

ALLEGATO B

UNIVERSITÀ DEGLI STUDI DI MILANO

selezione pubblica per n. 1 posto/i di Ricercatore a tempo determinato ai sensi dell'art.24, comma 3, lettera b) della Legge 240/2010 per il settore concorsuale 02/A1 ,

settore scientifico-disciplinare FIS/01; FIS/04

presso il Dipartimento di Fisica "Aldo Pontremoli" ,

(avviso bando pubblicato sulla G.U. n. 32 del 21-04-2020) Codice concorso 4359

Franco Giuliani CURRICULUM VITAE

INFORMAZIONI PERSONALI (NON INSERIRE INDIRIZZO PRIVATO E TELEFONO FISSO O CELLULARE)

COGNOME	GIULIANI
NOME	FRANCO
DATA DI NASCITA	11/01/67

INSERIRE IL PROPRIO CURRICULUM (non eccedente le 30 pagine)

Avendo visto il bando troppo tardi per la traduzione, inserisco il mio curriculum già pronto in inglese a partire dalla prossima pagina

Curriculum vitae of Franco Giuliani

Birth date and place: January, 11th 1967, Milano (Italia)

Nationality: Italian

Academic degrees

- ★ Ph. D. in Physics at the Politecnico di Torino (Italia), thesis: “Optical and electrical properties of amorphous silicon - based semiconductive films and physics of optoelectronic devices”
- ★ Laurea (degree) in Physics at the Università degli Studi di Milano (Italy), score 109/110, thesis “Acceleratori elettrostatici di grande potenza per F.E.L.” (“High power electrostatic accelerators for F.E.L.”)

Other schools/courses/skills

- † C++ programming in ROOT (extensive work experience)
- † GEANT4 MC simulations (extensive work experience)
- † “School on tools and toys in nuclear astrophysics”, Michigan State University, East Lansing, Michigan, USA, February 13-17, 2006, organized by JINA (Joint Institute for Nuclear Astrophysics)
- † “Scuola Nazionale di Fisica della Materia”, September, 9 - 19, 1997, Villa Gualino, Torino (Italia), organized by INFM (Italian National Institute for Materials Physics) and ISI (Institute for Scientific Interchange)
- † Third “Scuola di Risonanza di Spin Elettronico” (school of ESR measurements), Centro Estivo of the Università di Pavia at Brallo di Pregola, Pavia (Italia), 28 September - 6 October 1996
- † School of specialization in physics at the Università di Pavia (Italia) in 1992

Professional History:

2016–2019: Assistant Researcher, Shanghai Jiaotong University, Shanghai, People’s Republic of China. Collaboration on the PandaX (Dark Matter and neutrinoless double beta decay with xenon TPCs. While the DM TPCs use the scintillation of LXe, the $0\nu\beta\beta$ decay search will directly detect the ionization charge in high pressure GXe).

Activities:

- design of a 10 ton/h water purification system to provide ultra pure water with $>18 \text{ M}\Omega\text{-cm}$ resistivity to shield the future (post PandaX-II) PandaX detectors. The design was aimed at filling the approximately 5000 m^3 water pool that the PandaX collaboration excavated in the CJPL (China JinPing underground Laboratory), able to shield 5 PandaX-III modules by surrounding each of them with 5 m^3 water.
- work on a cold (LN) trap-based purity measurement system to check the purity of xenon by means of a Residual Gas Analyzer.
- I was also responsible for 2 HPGe setups to measure the radioimpurity levels of various materials via gamma spectroscopy. One of them was located underground in CJPL and operated as off the shelf, while the other, being located above ground at Shanghai Jiaotong University, was equipped with a plastic scintillator-based veto, so I developed a custom DAQ using anticoincidence and CAEN electronic boards.
- participation in the development of the Geant4 optical simulation of the PandaX detectors, and simulation study of the potential Pulse Shape Discrimination capability of PandaX. According to simulation, although PSD does not work in xenon so well as in argon, if a low nuclear recoil acceptance of 20-30

First half of 2015: Scientific Visitor at University of Milano-Bicocca, Italy. Collaboration with INFN (italian nuclear and high energy physics institute) on the development of a novel bubble chamber type detector, called “geyser”, for Dark Matter searches. The major novelties are: 1) like in a geyser, the vapour produced by an event immediately leaves the superheated liquid, so that it does not trigger the ebullition of the bulk 2) the vapour is recovered, re-liquefied and returned to the sensitive volume.

up to Sept 30 2014: Assistant Research Professor, Physics and Astronomy Department, University of New Mexico, USA. Continuing the previous activity in the frame of CLEAN and DEAP, aiming at expansion to related fields and experiments like NEXT and CAPTAIN.

