct anticancer treatments, Cannet, Floriane *et al.*, iScience 28 (2025) 112071
2. A Fast Plastic Scintillator for Low-Intensity Proton Beam Monitoring, A. André *et al.*, IEEE T. Rad. Plasma Med. Sci 9 (2025) 382-387

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1. The SNR of time-of-flight positron emission tomography data for joint reconstruction of the activity and attenuation images, Nuyts, Johan *et al.*, Phys. Med. Biol 69 (2024) 015011
2. First ClearMind gamma detector prototype for TOF-PET imaging, A. Galindo-Tellez *et al.*, J. Instrum 19 (2024) P07037
3. Characterization of IMIC, an implantable needle-shaped positron sensitive monolithic active pixel sensor for preclinical molecular neuroimaging, S. El ketara *et al.*, Nucl. Instrum. Meth. A 1064 (2024) 169456
4. β^+ surgical radio-guidance using a small Compton- angles collimation probe, Mehadji, Brahim *et al.*, J. Instrum 19 (2024) T08002

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1. Detailed simulation of the ClearMind prototype detection module and event reconstruction using artificial intelligence, C.-H. Sung *et al.*, Nucl. Instrum. Meth. A 1053 (2023) 168357
2. Monte Carlo simulation of a scintillation crystal read by a SiPM with GATE, B. Mehadji *et al.*, Nucl. Instrum. Meth. A 1048 (2023) 167905
3. A high sensitivity Cherenkov detector for prompt gamma timing and time imaging, M. Jacquet *et al.*, Sci. Rep 13 (2023) 3609

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1. Monte Carlo simulation of SiPMs with GATE, B. Mehadji *et al.*, J. Instrum 09 (2022) P09025

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1. ProMeSCT : a proximal metric algorithm for spectral CT, S. Tairi *et al.*, IEEE T. Rad. Plasma Med. Sci 5(4) (2021) 548-558
2. A time-of-flight-based reconstruction for real-time prompt- gamma imaging in protontherapy, M. Jacquet *et al.*, Phys. Med. Biol 66 (2021) 135003

3. Advanced Monte Carlo simulations of emission tomography imaging systems with GATE, D. Sarrut *et al.*, Phys. Med. Biol 66 (2021) 10TR03

4. Characterization of a beam-tagging hodoscope for hadrontherapy monitoring, O. Allegrini *et al.*, J. Instrum 16 (2021) P02028

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1. Roadmap toward the 10 ps time-of-flight PET challenge, P. Lecoq *et al.*, Phys. Med. Biol 65 (2020) 21RM01

2. On the role of single particle irradiation and fast timing for efficient online-control in particle therapy, D. Dauvergne *et al.*, Front. Phys. 8 (2020) 434

3. Design study of a "scintronic" crystal targeting tens of picoseconds time resolution for gamma ray imaging: the ClearMind detector, D. Yvon *et al.*, J. Instrum 15 (2020) P07029

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1. MAPSSIC, a Novel CMOS Intracerebral Positrons Probe for Deep Brain Imaging in Awake and Freely Moving Rats: A Monte Carlo Study, L. Ammour *et al.*, IEEE T. Rad. Plasma Med. Sci 3 (2019) 302-314

2. Tracking Dynamics of Spontaneous Tumors in MiceUsing Photon- Counting Computed Tomography, F. Cassol *et al.*, iScience 21 (2019) 68-83

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1. Implantable CMOS pixel sensor for positron imaging in rat brain, J. Heymes *et al.*, Nucl. Instrum. Meth. A A911 (2018) 19-24

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1. Characterization of the imaging performance of a micro-CT system based on the photon counting XPAD3/Si hybrid pixel detectors, F. Cassol *et al.*, Biomed. Phys. Eng. Express 2 (2016) 025003

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1. PIXSIC, a Pixelated beta+ - Sensitive Probe for Radiopharmacological Investigations in Rat Brain: Binding Studies with 18F-MPPF., L. Balasse *et al.*, Mol. Imaging Biol 17(2) (2015) 163-167

2. PIXSIC: a wireless intracerebral radiosensitive probe in freely moving rats, L. Balasse *et al.*, Mol. Imaging 14(43) (2015) 5497-5511

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2. A wireless beta-microprobe based on pixelated silicon for in vivo brain studies in freely moving rats, J. Märk *et al.*, Phys. Med. Biol 58 (2013) 4483-4500
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3. Real time monitoring of the Bragg-Peak position in ion therapy by means of single photon detection, M. Testa *et al.*, Radiat. Environ. Bioph 49 (2010) 337-43
4. Detective quantum efficiency, modulation transfer function and energy resolution comparison between CdTe and silicon sensors bump-bonded to XPAD3S, K. Medjoubi *et al.*, J. Synchrotron Radiat 17 (2010) 486-495

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1. Spectral CT reconstruction with ProMeSCT: results on real data from PIXSCAN, Y. Boursier, F. Cannet, M. Dupont, S. Anthoine, C. Morel, indéfini, The 8th International Conference on Image Formation in X-ray Computed Tomography (2024) 292-295, Bamberg, Germany, 5-9 Aou 2024

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1. Estimating the Value of TOF-PET Events for Joint Reconstruction of Activity and Attenuation, Nuyts, Johan, Defrise, Michel, Roncali, Emilie, Gundacker, Stefan, Morel, Christian, Visvikis, Dimitris, Lecoq, Paul, IEEE Conf. Proceedings, 2022 IEEE Nuclear Science Symposium (NSS), Medical Imaging Conference (MIC) and Room Temperature Semiconductor Detector (RTSD) Conference (2022), Milan, Italy, 5-12 Nov 2022

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1. Modelisation of light transmission through surfaces with thin film optical coating in Geant4, L. Cappellugola, S. Curtoni, M. Dupont, C.-H. Sung, V. Sharyy, D. Yvon, C. Morel, indéfini, IEEE NSS/MIC'2021, IEEE Nuclear Science Symposium and Medical Imaging Conference (2021), Yokohama, Japan, 16-23 Oct 2021

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2. Case for setting up a 10ps challenge: A step toward reconstruction-less TOF-PET, P. Lecoq, C. Morel, J. Prior, Nuovo Cim. C, 43, FAst Timing Applications for nuclear physics and medical imaging (2020) 2, Acireale, Italy, 03-05 Sep 2019

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1. A time-of-flight gamma camera data acquisition system for hadrontherapy monitoring, X. Chen, O. Allegrini, B. Carlus, C. Caplan, L. Caponetto, J. P. Cachemiche, S. Curtoni, D. Dauvergne, R. Della Negra, M. Fontana, L. Gallin- Martel, M.-L. Gallin-Martel, J. Hérault, D. Lambert, G.-N. Lu, M. Magne, S. Marcatili, H. Mathez, C. Morel, G. Montarou, E. Testa, Y. Zoccarato, IEEE Conf. Proceedings, IEEE NSS/MIC 2019 (2019), Manchester, United Kingdom, 28 Oct - 2 Nov 2019

2. A TCA Back-End Firmware for Data Acquisition and Slow Control of the CLaRyS Compton Camera, C. Caplan, O. Allegrini, J.-P. Cachemiche, B. Carlus, X. Chen, D. Dauvergne, R. Della-Negra, M. Fontana, L. Gallin-Martel, M.-L. Gallin-Martel, J. Hérault, D. Lambert, G.-N. Lu, M. Magne, H. Mathez, G. Montarou, C. Morel, M. Rodo Bordera, E. Testa, Y. Zoccarato, IEEE Conf. Proceedings, IEEE NSS/MIC 2019 (2019), Manchester, United Kingdom, 28 Oct - 2 Nov 2019

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3. First images from a $CeBr_3$/LYSO:Ce Temporal Imaging portable Compton camera at 1.3 MeV, M. Z. Hmissi, A. Iltis, C. Tata, G. Zeufack, L. Rodrigues, B. Mehadji, C. Morel, H. Snoussi, indéfini, 2018 IEEE Nuclear Science Symposium and Medical Imaging Conference (2018) 1-3, Sydney, Australia, 10-17 Nov 2018

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8. Implementing Geant4 on GPU for Medical Applications, H. Perez-Ponce, Z. El bitar, Y. Boursier, D. Vintache, A. Bonissent, C. Morel, D. Brasse, D. Visvikis, J. Bert, IEEE Nucl. Sci. Symp. Conf, Nuclear Science Symposium

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présentation orale

2024

1. 10 ps: a Challenge for the Future of Positron Emission Tomography, **C. Morel**, PHENIICS Fest 2024, Orsay, France, 16-17 Mai 2024

2. Fast Timing Detectors for Prompt Gamma Time Imaging, S. Marcatili, A. André, C. Hoarau, M.-L. Gallin-Martel, J.-F. Muraz, L. Gallin-Martel, Y. Boursier, A. Cherni, M. Dupont, A. Garnier, J. Hérault, J.-P. Hofverberg, D. Maneval, C. Morel, PSMR2024, 10th Conference on PET, SPECT, and MR Multimodal Technologies, Total Body and Fast Timing in Medical Imaging, La Biodola, Isola d'Elba, Italy, 19-23 Mai 2024

3. Optimizing high energy gamma surgical probes: small Compton- angles collimation for increased SNR and size and weight reduction, B. Mehadji, M. Dupont, A. Montrot, E. Roncali, C. Morel, B. Farman, SNMMI 2024, Society of Nuclear Medicine & Molecular Imaging Annual Meeting, Toronto, Canada, 8-11 Jui 2024

4. Simulation of Photon-Counting X-ray Detectors, **M. Leroy**, AG du GDR MI2B, Grenoble, France, 9-11 Oct 2024

5. Simulation Monte Carlo pour l'imagerie temporelle des gamma prompt, **A. Garnier**, AG du GDR MI2B, Grenoble, France, 9-11 Oct 2024

6. Time-of-Flight imaging for gamma prompt imaging in protontherapy, **A. Garnier**, R&D Imaging 2024, Marseille, France, 4-8 Nov 2024

7. Monte Carlo simulation of Prompt Gamma Time Imaging in protontherapy, **A. Garnier**, 82th Crystal Clear Collaboration meeting, Genève, Switzerland, 14 Nov 2024

2023

1. Time-of-flight imaging for gamma prompt imaging in proton therapy, **A. Garnier**, AG du GDR MI2B, Bordeaux, France, 4-6 Oct 2023

2. Focus sur l'imagerie TEP, défi 10 ps et corps entier, **C. Morel**, Journées thématiques de la Société Française de Physique : les apports du nucléaire à la santé, Paris, France, 16-17 Oct 2023

3. Experimental feasibility of Prompt Gamma Time Imaging, A. André, S. Ansari, Y. Boursier, A. Cherni, M. Dupont, J. Hérault, C. Hoarau, M.-L. Gallin-Martel, L. Gallin-Martel, A. Garnier, D. Maneval, C. Morel, J.-F. Muraz, G. Tripodo, S. Marcatili, 4th ion imaging workshop, Londres, United Kingdom, 26-27 Oct 2023

4. An alternating approach to reconstruct prompt gamma distribution and hadron velocity profiles from Time-Of-Flight measurements, A. Cherni, A. Garnier, M. Dupont, A. André, J. Hérault, D. Maneval, C. Hoarau, M.-L. Gallin-Martel, G. Tripodo, S. Ansari, J.-F. Muraz, C. Morel, S. Marcatili, **Y. Boursier**, 4th ion imaging workshop, Londres, United Kingdom, 26-27 Oct 2023

5. A standalone Monte Carlo simulation toolkit at the micro- cell level to mimic SiPMs signals, B. Mehadji, C. Trigila, M. Dupont, C. Morel, E. Roncali, 2023 IEEE Nuclear Science Symposium (NSS), Medical Imaging Conference (MIC) and Room Temperature Semiconductor Detector (RTSD) Conference (NSS/MIC 2023), Vancouver, Canada, 4-11 Nov 2023

6. An alternating algorithm for Prompt Gamma Time Imaging with the TIARA project, **A. Cherni**, A. Garnier, M. Dupont, A. André, J. Hérault, D. Maneval, C. Hoarau, M. L. Gallin-Martel, S. Marcatili, C. Morel, Y. Boursier, 2023 IEEE Nuclear Science Symposium (NSS), Medical Imaging Conference (MIC) and Room Temperature Semiconductor Detector (RTSD) Conference (NSS/MIC 2023), Vancouver, Canada, 4-11 Nov 2023

7. MAPSSIC, a beta¡sup¿+¡/sup¿ implantable microprobe for neuroimaging of awake and freely moving rats: first sensor characterization and in vivo imaging simulations, S. E. Ketara, F. Agnese, L. Ammour, J. Baudot, S. Bouvard, M. Dupont, F. Gensolen, M. Kachel, J. Laurence, C. Morel, P. Pangaud, T. Weicherding, L. Zimmer, P. Lanièce, M. A. Verdier, 2023 IEEE Nuclear Science Symposium (NSS), Medical Imaging Conference (MIC) and Room Temperature Semiconductor Detector (RTSD) Conference (NSS/MIC 2023), Vancouver, Canada, 4-11 Nov 2023

8. Prompt Gamma Time Imaging in protontherapy, **A. Garnier**, 80th Crystal Clear Collaboration meeting, Genève, Switzerland, 23 Nov 2023

2022

1. Deep-learning data processing of spectral PC-CT longitudinal studies to design and optimize combined immuno-anticancer treatments in liver cancer mouse models, **F. Cannet**, Y. Boursier, C. Morel, R&D Seminar - "Imaging 2022", Institute Marseille Imaging (IMI), Marseille, France, 26-30 Sep 2022

2. Monte Carlo simulation of a scintillation crystal read by a SiPM with GATE, **B. Mehadji**, M. Dupont, C. Morel, NDIP20, 9th Conference on New Developments in Photodetection, Troyes, France, 4-8 Jul 2022

3. A mathematical framework for Prompt-Gamma time imaging with TIARA, **Y. Boursier**, M. Jacquet, M. Dupont, C. Morel, D. Maneval, J. Hérault, M.-L. Gallin-Martel, S. Ansari, S. Marcatili , RITS'2022, Recherche en Imagerie et Technologies pour la Santé, Brest, France, 22-25 Mai 2022

4. Spectral CT : avancées technologiques et méthodologiques avec les pixel hybrides, **Y. Boursier**, RITS'2022, Recherche en Imagerie et Technologies pour la Santé, Brest, France, 22-25 Mai 2022

5. Development of a fast Cherenkov detector dedicated to Prompt Gamma Time Imaging, M. Jacquet, A. André, S. Marcatili, M.-L. Gallin-Martel, S. Ansari, Y. Boursier, M. Dupont, L. Gallin-Martel, J. Hérault, C. Hoarau, P. Hofverberg, D. Maneval, C. Morel, J.-F. Muraz, FTMI, Fast Timing in Medical Imaging, Valencia, Spain, 3-5 Jun 2022

6. High-speed, efficient, high-resolution gamma ray imaging: the ClearMind project, D. Yvon, V. Sharyy, M. Follin, C.-H. Sung, A. Galindo-Tellez, T. Chaminade, D. Breton, J. Maalmi, P. Rusquart, C. Cheikalib, C. Morel, L. Cappellugola, S. Curtoni, M. Dupont, Y. Boursier, J.-P. Logier, G. Daniel, J.-M. Martinez, S. Jan, C. Comtat, O. Kochebina, NDIP20, 9th Conference on New Developments in Photodetection, Troyes, France, 4-8 Jul 2022

7. 10 picosecondes : un défi pour la TEP du futur, **C. Morel**, Séminaire d'Unité BioMaps, Branville, France, 7-8 Avr 2022

