


PERSONAL INFORMATION

Mariana Petris



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Sex Female | | Nationality Romanian

WORK EXPERIENCE

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| <p>2014 – prezent</p> <p>2005 – 2014</p> <p>1999 – 2005</p> <p>1990 – 1999</p> | <p>Relativistic heavy-ion collisions, high-energy particle physics, detector physics, particle identification techniques.</p> <p>Scientific researcher II, “Horia Hulubei”, National Institute of Physics and Nuclear Engineering (IFIN-HH), Hadron Physics Department (HPD).</p> <p>Scientific researcher III, IFIN-HH.</p> <p>Scientific researcher, IFIN-HH.</p> <p>Assistant Researcher, IFIN-HH.</p> |
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EDUCATION AND TRAINING

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| <p>2005</p>

<p>1997 –2005</p> <p>1990</p>

<p>1985 - 1990</p> <p>1985 -1981</p> | <p>PhD Degree, Physics Faculty, Bucharest University</p> <p>PhD thesis, “Contributions to the development of high time resolution detection systems”, awarded with “Summa cum Laude”</p>
<p>PhD activity, Physics Faculty, Bucharest University</p> <p>License Physics Faculty, Bucharest University</p> <p>“Characterization of inorganic semiconductors based on organic –inorganic structures”, appreciated with top mark 10.</p>
<p>Student, Physics Faculty, Bucharest University.</p> <p>Mathematics-Physics High School no.4, Bucharest.</p> |
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PERSONAL SKILLS

Instrumentation and advanced detection systems for high energy physics experiments

R&D activity for:

A. Solid State Detectors

- 1990 – 1999 - radiation hard silicon detectors for modern high energy particle physics experiments.
- 2000 – 2003 - start detector for minimum ionizing particles based on polycrystallin diamond detectors

B. Gas Detectors

- 2000 –present: a new Multi-Gap Resistive Plate Counter (MGRPC) architecture with Multi-Strip readout (MSMGRPC) for particle identification by time of flight (TOF) technique in high counting rate environment..
- 2004 – present: a Transition Radiation Detector (TRD) based on Multiwire Proportional Chamber (MWPC) for high counting rate environments.

International Collaborations:

CBM Collaboration, FAIR/GSI Darmstadt: member of the CBM Collaboration since 2003.

R&D activities for the low polar angle region of the CBM-TOF and CBM-TRD subsystems:

- Development of a MSMGRPC prototype for high counting rate environment, (the low polar angle region of CBM-Time of Flight subsystem). Design and prototyping of the CBM-TOF inner wall (low polar angle region of the CBM-TOF subsystem)
- Co-author of the CBM-TOF Technical Design Report (CBM-TOF TDR).
- Development of a Transition Radiation Detector architecture for the low polar angle region of the CBM-Transition Radiation subsystem (CBM-TRD). Design and prototyping of the CBM-TRD inner zone.
- Co-author of the CBM-TRD TDR and Addendum to the CBM-TRD TDR.

ALICE Collaboration, LHC - CERN Geneva: member of the ALICE Collaboration since 2006.

•ALICE Transition Radiation Detector construction:

- participation in the assembling and testing of 130 TRD chambers (out of a total of 540 chambers), based on MWPC technology for ALICE -TRD subsystem.
- Upgrade of the ALICE Time Projection Chamber (TPC) based on Gas Electron Multiplier (GEM) technology:
 - co-author of the ALICE-TPC upgrade TDR.
 - participating in the assembling and testing of 20 Outer Readout Chambers (OROCs) for ALICE-TPC upgrade (out of a total of 40 OROCs).

European and National Projects

EU Programmes:

- ✓ 2004 – 2008: Integrated Infrastructure Initiative in Hadron Physics (I3HP) FP6 EU Programme, “Study of Strongly Interacting Matter”, Grant Agreement 506078.
 - Joint Research Activity 4, High Speed Gas Detectors with Integrated Electronics;
 - Joint Research Activity 12, Advanced TOF Detection Systems (ATOF);
 - Joint Research Activity 11, Novel Radiation Hard CVD - Diamond Detectors (NORHDIA);
- ✓ 2009 – 2011: Hadron Physics2 FP7/EU , “Study of Strongly Interacting Matter”, Grant Agreement 227431.
 - WP15: Advanced Diamond Detectors (CARAT);
 - WP18: Development of large-area low-mass self-triggered gaseous detectors (Future Gas).
- ✓ 2012 – 2016: Hadron Physics3 FP7/EU , “Study of Strongly Interacting Matter”, Grant Agreement 283286.
 - WP19: Future Particle Identification Techniques (Future PID).

National Programmes :

- Participant in the national projects won in national competitions within the frame of Programmes: CERES, CORINT, NUCLEU, CAPACITATI, PARTENERIATE, RO-CERN, RO-FAIR

Communication skills

- Experience in active participation in large scale international collaborations i.e. ALICE/CERN Geneva, CBM / FAIR Darmstadt.
- Strong collaboration in the joint in-beam test campaigns of detector prototypes, at different accelerating facilities (SIS18 GSI Darmstadt, ELBE Dresden-Rossendorf, COSY Jülich, PS and SPS CERN Geneva), with international teams (Germany, China, Croatia, Russia, etc.).
- Research visits to the international research centers (GSI Darmstadt, CERN-Geneva, HZD Dresden – Rossendorf, FZ Juelich).
- Active participations in the international conferences, workshops and collaboration meetings.

Organisational / managerial skills

Research Grants:

Two Research Grants of Horia Hulubei Foundation:

- 2001 – Preliminary tests for a time resolution better than 100 ps for minimum ionizing particles using CVD diamond detectors.
- 2002 – Time resolution better than 100 ps for minimum ionizing particles using CVD diamond detectors.

Projects leading:

- 1996 – 1999: Project leader for “Study of the behaviour of semiconductor detectors in high counting rate environment” and “Radiation effects on X-ray imaging detectors.

Member of organizing committee of the Workshop "Transition Radiation Detectors -Present and Future", 24 - 28 September, 2005, Cheile Gradistei, Romania.

Member of the local organizing committee of the “42nd CBM Collaboration Meeting”, September 24 – 29, 2023, Bucharest

Publications
Presentations
Projects
Conferences
Seminars
Honours and awards
Memberships
References

- >300 scientific papers in ISI journals; https://www.nipne.ro/6355-staff_info.html
- 20 oral talks presented at international conferences;
- >70 oral contributions to international workshops and meetings;
- 4 invited talks;
- "Patent No. RO125481-A0, RO125481-B1(2011), OSIM A-00635;
- "Patent No. RO125480-A0, , RO125480-B1 (2013), OSIM A-00570"
- 2 silver and bronze medals at the International Exhibition of Inventions, Geneva, Switzerland
- Member of the Scientific Council of IFIN-HH (2017-2020)
- Reviewer for „Nuclear Instruments and Methods A”, „Journal of Instrumentation”, „Romanian Reports in Physics”, „Romanian Journal of Physics”
- <http://inspirehep.net/author/profile/M.Petris.1>
- <https://orcid.org/0000-0003-2806-5941>
- SCOPUS ID 7003329195
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- Teaching activities
- Bachelor degree thesis supervised: 1
 - Master degree thesis supervised: 1

Mother tongue(s) Romanian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	Proficient user	Proficient user	Proficient user	Proficient user	Proficient user
	Replace with name of language certificate. Enter level if known.				
French	Independent user	Independent user	Independent user	Independent user	Independent user
	Replace with name of language certificate. Enter level if known.				

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages