

Informații personale



Lector Universitar Facultatea de Fizică, Universitatea Babeș-Bolyai, Cluj Napoca, Romania

Afilieri:

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Naționalitate

Română

Data nașterii

29 August 1988

Sex

M

Experiență profesională

Data

Mai 2024 - Prezent

Poziția

Prodecan, Facultatea de Fizică

Data

26 Feb 2018 – Prezent

Poziția

Lector Universitar

Angajator

Facultatea de Fizică, Universitatea Babeș-Bolyai

Data

22 Noiembrie 2011 – 22 Noiembrie 2018

Poziția

Senior Scientist (promoted to Scientist from Junior Scientist in 2017, promoted to Senior Scientist in 2018)

Angajator

Joint Institute for Nuclear Research – Bogoliubov Laboratory for Theoretical Physics, Dubna, Russian Federation

Educație

Liceu

2003 – 2007 “Grup Școlar Sanitar”, Bistrița, Bistrița – Năsăud county, Romania

Studii universitare

2007 – 2011 Facultatea de Fizică, Universitatea Babeș – Bolyai, Cluj – Napoca, Cluj, Romania, promoția Iunie 2011.
2011-2013 Facultatea de Fizică, Universitatea Babeș – Bolyai, Cluj – Napoca, Cluj, Romania, promoția Iulie 2013
2013- 2017, Student Doctorand, Universitatea Babeș – Bolyai

Cea mai mare calificare obținută

Doctor în Fizică (titlul lucrării: “*Cluster approach to fission*”, 28.Apr.2017, cu calificativul Summa Cum Laude.) Link: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjG8d3eu8uDAX3IP0HHXkyCP8QFnoECBEQAQ&url=https://teze.doctorat.ubbcluj.ro/doctorat/teza/fisier/3867&usq=AOvVaw0fw_bHHdOusCygB0kxdhww&opi=89978449

**Premii
obținute**

- **Premiul Academiei Române “Stefan Procopiu”** pentru grupul de lucrări “The study of nuclear fission reactions, the theoretical description of experimental observables, and their comparison with measured data” publicat în 2018
- **1st place** of the 2016 **JINR Prize** with the project “Cluster approach for describing nuclear fission”, authors: H. Pașca, G. Adamian, A. Andreev, N. Antonenko, R. Jolos, A. Nasirov, T. Shneidman.
- 1st place in the Poster Competition for Young Scientists at Programme Advisory Committee for Nuclear Physics of JINR in 2016.
- Received the JINR AYSS 2017 Grant (Grant No. 17-302-08).
- Received the BLTP JINR **V.G. Soloviev** scholarship for 2018.

Competențe

Limba maternă	Limba Română
Limbi străine	Engleză (proficient), Germană (basic), Rusă (basic)
Competențe organizatorice	Președintele Societății Române de Fizică - Filiala Cluj Președintele Comisiei Electorale, Facultatea de Fizică Prodecan, Facultatea de Fizică
Competențe tehnice	Detectori de radiații
Competențe IT	Python (excelent), Mathematica (excelent), C++(excelent), etc.
Alte informații	Olimpic județean la Fizică în perioada liceului (IX-XII), participant la “JINR Junior Summer School” in anii 2010 și 2011.

Publicații științifice

“Alpha clusterization as a reason for the narrow symmetric mass distribution in spontaneous fission of ^{258}Fm ”, Author(s): Pasca, H (Pasca, H.); Adamian, GG (Adamian, G. G.); Antonenko, NV (Antonenko, N.,V.), PHYSICS LETTERS B 870, (2025)

“Manifestation of ternary clusterization in binary spontaneous fission of ^{252}Cf ”, Author(s): Pasca, H (Pasca, H.); Adamian, GG (Adamian, G. G.); Antonenko, NV (Antonenko, N.,V.), Physics Letters B 864:139444, DOI: 10.1016/j.physletb.2025.139444

“Excitation-energy dependence of fission-fragment neutron multiplicity in the improved scission-point model”, Author(s): Pasca, H (Pasca, H.); Andreev, AV (Andreev, A., V); Adamian, GG (Adamian, G. G.); Antonenko, NV (Antonenko, N., V), Physical Review C 109(4), DOI: 10.1103/PhysRevC.109.044601

“Fission within dinuclear system approach”, Author(s): Pasca, H (Pasca, H.); Andreev, AV (Andreev, A., V); Adamian, GG (Adamian, G. G.); Antonenko, NV (Antonenko, N., V), International Journal of Modern Physics E, 2023, 32(10), 2340005 DOI:10.1142/S0218301323400050

“Influence of the transition from symmetric to asymmetric fission mode on the average total kinetic energy and neutron multiplicity”, Author(s): Pasca, H (Pasca, H.); Andreev, AV (Andreev, A., V); Adamian, GG (Adamian, G. G.); Antonenko, NV (Antonenko, N., V), Physical Review C 108(1) (2023), DOI:10.1103/PhysRevC.108.014613