8. Characterization of a one face instrumented monolithic PbWO4 integrated detector toward the pico-seconds TOF-PET applications, A. Galindo-Tellez, V. Sharyy, D. Yvon, M. Follin, C.-H. Sung, T. Chaminade, D. Breton, J. Maalmi, P. Rusquart, C. Cheikalib, C. Morel, L. Cappellugola, S. Curtoni, M. Dupont, Y. Boursier, J.-P. Logier, G. Daniel, J.-M. Martinez, S. Jan, C. Comtat, O. Kochebina, IEEE NSS/MIC'2022, IEEE Nuclear Science Symposium and Medical Imaging Conference, Milan, Italy, 5-12 Nov 2022

9. Development of a high sensitivity TOF detector dedicated to prompt gamma time imaging, S. Marcatili, A. André, S. Ansari, Y. Boursier, M. Dupont, J. Hérault, C. Hoarau, J.P. Hofverberg, M.-L. Gallin-Martel, L. Gallin-Martel, M. Jacquet, D. Manéval, C. Morel, J.-F. Muraz, IEEE NSS/MIC'2022, IEEE Nuclear Science Symposium and Medical Imaging Conference, Milano, Italy, 5-12 Nov 2022

10. Update of the optical light transport in Geant4 to model optical coating, **L. Cappellugola**, M. Dupont, S. Curtoni, C.-H. Hsun, V. Sharyy, D. Yvon, T. Proslier, C. Morel, Technical Forum, 27th Geant4 Collaboration Meeting, Rennes, France, 27 Sep 2022

11. 10 picosecondes : un défi pour la TEP du futur, **C. Morel**, Journées scientifiques de la Société Française de Physique Médicale, Avignon, France, 1-3 Jui 2022

12. Étude longitudinale de l'effet de différents traitements pour le carcinome hépatocellulaire chez la souris assistée par l'imagerie à rayons X et calibration d'un nouveau détecteur pour l'imagerie spectrale, **F. Cannet**, AG du GDR MI2B 2022, Orsay, France, 13-15 Jui 2022

13. Modélisation Monte Carlo de la transmittance d'un cristal de tungstate de plomb passivé par des couches minces d'oxydes, **L. Cappellugola**, AG du GDR MI2B 2022, Orsay, France, 13-15 Jui 2022

14. Modeling of optical coating for the Monte Carlo design study of the ClearMind detection module, **L. Cappellugola**, 78th Crystal Clear Collaboration meeting, Genève, Suisse, 24 Nov 2022

2021

1. Compton 3D imaging with sparse number of views: progress on image quality @ 511 keV, M.Z. Hmissi, G. Lebonvallet, A. Iltis, B. Mehadji and C. Morel, 34th Annual Congress of the European Association of Nuclear Medicine (EANM 2021), Hamburg, Germany, 20-23 Oct 2021

2. Estimating the relative SNR of individual TOF-PET events for Gaussian and non-Gaussian TOF-kernels, J. Nuyts, E. Roncali, S. Gundacker, C. Morel, D. Visvikis, P. Lecoq, Fully-3D'2021, 16th International meeting on fully 3D image reconstructionin radiology and nuclear medicine, Leuven, Belgium, 19-23 Jul 2021

3. Modelisation of frustrated transmission for the ClearMind module, **L. Cappellugola**, M. Dupont, C. Morel, S. Sharyy, C.-H. Sung, D. Yvon, 75th Crystal Clear Collaboration meeting, Genève, Suisse, 25 Mar 2021

4. Geant4 simulation for the ClearMind project and reconstruction of the gamma conversion, C.-H. Sung, L. Cappellugola, M. Follin, M. Dupont, C. Morel, D. Yvon, V. Sharyy, IEEE NSS/MIC'2021, IEEE Nuclear Science Symposium and Medical Imaging Conference, Yokohama, Japan, 16-23 Oct 2021

5. Modelisation of light transmission through surfaces with optical coating in Geant4, **L. Cappellugola**, S. Curtoni, M. Dupont, C.-H. Sung, V. Sharyy, D. Yvon, C. Morel, 76th Crystal Clear Collaboration meeting, Genève, Suisse, 18 Nov 2021

2020

1. MAPSSIC, a communicating MAPS-based intracerebral positrons probe for deep brain imaging in awake and freely-moving rats, **F. Gensolen**, L. Ammour, M. Bautista, J. Heymes, S. Fieux, M. Kachel, F. Lefebvre, P. Pangaud, L. Pinot, P. Lanièce, J. Baudot, P. Gisquet, L. Zimmer, M.-A. Verdier, C. Morel, 6th International Conference on Advancements in Nuclear Instrumentation Measurement Methods and their Applications, Protoroz, Slovenia, 17-21 Jun 2019

2. Detectors for X-ray imaging, **C. Morel**, European School of Instrumentation in Particle & Astroparticle Physics, ESIPAP'2020, Archamps, France, 2-6 Mar 2020

3. Monte Carlo implementation and experimental validation of a model of SiPM, **B. Mehadji**, M. Dupont and C. Morel, IEEE NSS/MIC'2020, IEEE Nuclear Science Symposium and Medical Imaging Conference, Boston, United States, 31 Oct - 7 Nov 2020

4. Monte Carlo implementation and experimental validation of a model of SiPM into GATE, **B. Mehadji**, M. Dupont, D. Fougeron, C. Morel, 74th Crystal Clear Collaboration meeting, Genève, Suisse, 19 Nov 2020

2019

1. Binocular CeBr3 Compton camera for nuclear decommissioning and nuclear waste management, H.Z. Hmissi, A. Iltis, C. Tata Zafiarifety, G. Zeufack, Tadonkeng, L Rodrigues and C. Morel, ANIMMA'2019, International Conference on Advancements in Nuclear Instrumentation, Measurement Methods and their Applications, Portorož, Slovenia, 17-21 Jun 2019

2. Detectors for X-ray imaging, **C. Morel**, European School of Instrumentation in Particle & Astroparticle Physics, ESIPAP'2019, Archamps, France, 4-8 Mar 2019

3. Setting up the 10 ps Challenge: rationale and progress status, **C. Morel**, VI Mediterranean Thematic Workshop in Advanced Molecular Imaging MEDAMI' 2019, Valencia, Spain, 15-17 May 2019

4. Le défi 10 ps, **C. Morel**, Journées Thématiques du Réseau Semi-conducteur IN2P3-IRFU, Marseille, France, 25-26 Jun 2019

5. Detectors for X-ray imaging, **C. Morel**, Ecole d'été France Excellence, Marseille, France, 1-11 Jul 2019

6. Setting up of the 10 ps challenge: progress status, **C. Morel**, Journées annuelles du GDR MI2B, Nantes, France, 20-22 Nov 2019

7. Flight-speed, efficient, high-resolution gamma ray imaging: the Clearmind project, D. Yvon, S. Sharyy, M. Follin, J.-P. Bard, D. Breton, J. Maalmi, C. Morel, NSS/MIC'2019, IEEE Nuclear Science Symposium and Medical Imaging Conference, Manchester, United Kingdom, 28 Oct - 2 Nov 2019

8. Setting up the 10 ps Challenge: rationale and progress status, **C. Morel**, MEDAMI' 2019, VIth Mediterranean Thematic Workshop in Advanced Molecular Imaging, Valence, Spain, 15-17 Mai 2019

9. A Time-Of-Flight Gamma Camera Data Acquisition System for Hadrontherapy Monitoring, X. Chen, O. Allegrini, B. Carlus, C. P. C. Caplan, L. Caponetto, J. P. Cachemiche, S. Curtoni, D. Dauvergne, R. Della-Negra, M. Fontana, L. Gallin-Martel, M. L. Gallin-Martel, J. Hérault, D. Lambert, G. N. Lu, M. Magne, S. Marcatili, H. Mathez, C. Morel, G. Montarou, E. Testa, Y. Zoccarato, 2019 IEEE Nuclear Science Symposium (NSS) and Medical Imaging Conference (MIC), Manchester, United Kingdom, 26 Oct - 02 Nov 2019

