

Maria Doncel

Curriculum Vitae

Address: Lillåkersvägen 52
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Date of Birth: 5th September 1980
Nationality: Spanish
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Previous employment

January 2020-	Researcher, University of Stockholm, Sweden.
Maternity leave	2019
January 2016- December 2018	Researcher Associate, University of Liverpool, United Kingdom.
November 2015- December 2015	Invited Researcher, Laboratori Nazionali di Legnaro (LNL), Italy.
February 2015- October 2015	Postdoctoral Researcher, University of Salamanca, Spain.
July 2014- December 2014	Postdoctoral Researcher Royal Institute of Technology (KTH), Sweden.
July 2013- June 2014	Postdoctoral Fellowship Royal Institute of Technology (KTH), Sweden.
July 2012- June 2013	Göran Gustafsson Postdoctoral Fellowship. Royal Institute of Technology (KTH), Sweden.
June 2011- June 2012	CPAN contract (Particle, Astroparticle and Nuclear center) University of Salamanca, Spain.
November 2010- May 2011	Technical Supervisor, Environmental Radioactivity Laboratory, ENUSA, Spain.
January 2010- November 2010	Researcher, University of Salamanca, Spain. Research Project: “ <i>Gamma spectroscopy by tracking</i> ”.
January 2009- December 2009	“P.A.S Contract”, University of Salamanca, Spain Research Project: “ <i>Gamma spectroscopy for DESPEC in FAIR</i> ”.
January 2006- December 2008	Predocotrual fellowship, Art. 83 LOU contract, University of Salamanca Spain. Research Project: “ <i>Radiologic Surveillance Programme: Sampling Station Network (REM)</i> ”.

Educational Background

April 2012	PhD: <i>“Progress in the conceptual design of future gamma-tracking arrays with imaging capabilities. Lifetime measurement in neutron-rich nuclei in the region of the double magic ^{78}Ni with the AGATA Demonstrator”</i> , University of Salamanca, Spain.
July 2008	<i>“Grado de Salamanca: Monte Carlo study of a high resolution gamma array by trajectory reconstruction for the DESPEC experiment”</i> , University of Salamanca, Spain.
March 2007	Certificate on Pedagogical Aptitude, University Complutense of Madrid, Spain.
2006-2008	Advanced Studies Degree on Nuclear Physics, University of Salamanca Spain.
2005	Master Degree in Physics at the University of Salamanca, Spain.

Languages

English	C2 level
Swedish	A2 level
Spanish	Mother Language

Programming skills

Microsoft Office
C++ / C / Fortran / Geant4 C++ simulation tool

Research Interests

My research career has been focused on both, basic nuclear physics and applied nuclear physics. I have been working on the study of relevant properties of exotic nuclei as well as in the R&D of high-resolution semiconductor detectors based on the tracking and imaging techniques for nuclear physics. These techniques can be also applied to new medical imaging systems.

Research Projects

I have been actively participated in the following projects:

1. “Lifetime measurements for precision studies of the structure of exotic atomic nuclei and R&D of instrumentation to investigate exotic nuclei and hypernuclei at FAIR”.
Financial support: Vetenskapsrådet (Sweden), 01/01/2020 – 31/12/2023 (main applicant).