Activities:

- Development of the light injection system, now operational, of the 92 8-inch PMTs (R5912-02-MOD) of the MiniCLEAN LAr detector at SNOLAB, that allows for in-situ optical calibrations of the PMTs. While the LEDs (tested at LN temperature) are in LAr, the control electronics is at room temperature
- Development of a system (design in Nucl. Instr. and Meth. A 697 (2012) 99) to compensate the effect of the Earth’s magnetic field on the inner PMTs of MiniCLEAN
- Contribution to the development of the Geant4 MC simulations of the MiniCLEAN and DEAP-3600 detectors.

- Coordination of the cleaning and preparation (excluded the wavelength shifter film deposition) of the 92 acrylic light guides of the MiniCLEAN detector.
- 2007 – 2011: postdoctoral Research Associate, Physics and Astronomy Department, University of New Mexico, USA. Participation in the CLEAN and DEAP single phase noble liquid Dark Matter searches. In addition, Co-organization of the Mini-Workshop “Dark Matter: its Origin, Models and Detection”, New Mexico Center for Particle Physics, University of New Mexico, Albuquerque (NM), USA, May 27-29, 2011.
- 2001 – 2006: Participation in the SIMPLE Dark Matter Search, activity on the interpretation of direct Dark Matter Search results in general, reintroducing the $a_p - a_n$ formalism (first published by D. R. Tovey et al. in Phys. Lett. B 488 (2000) 17). Though published, this formalism began to be used by the experiments to report their Spin-Dependent results after my Phys. Rev. Lett. 93 (2004) 161301, and its follow-up Phys. Rev. D 71 (2005) 123503 revised the formalism and showed its application to the comparison of the main experimental Spin-Dependent results (particularly in the interesting region of the 50 GeV DAMA candidate of the time). Also, my Phys. Rev. Lett. 95 (2005) 101301 is a precursor of the more recent “Isospin Violating” interpretation framework of Spin-Independent results, which I called simply “Isospin-Dependent” because the Spin-Independent coupling with the nucleons is not assumed to be completely independent of their isospin. My experimental point of view is that the data analysis should be able to verify all our expectations on the interaction between DM and nuclei. An example of an Isospin-Dependent model that still conserves isospin is available in arXiv:1110.4616 [astro-ph.CO]. Besides this “theoretical/phenomenological” activity, I also participated in more “hands-on” ones, like the filtered neutron beam calibrations performed at the only Research nuclear Reactor in Portugal (I worked on both the design&assembly of the filters and the data analysis). The activity was performed as postdoctoral fellow supported by grants from several Portuguese institutions, detailed below:
 - 2004 – 2006: postdoctoral fellow, Nuclear Physics Center, University of Lisbon (Portuguese Foundation for Science and Technology).
 - 2003 – 2004: postdoctoral fellow, Nuclear Physics Center, Instituto Tecnológico e Nuclear, Portugal.
 - 2001 – 2002: postdoctoral fellow, Nuclear Physics Center, Universidade de Lisboa, Portugal.
- 1998 – 2000: postdoctoral fellow in the frame of the European Training and Mobility of Researchers program, at CEMOP/UNINOVA, New University of Lisbon, Portugal.
- 1997/1998: lecturer of Fisica I for the bachelor- level courses of “Diploma Universitario” in “Ingegneria delle Infrastrutture” (Engineering of Infrastructures) and Diploma Univer-

sitario in “Ambiente e Risorse” (Environment and Resources), Politecnico di Torino, Italia.

1996/1999: Ph. D. fellowship

1995: collaboration with SIDI spa (an informatics enterprise), Milano, Italia

1992/1993: Military service as Jr. Lt.