10. A µTCA Back-End Firmware for Data Acquisition and Slow Control of the CLaRyS Compton Camera, **C. Caplan**, O. Allegrini, J. P. Cachemiche, B. Carlus, X. Chen, D. Dauvergne, R. Della-Negra, M. Fontana, L. Gallin-Martel, J. Hérault, D. Lambert, G. N. Lu, M. Magne, H. Mathez, G. Montarou, C. Morel, M. R. Bordera, E. Testa, Y. Zoccarato, 2019 IEEE Nuclear Science Symposium (NSS) and Medical Imaging Conference (MIC), Manchester, United Kingdom, 26 Oct - 02 Nov 2019

11. Comparison between measured data and GATE Monte Carlo data for studying the impact of SiPM noise sources on energy spectra, **B. Mehadji**, C. Morel, 72th Crystal Clear Collaboration meeting, Genève, Suisse, 14 Nov 2019

12. Setting up of the 10 ps challenge: progress status, **C. Morel**, Journées du GDR Modélisation et Instrumentation pour l'Imagerie Biomédicale, Nantes, France, 20-22 Nov 2019

13. Le défi 10 ps, , Journées du GDR Modélisation et Instrumentation pour l'Imagerie Biomédicale, Nantes, indéfini,

2018

1. Development of a new GATE digitizer module for SiPMs, **M. Dupont**, C. Morel, 4th FAST WG3/4/5 Meeting, Ljubljana, Slovenia, 8-9 Jan 2018

2. Longitudinal in vivo monitoring of hepatocellular carcinoma in mice with photon counting computed tomography, **L. Portal**, F. Cassol, M. Dupont, Y. Boursier, F. Maina, C. Morel, EMIM'2018, European Molecular Imaging Meeting, San Sebastian, Spain, 20-23 Mar 2018

3. Simultaneous reconstruction and separation in a spectral CT framework with a proximal variable metric algorithm, **S. Tairi**, S. Anthoine, C. Morel, Y. Boursier, The Fifth International Conference on Image Formation in X-Ray Computed Tomography - CT Meeting, Salt Lake City, United States, 20-23 May 2018

4. FAST Working Group 4 - Electronics & DAQ, **C. Morel**, J. Varela, 4th FAST Annual Meeting, Bucharest, Romania, 8-9 Mar 2018

5. Les caméras XPAD3 à pixels hybrides de Si et de CdTe pour le comptage de rayons X, **C. Morel**, Journée thématique du réseau détecteurs semiconducteurs IN2P3-IRFU, Grenoble, France, 31 Mai - 1 Jun 2018

6. Le défi en tant qu'aiguillon du progrès technologique, **C. Morel**, Atelier du Pôle imagerie du GDR MI2B : Réflexion sur le défi 10 ps, Paris, France, 11-12 Jun 2018

7. Implementation and experimental validation of SiPMs in GATE, **M. Dupont**, B. Mehadji, S. Gundacker, E. Auffray, S. Bin Ahmad, J. Fleury, C. Morel, International Conference on the Advancement of Silicon Photomultiplier, Schwetzingen, Allemagne, 11-15 Jun 2018

8. Extension of the List-Mode MLEM Algorithm for Poly-Energetic Imaging with a Compton Camera, **B. Mehadji**, M. Dupont, Y. Boursier, C. Morel, 2018 IEEE Nuclear Science Symposium and Medical Imaging Conference, Sydney, Australia, 10-17 Nov 2018

9. Implementation and experimental validation of a model of SiPM in GATE, **M. Dupont**, B. Mehadji, S. Gundacker, E. Auffray, S. Bin Ahmad, J. Fleury, C. Morel, NSS/MIC'2018, IEEE Nuclear Science Symposium and Medical Imaging Conference, Sydney, Australia, 10-17 Nov 2018

10. The 10 ps challenge, **C. Morel**, 70th Crystal Clear Collaboration meeting, Genève, Suisse, 29 Nov 2018

11. Implementation and experimental validation of a model of SiPM in GATE, **B. Mehadji**, M. Dupont, S. Gundacker, E. Auffray, S. Bin Ahmad, J. Fleury, C. Morel, 70th Crystal Clear Collaboration meeting, genève, Suisse, 29 Nov 2018

12. Le défi 10 ps, **C. Morel**, Journées du GdR Mi2B, Toulouse, France, 3-4 Dec 2018

2017

1. K-edge spectral tomography of preclinical lung tissue: energy calibration and image analysis within the prototype PIXSCAN-FLI, A. Ortega-Gil, M. Dupont, Y. Boursier, L. Portal, F. Cassol, C. Morel, 1st young Spanish Molecular Imaging Network meeting, Madrid, Spain, 30 Jan 2017

2. Monte Carlo simulation of a Compton camera for nuclear dismantling operations, **B. Mehadji**, C. Morel, 67th Crystal Clear Collaboration general meeting, Giessen, Germany, 16 Mar 2017

3. FAST Working Group 4 - Electronics & DAQ, **C. Morel**, J. Varela, 3rd FAST Annual Meeting, Larnaca, Cyprus, 23-24 Mar 2017

4. Imagerie X spectrale : décomposition en base de matériaux par calibration polynomiale, N. Ducros, O. Pivot, S. Rit, J.-M. Létang, J. Abascal, Y. Boursier, M. Dupont, C. Morel, F. Peyrin, RITS' 2017, Recherche en Imagerie et Technologie pour la Santé, Lyon, France, 27-29 Mar 2017

5. Detectors for X-ray imaging, **C. Morel**, European School of Instrumentation in Particle & Astroparticle Physics, ESIPAP'2017, Week 5: Detector Technologies & Electronics, European Scientific Institute, Archamps, France, 20-24 Feb 2017

6. Optical simulation for the TEMPORAL project: study for scintillation photon detection time and SiPM modelisation, **M. Dupont**, C. Morel, OpenGATE Collaboration technical meeting, Clermont-Ferrand, France, 11 May 2017

7. PLATO: A low thresholf X-ray photon counting detector prototype readout chip for spectroscopic imaging, **A. Habib**, M. Menouni, P. Pangaud, C. Morel, 4th Workshop on Medical Applications of Spectroscopic X-ray Detectors, Geneva, Switzerland, 15-18 May 2017

8. Progress report on the Development of a comprehensive model of a spectrometric chain using a Silicon photo-multiplier, **M. Dupont**, 3rd FAST Annual Meeting, Larnaca, Cyprus, 23-24 Mar 2017

9. Temporal Imaging CeBr3 Compton camera: a new concept for nuclear decommissioning and nuclear waste management, A. Iltis, H. Snoussi, L. Rodrigues de Magalhaes, M.Z. Hmissi, C. Tata Zafiarifety, G. Zeufack, Tadonkeng, C. Morel, ANIMMA'2017, International Conference on Advancements in Nuclear Instrumentation, Measurement Methods and their Applications, Liège, Belgium, 19-23 Jun 2017

10. A data acquisition system for a beam-tagging hodoscope used in hadrontherapy monitoring, **X. Chen**, J.-P. Cachemiche, C. Pimenta Cheble Caplan, L. Caponetto, D. Dauvergne, R. Della Negra, M. Fontana, G.-N. Lu, C. Morel, M. Rodo Bordera, E. Testa, Y. Zoccarato, NSS/MIC'2017, IEEE Nuclear Science Symposium and Medical Imaging Conference, Atlanta, United States, 21-28 Oct 2017

11. Characterization results for PLATO : a prototype CMOS readout chip for hybrid X-ray photon counting detectors with low thresholds for fusion plasma diagnostics, **A. Habib**, M. Menouni, D. Fougeron, P. Pangaud, C. Fenzi, G. Colledani, G. Moureau, A. Escarguel, C. Morel, NSS/MIC'2017, IEEE Nuclear Science Symposium and Medical Imaging Conference, Atlanta, United States, 21-28 Oct 2017

12. Développement d'un micro-scanner à comptage de photons pour le CERIMED, **C. Morel**, Journées du Département Hospitalo- Universitaire Imaging, Marseille, France, 30 Jun 2017

13. Development of a new GATE digitizer module for SiPMs, **M. Lenz**, M. Dupont, U. Pietrzyk, C. Morel, 68th Crystal Clear Collaboration Meeting, Genève, Switzerland, 16 Nov 2017