2. “High resolution Gamma Spectroscopy: the path to AGATA”.
Financial support: Science Ministry (Spain), 01/03/2012 – 31/12/2014 (co-applicant).
3. “Consolider "Centro Nacional de Física de Partículas, Astropartículas y Nuclear".
Financial support: Science Ministry (Spain), 01-01-2007-10-12-2014 (co-applicant).
4. “Radiologic Surveillance Programme: Sampling Station Network (REM)”.
Financial support: Nuclear Security Council (Spain), from 1992 till 2014 (extended each 4 years) (co-applicant).
5. “Lifetime measurement in neutron-rich Ni and Cu isotopes” (AIC-D-2011-0764).
Financial support: Economy and Competitvity Ministry (Spain), 01/12/2011 – 01/12/2012 (co-applicant).
6. “Lifetime measurement in neutron-rich Ni and Cu isotopes” (AIC10-D-000605).
Financial support: Science Ministry (Spain), 30/12/2010 – 30/12/2011 (co-applicant).
7. “Gamma Spectroscopy for DESPEC in FAIR”.
Financial support: Science Ministry (Spain), 01/01/2008 – 31/12/2011 (co-applicant).
8. “Nuclear Physics on FAIR and Enviromental Radiactivity (GR12)”.
Financial support: Junta de Castilla y León (Spain), 2008-2010 (co-applicant).
9. “Application of the knowledge on the natural decay chains to the study of the climatic variability in the Mediterranean area in the last 400.000 years”.
Financial support: Junta de Castilla y León (Spain), 01/01/2007 – 31/12/2009 (co-applicant).
10. “Ge detectors for DESPEC”.
Financial support: Science Ministry (Spain), 01/10/2006 - 30/09/2008 (co-applicant).

Scientific-Technical Publications

Peer-reviewed original articles

1. J.J. Valiente-Dobón et al., (19/61), “*Manifestation of the Berry phase in the atomic nucleus ^{213}Pb* ”. Physics Letters B 816, (2021) 136183.
2. D. A. Testov et al., (14/39), “*Octupole correlations near ^{110}Te* ”, Accepted in Phys. Rev. C. (2021).
3. A. Ertoprak et al., (4/42), “*Lifetimes of core-excited states in semi-magic ^{94}Rh* ”. Eur. Phys. J A. 56, (2020).
4. R. D. O. Llewellyn et al., (13/26), “*Spectroscopy of proton-rich ^{79}Zr : Mirror energy differences in the highly-deformed fpg shell*”. Physics Letters B 811, 135873 (2020).
5. J. Bradbury et al., (16/37), “*Lifetime measurements using a plunger device and the EUCLIDES Si array at the GALILEO gamma-ray spectrometer*”, Nucl. Inst. and Meth. A 979, 164345 (2020).

6. M. Siciliano et al., (13/70), “*Pairing-quadrupole interplay in the neutron-deficient tin nuclei: First lifetime measurements of low-lying states in $^{106,108}\text{Sn}$* ”, Phys. Lett. B, 806 (2020) 135474.
7. A. Ertoprak et al., (5/59), “*Evidence for octupole collectivity in ^{172}Pt* ”. Eur. Phys. J A. 56, (2020).
8. B. Cederwall et al., (23/71), “*Isospin Properties of Nuclear Pair Correlations from the Level Structure of the Self-Conjugate Nucleus ^{88}Ru* ”. Phys. Rev. Lett. 124, 062501 (2020).
9. R. D. O. Llewellyn et al., (12/27), “*Establishing the Maximum Collectivity in Highly-Deformed $N = Z$ Nuclei*”. Phys. Rev. Lett. 124, 152501 (2020).
10. L. Grocutt et al., (14/34), “*Lifetime measurements of $N=20$ phosphorus isotopes using the AGATA γ -ray tracking spectrometer*”, Phys. Rev. C. 100, 064308 (2019).
12. A. Gottardo et al., (14/34), “*New spectroscopic information on $^{211,213}\text{Tl}$: A changing structure beyond the $N = 126$ shell closure*”, Phys. Rev. C. 99, 054326 (2019).
13. M.C. Lewis et al., (15/43), “*Lifetime measurements of excited states in ^{163}W and the implications for the anomalous $B(E2)$ ratios in transitional nuclei*”, Phys. Lett. B. 798 (2019) 134998.
14. D. Testov et al., (17/40), “*High resolution γ -ray spectrometry using GALILEO array*”, Eurasian Journal of Physics and Functional Materials 2019, 3(1), 84-90.
15. A. Ertoprak et al., (4/42), “ *$M1$ and $E2$ transition rates from core-excited states in semi-magic ^{94}Ru* ”. Eur. Phys. J A. 54, (2018).
16. A. Boso et al., (13/32), “*Neutron Skin Effects in Mirror Energy Differences: The Case of ^{23}Mg - ^{23}Na* ”. Phys. Rev. Letters. 121, 032502 (2018).
17. B. Cederwall et al., (2/40), “*Lifetime Measurements of Excited States in ^{172}Pt and the variation of Quadrupole Transition Strength with Angular Momentum*”. Phys. Rev. Lett. 121, 022502 (2018).
18. **M. Doncel** et al., (1/27), “*Spin-dependent evolution of collectivity in ^{112}Te* ”, Phys. Rev. C 96, 051304(R) (2018).
19. **M. Doncel** et al., (1/9), “*Determination of lifetimes of nuclear excited states using the Recoil Distance Doppler Shift Method in combination with magnetic spectrometers*”. Eur. Phys. J. A 53 (2017).
20. B. Saygı et al., (16/53), “*Reduced transition probabilities along the yrast line in ^{166}W* ”, Phys. Rev. C. 96, 021301(R) (2017).
21. A. Boso et al., (11/27), “*Isospin Symmetry Breaking in Mirror Nuclei ^{23}Mg - $^{23}\text{Na}^*$* ”, Acta Phys. Pol. B, Vol. 48, No. 3, March 2017.
22. M. Siciliano et al., (12/39), “*Study of Quadrupole Correlations in $N=Z=50$ Region via Lifetime Measurements*”, Acta Phys. Pol. B, Vol. 48, No. 3, March 2017.