Foreign languages

English read/written/conversation: very good

Portuguese read/written/conversation: very good

Talks and seminars

1. “A nonstandard Pulse Shape Discrimination parameter to discern recoiling e- and nuclei in LXe scintillator detectors”, The 4th International Conference on Science, Application and Technology of Xenon Radiation Detector, 18-21 September 2018, WASEDA University, Tokyo, Japan
2. “A method to reanalyze Dark Matter experimental results in different theoretical scenarios”, TAUP 2017 – XV International Conference on Topics in Astroparticle and Underground Physics, 24 – 28 July 2017, Sudbury, ON, Canada
3. “Low-level impurity measurements in Xenon with cold traps”, XeSAT 2017 – The International Conference on Science, Application, and Technology of Xenon Radiation Detectors, 3 – 7 April 2017, Khon Kaen, Thailand
4. “Single phase noble liquid detectors for Dark Matter and neutrino searches”, INPAC, Shanghai Jiaotong University, Shanghai, China, October 30, 2015
5. “Rare event searches, with focus on direct WIMP DM and $0\nu\beta\beta$ decay”, CHEP, August 5 2015, Peking University, Beijing, China
6. “MiniCLEAN’s B_{Earth} compensation status”, MiniCLEAN collaboration meeting, Yale University, New Haven, CT USA, July 19th–21st 2011
7. “In situ optical calibration system for MiniCLEAN’s PMTs”, MiniCLEAN Neutron & Surface Backgrounds Workshop, Syracuse University, Syracuse, NY USA, January 10th–11st 2011
8. “Earth magnetic field compensation for MiniCLEAN”, MiniCLEAN collaboration meeting, Los Alamos, NM USA, March 11th–13th 2010
9. “In situ optical calibration of MiniCLEAN”, MiniCLEAN collaboration meeting, LANL, March 11th–13th 2010
10. “The DEAP and the CLEAN search”, Nuclear, Particle, Astroparticle and Cosmology (NUPAC) seminar, UNM, Albuquerque NM USA, October 6, 2009
11. Talk on “Dark matter and solar neutrinos with DEAP/CLEAN”, 22nd international workshop on Weak Interactions and Neutrinos, Perugia, Italy, September 14th–19th, 2009
12. Talk on “Magnetic compensation for MiniCLEAN”, DEAP and CLEAN Collaboration Meeting, Kingston, ON, Canada, August 21st–24th, 2009

13. Talk on the potential of the DEAP/CLEAN program for direct Dark Matter detection to test various dark matter models, 17th International Conference on Supersymmetry and the Unification of Fundamental Interactions, Northeastern University, Boston, MA, June 5-10, 2009
14. Talk (via conference call) on the status of the DEAP-3600 geometry in the GEANT4-based RAT simulations, DEAP collaboration meeting, SNOlab, Sudbury, ON CA, March 27, 2009
15. Talk on position reconstruction in miniCLEAN and DEAP-I, DEAP-I analysis meeting, Queen's University, Kingston, ON CA, Oct 25, 2008
16. Talk on position reconstruction in miniCLEAN, miniCLEAN engineering meeting, UNM, Albuquerque NM USA, July 15, 2008
17. seminar on Low energy WIMP-nucleon cross sections, NUPAC, UNM, Albuquerque NM USA, September 19, 2007
18. seminar on SIMPLE, NUPAC, UNM, Albuquerque NM USA, 2007
19. "SIMPLE-icity in Direct Dark Matter Searches", 7th UCLA Symposium on Sources and Detection of Dark Matter and Dark Energy in the Universe, Marina Del Rey, Los Angeles CA USA, February 22-24, 2006
20. Talk on nuclear matrix elements for Dark Matter searches at the Joint Institute for Nuclear Astrophysics shell model workshop "The school on tools and toys in nuclear astrophysics", Michigan State University, East Lansing, Michigan, USA, February 13-17, 2006
21. Seminar on limits on the existence of spin-independent WIMPs at CENTRA, Instituto Superior Tecnico, Lisboa (Portugal) 11 November 2005
22. "SIMPLE Dark Matter Search Results in Rustrel", RENCONTRE DE RUSTREL 2005, Laboratoire Souterrain à Bas Bruit, Rustrel (France), 28-30 September 2005
23. "Impact of a "heavy" SIMPLE on the search for WIMP dark matter", Topics in Astroparticle and Underground Physics 2005 conference, September 10-14, 2005 Zaragoza, Spain
24. Lecture on dark matter, course of Astrophysics, Instituto Superior Tecnico, Lisboa (Portugal), April 26, 2005
25. "The SIMPLE search for WIMP dark matter", International workshop on Small and Medium Scale Underground Science, Laboratoire Souterrain à Bas Bruit, Rustrel (France), 22-24 September 2004

