

Ciriculum Vitae

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May 19, 2009

1 Personal Data

- Born - January, 6, 1943, Kazanlak, Bulgaria.
- Married,
Wife : Ivanka Stoyanova-Skordeva
Child: Kalina
- German citizen
- Languages: bulgarian, russian, english, german.

2 Education

- 1960-1963 - Department of Mathematics, University of Sofia, Bulgaria;

- 1963-1966 - Department of Mathematics and Mechanics, Moscow State University, UdSSR, (advisor E. G. Skljarenko in the Chair High Geometry and Topology of P. S. Alexandrov);
- 1967-1970 - PhD student, Department of Mathematics and Mechanics, Moscow State University, UdSSR, (advisor E. G. Skljarenko in the Chair of P. S. Alexandrov);

3 Degrees

- 1966 - MS - Moscow State University, UdSSR (Diplom Thesis [5]);
- 1970 - PhD - Moscow State University, UdSSR (Topic "Resolvents of closed mappings and maps increasing the dimension", referees M. F. Bockstein, A. V. Zarelua, B. T. Lefshenko, [2,3,4]);
- 1983 - Dr Math. Sci. - University of Sofia, Bulgaria (Topic "Homology properties of continuous maps", referees A. V. Zarelua, D. Doichinov, I. Prodanov, part.published in [17,30,48,44,45,49]);
- 1989 - Corresponding Member of Bulgarian Academy of Sciences;

4 Employment

- 1971-1976 - Research Fellow, Institute of Mathematics, Bulgarian Academy of Sciences, Section Topology;
- 1976-1985 - Associate Professor on Mathematical Analysis, Department of Mathematics and Mechanics, University of Sofia;
- 1985-1994 - Professor on Mathematical Analysis, Department of Mathematics and Informatics, University of Sofia;
- Sept. 1990 - Dec., 1990 - Institute of Dynamical Systems, University of Bremen, Germany, Guest Professor in the group of H.-O. Peitgen;
- 1991 - Research Fellow, Cevis, Department of Mathematics and Informatics, University of Bremen, Germany;

5 Teaching

- Department of Mathematics, University of Sofia:
 - Exercises
 - * Elementary Mathematics, 1961-62;
 - * Calculus I, 1962-63; 1970-71.
 - Lectures
 - * Analytical Geometry;
 - * Homotopical Topology, different versions many times;
 - * Differential Topology, different versions many times;
 - * Algebraic Topology, different versions many times;
 - * Calculus and Analysis, many times for mathematicians, physicists, computer scientist, future teachers;
 - * The number concept, several times for future teacher students;
 - * Some problems of the didactics of mathematics, several times for future teacher students;
 - * Calculus without limit concept, several times for future teachers;
 - * Elementary differential geometry and topology.
- University of Plovdiv, Bulgaria:
Calculus, 1971-1973.
- National Mathematical Gymnasium, Sofia:
Analytical Geometry, 1971-1973.
- Department of Mathematics, University of Bremen:
 - Exercises
 - * Analysis, 1996-97;
 - * Linear Algebra, 1997-98;
 - * Parts of Applications of Mathematics for teachers, many times;
 - Lectures
 - * Parts of Fractal Geometry, several times;

- * Dynamical Systems, several times;
- * Parts of Euclidean Geometry with Cabri;
- * Mathematics for engineering's students 1999- ;

6 Research

I. Topology:

- Dimensionrising maps: [2, 3, 4, 6, 102];
- Sheaf theory, resolvents of Zarelua: [3, 4, 5, 12, 31, 42, 49, 50];
- Lefschetz fixed point and coincidence theorems: [8, 13, 14, 15, 17, 18, 19, 24, 28, 29, 30, 33, 34, 35, 39, 40, 43, 47,52, 53, 54, 86, 88, 89];
- Borsuk-Ulam, Bourgin-Yang theorems, equivariant maps und generalizations: [9, 10, 20, 21, 23, 26, 27, 56];
- Fixed point index: [44, 45, 46, 47, 49, 51, 55, 96, 100];
- Shape theory: [36, 37, 38, 41, 48];
- Factorisation theorems : [25].

II. Fractal properties of classical double sequences, sequences of polynomials:

- Pascal triangle, Gauss binomial coefficients, Stirling numbers I-, II-art: [57, 58, 59, 61, 64, 103];
- Fractal properties of the sequence of Legendre polynomials and Carlitz sequences of polynomials: [76, 77, 94, 103].