14. Development of a new GATE digitizer module for SiPMs, **M. Dupont**, M. Lenz, U. Pietrzyk, C. Morel, OpenGATE Collaboration technical meeting, Marseille, France, 30 Nov - 1 Dec 2017

15. A study of the Temporal Compton camera with GATE, **B. Mehadji**, M. Dupont, C. Morel, OpenGATE Collaboration technical meeting, Marseille, France, 30 Nov - 1 Dec 2017

16. Longitudinal monitoring of hepatocellular carcinoma in mice with the photon counting microCT scanner PIXSCAN-FLI, **L. Portal**, F. Cassol, M. Dupont, Y. Boursier, S. Richelme, F. Maina, C. Morel, BCP 13, 13ème Journée Scientifique Interface Biologie- Chimie-Physique, Marseille, France, 4 Dec 2017

17. Spectral CT at CPPM with the PIXSCAN-FLI: a new framework for simultaneous separation and 3D reconstruction, S. Tairi, S. Anthoine, C. Morel, **Y. Boursier**, 68th Crystal Clear Collaboration meeting, Genève, Suisse, 16 Nov 2017

18. Development of a new GATE digitiser module for SiPMs, M. Lenz, M. Dupont, U. Pietrzyk, C. Morel, 68th Crystal Clear Collaboration meeting, Genève, Suisse, 16 Nov 2017

19. Pôle imagerie: défi 10 ps, **C. Morel**, Journées du GDR Modélisation et Instrumentation pour l'Imagerie Biomédicale, Caen, France, 5-6 Dec 2017

20. Développement d'un micro-scanner à comptage de photons PIXSCAN-FLI, **C. Morel**, Journées du GDR Modélisation et Instrumentation pour l'Imagerie Biomédicale, Caen, France, 5-6 Dec 2017

2016

1. Implementaion of a comprehensive model of a spectrometric chain using a Silicon photo-multiplier in Gate, M. Dupont, C. Morel, OpenGATE Technical Collaboration Meeting, Orsay, France, 31 Mar 2016
2. Nuclear and CT imaging: what drives it?, **C. Morel**, MEDAMI'2016, Mediterranean Thematic Workshops in Advanced Molecular Imaging, Ajaccio, France, 1-5 May 2016
3. Nuclear and CT imaging: what drives it?, **C. Morel**, EMIM 2016, 11th Molecular Imaging Meeting, Utrecht, Netherlands, 8-10 Mar 2016
4. Nouveaux contrastes en imagerie X, C. Morel, F. Peyrin, CNIV'2016, 1er Congrès National d'Imagerie du Vivant, Paris, France, 10-12 Feb 2016
5. CT Performances of ClearPET/XPAD prototype, M. Hamonet, M. Dupont, T. Fabiani, F. Cassol, Y. Boursier, A. Bonissent, F. Debarbieux, L. Bidaut, C. Morel , 65th Crystal Clear Collaboration Meeting, Marseille, France, 7-8 Apr 2016
6. MAPSSIC, a novel CMOS intra-cerebral beta+ probe for deep brain imaging in awake and freely moving rat: a Monte Carlo study, L. Ammour, J. Heymes, M. Bautista, S. Fieux, F. Gensolen, M. Kachel, F. Lefebvre, F. Pain, P. Pangaud, L. Pinot, J. Baudot, P. Gisquet-Verrier, P. Laniece, C. Morel, L. Zimmer, M.-A. Verdier, IEEE NSS/MIC 2016, Strasbourg, France, 29 Nov - 5 Dec 2016
7. Imaging: Current status from technical perspectives, **C. Morel**, 2nd Divonne Brainstorming meeting on CERN Medical Applications, Divonne, France, 19-21 Fev 2016
8. Détecteurs à pixels hybrides: de la recherche à l'industrialisation, P. Delpierre, B. Dinkespiler, C. Morel, Inventeurs à l'honneur, Palais de la Découverte, Paris, France, 23 Mar 2017
9. Nuclear and CT imaging: what drives it ?, **C. Morel**, EMIM'2016, 11th Molecular Imaging Meeting, Utrecht, Netherlands, 8-10 Mar 2016
10. FAST Working Group 4 - Electronics & DAQ, C. Morel, J. Varela, 2nd FAST Annual Meeting, Trente, Italy, 16-18 Mar 2016
11. Nuclear and CT imaging: what drives it ?, **C. Morel**, MEDAMI' 2016, IVth Mediterranean Thematic Workshops in Advanced Molecular Imaging, Ajaccio, France, 1-5 Mai 2016
12. Simultaneous reconstruction and separation in a spectral CT framework, **S. Tairi**, C. Morel, Y. Boursier, S. Anthoine, DHU Imaging Workshop : Problématiques en Imagerie Médicale et méthodologies de résolution par traitement d'image, Marseille, France, 16 Dec 2016

13. The Crystal Clear Collaboration and medical applications, **C. Morel**, K. Ziemons , 25th anniversary of the Crystal Clear Collaboration Symposium, Genève, Suisse, 24 Nov 2016

14. The Crystal Clear Collaboration and medical applications, , 25th anniversary of the Crystal Clear Collaboration Symposium, Genève, indéfini,

2015

1. Les pixels hybrides : des experiences du LHC à la tomodensitométrie spectrale du petit animal, C. Morel, XXIIIe Congrès Général de la Société Française de Physique, Strasbourg, France, 24-28 Aug 2015

2. A large surface X-ray camera based on XPAD3-CdTe single chip hybrids, F. Cassol, A. Dawiec, N. Blanc, F. Bompard, N. Boudet, Y. Boursier, C. Buton, J.-C. Clémens, F. Debarbieux, P. Delpierre, M. Dupont, J. Graber-Bolis, S. Hustache, C. Kronland- Martinet, H. Perez-Ponce, L. Portal, E. Vigeolas, C. Morel, 3rd Workshop on Medical Applications of Spectroscopic X-ray Detectors, Genève, Switzerland, 20-23 Apr 2015

3. A large surface X-ray camera based on XPAD3-CdTe single chip hybrids, F. Cassol, N. Blanc, F. Bompard, N. Boudet, Y. Boursier, C. Buton, J.-C. Clémens, A. Dawiec, F. Debarbieux, P. Delpierre, M. Dupont, J. Graber-Bolis, S. Hustache, C. Morel, H. Perez-Ponce, L. Portal, E. Vigeolas, 17th iWoRiD International Workshop on Radiation Imaging Detectors, Hamburg, Germany, 8 Jun - 2 Jul 2015

4. The ClearPET/XPAD prototype: development of a simultaneous PET/CT scanner for mice., **M. Hamonet**, M. Dupont, T. Fabiani, F. Cassol, Y. Boursier, A. Bonissent, F. Debarbieux, L. Bidaut, C. Morel , NSS/MIC'2015, IEEE Nuclear Science Symposium and Medical Imaging Conference, San Diego, United States, 31 Oct - 7 Nov 2015

5. Development of a micro-CT based on the XPAD3 chip for K-edge imaging of the mouse, C. Morel , 1st Spectral Photon Counting CT Workshop, Lyon, France, 7-8 Sep 2015

2014

1. Applications sociétales de la physique des particules au domaine de l'imagerie, **C. Morel**, Ecole IN2P3 d'instrumentation "de la physique au détecteur", Bénodet, France, 2-8 Fev 2014

2. Development of K-edge imaging using XPAD3 composite pixels, **C. Kronland-Martinet**, Workshop Spectral CT, Marseille, France, 2-7 May 2014

3. Component separation for spectral X-ray imaging using the XPAD3 hybrid pixel camera, M. Dupont, **Y. Boursier**, A. Bonissent, F. Cassol, C. Kronland-Martinet, F. Debarbieux, C. Morel, Workshop Spectral CT, Marseille, France, 2-7 May 2014

