



Abdulah Jašarević

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<https://scholar.google.com/citations?user=FO7CZf8AAAAJ&hl=en>

SUMMARY

PhD in Theoretical Physics specializing in atomic, molecular and optical (AMO) physics, with expertise in strong-field laser physics and quantum-orbit theory. Author of nine peer-reviewed publications, including papers in Physical Review A, Physical Review Research, and Journal of Physics A, and reviewer for Physical Review A. Experienced in scientific programming, mathematical modeling, electronics, embedded systems, and accelerator physics. Graduated with a perfect GPA (10.0/10.0), receiving the highest academic honors at both the undergraduate and graduate levels.

EDUCATION

PhD in Theoretical Physics | *Atomic, molecular and optical physics*

Faculty of Science, University of Sarajevo

November 2021 – March 2025

Sarajevo, Bosnia and Herzegovina

Master of Science | *Theoretical Physics*

Faculty of Science, University of Sarajevo

October 2018 – September 2019

Sarajevo, Bosnia and Herzegovina

Bachelor of Science | *Theoretical Physics*

Faculty of Science, University of Sarajevo

October 2014 – September 2018

Sarajevo, Bosnia and Herzegovina

WORK EXPERIENCE

Senior Research and Teaching Assistant

Faculty of Science, University of Sarajevo

November 2023 – Now

Sarajevo, Bosnia and Herzegovina

Research and Teaching Assistant

Faculty of Science, University of Sarajevo

January 2020 – October 2023

Sarajevo, Bosnia and Herzegovina

PROJECTS AND RESEARCH

COAS Research Associate – CERN (European Organization for Nuclear Research)

June 2026

CERN, Geneva, Switzerland

- Contributed to the development of the Sarajevo Ion Accelerator (SARAI), a collaborative project with CERN, working closely with CERN researchers in accelerator physics on the development and integration of accelerator systems.

Member of the Research Project “Development of a New Quantum Orbit Method and Its Application in Attosecond Science”

September 2024 – September 2025

Faculty of Science, University of Sarajevo

- Project approved and funded by the Ministry for Science, Higher Education and Youth Canton Sarajevo

Member of the Research Project “New Methods for Generating Soft X-Rays and Scattered Electrons Using Complex Laser Fields”

September 2019 – March 2021

Faculty of Science, University of Sarajevo

- Project approved and funded by the Ministry for Science, Higher Education and Youth Canton Sarajevo

SKILLS

Programming & Scientific Computing: Python, Fortran, C/C++, Mathematica, LaTeX, SPSS, R
Physics & Modeling: AMO Physics, Strong-field physics, Attosecond Science, Laser-matter interactions, High-harmonic generation, Above-threshold ionization, Quantum Mechanics, Electrodynamics, QFT, Classical Mechanics, Mathematical modeling, Numerical methods
Electronics & Instrumentation: Embedded Systems (ESP32, Arduino), Scientific Instrumentation, Accelerator Physics
Research: Scientific Writing, Journal Peer Review, Peer-Reviewed Publications, Research Project Development
Languages: Bosnian (Native), English (C1), Turkish (B1)

HONORS AND AWARDS

"Golden Badge" of the University of Sarajevo Best graduate student (Master's level) at the University of Sarajevo with a perfect GPA (10/10)	December 2019
"Golden Badge" of the University of Sarajevo Best undergraduate student at the University of Sarajevo with a perfect GPA (10/10)	December 2018
Special Recognition from the Ministry of Education of the Federation of Bosnia and Herzegovina Awarded annually to top-performing students in mathematics, physics, and informatics competitions	2008 – 2014
Scholarship from the "Bošnjaci" Fund Merit-based scholarship awarded to top university students in Bosnia and Herzegovina	2015 – 2019

OTHER EXPERIENCE

Academic Committee Member – Cantonal & Federal Mathematics Competitions Canton Sarajevo Mathematical Society	March 2015 – Now Bosnia and Herzegovina
Lecturer – Winter Schools in Physics Federation of Bosnia and Herzegovina Physical Society	January 2022 – January 2023 Sarajevo, Bosnia and Herzegovina
Leader of the Bosnia and Herzegovina Team – 52nd International Physics Olympiad Federation of Bosnia and Herzegovina Physical Society	July 2022 Switzerland
Grading Coordinator – 26th Junior Balkan Mathematical Olympiad Canton Sarajevo Mathematical Society	June and July 2022 Sarajevo, Bosnia and Herzegovina
Academic Committee Member – Federal & National Physics Competitions Federation of Bosnia and Herzegovina Physical Society	March 2015 – May 2022 Bosnia and Herzegovina
Lecturer – Math School for Gifted Students Canton Sarajevo Mathematical Society	September 2016 – August 2018 Sarajevo, Bosnia and Herzegovina