26. “Model Independent Experimental Limits on Spin-dependent WIMPs”, Fifth International Workshop on the Identification of Dark Matter, 6 - 10 September 2004, Edinburgh, UK
27. “Recent Results from the SIMPLE Dark Matter Search” and “Model Independent Experimental Limits on Spin-dependent WIMPs”, Fifth International Workshop on the Identification of Dark Matter, 6 - 10 September 2004, Edinburgh, UK
28. Status report of SIMPLE at the First International Workshop on Bubble Detectors in Fundamental and Applied Research, Montréal (Canada), February 28, 2004
29. Seminar on experimental limits on WIMP-matter interaction, Instituto Superior Tecnico, Lisboa, January 27, 2004
30. Seminar on Result analysis and interpretation of the SIMPLE direct search for spin-dependent dark matter, CFNUL, Universidade de Lisboa (Portugal) November 05, 2003
31. “The status of SIMPLE in 2002” international conference Dark 2002, 4-9 February 2002, Cape Town, South Africa
32. “SIMPLE: present status and improvements”, XIII Rencontres de Blois conference, June, 17-23 2001, Blois, Loire Valley, France
33. “New ultra-light flexible large area thin film position sensitive detector based on amorphous silicon”, 18th International Conference on Amorphous and Microcrystalline Semiconductors, August, 22-27 1999, Snowbird, UT, USA

Franco Giuliani's Publication list

1. The PandaX collaboration and F. Giuliani, “Topological background discrimination in the PandaX-III neutrinoless double beta decay experiment”, arXiv:1903.03979 [physics.ins-det], Accepted for publication in Journal of Physics G: Nuclear and Particle Physics
2. The PandaX collaboration and F. Giuliani, “An Improved Evaluation of the Neutron Background in the PandaX-II Experiment”, Sci. China Phys. Mech. Astron. 63 (2020) 231011
3. The PandaX collaboration and F. Giuliani, “Searching for Neutrino-less Double Beta Decay of ^{136}Xe with PandaX-II Liquid Xenon Detector, Chin. Phys. C43 (2019) 113001
4. CAPTAIN Collaboration and F. Giuliani, “First Measurement of the Total Neutron Cross Section on Argon Between 100 and 800 MeV”, Phys. Rev. Lett. 123 (2019) 042502, LANL Report LA-UR-19-22200
5. The PandaX collaboration and F. Giuliani, “Dark matter direct search sensitivity of the PandaX-4T experiment”, Sci. China Phys. Mech. Astron. 62 (2019) 031011
6. The PandaX collaboration and F. Giuliani, “PandaX-II constraints on spin-dependent WIMP-nucleon effective interactions”, Phys. Lett. B 792 (2019) 193
7. The PandaX collaboration and F. Giuliani, “Constraining Dark Matter Models with a Light Mediator at the PandaX-II Experiment”, Phys.Rev.Lett. 121 (2018) 021304
8. The PandaX collaboration and F. Giuliani, “Limits on Axion Couplings from the First 80 Days of Data of the PandaX-II Experiment”, Phys. Rev. Lett. 119 (2017) 181806
9. The PandaX collaboration and F. Giuliani, “Dark Matter Results From 54-Ton-Day Exposure of PandaX-II Experiment”, Phys.Rev.Lett. 119 (2017) 181302
10. The PandaX collaboration and F. Giuliani, “Spin-Dependent Weakly-Interacting-Massive-Particle–Nucleon Cross Section Limits from First Data of PandaX-II Experiment”, Phys. Rev. Lett. 118 (2017) 071301
11. The PandaX collaboration and F. Giuliani, “Exploring the dark matter inelastic frontier with 79.6 days of PandaX-II data”, Phys.Rev. D 96 (2017) 102007
12. The PandaX collaboration and F. Giuliani, “Dark Matter Results from First 98.7-day Data of PandaX-II Experiment”, Phys. Rev. Lett. 117 (2016) 121303