4. Development of a Compton Camera for medical applications based on SSD and scintillation detectors, J. Krimmer, J.-L. Ley, C. Abellan, J.-P. Cachemiche, L. Caponetto, X. Chen, M. Dahoumane, D. Dauvergne, N. Freud, B. Joly, D. Lambert, L. Lestand, J.M. Létang, M. Magne, H. Mathez, V. Maxim, G. Montarou, C. Morel, M. Pinto, C. Ray, V. Reithinger, E. Testa, Y. Zoccarato, NDIP'2014, 7th International Conference on New Developments in Photodetection, Tours, France, 30 Jun - 4 Jul 2014

5. About a few Challenges for Signal Processing in emission and transmission tomography, **C. Morel**, 2nd International Summer School on Intelligent Signal Processing for Frontier Research and Industry INFIERI'14, Paris, Paris, France, 14-25 Jul 2014

6. Tomographie spectrale à comptage de photons : imagerie au K-edge et séparation des composantes, **M. Dupont**, Deutsch- Französiche Medizin Tagung, Paris, France, 26 Sep 2014

7. Les Principes de Base de la Tomographie Spectrale : Imagérie au K-edge et séparation des composantes, M. Dupont, Deutsch- Frnazösische Tagung, Paris, France, 26 Sep 2014

8. Scanner spectral, C. Kronland-Martinet, P. Douek, Journée France Life Imaging, Journées Françaises de Radiolmogies (JFR), Paris, France, 16 Oct 2014

2013

1. Development of X-ray spectral CT using photon counting Hybrid Pixel detectors, **C. Morel**, Assemblée Générale du GDR MI2B, Strasbourg, France, 1-6 Apr 2013

2. Comparison of K-edge versus standard absorption imaging using the XPAD3 hybrid pixel detector, F. Cassol, C. Kronland-Martinet, A. Bonissent, Y. Boursier, J-C Clémens, M. Dupont, H. Ouamara, F. Debarbieux, P. Delpierrre, C. Morel, 2nd international workshop on spectral CT imaging 2013, Genève, Switzerland, 21-25 Apr 2013

3. A data acquisition system for medical imaging, **C. Abellan**, J.-P. Cachemiche, F. Réthoré, C. Morel , ANIMMA'2013, International Conference on Advancements in Nuclear Instrumentation, Measurement Methods and their Applications, Marseille, France, 23-27 Jun 2013

4. Potential of the wireless radiosensitive intracerebral probe PIXSIC to monitor PET radiotracers in anaesthetized and awake rat, L. Balasse, J. Maerk, S. Fieux, F. Pain, A. Genoux, C. Morel, P. Gisquet-Verrier, L. Zimmer, P. Lanièce, WMIC'2013, World Molecular Imaging Congress, Savannah, Georgia, USA, Savannah, Georgia, United States, 18-21 Sep 2013

5. Component separation for spectral X-ray imaging using the XPAD3 hybrid pixel camera, **M. Dupont**, Y. Boursier, A. Bonissent, F. Galland, F. Cassol, C. Kronland-Martinet, C. Morel, NSS/MIC'2013, IEEE Nuclear Science Symposium and Medical Imaging Conference, Seoul, South Korea, 27 Oct - 02 Nov 2013

2012

1. Développement du CT spectral, une nouvelle modalité d'imagerie par rayons X intrinsèquement anatomo-fonctionnelle, **C. Morel**, 3ème Journée de la Recherche du Pôle Imagerie, Hôpital de la Timone, Marseille, France, 6 Apr 2012

2. Proximal Algorithms and CT: New Results on 3D Real Datas and Color CT, **Y. Boursier**, M. Dupont, S. Anthoine, J.-F. Aujol, C. Melot , SIAM Conference on Imaging Science2012, Philadelphie, United States, 20-22 May 2012

3. Development of the small animal hybrid PET/CT prototype ClearPET/XPAD, **C. Morel**, Réunion Axe E « Imagerie et Radiothérapie », Cancéropôle PACA, Marseille, France, 7 Jun 2012

4. Comparison of the performance of the photon counting hybrid pixel camera XPAD3 versus the CCD camera DALSA XR-4 for cone beam micro-CT, **C. Morel**, Réunion Axe E « Imagerie et Radiothérapie », Cancéropôle PACA, Marseille, France, 7 Jun 2012

5. Study of the X-Ray Scattering in the Silicon and CdTe XPAD , P. Delpierre K. Medjoubi, S. Hustache, P. Mercère, S. Ravy, J.-C. Clémens, J.-F. Bérar, N. Boudet, B. Dinkespiler, A. Dawiec , Study of the X-Ray Scattering in the Silicon and CdTe XPAD, Coimbra , Portugal, 1-5 Jul 2012

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9. Imagerie intravitale des innteractions cellulaires dans le système nerveux central pathologique, F. Debarbieux, A. Bonissent, Y. Boursier, F. Cassol Brunner, J.-C. Clémens, M. Dupont, K. Fenrich, M. Hocine, C. Kronland-Martinet, H. Ouamara, C. Ricard, C. Morel, G. Rougon, IX ième Journée Scientifique BCP, Marseille, France, 3 Dec 2012

10. Intravital imaging of cellular interactions in the pathological central nervous system, **F. Debarbieux**, A. Bonnissent, Y. Boursier, F. Cassol, J.-C. Clémens,M. Dupont, K. Fenrich, M. Hocine, C. Kronland-Martinet, C. Ricard, H. Houamara, C. Ricard, F. Stanchi, T. Rodriguez, P. Weber, C. Morel, G. Rougon, GDR interdisciplinaire, Marseille, France, 3 Dec 2012

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2. New Concept of a Submillimetric Pixelated Silicon Detector for in Vivo Brain Studies in Freely Moving Rodents, **J. Maerk**, D. Benoit, M. Benoit, J.-C. Clémens, S. Fieux, D. Fougeron, B. Janvier, M. Jevaud, A. Genoux, P. Gisquet-Verrier, F. Lefebvre, M. Menouni, F. Pain, C. Tourvielle, P. Weiss, L. Zimmer, C. Morel, P. Lanièce, WMIC'2011, World Molecular Imaging Congress, San Diego, United States, 7-10 Sep 2011

3. On the efficiency of proximal methods for CBCT and PET, S. Anthoine, J.-F. Aujol, **Y. Boursier**, C. Mélot, ICIP 2011 : 2011 IEEE International Conference on Image Processing, Bruxelle, Belgium, 11-14 Sep 2011

4. A General Framework for Static and Dynamic Tomography with Regularity Constraints. Biomedical Application to Cone Beam Computerized TomographyCBCT) and Positron Emission Tomography (PET). Astrophysical application to Solar Rotational Tomography (SRT)., **Y. Boursier**, ICIP 2011 : 2011 IEEE International Conference on Image Processing,, Bruxelle, Belgium, 11-14 Sep 2011

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6. Comparison of K-Edge Versus Standard Absorption Imaging Using the XPAD3 Hybrid Pixel Detector, **F. Cassol Brunner**, C. Kronland-Martinet, A. Bonissent, Y. Boursier, J.-C. Clémens, M. Dupont, H. Ouamara, F. Debardieux, C. Morel, Nuclear Science Symposium and Medical Imaging Conference 2011, Valence, Spain, 23-29 Oct 2011

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1. Spectral CT reconstruction with ProMeSCT: results on real data from PIXSCAN, **Y. Boursier**, F. Cannet, M. Dupont, S. Anthoine, C. Morel, The 8th International Conference on Image Formation in X-ray Computed Tomography, Bamberg, Germany, 5-9 Aou 2024

2. PET tracers surgical radio-guidance with using a small Compton-angles collimation probe, B. Mehadji, M. Dupont, A. Montrot, E. Roncali, C. Morel, B. Farman, IEEE Nuclear Science Symposium and Medical Imaging Conference, Tampa, United States, 26 Oct - 2 Nov 2024

3. A Monte Carlo Simulation for Prompt Gamma Time Imaging, **A. Garnier**, A. André, A. Cherni, M. Dupont, C. Hoarau, M.-L. Gallin-Martel, M. Pinson, J. Hérault, D. Maneval, J.-P. Hofverberg, J.-F. Muraz, S. Marcatili, C. Morel, Y. Boursier, IEEE Nuclear Science Symposium and Medical Imaging Conference, Tampa, United States, 26 Oct - 2 Nov 2024