CONFERENCES AND WORKSHOPS

NICE 2026: Nonlinear Imaging and Coherent Effects, Latisana - Italy Poster presentation. Workshop co-organised with COST Action NEXT, CA22148, and supported by COST and Elettra Sincrotrone Trieste.	May 2026
4th International Physics Conference in Bosnia and Herzegovina Poster presentation. Conference organized by the Physical Society in Federation of Bosnia and Herzegovina with the support of the University of Sarajevo - Faculty of Science.	September 2024
International Physics Conference in Bosnia and Herzegovina 2022 Poster presentation. Conference organized by the Physical Society in Federation of Bosnia and Herzegovina with the support of the University of Sarajevo - Faculty of Science.	June - July 2022
Physics Conference in Bosnia and Herzegovina 2018 Conference organized by the Physical Society in Federation of Bosnia and Herzegovina	October 2018

PUBLICATIONS

- [1] F Žgalj, AS Jašarević, D Habibović, and DB Milošević. “Directional asymmetry in strong-field ionization induced by a terahertz-assisted laser pulse”. In: *Physical Review Research* 8.2 (2026), p. 023211. URL: <https://doi.org/10.1103/w4v4-6m6v>.
- [2] Dino Habibović, Abdulah S Jašarević, Mustafa Busuladžić, and Dejan B Milošević. “High-order above-threshold ionisation of diatomic molecules by few-cycle bicircular and orthogonally polarised two-colour pulses”. In: *Physical Chemistry Chemical Physics* 26.27 (2024), pp. 19008–19020. URL: <https://doi.org/10.1039/d4cp01271b>.
- [3] AS Jašarević, D Habibović, and DB Milošević. “Quantum orbits in atomic ionization beyond the dipole approximation”. In: *Physical Review A* 110.2 (2024), p. 023111. URL: <https://doi.org/10.1103/PhysRevA.110.023111>.
- [4] AS Jašarević, E Hasović, and DB Milošević. “Modified saddle-point method applied to high-order above-threshold ionization and high-order harmonic generation: Slater-type versus asymptotic ground-state wave function”. In: *Physical Review A* 109.4 (2024), p. 043114. URL: <https://doi.org/10.1103/PhysRevA.109.043114>.
- [5] DB Milošević, AS Jašarević, D Habibović, E Hasović, A Čerkić, and W Becker. “Asymptotic methods applied to integrals occurring in strong-laser-field processes”. In: *Journal of Physics A: Mathematical and Theoretical* 57.39 (2024), p. 393001. URL: <https://doi.org/10.1088/1751-8121/ad7212>.
- [6] Abdulah S. Jašarević, Elvedin Hasović, and Dejan B. Milošević. “High-Order Above-Threshold Ionization Using a Bi-Elliptic Orthogonal Two-Color Laser Field with Optimal Field Parameters”. In: *Atoms* 11.6 (2023), p. 91. URL: <https://doi.org/10.3390/atoms11060091>.
- [7] AS Jašarević, E Hasović, and DB Milošević. “Modified saddle-point method applied to direct ionization of noble gas atoms”. In: *Journal of Physics A: Mathematical and Theoretical* 56.33 (2023), p. 335201. URL: <https://doi.org/10.1088/1751-8121/ace811>.
- [8] AS Jašarević, E Hasović, and DB Milošević. “Ionization by a strong orthogonal two-color laser field: a quantum-orbit-theory approach”. In: *The European Physical Journal D* 76.12 (2022), p. 240. URL: <https://doi.org/10.1140/epjd/s10053-022-00569-2>.
- [9] A Jašarević, E Hasović, R Kopold, W Becker, and DB Milošević. “Application of the saddle-point method to strong-laser-field ionization”. In: *Journal of Physics A: Mathematical and Theoretical* 53.12 (2020), p. 125201. URL: <https://doi.org/10.1088/1751-8121/ab749b>.