“Fission within dinuclear system approach”, Author(s): Pasca, H (Pasca, H.); Andreev, AV (Andreev, A., V); Adamian, GG (Adamian, G. G.); Antonenko, NV (Antonenko, N., V), International Journal of Modern Physics E (2023) 2340005, DOI: 10.1142/S0218301323400050

“Excitation-energy dependence of the fission-fragment neutron-excess ratio”, Author(s): Pasca, H (Pasca, H.); Andreev, AV (Andreev, A., V); Adamian, GG (Adamian, G. G.); Antonenko, NV (Antonenko, N., V), Physical Review C 107(2) (2023), DOI:10.1103/PhysRevC.107.024603

“Simultaneous description of charge, mass, total kinetic energy, and neutron multiplicity distributions in fission of Th and U isotopes”, Author(s): Pasca, H (Pasca, H.); Andreev, AV (Andreev, A., V); Adamian, GG (Adamian, G. G.); Antonenko, NV (Antonenko, N., V) PHYSICAL REVIEW C Volume: 104 Issue: 1 Article Number: 014604 DOI: 10.1103/PhysRevC.104.014604 Published: JUL 6 2021

Examination of coexistence of symmetric mass and asymmetric charge distributions of fission fragments, Pasca, H; Andreev, AV, Adamian, GG, Antonenko, NV, Source: PHYSICAL REVIEW C 101, 064604 DOI: 10.1103/PhysRevC.101.064604 Published: JUN 3 2020

“Change of the shape of mass and charge distributions in fission of Cf isotopes with excitation energy”, H. Pașca, A.V. Andreev, G.G. Adamian, N.V. Antonenko, Phys. Rev. C 99, 064611 (2019).

“Influence of the entrance channel on spins of complex fragments in binary reactions”, Pașca H., Kalandarov S.A., Adamian G.G., Antonenko N.V., Nuclear Physics A 980, DOI: 10.1016/j.nuclphysa.2018.10.060, (2018);

“Charge/mass yields in the fission of highly excited heavy actinides”, Pașca H., Andreev A.V., Adamian G.G., Antonenko N.V., EPJ Web of Conferences, 194, 10.1051/epjconf/201819406004 (2018);

“Toward an understanding of the anomaly in charge yield of Mo and Sn fragments in the fission reaction $\text{U } 238 (n, f)$ ”, H. Pașca, A.V. Andreev, G.G. Adamian, N.V. Antonenko, D. Lacroix, Phys. Rev. C 98, 014624 (2018);

“Suggestion for examination of a role of multi-chance fission”, H. Pașca, A.V. Andreev, G.G. Adamian, N.V. Antonenko, Eur. Phys. J. A 54: 104 (2018);

“Induced fission modes of Fermium and Nobelium isotopes”, H. Pașca, A.V. Andreev, G.G. Adamian, N.V. Antonenko, Nuclear Physics, Section A, Volume 977, p. 1-13 (2018);

“Charge distributions of fission fragments of low- and high-energy fission of Fm, No, and Rf isotopes”, H. Pașca, A.V. Andreev, G.G. Adamian, N.V. Antonenko, Phys. Rev. C 97, 034621 (2018);

“Role of the excitation energy of the compound nucleus in binary decay

Pasca, Horia, "Role of the excitation energy of the compound nucleus in binary decay processes", January 2018 The European Physical Journal Conferences 169:00015, DOI: 10.1051/epjconf/201816900015

"Transitions between symmetric and asymmetric modes in the region of heavy actinides", Horia Pasca, A. Andreev, G. G. Adamian, N. V. Antonenko, Nuclear Physics A 969, DOI: 10.1016/j.nuclphysa.2017.10.001 (2017)

"Physical origin of the transition from symmetric to asymmetric fission fragment charge distribution", H. Pașca, A.V. Andreev, G.G. Adamian, and N.V. Antonenko, AIP Conference Proceedings 1852, 080007 (2017); doi: 10.1063/1.4984881

"Physical Origin of the Transition from Symmetric to Asymmetric Fission Fragment Charge Distribution", Horia Pasca, A. Andreev, G. G. Adamian, N. V. Antonenko, Acta Physica Polonica Series B 48(3):431, DOI: 10.5506/APhysPolB.48.431 (2017)

"Physical origin of the transition from symmetric to asymmetric fission fragment charge distribution", **H. Pașca**, A.V. Andreev, G.G. Adamian, and N.V. Antonenko, **AIP Conference Proceedings 1852, 080007 (2017); doi: 10.1063/1.4984881**

"Physical Origin of the Transition from Symmetric to Asymmetric Fission Fragment Charge Distribution", **Horia Pasca**, A. Andreev, G. G. Adamian, N. V. Antonenko, **Acta Physica Polonica Series B 48(3):431, DOI: 10.5506/APhysPolB.48.431 (2017)**

"Unexpected asymmetry of the charge distribution in the fission of $^{222,224}\text{Th}$ at high excitation energies" **H. Pașca**, A.V. Andreev, G.G. Adamian, and N.V. Antonenko, **Phys. Rev. C 94, 064614 (2016)**

"Extraction of potential energy in charge asymmetry coordinate from experimental fission data" **H. Pașca**, A.V. Andreev, G.G. Adamian, and N.V. Antonenko, **Eur. Phys. J. A 52, 369 (2016)**