4. A fast detection system for Prompt Gamma Time Imaging, A. André, M. Pinson, C. Hoarau, Y. Boursier, A. Cherni, M. Dupont, M.-L. Gallin-Martel, A. Garnier, J. Hérault, J.-P. Hofverberg, P. Kavrigin, D. Maneval, C. Morel, J.-F. Muraz, S. Marcatili, IEEE Nuclear Science Symposium and Medical Imaging Conference, Tampa, United States, 26 Oct - 2 Nov 2024

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2. Prompt Gamma Time Imaging technique for proton range control during Particle Therapy, A. André, S. Ansari, Y. Boursier, A. Cherni, M. Dupont, J. Hérault, C. Hoarau, M.-L. Gallin-Martel, A. Garnier, D. Maneval, C. Morel, J.-F. Muraz, G. Tripodo, S. Marcatili, 71th Annual Conference of the Particle Therapy Co- Operative Group, Madrid, Spain, 10-16 Jui 2023

3. Optimisation alternée pour la localisation des rayons gamma prompts et l'estimation du profil de vitesses en hadronthérapie, **A. Cherni**, A. Garnier, M. Dupont, A. André, J. Hérault, D. Maneval, M.-L. Gallin-Martel, S. Marcatili, C. Morel, Y. Boursier, GRETSI'2023, XXIXe Colloque Francophone

de Traitement du Signal et des Images, Grenoble, France, 28 Aou - 1 Sep 2023

4. Time-of-flight imaging for prompt gamma imaging in proton therapy, **A. Garnier**, Biomedical Imaging School, Cargèse, France, 29 Oct - 3 Nov 2023

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1. Micro Photon-Counting Computed Tomography to document longitudinally treatment response in hepatocellular carcinoma mouse models, **F. Cannet**, Y. Boursier, C. Sequera, S. Richelme; P. Michea, J.-P. Borg, C. Morel, F. Maina, 17th European Molecular Imaging Meeting — EMIM 2022, Thessaloniki, Greece, 15-18 Mar 2022

2. Development of a fast Cherenkov detector for prompt gamma ray imaging in particle therapy, M. Jacquet, S. Marcatili, M.-L. Gallin-Martel, S. Ansari, Y. Boursier, M. Dupont, L. Gallin-Martel, J. Hérault, C. Hoarau, P. Hofverberg, D. Maneval, **C. Morel**, J.-F. Muraz, NDIP20, 9th Conference on New Developments in Photodetection, Troyes, France, 4-8 Jul 2022

3. Simulation and event reconstruction in monolithic PbWO4 crystal detector for the ClearMind project, C.-H. Sung, D. Yvon, V. Sharyy, M. Follin, A. Galindo-Tellez, T. Chaminade, D. Breton, J. Maalmi, P. Rusquart, C. Cheikalib, C. Morel, L. Cappellugola, S. Curtoni, M. Dupont, Y. Boursier, J.-P. Logier, G. Daniel, J.-M. Martinez, S. Jan, C. Comtat, O. Kochebina, NDIP20, 9th Conference on New Developments in Photodetection, Troyes, France, 4-8 Jul 2022

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5. Spectral CT reconstruction with ProMeSCT: results on real data from PIXSCAN, Y. Boursier, F. Cannet, S. Anthoine, **C. Morel** , IEEE NSS/MIC'2022, IEEE Nuclear Science Symposium and Medical Imaging Conference, Milano, Italy, 5-12 Nov 2022

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1. A mathematical framework for prompt-gamma time imaging with TIARA, **Y. Boursier**, M. Jacquet, M. Dupont, C. Morel, D. Maneval, J. Hérault, M.-L. Gallin-Martel, S. Ansari, S. Marcatili, IEEE NSS/MIC'2021, IEEE Nuclear Science Symposium and Medical Imaging Conference, Yokohama, Japan, 16-23 Oct 2021

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1. Towards a binocular Compton Camera for low activity Imaging, M. Z. Hmissi, A. Iltis, C. Tata, G. Zeufack, B. Mehadji, C. Morel, H. Snoussi, IEEE NSS/MIC'2020, IEEE Nuclear Science Symposium and Medical Imaging Conference, Boston, United States, 31 Oct - 7 Nov 2020

2019

1. Fast prompt-gamma imaging for the online monitoring of the ion range in hadron therapy, J. Livingstone, A. Etxebeste, S. M. Cissé, D. Dauvergne, M. Fontana, M.-L. Gallin-Martel, J.-M. Létang, S. Marcatili, C. Morel, D. Sarrut, E. Testa, PTCOG58, 58th Annual Conference of the Particle Therapy Co- Operative Group, Manchester, United Kingdom, 10-15 Jun 2019

2. Temporal imaging CeBr3 Compton camera: first imaging results and prospects for medical imaging, C. Tata Zafiarifety, A. Iltis, G. Zeufack, L. Rodrigues, M. Lopez, H. Snoussi, Z. Hmissi, C. Morel, Conf. Rec. SPIE Medical Imaging Conference, San Diego, United States, 16-21 Feb 2019

3. Imaging of a 30 kBq 22Na source form 3 meters with a Temporal CeBr3 Compton camera, M.Z. Hmissi, A. Iltis, C. Tata, G. Zeufack, A. Alhamwi, L. Rodrigues, B. Mehadji, C. Morel, H. Snoussi, NSS/MIC'2019, IEEE Nuclear Science Symposium and Medical Imaging Conference, Manchester, United Kingdom, 28 Oct - 2 Nov 2019

4. Test and characterization of the ClaRyS camera's absorber with its final acquisition chain, O. Allegrini, J.-P. Cachemiche, C. Caplan, B. Carlus, X. Chen, D. Dauvergne, R. Della Negra, J.-M. Létang, C. Morel, E. Testa, Young Investigator's Workshop on Photon Detection in Medicine and Medical Physics, Siegen, Germany, 2-3 Dec 2019

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1. Simultaneous reconstruction and separation in a spectral CT framework., S. Tairi, S. Anthoine, C. Morel, Y. Boursier, SIAM IS18, SIAM Conf. on Imaging Science, Bologne, France, 5-8 Jun 2018

2. A HCC mouse model to develop treatments combining immuno- therapy wigth drugs targeting cancer cells, M. Arechederra, S. Richelme, L. Portal, F. Cassol, F. Yannan, F. Daian, M. Dupont, Y. Boursier, R. Dono, C. Morel, F. Maina, French R&D'2018, Rencontres internationales Recherche, Paris, France, 6 Fev 2018

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1. First in-vivo monitoring of hepatocellular carcinoma in mice with a photon counting detector for micro-CT imaging, **L. Portal**, F. Cassol, M. Dupont, Y. Boursier, S. Richelme, F. Maina, C. Morel, EMIM'2017, European Molecular Imaging Meeting, Köln, Germany, 5-7 Apr 2017

2. Séparation et reconstruction simultanées en tomographie spectrale via un algorithme proximal à métrique variable, **S. Tairi**, S. Anthoine, C. Morel, Y. Boursier, GRETSI'2017, XXVIe Colloque GRETSI – Traitement du Signal et des Images, Juan-les-Pins, France, 5-8 Sep 2017

3. Design and characterization of pixelated needle probe for molecular neuroimaging on awake and freely moving rats, P. Laniece, C. Morel, M.-A. Verdier, L. Zimmer, J. Baudot, PSD'11, 11th International Conference on Position Sensitive Detectors, Milton Keynes, United States, 3-8 Sep 2017

4. Décomposition en base de matériaux à partir de données issues du scanner spectral PIXSCAN-FLI, N. Ducros, O. Pivot, M. Dupont, J.M. Létang, S. Rit, J.F. Perez Juste, C. Morel, Y. Boursier, F. Peyrin, CNIV'2017, 2e Congrès National d'Imagerie du Vivant, Paris, France, 8-9 Nov 2017