23. A. Ertoprak et al., (7/41), “Lifetime Measurements with the Doppler shift attenuation method using a thick homogeneous production target – Verification of the method*”, Acta Phys. Pol. B, Vol. 48, No. 3, March 2017.
24. **M. Doncel** et al., (1/8), “Performance and imaging capabilities of the DEGAS high-resolution γ -ray detector array for the DESPEC experiment at FAIR”, Nucl. Inst. and Meth. A 873, 36 (2017).
25. **M. Doncel** et al (1/32), “Lifetime measurements of excited states in ^{162}W and ^{164}W and the evolution of collectivity in rare earth nuclei”, Phys. Rev. C. 95, 044321 (2017).
26. D. Ralet et al., (28/95), “Lifetime measurement of neutron-rich even-even molybdenum isotopes”, Phys. Rev. C. 95, 034320 (2017).
27. R. J. Carroll et al., (11/44), “Excited states in the proton-unbound nuclide ^{158}Ta ”, Phys. Rev. C 93, 034307 (2016).
28. H. Li et al., (3/39), “Lifetime measurements in ^{166}Re : Collective versus magnetic rotation”, Phys. Rev. C 93, 034309 (2016).
29. H. Li et al., (5/35), “Recoil-decay tagging spectroscopy of $^{162}_{74}\text{W}_{88}$ ”, Phys. Rev. C 92, 014326 (2015).
30. M. J. Taylor et al., (34/34), “Oblately deformed isomeric proton-emitting state in ^{151}Lu ”, Phys. Rev. C. 91, 044322 (2015).
31. H. Li et al., (2/36), “First identification of rotational band structures in ^{166}Re ”, Phys. Rev. C 92, 014310 (2015).
32. **M. Doncel** et al., (1/28) “Lifetime measurement of the first excited 2^+ state in ^{112}Te ”. Phys. Rev. C 91, 061304(R) (2015).
33. **M. Doncel** et al., (1/7), “Conceptual design of a high resolution Ge array with tracking and imaging capabilities for the DESPEC (FAIR) experiment”, Journal of Instrumentation 10 P06010 (2015).
34. E. Sahin et al., (2/75), “Shell evolution beyond $N=40$: $^{69,71,73}\text{Cu}$ ”, Phys. Rev. C 91 034302, (2015).
35. F. Ghazi Moradi et al., (7/35), “Spectroscopy of the neutron deficient $N=50$ nucleus ^{95}Rh ”, Phys. Rev. C 89, 044310, (2014).
36. T. Marchi et al., (12/37), “Quadrupole transition strength in the ^{74}Ni nucleus and restored core polarization effects in the neutron-rich Ni isotopes”, Phys. Rev. Lett. 113, 182501, (2014).
37. A. Gottardo et al., (25/78), “Isomeric decay spectroscopy of the ^{217}Bi isotope”, Phys. Rev. C 90, 034317, (2014).
38. E. Grodner et al., (24/53), “Hindered Gamow Teller decay to the odd-odd $N=Z$ ^{62}Ga : absence of proton-neutron $T=0$ condensate in $A=62$ ”, Phys. Rev. Lett. 113, 092501, (2014).