"Possible origin of transition from symmetric to asymmetric fission", **H. Pașca et. al., Phys. Lett. B 760 (2016) 800-806**

"Energy dependence of mass, charge, isotopic, and energy distributions in neutron-induced fission of ^{235}U and ^{239}Pu ", **H. Pașca et. al., Phys. Rev. C 93, 054602 (2016)**

"Energy dependence of fission observables" , **H. Pașca, EPJ Web of Conferences 107, 07003 (2016)**

Participări la conferințe internaționale

- 2024 International Conference «50 Years of Cold Fusion», 19-24 Nov, Yerevan Armenia, "Manifestation of clustering in fission of heavy nuclei" (Oral presentation)
- 2018 Nuclear Structure and Related Topics (NSRT18, 3-6 June), Burgas, Bulgaria, "Charge-mass yields in the fission of highly excited heavy actinides" (Oral presentation);
- 2017 JINR/BLTP – SKLTP/CAS Joint Workshop on Physics of Strong Interacting Systems (26 November – 1 December 2017) Shenzhen University in China, "Multiple transitions between symmetric and asymmetric fission modes" (Oral presentation);
- Helmholtz International Summer School "NUCLEAR THEORY AND ASTROPHYSICAL APPLICATIONS", Dubna, Russian Federation, (10-22 July 2017), "Spin Distribution Of Fission Fragments In Binary Decay Reactions" (Oral presentation);
- Helmholtz International Summer School "NUCLEAR THEORY AND ASTROPHYSICAL APPLICATIONS", Dubna, Russian Federation, (10-22 July 2017), "Influence Of Compound Nucleus Excitation On Mass And Charge Distributions Of Fission Fragments " (Oral presentation);
- THEORY-4 Scientific Workshop on Nuclear Fission dynamics and the Emission of Prompt Neutrons and Gamma Rays, Varna, Bulgaria (20-22 June 2017), "The role of excitation energy of the compound nucleus in binary decay processes" (Oral presentation);
- International Seminar on Interactions of Neutrons with Nuclei (ISINN25), Dubna, Russian Federation, (22-26 May 2017): "Spins of complex fragments in binary reactions and in fission" (Oral presentation);
- 40th ASRC International Workshop "Experimental and Theoretical Advances in Fission and Heavy Nuclei", Japan Atomic Energy Agency (JAEA), Tokai, Japan (12-13 December 2016); "Energy dependence of the shape of the fission fragment charge distribution" (Oral presentation);
- Zakopane Conference on Nuclear Physics Extremes of the Nuclear Landscape, Zakopane, Poland, (August 28 September 4 2016) "Physical origin of the transition from symmetric to asymmetric fission fragment charge distribution" (Authors: H.Pasca, A.V. Andreev, G.G. Adamian, N. V. Antonenko)(Oral presentation by dr. G.G. Adamian);
- Carpathian Summer School of Physics (26 June- 09 July 2016), Sinaia, Romania: „Physical origins of the transition from symmetric to asymmetric fission fragment charge distribution" (Oral presentation);

Seminarii susținute

- BLTP-KLTP Joint Workshop on Physics of Strong Interaction (28 June - 03 July 2016), Dubna, Russian Federation: "Physical origin of transition from symmetric to asymmetric fission" (Oral presentation);
- 119th Session of the Scientific Council of the Programme Advisory Committee for Nuclear Physics of JINR (18-19 February 2016), Dubna, Russian Federation: "Energy dependence of mass, charge, isotopic distributions and TKE in neutron-induced fission of ^{235}U and ^{239}Pu " (Oral presentation);
- Programme Advisory Committee for Nuclear Physics of JINR (29-10 January 2016), Dubna, Russian Federation: "Energy dependence of mass, charge, isotopic distributions and TKE in neutron induced fission of ^{235}U and ^{239}Pu " (Poster);
- 9th International Physics Conference of the Balkan Physical Union – BPU9 (24-27 August 2015), Istanbul, Turkey: "Spin distribution of binary decay products" (Oral presentation);
- Nuclear Structure and Related Topics – NSRT15 (14-18 July 2015), Dubna, Russian Federation: "Energy dependence of fission observables" (Oral presentation);
- SKLTP-BLTP JINR Joint Workshop on Physics of Strongly Interacting Systems (14-19 July 2014), Dubna, Russian Federation: "Angular momentum distribution of binary reaction products" (Oral presentation);
- 17th of October 2016, Bogolyubov Laboratory of Theoretical Physics, JINR, Russian Federation, title "Cluster approach for describing nuclear fission" ;
- 31st of March 2017, Faculty of Physics, "Babes-Bolyai University", Romania, "Cluster approach to fission";
- 28th of July 2017, Bogolyubov Laboratory of Theoretical Physics, JINR, Russian Federation, Lecture for the young scientist of FSU countries, "The DNS approach to fission";
- 8th of October 2017, Institut de Physique Nucleaire, Orsay, France "Transitions between symmetric and asymmetric fission modes in the region of light and heavy actinides";