13. The PandaX collaboration and F. Giuliani, “Dark Matter Search Results from the Commissioning Run of PandaX-II”, *Phys. Rev. D* 93 (2016) 122009
14. The PandaX collaboration and F. Giuliani, “PandaX-III: Searching for Neutrinoless Double Beta Decay with High Pressure ^{136}Xe Gas Time Projection Chambers”, *Sci. China Phys. Mech. Astron.* (2017) 60: 061011, arXiv:1610.08883 [physics.ins-det]
15. T. Adam, F. An, G. An, the JUNO collaboration and F. Giuliani, “JUNO Conceptual Design Report”, arXiv:1508.07166 [physics.ins-det]
16. The MiniCLEAN collaboration and F. Giuliani, “Improving Photoelectron Counting and Particle Identification in Scintillation Detectors with Bayesian Techniques”, *Astrop. Phys.* 65 (2015) 40
17. The MiniCLEAN collaboration “Update on the MiniCLEAN Dark Matter Experiment”, *Proceedings of the TAUP 2013 Conference, Physics Procedia* 61 (2015) 144
18. The DEAP-1 collaboration and F. Giuliani, “Measurement of the scintillation time spectra and pulse-shape discrimination of low-energy β and nuclear recoils in liquid argon with DEAP-1”, *Astrop. Phys.* 85 (2016) 1
19. DEAP collaboration, “Radon backgrounds in the DEAP-1 liquid argon based Dark Matter detector”, arXiv:1211.0909 [astro-ph.IM]
20. M. Bodmer, *F. Giuliani*, M. Gold, A. Christou and M. Batygov, “Design of an active magnetic field compensation system for MiniCLEAN”, *Nucl. Instr. and Meth. A* 697 (2012) 99
21. F. Giuliani, “Isospin conserving Dark Matter with isospin dependent interaction, and reconciliation of contrasting results from direct Dark Matter experiments”, arXiv:1110.4616v1 [astro-ph.CO]
22. F. Giuliani, “The effect of the recoil energy window on the results of direct dark matter experiments”, arXiv:0910.1878v1 [astro-ph.HE]
23. F. Giuliani, on behalf of the DEAP/CLEAN collaboration, “Hunting the Dark Matter with DEAP/CLEAN”, in *American Institute of Physics CONFERENCE PROCEEDINGS 1200*, of the 17th International Conference on Supersymmetry and the Unification of Fundamental Interactions, June 5-10, 2009, Boston (MA), p. 985
24. T. Morlat, M. Felizardo, *F. Giuliani*, TA Girard, G. Waysand, R.F. Payne, H.S. Miley, A.R. Ramos, J.G. Marques, R.C. Martins and D. Limagne, “A CF3I-based SDD Prototype for Spin-independent Dark Matter Searches”, *Astrop. Phys.* 30 (2008) 159, arXiv:0704.2037 [astro-ph]

25. M. Felizardo, R.C. Martins, A.R. Ramos, T. Morlat, T.A. Girard, *F. Giuliani*, J.G. Marques, “New acoustic instrumentation for the SIMPLE superheated droplet detector”, Nucl. Instr. and Meth. A 589 (2008) 72
26. M. Felizardo, R.C. Martins, A.R. Ramos, T. Morlat, T.A. Girard, *F. Giuliani*, D. Limagne, G. Waysand and J.G. Marques, “Improved acoustic instrumentation of the SIMPLE detector”, Nucl. Instr. and Meth. A 585 (2008) 61
27. F. Nascimento, A.R. Ramos, A.C. Fernandes, M. Felizardo, T. Morlat, J.G. Marques, *F. Giuliani*, T.A. Girard and J.A. Paixão, “Optimization of filtered neutron beams for the calibration of superheated droplet detectors at the RPI” Nucl. Instr. and Meth. A 580 (2007) 282
28. T. Morlat, *F. Giuliani*, T.A. Girard, A.R. Ramos, M. Felizardo and J.G. Marques, “Response study of a CF3I Superheated Droplet Detector for dark matter applications”, Nucl. Instr. and Meth. A 580 (2007) 274
29. *F. Giuliani*, T. Morlat and T.A. Girard, “Heavy superheated droplet detectors as a probe of spin-independent WIMP dark matter existence”, Phys. Rev. D 75 (2007) 063503, arXiv:physics/0511158
30. T.A. Girard and *F. Giuliani*, “On the Direct Search for Spin-dependent WIMP Interactions”, Phys. Rev. D 75 (2007) 043512; arXiv:hep-ex/0511044
31. *F. Giuliani*, T. Morlat, A.R. Ramos, T.A. Girard, M. Felizardo da Costa, J.G. Marques, R.C. Martins, H.S. Miley, D. Limagne and G. Waysand, “SIMPLE-icity in Direct Dark Matter Searches”, Proc. 7th UCLA Symposium on Sources and Detection of Dark Matter and Dark Energy in the Universe February 22-24, 2006 Marina Del Rey, Los Angeles CA USA DOI 10.1016/j.nuclphysbps.2007.08.036, Nucl. Phys. B (Proc. Suppl.) 173 (2007) 129
32. F. Giuliani “Spin-independent experimental limits on a WIMP with isospin-dependent interaction”, Proc. Topics in Astroparticle and Underground Physics 2005 conference, September 10-14, 2005 Zaragoza, Spain, Journal of Physics: Conference Series 39 (2006) 203
33. F. Giuliani, et al. “Impact of a “heavy” SIMPLE on the search for WIMP dark matter”, Proc. TAUP 2005 conference, September 10-14, 2005 Zaragoza, Spain, Journal of Physics: Conference Series 39 (2006) 136
34. T.A. Girard, *F. Giuliani*, T. Morlat, et al., “SIMPLE limits on spin-dependent WIMP interactions”, Proc. Topics in Astroparticle and Underground Physics 2005 conference, September 10-14, 2005 Zaragoza, Spain, Journal of Physics: Conference Series 39 (2006) 114

