Pr. Christian MOREL, Ph.D.

Educational History

1985	Physics Engineer, Federal Institute of Technology of Lausanne (EPFL), Switzerland
1990	PhD, University of Lausanne (UNIL), Switzerland Thesis: *Measurement of the inclusive J/ψ production cross sections in proton-proton and antiproton-proton collisions at √s = 24.3 GeV*.

Employment Record

1985-1991	**Assistant**, Institute of Nuclear Physics, UNIL PhD student at UA6/SPS/CERN
1991-1994	**Master-assistant**, Institute of Nuclear Physics, UNIL
1994-2001	**Physicist**, Privat-Docent, Department of Radiology, Geneva University Hospitals *Cyclotron facility project leader*
2000-2001	**Visiting scientist**, Imperial College, Hammersmith Hospital, London
2001-2003	**Senior Scientist** (MER), Institute of Nuclear Physics, UNIL
2003-2005	**Research associate**, Laboratory for High Energy Physics, EPFL spokesman of the OpenGATE collaboration *development and construction of a ClearPET prototype*
2005	**Professor**, CPPM, Aix-Marseille University and CNRS/IN2P3 imXgam research team leader *development of photon counting X/gamma tomography*

Awards

2005	Junior Chair of Excellency, French National Research Agency (ANR)
2009	Rotblat Medal, Physics in Medicine and Biology (IOP)
2015	Yves Rocard Prize, French Physical Society

Publications (> 200)

- P. Lecoq *et al.* (2020) Roadmap toward the 10 ps time-of-flight PET challenge, accepted in *Phys. Med. Biol.* https://doi.org/10.1088/1361-6560/ab9500
- F. Cassol *et al.* (2019) Tracking dynamics of spontaneous tumours in mice using Photon Counting Computed Tomography. *iScience* **21**: 68-83
- F. Cassol *et al.* (2016) Characterization of imaging performance of a micro-CT system based on the photon counting XPAD3/Si hybrid pixel detectors. *Biomed. Phys. Eng. Express* **2** (2): 025003.
- L. Balasse *et al.* (2015) PIXSIC: a wireless intracerebral radiosensitive probe in freely moving rats. *Mol. Imaging* **14**: 484-489.
- F. Cassol Brunner *et al.* (2013) First K-edge imaging with a micro-CT based on the XPAD3 hybrid pixel detector, *IEEE Trans. Nucl. Sci.* **60**: 103-108.
- J. Bert *et al.* (2013) Geant4-based Monte Carlo simulations on GPU for medical applications. *Phys. Med. Biol.* **58**: 5593-5611.
- S. Jan, *et al.* (2011) GATE V6: a major enhancement of the GATE simulation platform enabling modelling of CT and radiotherapy. *Phys. Med. Biol.* **56**: 881-901. (PMB Citations Prize 2015)
- K. Thielemans *et al.* (2008) Normalisation of histogrammed list mode data. *IEEE Trans. Nucl. Sci.* **55**: 543-551.
- J.-B. Mosset *et al.* (2006) Development of an optimized LSO/LuYAP phoswich detector head for the Lausanne ClearPET demonstrator. *IEEE Trans. Nucl. Sci.* **53**: 25-29.
- S. Jan *et al.* (2004) GATE: a simulation toolkit for PET and SPECT. *Phys. Med. Biol.* **49**: 4543-4561. (PMB Citations Prize 2009)
- J. Chval, *et al.* (2000) Development of new mixed $Lu_x(RE^{3+})_{1-x}AP$:Ce scintillators (RE^{3+} = Y^{3+} or Gd^{3+}): comparison with other Ce-doped or intrinsic scintillation crystals. *Nucl. Instr. Meth. A* **443**: 331-341.
- M.L. Egger *et al.* (1998) Incremental beamwise backprojection using geometrical symmetries for 3D PET reconstruction in a cylindrical scanner geometry. *Phys. Med. Biol.* **43**: 3009-3024.
- C. Morel *et al.* (1990) Measurement of the inclusive J/ψ production cross sections in ppbar and pp collisions at √s = 24.3 GeV. *Phys. Lett. B* **252**: 505-510.