III. Cellular automata

- Cellular automata - fractal properties: [58, 59, 60, 61, 62, 63, 70, 72, 74, 78, 80, 81, 82, 87];
- Cellular automata as dynamical systems and review papers on cellular automata: [74, 83, 84, 85];
- Cellular automata on hypoerbolic latice: [82, 89, 90, 91, 92, 93, 97, 99]

IV. Automatic sequences, self-affine functions, transcendence

- Automatic sequences and generalizations: [61, 66, 67, 68, 70, 71, 72, 75, 76, 79, 101];
- Self-similar functions, curves and sequential machines: [69];
- Transcendence of formal power series: [73].

V. Regular tilings

- Regular tilings of Lobachevsky plane and 3-D space: [90, 91, 93, 94, 98, 100];
- Cellular automata on regular grids of Lobachevsky plane: [90, 92, 93]

7 Academic and other services

- Scientific secretary of the Institute of Mathematics of the Bulgarian Academy of Sciences, 1977-1983;
- Head of the Chair Mathematical Education, Department of Mathematics and Informatics, University of Sofia, 1985-1989;
- Head of the Chair Complex Analysis and Topology, Department of Mathematics and Informatics, University of Sofia, 1989-1991;
- Dean of the Department of Mathematics and Informatics, University of Sofia, 1983-1989;
- Vice President of the Bulgarian Mathematical Society, 1982-1988.

8 Member of Scientific Councils

- Scientific Council of the Institute of Mathematics, Bulgarian Academy of Sciences, 1978-1988;
- Scientific Council of the Department of Mathematics and Informatics, University of Sofia, 1988-1991;
- Scientific Council of the Banach International Center, Warsaw, Poland, 1983-1989;
- Scientific Council for Degrees in Mathematics and Computer Science, Bulgaria, 1988-1990.

9 Invitations

- Sept.1973-Jan.,1974 - Department of Mathematics, University of Chicago, U.S.A.(Advisor Prof. F.Browder);
- University of Warshau,Poland, many times for one/two weeks, 1972-1988;
- University of Gdainsk, Poland, many times for one/two weeks, 1972-1988;
- Etvosz University, Budapest, Hungary, one week, 1986;
- Dez., 1979 - Steklov Institute of Mathematics, Academy of Sciences UdSSR, Moskau;
- Juni, 1980 - Juli, 1981 - FB Mathematik, Universität Bremen (Advisor Prof. Dr. H.-O.Peitgen), Fellowship, Alexander von Humboldt Foundation;
- University of Bialistok, Poland, one week, 1987;
- University of Torun, Poland, one week, 1988;
- Insitut of Mathematics, Vietnam Academy of Sciences, Hanoi, Vietnam, two weeks, 1988;
- Mai, 1989 - Okt. 1989 - FB Mathematik, Universität Bremen (Advisor Prof. Dr. H.-O.Peitgen), Fellowship, Alexander von Humboldt Foundation;
- April, 1990 - Juli, 1990 - Joint Institute of Nuclear Research, Dubna, UdSSR, Laboratory of Computer Technique and Automatization;
- Sept 1994 - CNRS, Marseille, France;
- August 1998, October 2007 - CNRS, LRI, University Paris South, France;
- March 1999, 2000, 2001, 2002, 2003, 2004, 2005 - University of Metz, France;
- September 2001, 2002, 2004, 2005, 2006, 2008 - Katholic University Leuven, Belgien;

- September 2004, Sept. 2005, August 2006, August 2007 - Inst. Math., Bulgarian Academy of Sciences, Sofia, Bulgaria;
- September 2005, 2006, 2007 - Nipissing University, Canada;
- April 2007, KwaZulu Natal University, South Africa.

10 Editorial Boards

- Editor in Chief of Education in Mathematics and Informatics, Publ. Ministry of Education Bulgaria, 1985-1990;
- Mathematics, Publ. Bulgaria, 1980-1990;
- Journal of Fixed Point Theory and Applications, Birkhäuser, 2006 -.

11 Awards

- Award of the Balcan Mathematical Union for Young Mathematicians, 1971;
- N. Obreshkov award of Bulgarian Academy of Sciences and University of Sofia for Mathematical Sciences, 1985 (together with Prof. I. Prodanov.)
- Golden Medal "Kiril and Methody", for the work in mathematics and education of mathematics, 1988;
- The badge of honour of the University of Sofia, 2003.