5. First experimental evaluation of MAPSSIC prototype, a potential novel CMOS intra-cerebral beta+ probe for deep brain imaging in awake and freely moving rats, L. Ammour, J. Heymes, M. Bautista, S. Fieux, F. Gensolen, M. Kachel, A. Dubois, F. Lefèbvre, F. Pain, P. Pangaud, L. Pinot, J. Baudot, P. Gisquet-Verrier, P. Lanièce, C. Morel, L. Zimmer, M.-A. Verdier, NSS/MIC'2017, IEEE Nuclear Science Symposium and Medical Imaging Conference, Atlanta, United States, 21-28 Oct 2017

6. Characterization results for PLATO: a prototype CMOS readout chip for hybrid X-ray photon counting detectors with low thresholds for fusion plasma diagnostics, **A. Habib**, M. Menouni, D. Fougeron, P. Pangaud, C. Fenzi, G. Colledani, G. Moureau, A. Escarguel, C. Morel, NSS/MIC'2017, IEEE Nuclear Science Symposium and Medical Imaging Conference, Atlanta, United States, 21-28 Oct 2017

7. Material decomposition using the PIXSCAN-FLI spectral micro- CT, N. Ducros, O. Pivot, O. Kochebina, M. Dupont, S. Rit, J.M. Létang, J.F.P.J Abascal, F. Peyrin, C. Morel, Y. Boursier, NSS/MIC'2017, IEEE Nuclear Science Symposium and Medical Imaging Conference, Atlanta, United States, 21-28 Oct 2017

8. Implementation of an analytical model of SiPM in GATE, **M. Dupont**, C. Morel, SCINT'2017, 14th International Conf. on Scintillating materials and their applications, Chamonix, France, 18-22 Sep 2017

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3. Temporal imaging: observation and localization of a Compton effect inside a 20 mm monolithic LYSO plate with a Philips Digital Si-PM, A. Iltis, H. Snoussi, L. Rodriguez de Magalhaes, C. Morel, IEEE NSS/MIC 2016, Strasbourg, France, 29 Nov - 5 Dec 2016

4. X-ray imaging crystal spectroscopy development for WEST, C. Fenzi, G. Codellani, G. Moureau, P. Lotte, P. Moreau, G. Bertschinger, A. Escarguel, A. Habib, C. Morel, M. Menouni, 21st Topical Conference on High Temperature Plasma Diagnostics, Madison, United States, 5-9 Jun 2016

5. Simultaneous reconstruction and separation in a spectral CT framework, **S. Tairi** S. Anthoine, C. Morel, Y. Boursier, International Traveling Workshop on Interactions Between Sparse Models and Technology iTWIST'S 2016, Aalborg, Denmark, 24-26 Aou 2016

6. Séparation et reconstruction simultanées en tomodensitométrie spectrale, **S. Tairi**, S. Anthoine, C. Morel, Y. Boursier, 1er forum franco- québécois d'innovation en santé, Montréal, Canada, 11-12 Oct 2016

7. IMIC - Needle-shaped low-power monolithic active pixel sensors for molecular neuroimaging on awake and freely moving rats, J. Heymes, L. Ammour, M. Bautista, G. Bertolone, S. Fieux, F. Gensolen, M. Goffe, F. Guezzi-Messaoud, C. Hu-Guo, M. Kachel, F. Lefebvre, F. Pain, P. Pangaud, L. Pinot, P. Gisquet, P. Laniece, C. Morel, M.-A. Verdier, M. Winter, L. Zimmer, J. Baudot, IEEE NSS/MIC 2016, Strasbourg, France, 29 Nov - 5 Dec 2016

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2. Comparison of the performance of the photon counting hybrid pixel camera XPAD3 versus the CCD camera DALSA XR-4 for cone-beam micro-CT, **H. Ouamara**, F. Cassol Brunner, A. Bonissent, Y. Boursier, C. Kronland-Martinet, J.-C. Clemens, M. Dupont, F. Debarbieux, C. Morel, 2012 Nuclear Science Symposium, Medical Imaging Conference & Workshop on Room- Temperature Semiconductor X-Ray and Gamma-Ray Detectors, Anaheim, Californie, United States, 29 Oct - 3 Nov 2012

3. Imagerie à comptage de photons, **F. Cassol Brunner**, A. Bonissent, Y. Boursier, F. Debarbieux, J.-C. Clémens, M. Dupont, M. Hamonet, C. Kronland-Martinet, H. Ouamara, C. Morel , IX ième Journée Scientifique BCP, Marseille, France, 3 Dec 2012

4. Imagerie spectrale basée sur la caméra à pixels hybrides XPAD3, **M. Dupont**, Y. Boursier, F. Cassol Brunner, A. Bonissent, H. Ouamara, C. Morel, Journées Scientifiques Nouvelles méthodologies du vivant, Lyon, France, 11-13 Dec 2012

5. Comparison of the performance of the photon counting hybrid pixel camera XPAD3 versus the CCD camera DALSA XR-4 for cone-beam micro-CT, **H. Ouamara**, F. Cassol Brunner, A. Bonissent, Y. Boursier, C. Kronland-Martinet, J.-C. Clémens, M. Dupont, F. Debarbieux, C. Morel, Journées Scientifiques Nouvelles méthodologies du vivant, Lyon, France, 11-13 Dec 2012

6. Normalisation of the PET data acquired with the hybrid PET/CT prototype ClearPET/XPAD, **M. Hamonet**, T. Fabiani, C. Kronland-Martinet, F. Debarbieux, F. Cassol, C. Morel, Journées Scientifiques Nouvelles méthodologies du vivant, Lyon, France, 11-13 Dec 2012

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1. Design and Construction of the ClearPET/XPAD Small Animal PET/CT Scanner, **C. Morel**, Physics for Health in europe workshop (Towards a European roadmap for using physics tools in the development of diagnostics techniques and new cancer therapies), Genève, Switzerland, 2-4 Feb 2010

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1. Apprentissage profond pour l'imagerie CT spectrale par Comptage de Photons et conception de traitement sur des modèles murins de cancer du foie, F. Cannet, Aix-Marseille Université, 04 Mar 2024

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1. Modélisation Monte Carlo d'un détecteur scintronique à haute résolution spatio-temporelle couplé à un tube multiplicateur à galette de micro-canaux, L. Cappellugola, Aix-Marseille Université, 07 Jui 2023

2021

1. Modélisation Monte Carlo d'une caméra Compton basée sur l'utilisation de détecteurs à scintillation sensibles à la position couplés à des SiPM, B. Mehadji, ,

2020

1. Mise en œuvre et caractérisation du système d'acquisition de données d'une caméra Compton pour l'imagerie des gammas prompts en protonthérapie, C. Pimenta Cheble Caplan, Aix-Marseille Université, 11 Dec 2020

2019

1. Développement de méthodes itératives pour la reconstruction en tomographie spectrale, S. Tairi, Aix-Marseille Université, 20 Jun 2019

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1. Étude de la tomographie à comptage de rayons X avec des pixels hybrides en Si et en CdTe et application au suivi longitudinal du carcinome hépatocellulaire chez la souris, L. Portal, Aix-Marseille Université, 29 Oct 2018
2. From particle tracking to counting tomography, F. Cassol, Aix-Marseille Université, 11 Apr 2018

2016

1. Tomographie hybride simultanée TEP/TDM combinant détecteurs à pixels hybrides et modules phoswich à scintillateurs, M. Hamonet, Aix Marseille Université, 19 Avr 2016

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1. Tomographie spectrale à comptage de photons : développement du prototype PIXSCAN et preuve de concept, M. Dupont, Aix- Marseille Université, 18 Apr 2014

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1. Développement d'une caméra X couleur ultra-rapide à pixels hybrides, A. Dawiec, Université de la Méditerranée - Aix- Marseille II, 04 May 2011

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1. Étude et construction d'un tomographe TEP/TDM pour petits animaux, combinant modules phoswich à scintillateurs et détecteur à pixels hybrides, S.Nicol, Université de la Méditerranée - Aix- Marseille II, 20 Jul 2010

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