

SVETLANA PACHEVA

Curriculum Vita

Work Address

Institute of Nuclear Research
and Nuclear Energy
Bulgarian Academy of Sciences
Tsarigradsko Chaussee 72
BG-1784 Sofia, Bulgaria

Telephone

Office: (+359-2) 9795-647
Mobile: +359-883-683-339
E-mail: svetlana@inrne.bas.bg
E-mail: svetlanapacheva@gmail.com
Homepage: <http://theo2.inrne.bas.bg/~svetlana/>

BIRTH: December 23, 1949, in Rousse, Bulgaria
MARITAL STATUS: married, one child
LANGUAGES: Bulgarian – mother tongue; Russian, English – free;
Hebrew – fair; German - mediocre

Education STEKLOV MATHEMATICAL INSTITUTE St. Petersburg, Russia
1976-1979
Ph.D. graduate student. Ph.D. degree in Theor. Physics - 1979; supervisors: Prof. L.D. Faddeev and Prof. P.P. Kulish. Ph.D. Thesis (1979): “*1/N Expansion and Critical Behaviour of Three-Dimensional Field Theory Models*”
SOFIA UNIVERSITY Sofia, Bulgaria
1968-1973
Undergraduate and M.S. studies. M.S. degree in Physics - 1973 ; supervisor: Prof. I.T. Todorov

Field of Research

Theoretical and Mathematical Physics, Theory of Elementary Particles, High Energy Physics, General Relativity and Gravitation, Cosmology

Research Interests

Modified gravity beyond Einstein’s general relativity, Cosmology – Dark Energy and Dark Matter, Generalized gravity and nonlinear gauge theories, generalized string and p -brane models (strings/branes with dynamical tension, lightlike branes) – with applications in elementary particle physics, black hole and wormhole physics, and cosmology; Completely integrable models; Quantum groups and Hopf algebras - applications in physics; Group-theoretical approach to conformal field theories based on the method of group coadjoint orbits; Covariant quantization of strings with manifest space-time supersymmetry; Covariant quantization of constrained systems ; Stochastic quantization ; Non-perturbative aspects of gauge theories - renormalization of non-renormalizable theories, anomalies in odd dimensions, dynamical mass generation, dynamical generation of gauge bosons and Chern-Simmons terms, $1/N$ expansion, dynamical symmetry breaking; Field-theoretic approach in the theory of phase transitions and critical behaviour.

Publications Total number – 147;
Phys. Lett. B – 27; *Phys. Lett. A* – 3; *Nucl. Phys. B* – 5; *Comm. Math. Phys.*

– 2; *Mod. Phys. Lett. A* – 5; *Int. Journ. Mod. Phys. A* – 8; *Int. Journ. Mod. Phys. D* – 2; *Symmetry* – 2; *Journ. Math. Phys.* – 2; *Phys. Rev. D* – 2; *Gen. Rel. Grav.* – 2; *Theor. Math. Phys.* – 4; *Lett. Math. Phys.* – 9; *EuroPhys. Journ. B* – 1; *EuroPhys. Journ. C* – 3; *European Physics Journal Plus* – 1; *Fortschritte der Physik* – 2; *Centr.Europ.J.Phys.* – 1; *Astronom. Nachrichten* – 1; *Appl. Analysis* – 1; *Invertis Journal of Sci. and Technology* – 1; *The Open Nuclear and Particle Physics Journal* – 1; *Bulg. Journ. Phys.* – 15; *Comp. Rend. Acad. Sci. Bulg.* – 2; *Proceedings of International Conferences* (full text contributions) – 41; *Preprints* – 6

Citations and Impact Factor

Total number of independent citations – 1561

H-index: 21

Total Impact Factor: 286.193

Google Scholar profile:

http://scholar.google.bg/citations?hl=en&user=vnLVF-kAAAAJ&view_op=list_works&pagesize=100