35. T A Girard and *F. Giuliani*, “A not-so-rosy view of the apparent future in direct searches for spin-dependent WIMP interactions”, Proc. Topics in Astroparticle and Underground Physics 2005 conference, September 10-14, 2005 Zaragoza, Spain, Journal of Physics: Conference Series 39 (2006) 202
36. F. Giuliani “Are direct search experiments sensitive to all spin-independent WIMP candidates?”, Phys. Rev. Lett. 95 (2005) 101301
37. T.A. Girard, *F. Giuliani*, T. Morlat, M. Felizardo da Costa, J.I. Collar, C. Limagne, G. Waysand, J. Puibasset, H.S. Miley, M. Auguste, D. Boyer, A. Cavaillou, J.G. Marques, C. Oliveira, A.C. Fernandes, A.R. Ramos, R.C. Martins, “SIMPLE dark matter search results”, Physics Letters B 621 (2005) 233
38. *F. Giuliani*, TA Girard, “Model-independent Limits from Spin-dependent WIMP Dark Matter Experiments”, Phys. Rev. D 71 (2005) 123503
39. F. Giuliani, “Model Independent Experimental Limits on Spin-dependent WIMPs” in THE IDENTIFICATION OF DARK MATTER, Proceedings of the Fifth International Workshop, 6 - 10 September 2004, Edinburgh, UK, edited by Neil J C Spooner & Vitaly Kudryavtsev (World Scientific, Singapore, May 2005), 289
40. Felizardo, M.; Martins, R.C.; Ramos, A.R.; Morlat, T.; Giuliani, F.; Marques, J.G.; Limagne, D.; Waysand, G.; Fernandes, A.C.; Girard, T.A.; Alegria, F., “Signal Discrimination in Superheated Droplet Detectors”, Instrumentation and Measurement Technology Conference, 2005. IMTC 2005. Proceedings of the IEEE, Volume 2, 17-19 May 2005, 1551
41. *F. Giuliani*, TA Girard, G. Waysand, D. Limagne, T. Morlat, H.S. Miley, J.I. Collar, A.R. Ramos, M. da Costa, R.C. Martins, J.G. Marques, and A.C. Fernandes, “Recent Results from the SIMPLE Dark Matter Search” in THE IDENTIFICATION OF DARK MATTER, Proceedings of the Fifth International Workshop, 6 - 10 September 2004, Edinburgh, UK, edited by Neil J C Spooner & Vitaly Kudryavtsev (World Scientific, Singapore, May 2005), 230
42. M. Felizardo, R.C. Martins, J.G. Marques, A.R. Ramos, D. Limagne, TA Girard, *F. Giuliani*, T. Morlat, G. Waysand, and A.C. Fernandes, “Identification and Measurement of Bubble Nucleation in Superheated Emulsion Detectors (SED)” in proceedings of 5^a Conferência Nacional de Telecomunicações, Tomar 2005
43. *F. Giuliani*, T. A. Girard “Exclusion limits on spin dependent WIMP-nucleon couplings from the SIMPLE experiment”, Physics Letters B 588 (2004) 151
44. F. Giuliani “Model-independent Assessment of Current Direct Searches for Spin-dependent Dark Matter”, Physical Review Letters 93 (2004) 161301

