

CURRICULUM VITAE

Valentina Borissova Petkova

Born: Bulgaria

Education and degrees:

1966: High school in Sofia

1971: Master degree in Theoretical Physics from the Physical Department of Sofia University with Diploma work under the supervision of Professor Tch. Palev at the Theory of Elementary Particles Group of the Institute of Nuclear Research and Nuclear Energy (INRNE), Sofia, Bulgarian Academy of Sciences (BAS),

Title: *Representations of the symplectic algebra in the space of all polynomials of Heisenberg operators.*

1976: PhD thesis under the supervision of Professor I.T. Todorov at INRNE, BAS,

Title: *"Indecomposable representations of the conformal group and some applications to invariant operator product expansions".*

2008: Doctor of Sciences thesis, **Title:** *"Fusion rules, graphs and quantum symmetries"*

Positions:

1977: Permanent position equivalent to Junior Assistant Professor at the INRNE, BAS

1981: Permanent position equivalent to Assistant Professor at the INRNE, BAS

1988: Permanent position equivalent to Associate Professor at the INRNE, BAS

2009: Permanent position equivalent to Professor at the INRNE, BAS

2012: Corresponding member of the Bulgarian Academy of Sciences

2018: Professor emeritus at INRNE, BAS

Award:

The Bulgarian National Award for Young Scientists, 1982

Teaching experience:

1975: Assistance to Prof. I. Todorov in the advisorship of the Diploma work of M. Mintchev

1977: acting as Assistant Professor for the course "Mathematical Methods in Physics" in the Physical Department of Sofia University.

1982 - 1983: Assistance to Prof. D. Stoyanov in the advisorship of the PhD of G. Sotkov.

2002: three lectures on 2d Conformal Field Theory for graduate students and PhD students in the Physical Department of Sofia University.

2009: Lectures on 2d conformal field theory (42 hours) at the Institut für Theoretische Physik, Universität Göttingen, Germany.

Scientific visits:

1978: (11 months) visit at the 2nd Institute for Theoretical Physics in Hamburg, Germany (collaboration with G. Mack on lattice gauge theories)

Short visits (1 week to 3 months):

1974 – 1982: JINR, Dubna

1983 – 2006, 2011, 2012: INFN, Trieste
(collaboration with P. Furlan on 4d and 2d CFT)

1989: Hamburg

1990, 1996, 2006: CERN, Geneva

1991: Karlsruhe

1992: SISSA, Trieste

1993, 2006: Université Paris - VI

1994: Saclay

(collaboration with J.-B. Zuber on the relation of the 2d CFT to graphs)
 1996: ESI, Vienna
 1997, 1998, 2000, 2002, 2007: - ICTP, Trieste
 1998, 1999: King's College, London
 (collaboration with G. Watts on fractional level WZW models)
 1999: Saclay ,1999: ESI, Vienna, 2000: CERN
 (collaboration with J.-B. Zuber on boundary CFT)
 2003 – 2006: Saclay
 (collaboration with I. Kostov on non-critical string theory)
 2007 - 2009: Saclay
 2009: Lectures on 2d conformal field theory (42 hours) at the Institut für Theoretische Physik, Universität Göttingen, Germany
 2009: - Universite Paris - VI
 2010 - 2015: Saclay
 2014: Dubna
 2015 , 2017: INFN, Trieste (collaboration with P. Furlan on conformal Toda theory)
 2018 - 2019: Saclay (collaboration with I. Kostov on correlators in 4d $\mathcal{N} = 4$ SYM)

Talks at seminars:

Sofia, Hamburg (II Inst. DESY), Clausthal, Karlsruhe, Kaiserslautern, Trieste (SISSA, ICTP and many times at INFN), CERN, Universite Paris - VI, Genoa, Saclay (IThP), Sian (China), Durham, London (King's College)

Participation in schools and workshops:

Tehran - 1973, Primorsko - 1977, 1980, Bonn - 1978, Varna - 1982, 1987, 2008, Freiburg - 1983, Les Houches - 1984, Cargese - 1991, Paris - 1994 (talk), Bologna - 1997 (talk), Hamburg - 1998, York - 2001, Edinburgh - 2004, Sozopol - 2004, Paris - 2006, Lyon - 2006, Paris - 2007, Valencia - 2007 (talk), Moscow - 2008, Paris - 2009, Munchen - 2009, Paris - 2021, Santa Barbara - 2022.

Invited talks at conferences and workshops:

Clausthal-Zellerfeld- 1985, 1989, 1999, Gosen - 1991, Kiev - 1992, Durham - 1992, Razlog - 1995, Vienna - 1996, Goslar - 1996, Swansea - 1996, Warwick - 1999, London - ICMP-2000, Kyoto - 2000, London - 2001, Como - 2001, Dubna - 2005, Varna-2005, Santiago de Compostela-2005, Belgrade - 2006, Vienna - 2008, Sofia - 2009, Sofia - 2010, Paris - 2010, Yerevan-2011, Prague-2012,Prague-2015, Dubna-2015, Saclay 2018, Prague 2019, Stockholm 2019, Yerevan 2019.

Participation in organisation of conferences:

EU network "Euclid" Workshop, Integrable Models and Applications, 31 August - 4 September 2004, Sozopol, Bulgaria.

IV network conference of the RTN "Forces-Universe", Varna, September 2008

Workshop "New mathematical methods in solvable models and gauge/string dualities", Varna, August 2022.

Participation in international scientific projects:

Project within the BAS - Royal Society agreement (1999-2000)

EU: RTN EUCLID, contract HPRN-CT-2002-00325 (2003 -2006)

EU: MCRTN ForcesUniverse, contract MRTN-CT-2004-005104 (2005 - 2008)

RILA (Bulgarian-French programme) (2007-2008)

COST Action MP-1210 "The String Theory Universe" (2013-2017)

COST Action MP1405 QSPACE "The Quantum Structure of Spacetime" (2014-2018)

RILA (Bulgarian-French programme) (2017 -2019)

KITP program on "Integrability in String, Field and Condensed Matter Theory" (2022)

Referee for the scientific journals:

Nucl. Phys. B, J. Phys. A, JHEP, SIGMA

Member of juries:

for PhD, HDR, Dr.Sc. and professorship in Bulgaria, France and USA.

Current research topics:

Conformal field theory in two - and higher dimensions. Supersymmetry and integrability.