39. F. Ghazi Moradi et al., (7/35), “*Character of particle-hole excitations in ^{94}Ru deduced from γ -ray angular correlations and linear polarization measurements*”, Phys. Rev. C 89 (2014) 014301.
40. A.I. Morales et al., (41/81), “*Beta decay studies of neutron-rich Tl, Pb and Bi isotopes*”, Phys. Rev. C 89 (2014) 014324.
41. M.J. Taylor et al., (6/30), “*Collective single-particle and collective states in the low energy structure of ^{113}I* ”, Phys. Rev. C 88 (2013) 054307.
42. V. Modamio et al., (23/70), “*Lifetime measurements in neutron-rich $^{63,65}\text{Co}$ isotopes using the AGATA Demonstrator*”, Phys. Rev. C 88 (2013) 044326.
43. A. Gottardo et al., (35/83), “*New μs isomers in the neutron-rich ^{210}Hg nucleus*”, Phys. Lett. B 725 (2013) 292–296.
44. **M. Doncel** et al., (1/48), “*Lifetime Measurement in Neutron-Rich Cu Isotopes*”. Acta Phys. Pol. B, Vol. 44, No. 3, March 2013.
45. C. Louchart et al., (17/51), “*Investigation of the collective nature of low-lying excitations in $^{70,72,74}\text{Zn}$ via lifetime measurements with the plunger technique and the AGATA demonstrator*”, Phys. Rev. C 87 (2013) 054302.
46. A. M. Denis Bacelar et al (21/56), “*The population of metastable states as a probe of relativistic-energy fragmentation reactions*”, Phys. Lett. B 723 (2013) 302-306.
47. A. Gottardo et al (37/84), “*New isomers in the full seniority scheme of neutron-rich lead isotopes: the role of effective three-body forces*”, Phys. Rev. Lett. 109, 162502 (2012).
48. G. Benzoni et al., (40/80), “*First measurement of beta decay half-lives in neutron rich Tl and Bi isotopes*”, Phys. Lett. B 715 (2012) 293.
49. S. Akkoyun et al., (96/354), “*AGATA – Advanced Gamma Tracking Array*”, Nucl. Inst. and Meth. A 668 (2012) 26-58.
50. **M. Doncel** et al., (1/5), “*Background rejection capabilities of a Compton imaging telescope setup with DSSD Ge planar detector and AGATA*”. Nucl. Instr. And Meth. A 648 (2011), S131-S134.
51. **M. Doncel** et al., (1/5), “*Experimental test of the background rejection, through imaging capability, of a highly segmented AGATA germanium detector*”. Nucl. Inst. and Meth. A 622 (2010), 614-618.
52. N. Al-Dahan et al., (25/54), “*Nuclear structure “southeast” of ^{208}Pb : isomeric states in ^{208}Hg and ^{209}Tl* ”. Phys. Rev. C 80, 061302 R (2009).
53. A.M. Denis Bacelar et al., (20/52), “*Angular Momentum population in fragmentation reactions*”. Acta Phys. Pol. B, Vol. 40, No. 3, March 2009.

54. N. Al-Dahan et al., (25/54), “*Isomeric States in ^{208}Hg and ^{209}Tl populated in fragmentation of ^{238}U* ”. Acta Phys. Pol. B, Vol. 40, No. 3, March 2009.