45. A. R. Ramos, *F. Giuliani*, T.A. Girard, T. Morlat, J.G. Marques, C. Oliveira, D. Limagne, G. Waysand, A. Fernandes, "Neutron spectrometry with large volume, heavy-loaded superheated droplet detectors: a SIMPLE spin-off" *Radiation Protection Dosimetry* 115 (2005) 398
46. Oliveira, *F. Giuliani*, T. A. Girard, J. G. Marques, J. Salgado, J. I. Collar, T. Morlat, D. Limagne, G. Waysand "MCNP optimization of filtered neutron beams for calibration of the SIMPLE detector" *NIM B* 213 (2004) 172
47. *F. Giuliani*, C. Oliveira, J. I. Collar, T. A. Girard, T. Morlat, D. Limagne, J. G. Marques, A.R. Ramos, G. Waysand "Response of SIMPLE SDDs to Monochromatic Neutron Irradiations" *NIM A* 526 (2004) 348
48. A.C. Fernandes, T. Morlat, M. Felizardo, J.I. Collar, J. Puibasset, G. Waysand, H.S. Miley, A.R. Ramos, T.A. Girard, *F. Giuliani*, D. Limagne, J.G. Marques, R.C. Martins and C. Oliveira, "The SIMPLE SDD" *Radiation Protection Dosimetry* 120 (2006) 503.
49. *F. Giuliani*, T. A. Girard, J. I. Collar, D. Limagne, J. G. Marques, H. S. Miley, T. Morlat, C. Oliveira, J. Puibasset, G. Waysand, R. Ramos "The status of SIMPLE in 2002" in "Dark Matter in Astro and Particle Physics" Proc. of the international conference Dark 2002, ed. by H. V. Klapdor-Kleingrothaus and R. D. Viollier, publ. Springer, 524
50. J. I. Collar, *F. Giuliani*, T. A. Girard, D. Limagne, J. G. Marques, H. S. Miley, T. Morlat, C. Oliveira, J. Puibasset, G. Waysand "SIMPLE: present status and improvements" in *Frontiers of the Universe*, Proc. of the XIII Rencontres de Blois conference (2001), ed. L. Celnikier and J. Tran Thanh Van, publ. The Gioi, 101
51. E. M. C. Fortunato, D. Brida, I. M. M. Ferreira, *F. Giuliani*, H.M.B. Aguas, P. Nunes, A. Cabrita, Y. Nunes, M. J. P. Maneira, R. F. P. Martins "Large area flexible thin film position sensitive detectors", *Mat. Res. Soc. Symp. A Proc.*, 609 (2000) A12.7.
52. E. Fortunato, I. Ferreira, *F. Giuliani*, P. Wurmsdobler, R. Martins, "New ultra-light flexible large area thin film position sensitive detector based on amorphous silicon", *J. Non-Cryst. Solids* 266-269 (2000) 1213.
53. E. M. C. Fortunato, P. Teodoro, V. Silva, I. M. M. Ferreira, Y. Nunes, N. Guimares, F. Soares, *F. Giuliani*, G. Popovic, W. Brenner, R. F. P. Martins "Performances of an optical ruler based on one-dimensional hydrogenated amorphous Si position-sensitive detectors produced using different metal contacts", *Phil. Mag. B* 80 (2000) 765

