

EMIL NISSIMOV

Curriculum Vita

Work Address

Institute of Nuclear Research
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BIRTH: October 20, 1949, in Sofia, Bulgaria
MARITAL STATUS: married, one child
LANGUAGES: Bulgarian – mother tongue; Russian, English, German – free;
Hebrew – fair; French – mediocre

Education ST.PETERSBURG STATE UNIVERSITY St. Petersburg, Russia
1975-1978
Ph.D. graduate student. Ph.D. degree in Theor. Physics - 1978; supervisor: Prof.
L.D. Faddeev . Ph.D. Thesis (1978): “*Infinite Series of Higher Quantum Conserved
Currents in Two-Dimensional Completely Integrable 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 (as of Sept 2020) – 154;
Phys. Lett. B – 27; *Phys. Lett. A* – 3; *Nucl. Phys. B* – 6; *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; *Class. Quant. Grav.* – 1; *Theor. Math. Phys.* – 5; *J.E.T.P. Letters* – 1; *Lett. Math. Phys.* – 11; *EuroPhys. Journ. B* – 1; *EuroPhys. Journ. C* – 3; *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.* – 17; *Comp. Rend. Acad. Sci. Bulg.* – 2; *Proceedings of International Conferences* (full text contributions) – 40; *Preprints* – 7

Citations and Impact Factor

Total number of independent citations (as of Nov 2020): 1605

H-index: 21

Total Impact Factor: 296.403

Google Scholar profile:

http://scholar.google.bg/citations?hl=en&user=60RCkzUAAAAJ&view_op=list_works&pagesize=100

- Employment** INSTITUTE OF NUCLEAR RESEACH Sofia, Bulgaria
1988–2020
Corresponding Member of Bulgarian Academy of Sciences (since 2014);
Full Professor (since 2008);
Doctor of Sciences (Doctor Habil.) (2007);
Senior research staff member (equiv. to Associate professor) (1988–2007);
Head of Laboratory (Department) “Theory of Elementary Particles” (since 2001)
Member of Institute’s Scientific Board (since 2003)
- INSTITUTE OF NUCLEAR RESEACH Sofia, Bulgaria
1979–1988
Research staff member (equiv. to Assistant professor)
- BEN-GURION UNIVERSITY OF THE NEGEV Beer Sheva, Israel
1991–1994, 1995–1999
Visiting professor and research staff member;
“Shapiro” fellowship 1991–1994; “Giladi” fellowship 1996–1999
- HEBREW UNIVERSITY Jerusalem, Israel
Feb 1991 – July 1991
Visiting professor
- Visits** BEN-GURION UNIVERSITY OF THE NEGEV Beer-Sheva, Israel
2001–2019
Exchange agreement with Bulgarian Academy of Sciences
- UNIVERSITY OF PATRAS Patras, Greece
2003
NATO CLG fellow

UNIVERSITY OF ILLINOIS 1995, 1996, 1998, 1999, 2000 NSF-grant fellow (1998–2000)	Chicago, U.S.A.
UNIVERSITY OF FREIBURG 1993, 1995 <i>DAAD (German Academic Exchange) fellow</i>	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 (1989, 1992, 2000)	Geneva, Switzerland
ROME UNIVERSITY “LA SAPIENZA” 1989	Rome, Italy
RUSSIAN ACADEMY OF SCIENCES 1981, 1985, 1987 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
SERVICE DE PHYSIQUE THEOR. C.E.N. 1983	Saclay, France
INTERNATIONAL CENTER FOR THEOR. PHYSICS 1980, 1984, 1986, 1987	Trieste, Italy

Grants and Awards

COST - EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY	2019–2023
COST Action CA18108 “Quantum gravity phenomenology in the multi-messenger approach” – Member of Management Committee	
COST - EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY	2017–2021
COST Action CA16104 “Gravitational waves, black holes and fundamental physics” (GWnivers) – Member of Management Committee	

COST - EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY 2016–2020
 COST Action CA15117 “Cosmology and Astrophysics Network for Theoretical Advances and Training Actions” (CANTATA) – Subst. Member of Management Committee

COST - EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY 2014–2018
 COST Action MP1405 “The Quantum Structure of Spacetime” (QSPACE) – Member of Management Committee

COST - EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY 2013–2017
 COST Action MP1210 “The String Theory Universe”

EUROPEAN COMMISSION 2004–2008
 FP6 Marie Curie Research Training Network “Forces-Universe” MRTN-CT-2004-005104, contact person for Sofia node

EUROPEAN COMMISSION 2002–2006
 FP5 Research Training Network “EUCLID” HPRN-CT-2002-00325

BEN-GURION UNIVERSITY OF THE NEGEV, ISRAEL 2001–2019
 Exchange Agreement with Bulgarian Academy of Sciences
 Grant 2001–2004 (project coordinator); Grant 2004–2007 (project coordinator);
 Grant 2007–2009 (project coordinator); Grant 2009–2013 (project coordinator);
 Grant 2013–2016 (project coordinator); Grant 2016–2019 (project coordinator);

NATO SCIENCE DIVISION 2002–2004
 NATO Collaborative Linkage Grant *PST.CLG.978785*

NATIONAL SCIENCE FOUNDATION, U.S.A. 1997–2000
 NSF Grant *INT-9724747*

ISRAELI MINISTRY OF ABSORPTION 1996–1999
 “Giladi” Fellowship

ISRAELI MINISTRY OF SCIENCE 1991–1994
 “Shapiro” Fellowship

BULGARIAN NATIONAL SCIENCE FOUNDATION
 1994–1998: Grant *F-401/94* (project coordinator);
 2000–2004: Grant *F-904/99* (project coordinator);
 2004–2008: Grant *F-1412/04* (project coordinator);
 2008–2012: Grant *DO 02-257* of Framework Program “*Ideas*” (acting project coordinator);
 2015–2017: Grant *DFNI T02/6* (deputy project coordinator)
 2017–2020: Grant *DN 18/1* (project coordinator)

MINISTRY OF SCIENCE AND TECHNOLOGY OF BULGARIA
 1984: *Bulgarian National Prize for Young Scientists* ;

1987–1991: Project grant *F-003/87* (participant);
1987–1991: Project grant *F-403/87* (participant)