Peer reviewed conference papers

1. T. Marchi et al., (11/33), “*Evolution of collectivity in the ^{78}Ni region: Coulomb excitation of ^{74}Ni at intermediate energies*”, EPJ Web of Conferences 66, 2014, INPC 2013 – International Nuclear Physics Conference.

2. T. Marchi et al., (11/33), “*Probing core polarization around ^{78}Ni : Intermediate energy Coulomb excitation of ^{74}Ni* ”, EPJ Web of Conferences 63, 2013, Heavy Ion Accelerator Symposium 2013.

3. A. M. Bruce et al., (22/59), “ *β decay of ^{102}Y produced in projectile fission of ^{238}U* ”, Journal of Physics: Conference Series 381 (2012) 012053. ISSN: 1742-6588.

4. **M. Doncel** et al., (1/3), “*A new Compton imaging algorithm for gamma-ray tracking HPGe detectors*”. Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC), 2011 IEEE. ISSN: 1082-3654.

5. A. Gottardo et al., (26/76), “*Isomers in neutron-rich lead isotopes populated via the fragmentation of ^{238}U at 1 GeV/A*”, Journal of Physics: Conference Series 312 (2011) 092026. ISSN: 1742-6588.

6. **M. Doncel** et al., (1/5), “*Compton Imaging Capabilities of AGATA for Background Rejection*”. AIP Proceedings, Vol 1231, 213-214. ISSN: 0094-243X.

7. N. Al-Dahan et al., (28/47), “*Structure of $N \geq 126$ nuclei produced in fragmentation of ^{238}U* ”. AIP Conference Proceedings, Vol 1090, 145-148. ISSN: 0094-243X.

Monographs

1. B. Cederwall, **M. Doncel**, A. Gadea, J. Gerl, I. Kojouharov, R. Palit, “*Technical Report for the Design, Construction and Commissioning of the DESPEC Germanium Array Spectrometer – DEGAS*”. Approved by the Experts Committee of Experiments (ECE) of FAIR.

Other scientific documents

1. M.L. Jurado Gomez et al., (18/40). “*Status of the analysis of the E730 experiment at GANIL*”. LNL Annual Report. pp. 34 - 35. 2019. ISSN 1828-8561

2. J. Bradbury et al., (12/36). “*Lifetime measurements in ^{113}P* ”. LNL Annual Report. pp. 35 - 36. 2018. ISSN 1828-8561

3. M. Siciliano et al., (11/37) “*Lifetime Measurements in the Even-Even $^{104-108}\text{Cd}$ Isotopes*”. LNL Annual Report. Pp. 78 – 79. 2018. ISSN 1828-8561

4. S. Bakes et al., (12/35) “*Lifetime measurements of octupolly deformed bands in ^{110}Te* ”. LNL Annual Report. Pp. 22 – 23. 2017. ISSN 1828-8561