54. P. Mandracci, M. L. Rastello, P. Rava, *F. Giuliani*, F. Giorgis “Stability and quantum efficiency of a novel type of a-Si:H/ a-SiC:H based UV detector”, *Thin Solid Films* 337 (1999), 232-234.
55. F. Giorgis, *F. Giuliani*, C. F. Pirri, P. Mandracci, P. Rava, R. Reitano, L. Calcagno, P. Musumeci “Carbon rich a-Si_{1-x}C_x:H films: an investigation on radiative recombination properties” *Mat. Res. Soc. Symp. Proc.*, (spring meeting 1998)
56. P. Rava, *F. Giuliani*, F. Giorgis, C. F. Pirri, E.Tresso, P. Mandracci, C. Summonte, R. Rizzoli, A. Desalvo “Amorphous Silicon Nitrogen Alloys Deposited by PECVD Under Hydrogen Dilution Conditions”, in *Physics of Semiconductor Devices* (Narosa Publishing House, New Delhi, 1998) 580.
57. F. Giorgis, *F. Giuliani*, C. F. Pirri, V. Rigato, E.Tresso, S. Zandolin “Structural information on a-SiC:H from Infrared and Raman spectroscopy”, in *IEE emis Data Reviews Series 19 “Properties of Amorphous Silicon and Alloys data book”*, ed. T. Searle (INSPEC, UK, 1998) 74.
58. F. Giorgis, *F. Giuliani*, C. F. Pirri, E.Tresso “Structural information on a-SiN:H from Infrared and Raman spectroscopy”, *IEE emis Data Reviews Series 19 “ Properties of Amorphous Silicon and Alloys data book”*, ed. T. Searle (INSPEC, UK, 1998) 85.
59. F. Giorgis, *F. Giuliani*, C. F. Pirri, E.Tresso, U. Coscia “Information on gap states in a-SiC:H from ESR, LESR, constant photocurrent and photothermal deflection spectroscopies”, *IEE emis Data Reviews Series 19 “ Properties of Amorphous Silicon and Alloys data book”*, ed. T. Searle (INSPEC, UK, 1998) 161.
60. F. Giorgis, *F. Giuliani*, C. F. Pirri, E.Tresso “Information on gap states in a-SiN:H from ESR, LESR, constant photocurrent and photothermal deflection spectroscopies”, *IEE emis Data Reviews Series 19 “ Properties of Amorphous Silicon and Alloys data book”*, ed. T. Searle (INSPEC, UK, 1998) 168.
61. F. Giorgis, *F. Giuliani*, C. F. Pirri, E.Tresso, J.P. Conde, V. Chu “Wide band gap a-SiC:H films for optoelectronic applications”, *J. Non-Cryst. Solids* 227-230 (1998) 465.
62. F. Giorgis, *F. Giuliani*, C. F. Pirri, A. Tagliaferro, E.Tresso “Correlation between gap density of states and recombination processes in high electronic quality a-C:H”, *J. Non-Cryst. Solids* 227-230 (1998) 565.
63. F. Giorgis, *F. Giuliani*, C. F. Pirri, E.Tresso, R. Galloni, R. Rizzoli, C. Summonte, A. Desalvo, P. Rava “Photoluminescence and electroluminescence properties of a-Si_{1-x}N_x:H based superlattice structures”, *J. Non-Cryst. Solids* 227-230 (1998) 1127.

64. F. Giorgis, *F. Giuliani*, C. F. Pirri, A. Tagliaferro, E. Tresso "Radiative recombination processes and defects in a-C:H films deposited by PECVD", *Diamond and Related Materials* 7 (1998) 435.
65. F. Giorgis, *F. Giuliani*, C. F. Pirri, A. Tagliaferro, E. Tresso "Photoluminescence and electronic density of states in a-C:H films", *Applied Physics Letters* 72 (1998) 2520.
66. F. Giorgis, *F. Giuliani*, C. F. Pirri, E. Tresso, C. Summonte, R. Rizzoli, R. Galloni, A. Desalvo, P. Rava "Optical, structural and electrical properties of device quality hydrogenated amorphous silicon-nitrogen films deposited by plasma-enhanced chemical vapor deposition", *Phil. Mag. B* 77 (1998) 925.
67. F. Giorgis, *F. Giuliani*, C. F. Pirri, E. Tresso, C. Summonte, R. Rizzoli, R. Galloni, A. Desalvo, F. Zignani, P. Rava F. Caccavale "Photoluminescence and optical characterization of a-Si_xN_{1-x}:H based multilayers grown by PECVD", *Mat. Res. Soc. Symp. Proc.* 467 (1997) 489.
68. I. Boscolo, *F. Giuliani*, M. Valentini "A 1 MW, 1 mm Continuous-Wave FELTRON for Toroidal Plasma Heating", *IEEE TRANSACTIONS ON PLASMA SCIENCE* 20 (1992) 256
69. I. Boscolo, *F. Giuliani*, M. Valentini, M. Roche "A Cockcroft-Walton for FELTRON: The New μ -Wave Source for TeV Colliders", *IEEE TRANSACTIONS ON NUCLEAR SCIENCE* 39 (1992) 308
70. I. Boscolo, *F. Giuliani*, M. Roche "Powerful high-voltage generators for FELTRON, the electrostatic-accelerator FEL amplifier for TeV colliders", *NIM A* 318 (1992) 465
71. *F. Giuliani*, I. Boscolo, M. Valentini "A Powerful FELTRON driven by a Cockcroft-Walton for Toroidal Plasma Heating", in *Proceedings of the International School of Plasma Physics "Piero Caldirola", High Power Microwave Generation and Applications*, course and workshop held at Villa Monastero, Varenna, Italy, 9-17 Sept. 1991

Data

21/05/20

Luogo

Mediglia (MI)