

Jasna Stevanović

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Employment

- **Department of Physics, Faculty of Science, University of Kragujevac, Serbia**
 - **Teaching Assistant**
 - for the scientific field Atomic, Molecular and Optical Physics, 2013–2019.
 - **Assistant Professor**
 - for the scientific field Atomic, Molecular and Optical Physics, 2019–
 - **Participation in scientific projects:**
 - Researcher on the following projects, Ministry of Science of the Republic of Serbia and Science Fund of the Republic of Serbia:
 - „Higgs boson: a portal to new physics”, Project No. 7699827 , 1. 1. 2022 – 1. 1. 2025.
 - „Physics and detector R&D in HEP experiments” Project No. 171012, 2018 – 2021.
 - „Experimental and theoretical investigations in radiation physics and radioecology”, Project No.171021, 2011 – 2021.
 - „Theoretical and experimental investigations in microdosimetry and radioecology”, Project No.141023, 2006 – 2010.
 - „Dynamics of atomic systems and their interaction with radiation”, Project No. 1470, 2004 – 2005.
 - **Research ranks:**
 - **Assistant Professor**, 2019 –
 - **Research Associate**, 2017 –
 - **Research Assistant**, 2009 – 2019.
 - **Junior Research Assistant**, 2004 – 2009.

Education

- **Department of Physics, Faculty of Science, University of Kragujevac**
 - **PhD in Physics**, Department of Physics, University of Kragujevac, 2014
 - Thesis title: *Corrected transition rate to the ADK theory in the process of tunnel ionization*
 - **MSc in Physics**, Department of Physics, University of Kragujevac, 2007
 - Thesis title: *Transition probability dependence on the laser field intensity in the ADK-theory*
 - **BSc in Physics**, Department of Physics, University of Kragujevac, 1998 - 2004
 - Thesis title: *Branching processes in physics with application to polymers*

Conferences/Workshop

- International Workshop on Future Linear Colliders (LCWS2021), March 2021, CERN, Geneva
- CLIC Workshop 2019, 21-25 January 2019, CERN, Geneva
- 3rd International School and Conference on Photonics 29 August - 2 September, 2011, Belgrade, Serbia
- Balkan Summit of Young Scientists 17-19 December 2010, Thessaloniki, Greece
- 25th SPIG August 30-September 3, 2010, Donji Milanovac, Serbia
- 23rd SPIG August 28-September 1, 2006, Kopaonik, Serbia

Computing skills

- Programming: Wolfram Mathematica, C++
- Operating systems: MS Windows

Language skills

- English (intermediate level)

Research Experience

Theoretical investigation in laser-matter interactions, concerning atomic ionization using tunnel ionization and single-atom approximation in semiclassical theories for intense laser fields. Testing and applying the tunnel ionization rate formula improved with modified ionization potentials and effective quantum number for the above-barrier ionization and barrier-suppression ionization processes, as well as a more precise analysis of determining the required boundary conditions for these effects. Finding a more realistic representation of the tunneling dynamics of certain atoms at considered laser field intensities. The analysis of the theoretical data obtained by using the derived formulas and the existing experimental results refer to hydrogen-like atoms when they are affected by intense laser fields.

Research in Higgs physics and the future electron-positron colliders CEPC, ILC and CLIC, all foreseen to run as Higgs factories. Higgs decay study in the final states at 350 GeV and 3 TeV, CP violation at 1.4 TeV.

Teaching Experience

- Mathematical physics
- Theoretical mechanics
- Quantum optics
- Using microcomputers in physics
- Physics 1
- General theory of relativity

List of Publication

· Research Papers – International Journals:

- (1) V. M. Ristić, J. M. Stevanović and M. M. Radulović, *Transition rate dependence on the improved turning point in ADK-theory*, Laser Physics Letters, Vol. 3, No. 6, 298-300 (2006)
- (2) V. M. Ristić and J. M. Stevanović, *Transition rate dependence on the atom charge states, Z*, Laser Physics Letters, Vol. 4, No. 5, 354-356 (2007)
- (3) V. M. Ristić and J. M. Stevanović, *Atom charge states, Z and comparing the ADK and cADK-theories*, Laser Physics, Vol. 19, No. 5, 989-992 (2009)
- (4) V. M. Ristić, T. B. Miladinović and J. M. Stevanović, *Circularly polarized laser fields, with different Z, including non-zero initial momentum*, Acta Physica Polonica A Vol. 119, No. 6, 761-763 (2011)
- (5) J. M. Stevanović, T. B. Miladinović, M. M. Radulović and V. M. Ristić, *Ionization rate for circularly polarized laser fields with modified ionization potential included*, Physica Scripta T149, 014046 (2012)
- (6) T.B. Miladinović, J.M. Stevanović, M.M. Radulović and V.M. Ristić, *The energy at which the maximum number of photoelectrons are observed during the ionization of potassium and xenon atoms*, Physica Scripta T149, 014047 (2012)
- (7) M. M. Radulović, J. M. Stevanović, T. B. Miladinović, V. M. Ristić, *The role of the non-zero initial momentum and modified ionization potential in the corrected Ammosov-Delone-Krainov theory*, Romanian Journal of Physics, 58, 127-135 (2013)
- (8) V. M. Ristić, M. M. Radulović, T. B. Miladinović and J. M. Stevanović, *Getting deeper insight into stopping power problems in radiation physics using the Noether's theorem corollary*, Nuclear Technology and Radiation Protection Vol. 29, No. 1, 24-27 (2014)
- (9) N. Vukašinović, I. Božović-Jelisavčić, G. Kačarević, G. Milutinović-Dumbelović, T. Agatonović-Jovin, I. Smiljanić, M. Radulović and J. Stevanović, *Measurement of the H to ZZ branching fraction at 350 GeV and 3 TeV CLIC*, Physical Review D 105, 092008 (2022).
- (10) G. Kačarević, I. Božović-Jelisavčić, N. Vukašinović, G. Milutinović-Dumbelović, I. Smiljanić, T. Agatonović-Jovin, M. Radulović and J. Stevanović, *Measurement of the Higgs branching ratio $BR(H \rightarrow \gamma\gamma)$ at 3 TeV CLIC*, Physical Review D 105, 092009 (2022).
- (11) N. Vukasinovic, T. Agatonovic Jovin, I. Bozovic Jelisavcic, G. Kacarevic, G. Milutinovic Dumbelovic, I. Smiljanic, M. Radulovic and J. Stevanovic, *CPV in e^+e^-H at 1 TeV ILC*, Moscow University Physics Bulletin, Vol. 77, No. 2, pp 268-269 (2022)
- (12) Tatjana B. Miladinović, Mirko M. Radulović, and Jasna M. Stevanović, *Effects of the Different Laser Beam Profiles on the Tunneling Ionization with Coulomb Correction Included*, Romanian Reports in Physics, Vol. 74, 406 (14) (2022)

