

Curriculum Vitae

Personal data

Date and place of birth	March 12, 1981, Gorzów Wlkp., Poland
Citizenship	Polish
E-mail	tomsow@ifpan.edu.pl • tomasz.sowinski@cern.ch
WebPage	www.ifpan.edu.pl/~tomsow
Other profiles	Researcher ID • ORCID • Google Scholar • Arxiv
Marital status	married, three sons

Education and degrees

2023	Professor of natural sciences in physics (pol. <i>profesor nauk ścisłych i przyrodniczych w dyscyplinie nauki fizyczne</i>)
2015	DSc in Physics (pol. <i>dr hab. nauk fizycznych</i>) Institute of Physics of the Polish Academy of Sciences
2008	PhD in Physics (pol. <i>dr nauk fizycznych</i>) Faculty of Physics, University of Warsaw Supervisor: prof. Iwo Białynicki-Birula
2005	MSc in Physics (pol. <i>mgr fizyki</i>) Faculty of Physics, University of Warsaw, graduated with honours Supervisor: prof. Iwo Białynicki-Birula
2000	Matriculation exam (pol. <i>egzamin maturalny</i>) I Liceum Ogólnokształcące im. Tadeusza Kościuszki w Gorzowie Wlkp.

Scientific career

2024 -	Professor (pol. <i>profesor</i>) Institute of Physics of the Polish Academy of Sciences
2021 -	CERN User AEGIS/AD-6 Antihydrogen experiment: Gravity, Interferometry and Spectroscopy
2016 - 2023	Associate professor (pol. <i>profesor nadzwyczajny, profesor instytutu</i>) Institute of Physics of the Polish Academy of Sciences
2021 - 2022	Visiting Scientist IUMPA – Instituto Universitario de Matemática Pura y Aplicada Universitat Politècnica de València (3 months)
2016 - 2017	Deputy Director for Scientific Affairs (pol. <i>Zastępca Dyrektora ds. Naukowych</i>) Institute of Physics of the Polish Academy of Sciences
2010 - 2016	Assistant professor (pol. <i>adiunkt</i>) Institute of Physics of the Polish Academy of Sciences
2013 - 2015	Assistant professor (pol. <i>adiunkt</i>) Center for Theoretical Physics of the Polish Academy of Sciences
2012 - 2013	KOLUMB PostDoc Scholarship granted by the Foundation for Polish Science ICFO – The Institute of Photonic Sciences, Barcelona (9 months)
2011	Visiting Scientist ICFO – The Institute of Photonic Sciences, Barcelona (3 months)

- 2009 - 2012 Assistant professor (pol. *adiunkt*)
Faculty of Biology and Environmental Sciences, Cardinal Stefan Wyszyński University
- 2005 - 2009 Assistant (pol. *asystent*)
Center for Theoretical Physics of the Polish Academy of Sciences
- 2003 - 2005 Laboratory technician for informatics (pol. *laborant ds. informatycznych*)
Center for Theoretical Physics of the Polish Academy of Sciences

PI in scientific grants

- 2024 - „Quantum correlations in multi-component systems of several fermions”
grant funded by the National Science Center (program OPUS 25)
Institute of Physics of the Polish Academy of Sciences
- 2022 - „Participation of Polish scientific institutions in the international project AEgIS at CERN”
consortium grant funded by the Ministry of Education and Science
- 2017 - 2022 „Two-component mixtures of a few attractive ultra-cold fermions”
grant funded by the National Science Center (program Sonata BIS 6)
Institute of Physics of the Polish Academy of Sciences
- 2015 - 2017 „Strongly correlated systems of a few ultra-cold atoms”
grant funded by the Ministry of Science and Higher Education (program *Iuventus Plus*)
Institute of Physics of the Polish Academy of Sciences
- 2012 - 2013 „Creation of angular momentum states in optical lattices”
grant funded by the Foundation for Polish Sciences (program *Kolumb*)
ICFO - The Institute of Photonic Sciences, Barcelona, Spain
- 2011 - 2014 „Ultra-cold gases in optical lattices with different shapes”
grant funded by the National Science Center (program *Sonata 1*)
Institute of Physics of the Polish Academy of Sciences

Supervisor experience

PhD supervisor

- 2023 Damian Włodzyński
„Problem of the small Fermi-polaron system in one-dimensional harmonic trap”
Institute of Physics of the Polish Academy of Sciences
- 2020 Jacek Dobrzyniecki
„Tunneling of a few interacting ultra-cold atoms to open space”
Institute of Physics of the Polish Academy of Sciences
- 2017 Daniel Pęczak
„Strongly correlated systems of a few ultra-cold fermions with unequal masses”
Institute of Physics of the Polish Academy of Sciences

PhD auxiliary supervisor

- 2013 Joanna Pietraszewicz
„Ultra-cold bosonic atoms with weak magnetic interactions confined in optical lattices”
Supervisor: Prof. Mariusz Gajda
Institute of Physics of the Polish Academy of Sciences

MSc supervisor

- 2022 Joanna Gajewska
„Application of the machine learning techniques in description
of critical transitions in the Bose-Hubbard model”
Faculty of Physics, Warsaw University of Technology
- 2020 Marcin Feliniak
„Tunneling of two speeded up and mutually interacting particles”
Faculty of Physics and Applied Informatics, University of Łódź
- 2019 Andrzej Chrostowski
„Properties of a few ultra-cold fermions in two dimensional harmonic trap”

