Curriculum Vitae Sketch

KOREPIN Vladimir become US citizen in 1999. PI accomplished his undergraduate study in Sankt Petersburg State University. In 1974 graduated from the University with the diploma in theoretical physics. In 1974 was employed by the Mathematical Institute of Academy of Sciences of Russia. PI accomplished his graduate and Post Doctoral studies in this Institute, L. D. Faddeev was **Post Doctoral adviser**. He worked in this Institute until 1989. Currently, he is a full professor with tenure in the Yang Institute for Theoretical Physics of State University of New York at Stony Brook. PI obtained Ph.D. degree in mathematical physics in 1977 from Mathematical Institute of the Academy of Sciences of the Russia in Moscow. In 1985 was awarded the honorable degree of doctor of sciences in mathematical physics by the Council of Ministers of Russian Federation. In 1978 his paper 'Quantum Solitons' was recognized as the best paper of the year by Russian Academy of Sciences. PI published about 295 papers in theoretical and mathematical physics.

He also have results important for mathematics: In 1982 he introduced six vertex model with domain wall boundary conditions, which played a major role in algebraic combinatorics [Alternating Sign Matrices, domino tiling, Young diagrams]. His other contribution important for mathematics is a discovery of a special class of Fredholm integral operators: integrable integral operators. Integrable integral operators play an important role in the theory of random matrices, algebraic combinatorics and theory of correlation functions of exactly solvable models of statistical mechanics. He also proved that the norm of Bethe wave function can be represented as a determinant of linearized system of Bethe equations. He discovered quantum determinant, which plays an important role in quantum groups.

PI was elected fellow of American Physical Society in 1996.

PI was elected fellow of International Association of Mathematical Physics in 1993.

He is an editor of two journals: Quantum Information Processing and International Journal of Modern Physics.

PI advised the following **PostDocs** C.Korff, B-Q Jin, F. Goehmann, H. Bougorzi during last five years.

The **graduate students**: Samson Shatashvili, Vitaly Tarasov, N.Slavnov, D.Coker, F.Essler, Hai Bin Su, O. Patu, Y. Xu, E. Williams, Raul Santos and Francis Paraan.

The list of **collaborators** during the past four years in alphabetical order is:

A.Abanov [Phys Dept, Stony Brook], L.Amico, D. Averin, H. Boos [ISSP, Japan], S. Bose, Byung-Soo Choi, T.Deguchi , F.Essler [BNL], H.Fan, H.Frahm,F. Franchini, J. de Gier [ANU, Canberra,

Australia], F. Goehmann [University Bayreuth, Germany], L.Grover, J.-Q. Jin [YITP, Stony Brook], A. Its, A. Hamma, T.Hirano, C. Hadley, A.Kapaev [POMI, Sankt Peterburg, H.Katsura, Anatol N. Kirillov, A.Kluemper, Naoki Kawashima, K. Kusakabe , Russia], F.T. Latrmolire, Jinfeng Liao, S.Lukyanov [Rutgers University],

Javier Molina-Vilaplana, Y. Nishiyama [ISSP, Japan], Takeshi Oota, O.Patu, A.G. Pronko, I.Roditi [CBPF, Rio de Jeneiro, Brasil], D. Rossini, V. Roychowdhury, M. Shiroishi , N.A.Slavnov

[Math. Institute, Moscow], F. Smirnov [LPTHE, Jussieu, Paris, France], Shu Tanaka, L.A. Takhtajan, J.Terilla [Math. Dept, Stony Brook], Brenno C. Vallilo, H. Wichterich, P. Zinn-Justin

[LPTMS,Universite Pari-Sud, France]

The **coeditors** for last two years: Howard Brant, Allan Fordy, K.K. Phua, Luigi Amico Vladko Vedral.

Five most relevant publications are:

1)A book: The One-Dimensional Hubbard model, published in Cambridge University Press in 2005

2) Quantum Spin Chain, Toeplitz Determinants and Fisher - Hartwig Formula , Journal of Statistical Physics , vol 116, Nos. 1-4, page 79, 2004

3) Entanglement in XY Spin Chain , Journal Phys. A: Math. Gen. vol 38, pages 2975-2990, 2005

4) Renyi Entropy of the XY Spin Chain, Journal of Physics A: Math. Theor. 41 (2008) 025302

5) Entanglement Spectrum for the XY Model in One Dimension , Quantum Information Processing: Vol 10, Issue 3 (2011), Page 325

Five other publications:

1) Diploma 1974: Cancellation of ultra-violet infinities in one loop quantum gravity on mass shell: http://insti.physics.sunysb.edu/ korepin/uvg.pdf

2) Quantum Theory of Solitons. Physics Reports vol 42 (1), pages 1-87, 1978

3) A Lattice Version of Nonlinear Schroedinger Equation , DOK-LADY AKADEMII NAUK, 1981

4) Calculation of Norms of Bethe Wave Functions, Commun. Math. Phys. vol 86, page 391, 1982

5) The book Quantum Inverse Scattering Method and Correlation Functions , Cambridge University Press 1993