• **Proceedings - International Conferences/Workshops:**

- (1) V. M. Ristić, J. M. Stevanović and M. M. Radulović, *Transition Rate Dependence on the Atom Charge States*, Z, 23rd SPIG, Contributed Papers, 83-87 (2006)
- (2) V. M. Ristić, T. B. Miladinović and J. M. Stevanović, *Ionization Transition Rate for Circularly Polarized Fields, for different Z, Including non-zero Initial Momentum*, 25th SPIG, Contributed Papers, 45-48 (2010)
- (3) I. Smiljanić, I. Božović-Jelisavčić, G. Kačarević, N. Vukašinović, T. Agatonović-Jovin, G. Milutinović-Dumbelović, J. Stevanović, M. Radulović, *Integrated luminosity measurement at CEPC*, International Workshop on Future Linear Colliders (LCWS2021), 15-18 March 2021, C21-03-15.1., pp. 7, arXiv:2105.06245v2[physics.ins-det]
- (4) T. Agatonović Jovin, I. Božović Jelisavčić, I. Smiljanić, G. Kačarević, N. Vukašinović, G. Milutinović Dumbelović, J. Stevanović, M. Radulović, D. Jeans, [on behalf of the ILD Concept Group], *Probing the CP properties of the Higgs sector at ILC*, International Workshop on Future Linear Colliders (LCWS2021), 15-18 March 2021, C21-03-15.1., ILD-PHYS-PROC-2021-004, pp. 5, arXiv:2105.06530v2[hep-ph]
- (5) G. Kačarević, I. Božović-Jelisavčić, N. Vukašinović, G. Milutinović-Dumbelović, M. Radulović, J. Stevanović, Ivan Smiljanić, T. Agatonović-Jovin, [on behalf of the CLICdp Collaboration], *Measurement of the Higgs branching ratio $BR(H \rightarrow \gamma\gamma)$ at 3 TeV CLIC*, International Workshop on Future Linear Colliders (LCWS2021), 15-18 March 2021, C21-03-15.1., CLICdp-Conf-2021-002, pp. 6, arXiv:2105.06795v2[hep-ex]
- (6) N. Vukašinović, I. Božović-Jelisavčić, I. Smiljanić, G. Kačarević, G. Milutinović-Dumbelović, T. Agatonović-Jovin, M. Radulović, J. Stevanović, [on behalf of the CLICdp Collaboration], *Measurement of the H to ZZ branching fraction at 350 GeV and 3 TeV CLIC*, International Workshop on Future Linear Colliders (LCWS2021), 15-18 March 2021, C21-03-15.1., CLICdp-Conf-2021-001, pp. 8, arXiv:2105.06792v2[hep-ex]
- (7) Ivana Vidaković, Mirko Radulović, Jasna Stevanović and Goran Kačarević, *Application of Multivariate Analysis in Separation of Higgs Boson Signal at Future $e+e-$ Colliders*, 11th International Conference of the Balkan Physical Union (BPU11), 28 August-1 September 2022, Belgrade, Serbia, Proceedings of Science, Vol. 427
- (8) G. Kačarević, I. Božović-Jelisavčić, N. Vukašinović, M. Radulović and J. Stevanović, *Measurement of the Higgs to $\gamma\gamma$ branching fraction at 3 TeV CLIC*, 11th International Conference of the Balkan Physical Union (BPU11), 28 August-1 September 2022, Belgrade, Serbia, Proceedings of Science, Vol. 427
- (9) N. Vukašinović, I. Božović-Jelisavčić, G. Kačarević, M. Radulović and J. Stevanović, *Determination of the CPV Higgs mixing angle in ZZ-fusion at 1.4 TeV CLIC*, 11th International Conference of the Balkan Physical Union (BPU11), 28 August-1 September 2022, Belgrade, Serbia, Proceedings of Science, Vol. 427
- (10) G. Milutinović-Dumbelović, I. Božović-Jelisavčić, N. Vukašinović, G. Kačarević, M. Radulović and J. Stevanović, *Measurement of the $\sigma \times BR(H \rightarrow ZZ)$ at 350 GeV and 3 TeV center-of-mass-energy CLIC*, 11th International Conference of the Balkan Physical Union (BPU11), 28 August-1 September 2022, Belgrade, Serbia, Proceedings of Science, Vol. 427