5. N.A. Kelly et al., (13/39) “Gamma-ray spectroscopy in the neutron-deficient Barium region”. LNL Annual Report. Pp. 47 – 48. 2017. ISSN 1828-8561.
6. M. Siciliano et al., (12/39) “Neutron-Deficient Sn Isotopes Populated via Deep-Inelastic Collisions”. LNL Annual Report. Pp. 57 – 58. 2017. ISSN 1828-8561
7. M. Siciliano et al., (12/39). “Lifetime measurement in $Z=N=50$ region: Optimization of OFT Parameters”. LNL Annual Report. pp. 102 - 103. 2016. ISSN 1828-8561
8. D. Testov et al., (13/40) “E2 transition probabilities in light $^{110,112}\text{Te}$ isotopes”. LNL Annual Report. Pp. 59 – 60. 2016. ISSN 1828-8561
9. N.A. Kelly et al., (12/38), “Development of Octupole Correlations near $N=Z=56$: Search for Excited States in ^{116}Ba ”. LNL Annual Report. pp. 53 - 54. 2016. ISSN 1828-8561
10. M. Siciliano et al., (12/37). “Study of Quadrupole Correlations in the $^{106,108}\text{Sn}$ Isotopes via Lifetimes Measurements”. LNL Annual Report. pp. 76 - 77. 2015. ISSN 1828-8561
11. G.M. Jaworski et al., (11/37). “Octupole correlations and ground state deformations in the neutron-deficient region of ^{116}Ba ”. LNL Annual Report. pp. 52 - 53. 2015. ISSN 1828-8561
12. A. Gottardo et al., (25/76), “New isomers in ^{210}Hg , $^{211,213}\text{Tl}$: a changing structure below $Z=82$?”. LNL Annual Report 2012 pp 22-23. ISSN: 1828-8561.
13. A. Boso et al., (11/27). “Isospin Symmetry Breaking in Mirror Nuclei ^{23}Mg - $^{23}\text{Na}^*$. LNL Annual Report. pp. 22 - 23. 2014. ISSN 1828-8561
14. **M. Doncel** et al., (1/6), “A new approach to determine lifetimes by using the Recoil Doppler Distance Shift Method in combination with Mass spectrometers”. LNL Annual Report 2012 pp 26-27. ISSN: 1828-8561.
15. **M. Doncel** et al., (1/54), “Lifetime Measurement in Neutron-Rich Cu Isotopes”. LNL Annual Report 2010 pp 5-6. ISSN: 1828-8545.
16. C. Louchart et al., (6/42), “First Campaign with the AGATA Demonstrator at LNL: Lifetime of Excited States in ^{72}Zn and ^{74}Zn ”. LNL Annual Report 2010 pp 3-4. ISSN: 1828-8545.
17. G. Benzoni et al., (67/75), “Spectroscopy of neutron-rich lead nuclei”. GSI Annual Report 2009. ISSN: 0174-0814.
18. E. Farnea et al., (93/107), “Commissioning Campaign of the AGATA Demonstrator Array”. LNL Annual Report 2009 pp 51-52. ISSN: 1828-8545.
19. R. S. Kempley et al., (7/28), “AGATA Demonstrator Beam Test: ^{110}Pd ($\beta^2\text{S}$, $4n$) ^{138}Sm Fusion-Evaporation Experiment”. LNL Annual Report 2009 pp 17. ISSN: 1828-8545.
20. A. Gottardo et al., (26/76), “Shell Evolution in the Newly-Explored Neutron-Rich Region Around $Z = 82$ Far Beyond $N = 126$ ”. LNL Annual Report 2009 pp 16. ISSN: 1828-8545.

21. **M. Doncel** et al., (1/5), “*Compton Imaging Capabilities of AGATA for Background Rejection*”. LNL Annual Report 2008, pp 42-43. ISSN: 0828-8545.
22. E. Farnea et al., (27/101), “*Coupling of the AGATA Demonstrator Array with the PRISMA Magnetic Spectrometer*”. LNL Annual Report 2008, pp 40-41. ISSN: 0828-8545.
23. A. Algora et al., (6/8), “*Study of the performance of Tracking algorithms for the DESPEC planar setup*”. GSI Scientific Report 2007. ISSN: 0174-0814.

Participation on Experiments

As part of wide collaborations I have participated in several measurements in different European facilities, like Ganil (France), GSI (Germany), Laboratori Nazionali di Legnaro (Italy) or the University of jyvaskylä (Finland).

During my scientific careers I have been responsible (spokesperson) of four measurements:

- “Lifetime measurement in neutron-rich Ni, Cu, and Zn isotopes”.
M. Doncel (University of Salamanca, Spain), A. Gørgen (CEA, Saclay, France) and E. Sahin (INFN, LNL, Italy). 10-20 June 2010, LNL (Italy).
- “Lifetime measurement of low-lying states in midshell Te isotopes”.
M. Doncel (Univ. of Salamanca) and T. Bäck (KTH, Stockholm), 10-13 March 2017, JYFL (Finland).