- 2019 Faculty of Physics, University of Warsaw
Damian Włodzyński
„Variational Jastrow ansatz for a few interacting bosons in a harmonic trap”
Faculty of Physics, University of Warsaw
- 2016 Jacek Dobrzyniecki
„Exact dynamics of two ultra-cold bosons in a one-dimensional double-well trap”
Faculty of Mathematics and Natural Studies, Cardinal Stefan Wyszyński University

Bachelor supervisor

- 2023 Grzegorz Jaczewski
„Lissajous figures in a quantum walk on a lattice”
Faculty of Physics, University of Warsaw
- 2020 Rafał Błaszkiwicz
„Quantum dynamics of a few interacting bosons in a double-well potential”
Faculty of Physics, University of Warsaw
- 2010 Marcin Obidziński
„Motion of the charged particle in crossed electric and magnetic fields”
Faculty of Mathematics and Natural Studies, Cardinal Stefan Wyszyński University
- 2009 Piotr Majblat
„Estimation of areas of polygons with Monte Carlo approach”
Faculty of Mathematics and Natural Studies, Cardinal Stefan Wyszyński University

Student's internship supervisor

- from 2012 Paweł Kozów • Jacek Dobrzyniecki • Dariusz Wiater • Piotr Wrzosek
Andrzej Chrostowski • Robert Grosz • Damian Włodzyński • Aleks Czejdo
Marcin Feliniak • Rafał Błaszkiwicz • Jędrzej Wardyn • Grzegorz Jaczewski
Jan Rawa • Michał Wójcik

Evaluator experience in promotion procedures

habilitation

- 2022 Habilitation procedure of Paweł Potasz (referee)
Nicolaus Copernicus University in Toruń
- 2022 Habilitation procedure of Konrad Kapcia (referee)
Adam Mickiewicz University in Poznań
- 2021 Habilitation procedure of Krzysztof Jachymski (referee)
University of Warsaw
- 2020 Habilitation procedure of Carmine Autieri (assessment committee secretary)
Institute of Physics of the Polish Academy of Sciences
- 2019 Habilitation procedure of Paweł Zin (assessment committee member)
National Center for Nuclear Research
- 2019 Habilitation procedure of Michał Rode (referee)
Institute of Physics of the Polish Academy of Sciences
- 2019 Habilitation procedure of Krzysztof Pawłowski (assessment committee member)
Faculty of Physics, University of Warsaw

doctoral thesis

- 2023 Doctoral thesis referee
Dissertation by Piotr Różański under supervision of dr hab. Michał Zieliński
Institute of Physics, Nicolaus Copernicus University in Toruń
- 2022 Doctoral thesis external evaluator
Dissertation by Israel Griol Barres under supervision of prof. José Millet Roig
Escuela Técnica Superior de Ingeniería de Telecomunicación, Universitat Politècnica de València

2021	Doctoral thesis referee Dissertation by Piotr Zdybel under supervision of dr hab. Paweł Jakubczyk Faculty of Physics, University of Warsaw
2021	Doctoral thesis referee Dissertation by Buğra Tüzemen under supervision of prof. Piotr Magierski Faculty of Physics, Warsaw University of Technology
2017	Doctoral thesis referee Dissertation by Arkadiusz Kuroś under supervision of prof. Anna Okopińska Institute of Physics, Jan Kochanowski University
2015	Doctoral thesis referee Dissertation by Oleksandr Marchukov under supervision of prof. Nikolaj Zinner Department of Physics and Astronomy, Aarhus University, Denmark

Science popularization

1. Member of the Programme Council of the Copernicus Science Centre in Warsaw (from 2018)
2. Member of the Organizing Committee of the high school student contest "Physical Pathways" (pol. „Fizyczne Ścieżki”)
3. Over sixty articles about physics published in the oldest polish educational magazine „Young Technician” (pol. „Młody Technik”) and in „Characters” (pol. „Charaktery”)
4. Four educational movies published electronically in „Young Technician” (pol. „Młody Technik”)
5. Five lectures for Scientific Club in the Institute of Physics of the Polish Academy of Sciences
6. A. Trętowska, Ł. Nowotko, W. Śliwa, G. Wrochna, T. Sowiński, P. Fita
„CCD Observatory in school. Guide for students, teachers and parents”
Electronic publication funded by European Commission in program "Hands-On Universe" (2005)
7. Over twenty lectures for the general public on physics
8. Several lectures and workshops for children at "University of Children"

Awards and scholarships

2020	Director of the Institute of Physics Prize for the best scientific publication in 2019
2016	Director of the Institute of Physics Prize for the best habilitation dissertation in 2015
2015	The Stefan Pieńkowski Prize of the Polish Academy of Sciences in the field of physics for the year 2015
2014	Director of the Institute of Physics Prize for the best scientific publication in 2013
2013	3-year scholarship for Outstanding Young Scientists granted by Ministry of Science and Higher Education
2012	KOLUMB PostDoc Scholarship granted by the Foundation for Polish Science
2009	Best lecture of the XIII Science Festival in Warsaw
2008	„Master of science popularization – Golden Mind 2008” Title awarded by the President of the Polish Academy of Sciences
2004/05	Ministry of National Education Scholarship
2005, 09, 10	Nominated for the title „Popularizer of Science” awarded by the Polish Press Agency and the Ministry of Science and Higher Education

Certificates by Coursera

Stanford Univ.	<u>Machine Learning</u>
IBM	<u>Python for Data Science</u> • <u>Data Visualization with Python</u> • <u>Data Analysis with Python</u>
deeplearning.ai	<u>Neural Networks and Deep Learning</u> • <u>Improving Deep Neural Networks</u>