Employment	INSTITUTE OF NUCLEAR RESEACH 1989–2018 Full Professor (since 2008); Doctor of Sciences (Doctor Habil.) (2007); Senior research staff member (equiv. to Associate professor) (1989–2007)	Sofia, Bulgaria
	INSTITUTE OF NUCLEAR RESEACH 1980–1989 Research staff member (equiv. to Assistant professor)	Sofia, Bulgaria
	INSTITUTE OF SOLID STATE PHYS. 1974–1976 Junior research member	Sofia, Bulgaria
	BEN-GURION UNIVERSITY OF THE NEGEV 1991–1994, 1995–1999 Visiting professor and research staff member; “Giladi” fellowship 1996–1999	Beer Sheva, Israel
	HEBREW UNIVERSITY Feb 1991 – July 1991 Visiting professor	Jerusalem, Israel
Visits	BEN-GURION UNIVERSITY OF THE NEGEV 2001–2019 Exchange agreement with Bulgarian Academy of Sciences	Beer-Sheva, Israel
	UNIVERSITY OF PATRAS 2003 NATO CLG fellow	Patras, Greece

UNIVERSITY OF FREIBURG 1993 DAAD (<i>German Academic Exchange</i>) fellow	Freiburg i.Br., Germany
WEIZMANN INSTITUTE OF SCIENCE 1987–1990 Long-term visitor (1987,1988); Visiting professor (1989,1990)	Rehovot, Israel
CERN, THEORY DIVISION 1985–1986 Scientific associate - one-year term; Short-term visitor (1992)	Geneva, Switzerland
RUSSIAN ACADEMY OF SCIENCES 1985, 1989 Scientific Visitor at Steklov Mathematical Institute and Lebedev Physical Institute.	Moscow, Russia
JOINT INSTITUTE FOR NUCLEAR RESEARCH 1981/2/3/4/5/7/8	Dubna, Russia
INTERNATIONAL CENTER FOR THEOR. PHYSICS 1984, 1985, 1986, 1987	Trieste, Italy

Grants and Awards

COST - EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY 2017–2021 COST Action CA16104 “Gravitational waves, black holes and fundamental physics” (GWnivers) (Substitute-Member of Management Committee)	
COST - EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY 2014–2018 COST Action MP1405 “The Quantum Structure of Spacetime” (QSPACE) (Substitute- Member of Management Committee)	
COST - EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY 2013–2017 COST Action MP1210 “The String Theory Universe” (Member of Management Committee)	
EUROPEAN COMMISSION FP6 Marie Curie RTN project “ <i>Forces-Universe</i> ” MRTN-CT-2004-005104	2004–2008
EUROPEAN COMMISSION FP5 RTN project “ <i>EUCLID</i> ” HPRN-CT-2002-00325	2002–2006

NATO SCIENCE DIVISION NATO Collaborative Linkage Grant <i>PST.CLG.978785</i>	2002–2004
BEN-GURION UNIVERSITY OF THE NEGEV, ISRAEL Exchange Agreement with Bulgarian Academy of Sciences Grants 2001–2004; 2004–2007; 2007–2009; 2009–2013; 2013–2016; 2016–2019	2001–2019
NATIONAL SCIENCE FOUNDATION, U.S.A. NSF Grant <i>INT-9724747</i>	1997–2000
ISRAELI MINISTRY OF ABSORPTION Giladi Fellowship	1995–1998
ISRAELI MINISTRY OF SCIENCE Shapiro Fellowship	1991–1994
<p>BULGARIAN NATIONAL SCIENCE FOUNDATION Grant <i>F-401/94</i> (1994–1998); Grant <i>F-904/99</i> (2000–2004); Grant <i>F-1412/04</i> (2004–2008); Grant <i>DO 02-257</i> of Framework Program “<i>Ideas</i>” (2008–2012); Grant <i>DFNI T02/06</i> (2015–2017) Grant <i>DN 18/1</i> (2018–2021)</p>	
<p>MINISTRY OF SCIENCE AND TECHNOLOGY OF BULGARIA 1984: <i>Bulgarian National Prize for Young Scientists</i>; 1987–1991: Project grant <i>F-003/87</i> (participant); 1987–1991: Project grant <i>F-403/87</i> (participant)</p>	