Approved to be performed:

- “Spectroscopy and lifetime measurements in the $A=78$ isobaric triplet at the fpg valence maximum”. Approved to be performed at GANIL (France).
M. Doncel (University of Salamanca, Spain), B. Cederwall (KTH, Stockholm) and A. Gadea (IFIC, Spain).
- “Lifetime measurements in highly neutron deficient Ru and Pd nuclei between the $N=Z$ line and the $N=50$ shell closure: Disentangling the collective, seniority and isoscalar spin-aligned coupling scheme”. Approved to be performed at Laboratori Nazionali di Legnaro (Italy).
B. Cederwall (KTH, Stockholm) and **M. Doncel** (University of Liverpool, UK).

Contributions to Scientific Conferences

- 14th Euro School on exotic beams, Houlgate (Francia), 25/08/2007–31/08/2007. Poster: M. Doncel et al., “*Monte Carlo simulations for the germanium array at DESPEC (FAIR)*”.
- XXXI Bienal de la Real Sociedad Española de Física, Granada (Spain), 10/09/07–14/09/07. Oral Presentation: M. Doncel et al., “*Monte Carlo simulations for the germanium array at DESPEC*”.
- III Encuentro de Física Nuclear 2008, Santiago de Compostela (Spain), 17/09/08–19/09/08. Poster: M. Doncel et al., “*Optimization of the high resolution Ge array for DESPEC (FAIR)*”.

- I European Nuclear Physics Conference and DPG Meeting, Bochum (Germany), March 2009. Oral presentation: M. Doncel et al., “*Monte Carlo simulations of the DESPEC array with tracking and imaging capabilities*”.
- International Scientific Meeting on Nuclear Physics, La Rábida (Spain), 04/07/09–10/07/09. Poster: M. Doncel et al., “*Compton imaging capabilities of AGATA for Background rejection*”.
- Imaging 2010, Stockholm (Sweden), 08/06/10-11/06/10. Oral presentation: M. Doncel et al., “*Compton Imaging Capabilities of AGATA with planar detectors for Background Rejection in DESPEC*”.
- EGAN (European Gamma and Ancillary Detectors), Padova (Italy), 26/06/11-01/07/11. Oral presentation: M. Doncel et al., “*Lifetime measurements in neutron-rich Cu nuclei*”.
- 2011 IEEE Nuclear Science Symposium and Medical Imaging Conference, Valencia (Spain), 23/10/11-29/10/11. Oral presentation: M. Doncel et al., “*A new Compton imaging algorithm for gamma ray HPGe tracking detectors for DESPEC*”.
- Zakopane Conference on Nuclear Physics 2012, Zakopane (Poland), 28/08/12-02/09/12. Oral presentation: M. Doncel et al., “*Lifetime measurements in neutron-rich Cu nuclei*”.
- II European Nuclear Physics Conference, Bucarest (Rumania), 16/09/12-21/09/12. Oral presentation: M. Doncel et al., “*Lifetime measurements in neutron-rich Cu nuclei*”.
- XXXII Swedish Nuclear Physics Meeting, Goteborg (Sweden), 12/11/12-14/11/12. Oral presentation: M. Doncel et al., “*Lifetime measurements in neutron-rich Cu nuclei*”.
- **Invited seminar** at Laboratori Nazionali di Legnaro, Legnaro (Italy), 05/04/13: M. Doncel et al., “*Conceptual design of a high resolution Ge array for the DESPEC experiment*”.
- XXXIII Swedish Nuclear Physics Meeting, Stockholm (Sweden), 04/11/13-06/11/13. Oral presentation: M. Doncel et al., “*Conceptual design of the Ge detector array for the DESPEC experiment*”.
- AGATA week 2013, Madrid (Spain), 22/01/14-24/01/14. Oral presentation: M. Doncel et al., “*Simulations of DESPEC-AGATA*”.
- Workshop on Nuclear Structure and Reaction Studies, Beijing (China), 07/08/14-08/08/14. Oral presentation: M. Doncel et al., “*Conceptual design of the Ge detector array for the DESPEC experiment*”.
- **Invited talk** at Reactions and Spectroscopy of Unstable Nuclei, Beijing (China), 10/08/14-14/08/14. M. Doncel et al., “*Lifetime measurements in ^{112}Te* ”.
- **Invited seminar** at the University of Manchester (UK), 20/04/16: M. Doncel et al., “*Conceptual design of a high resolution Ge detector for the DESPEC experiment*”.
- Imaging 2016, 08/01/16-11/06/16. Oral presentation: M. Doncel et al., “*Compton Imaging Capabilities of AGATA with planar detectors for Background rejection in DESPEC*”.
- **Invited talk** at Turkish Physical Society 35th International Physics Congress (TPS-35), 04/09/2019-09/09/2019. M. Doncel et al., “*Lifetime measurements as a tool to study nuclear properties: the ^{112}Te case*”.

