

# CURRICULUM VITAE

January, 2011

## PERSONAL

Name: Sergei Evdokimov

Date of Birth: December 12, 1950

Place of Birth: St.Petersburg (Leningrad), Russia (USSR)

Citizenship: Russia

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## EDUCATION

1958–1966 Secondary School, St.Petersburg (Leningrad)

1966–1968 Mathematics and physics oriented High School, St.Petersburg

1968–1973 Mathematics and Mechanics Department of the St.Petersburg State University

Primary course: mathematics, computer science

Specialization: algebra and number theory

Graduation Thesis: Dirichlet series with Euler product for congruence subgroups of Siegel modular group of degree 2 (1973)

Advisor: Professor A.N.Andrianov, Dr. Sc.

1977 PhD. Thesis: Euler products for congruence subgroups of Siegel modular group of degree 2

PhD. Advisor: Professor A.N.Andrianov, Dr.Sc.

2005 ScD. Thesis: Schurity and separability of association schemes

## APPOINTMENTS

2005 – AT PRESENT:

Leading Research Fellow of the Laboratory of Algebra and Number Theory,  
St.Petersburg Department of Steklov Mathematical Institute of the Russian  
Academy of Sciences

1982 – 2005:

Senior Research Fellow of the Laboratory for Theory of Algorithms,  
St.Petersburg Institute for Informatics and Automation of the Russian  
Academy of Sciences

1974 – 1982:

Professor of the Chair for Mathematics, Physics and Mechanics Department  
of the Leningrad Polytechnical Institute (now St.Petersburg State Technical  
University)

PRINCIPAL FIELDS OF INTEREST:

Arithmetic theory of automorphic functions, modular forms and quadratic  
forms. Computational complexity (algebra, number theory, combinatorics).  
Algebraic combinatorics (coherent configurations, association schemes, de-  
signs, permutation groups). Multiresolution analysis and wavelets (p-adic  
and adelic constructions).

MAIN RESULTS:

In algebraic combinatorics: constructing for association schemes the theory  
of multidimensional extensions, characterizing cyclotomic schemes, solving  
the Schur-Klin hypothesis. In quadratic and automorphic forms: developing  
the theory of Euler products for congruence subgroups of the Siegel modular  
group of degree 2 (and partially of degree 3), characterizing the Maass space,  
proving the existence of an eigenbase for any degree, computing the action  
of the singular Hecke operators on the Fourier coefficients of theta series of  
a quadratic form. In computational complexity: designing several record-  
breaking algorithms including polynomial-time recognition and isomorphism  
tests for circulant graphs and a quasipolynomial-time factorization algorithm  
for polynomials over a finite field. In multiresolution analysis and wavelets:  
characterizing the orthogonal p-adic multiresolution analyses, constructing  
the first family of non-orthogonal p-adic multiresolution analyses, wavelet  
bases and wavelet frames.

OTHERS:

Chairman of St.Petersburg Seminar on Algebraic Combinatorics, Mathematical Institute of Academy of Sciences, since 1998.

Member of St.Petersburg Mathematical Society (The Chairman - professor A.M. Vershik, Dr.Sc.), since 1992.

Participant of St.Petersburg Seminar on Computation Complexity Theory, Mathematical Institute of Academy of Sciences (The Chairman - professor A.O. Slisenko, Dr.Sc.), 1982–1992.

Participant of St.Petersburg Seminar on Representation Theory Complexity, Mathematical Institute of Academy of Sciences (The Chairman - professor A.M. Vershik, Dr.Sc.), since 1992.

Participant of St.Petersburg Seminar on Automorphic Functions, Mathematical Institute of Academy of Sciences (The Chairman - professor A.N. Andrianov, Dr.Sc.), since 1970.

Invited as an invited speaker:

The International Conference "Wavelets and Applications", St. Petersburg, Russia, June 14–20, 2009

The International Conference "Fourier Series and Applications", Abrau-Durso, May 27 – June 3, 2008

The International Workshop "Open Problems on Association Schemes", Busan, Korea, July, 2004

The International Conference on Logic and Complexity in Computer Science (LCCS' 2001), Creteil, France, September 3–5, 2001

The First International Algorithmic Number Theory Symposium (ANTS 1), Ithaca, USA, May 6–9, 1994

Invited as a participant:

The International Conference "Combinatorics 2010", Verbania, Italy, June 27 – July 3, 2010

The 9th International Conference on Finite Fields and their Applications, Dublin, Ireland, July 13–17, 2009

The International Conference "Discrete Analysis and Applications", Thessaloniki, Greece, September 27–29, 2008

The 5th Conference on Modern Mathematical Physics, Beograd, Serbia, July 6–17, 2008

The International Conference "Combinatorics 2008", Costermano, Italy, June 22–28, 2008

The 6th Slovenian International Conference on Graph Theory, Bled, Slovenia, June 24–30, 2007

An International Conference on Algebraic Combinatorics in Honor of Eiichi Bannai's 60th Birthday, Sendai, Japan, June 26–30, 2006

The International Workshop "Recent Progress in Association Schemes", St.Petersburg, Russia, July 5–7, 2005

The Com<sup>2</sup>MaC Conference on Association Schemes, Codes and Designs, Busan, Korea, July, 2004

The Fifth Czech-Slovak International Symposium on Combinatorics, Graph Theory, Algorithms and Applications, Prague, July 6–11, 1998

The International Conference on Formal Power Series and Algebraic Combinatorics, Toronto, June 14–19, 1998

The International Algebraic Conference dedicated to the memory of D. K. Faddeev, St. Petersburg, Russia, June, 1997

The Sixteenth British Combinatorial Conference (BCC16), London, England, July 7–11, 1997

The Fourth International Symposium on Effective Methods in Algebraic Geometry (MEGA 96), Eindhoven, The Netherlands, June 4–8, 1996

The International Conference "Algebra and Combinatorics: Interactions and Applications", dedicated to the memory of Lev Arkad'evic Kaluznin on the occasion of his 80th birthday, Königstein, Germany, 1994

Dagstuhl Workshop on Algebraic Complexity and Parallelism, Schloss Dagstuhl, Germany, July 20–24, 1992

Dagstuhl Workshop on Efficient Interpolation Algorithms. Schloss Dagstuhl, Germany, December 2–6, 1991

Soviet Conference on Constructive Methods and Algorithms in Number Theory, Minsk, Belorussia, 10–16, 1989

The 7th Hungarian Colloquium on Combinatorics of Finite and Infinite Sets, Eger, Hungary, July 5–11, 1987

Soviet Conference on Algorithmic Problems, North Ossetia, September 14–21, 1987

The 8th Conference on Mathematical Logic, Moscow, URSS, September 16–18, 1986

Soviet Conference on Number Theory and its Applications, Tbilisi, Georgia, September 17–19, 1985

Soviet Conference on Estimation of Complexity of Computation, Grodno, Belorussia, May, 1983

Session of Leningrad Mathematical Society, April 8, 1980

Soviet Conference on Number Theory, Dushanbe, September 20–30, 1977

Knowledge of language: Russian (mother tongue), English (read, write, spoken), French (read, write, spoken), German (read)