Teaching Experience

- Colaboration on the lab sessions of the courses: “Physics of the Biological processes” (20 hours) and “Nuclear Physics Laboratory” (20 hours), University of Salamanca 2007-2008.
- Ionization Radiation I, Master on Medical Physics, University of Salamanca, 2011-2012, 10 hours.
- Physics of the Atomic Nucleus, Master on Nuclear Physics, University of Salamanca, 2013-2014, 20 hours.
- Experimental Techniques for Nuclear and Particle Physics, Master/PhD 2013-2014, Royal Institute of Technology, Sweden, 8 hours.
- Experimental Techniques for Nuclear and Particle Physics, Master/PhD 2014-2015, Royal Institute of Technology, Sweden, 30 hours.
- Radiation Protection and Environmental Radiology, Master/PhD 2020-2021, Stockholm University, Sweden, 36 hours.

Students Supervision

PhD’s co-supervisor:

- Hongjie-Li (August 2015)
- Dirk Wölbing (April 2020)
- Lucilio Dos Santos Matias (on-going)

Other relevant data

- Editor of the Technical Report for the design of the Ge detector (DEGAS) of the Decay SPECTroscopy experiment (DESPEC) at FAIR (Facility for Antiproton and Ion Research). Under evaluation by the Experts Committee of Experiments (ECE) of FAIR (submitted in August 2014).

B. Cederwall, **M. Doncel**, A. Gadea, J. Gerl, I. Kojouharov, R. Palit, “*Technical Report for the Design, Construction and Commissioning of the DESPEC Germanium Array Spectrometer – DEGAS*”.

- Member of the Organizing committee of the “21th European Conference on Few-Body Problems in Physics”, University of Salamanca, from 29/08/10 to 03/09/10.
- Member of the Organizing committee of the “I Feria Iberoamericana de la Ciencia, la Tecnología y la Innovación, Empirika”. Salamanca, from 12/11/2010 to 15/11/10.
- Member of the Organizing committee of the exposition “El CERN a través de los ojos de Peter Ginter, la visión de un poeta”. Salamanca, from 24/02/10 to 08/03/10.
- Member of the Organizing committee of the workshop “Chiral bands in nuclei”. KTH Stockholm, from 20/04/15 to 22/04/15.
- Member of the “Excellence Research Group of Castilla y León on Nuclear Physics, GR12”.
- Member of the AGATA, DESPEC and PANDA Collaborations.
- Certification by the Higher Education Academy in the United Kingdom of Associate Fellow Status (AFHEA). Higher Education Academy, United Kingdom (06/06/2017)

- Certification by the ANECA in Spain of Lecturer Status. Spain (16/03/2016).
- Research Supervision – Theory and practice (3 ECTS) Spring 2021, Stockholm University.
- Professional development 1: Teaching and Learning (7,5 ECTS) Autumn 2020, Stockholm University.
- Teaching for researchers programme at the University of Liverpool (UK): Consists of two modules:
 - EDEV306: Supporting Student Learning (10 ECTS credits) Autumn 2016
 - EDEV307: Assessing Student Learning (10 ECTS credits) Spring 2017