

## CURRICULUM VITAE

*Name:* Stanisław JANE CZKO

### Academic Career.

- 1978** MSc, Warsaw University.
- 1981** Degree: PhD. in Mathematics, Warsaw University of Technology.
- 1978-79** Tutor at the Department of Mathematical Physics, University of Warsaw.
- 1978-81** Senior Tutor in the Institute of Mathematics , Warsaw University of Technology.
- 1981-84** Lecturer in the Institute of Mathematics, Warsaw University of Technology.
- 1984** Research Fellow in the Department of Mathematics , Facultes Universitaires de Namur (Belgium)-6 months.
- 1985-86** Visiting research fellow in the Max-Planck-Institut für Mathematik, Bonn (West Germany)-1 year.
- 1986-87** Lecturer in the Institute of mathematics, Warsaw University of Technology.
- Since 1986 member of the A.M.S. and reviewer for the Math. reviews,
- 1988** Degree: Habilitation in Mathematics, Title of dissertation: The theory of singularities of Lagrangian varieties.
- 1988** Visiting professor in the Mathematics Institute, University of Warwick (England)-3 months, and in the Max-Planck-Institut für Mathematik, Bonn (West Germany)-3 months.
- 1989** Since 1989 docent in the Institute of Mathematics, Warsaw University of Technology.
- 1989** Visiting professor in the Department of Mathematics, Facultes Universitaires de Namur (Belgium)-4 months.
- 1992** Reviewer for Zentralblatt für Mathematik.
- 1990-91** Visiting professor in the Mathematics Department, University of California, Santa Cruz, USA-one year.
- 1992 -** Professor position in the Institute of Mathematics, Warsaw University of Technology and 1/2 docent position in Mathematics Institute, Polish Academy of Sciences.
- 1993** Visiting professor in the Department of Mathematics, University of Utrecht, Holland, (Commission of the European Communities Research Grant) - 3 months
- 1992-97** Member of the Banach Centre Scientific Council.
- 1992 -** Member of the London Mathematical Society.
- 1993-99** Dean of The Faculty of Applied Physics and Mathematics, Warsaw University of Technology.
- 1994 -** Head of the Department of Analysis and Singularity Theory in Warsaw University of Technology

- 1997 Title: Professor of Mathematical Sciences  
 1999 - The Delegate of Rector of Warsaw University of Technology  
 for Graduate and Advanced Studies.  
 2002 - Director of the Institute of Mathematics  
 Polish Academy of Sciences  
 and Director of the Stefan Banach International Mathematical Center  
 2008 - Director of the Center for Advanced Studies

**Short visits and main conferences.**

- 1981 & 1984 Two one-month visits in the Istituto di Fisica Mathematica  
 “J.L. Lagrange”, Univ. di Torino (Italy).  
 1983 Conference on Differential Geometry and Applications,  
 Nove Mesto, (Czechoslovakia).  
 1983 Conference on Convergent Structures II, Schwerin (DDR).  
 1985 Visit to the R. Thom Seminar in I.H.E.S.  
 Bures-Sur-Yvette (France).  
 1985 Semester on Singularity Theory, S. Banach Centre,  
 Warsaw, (Poland).  
 1986 Arbeitstagung 26, Bonn (West Germany).  
 1987 One-month visit to the Department of Mathematics,  
 University of Newcastle upon Tyne,( England).  
 1987 Two-months visit to the Department of Mathematics,  
 Monash University, Melbourne (Australia).  
 1987 Visit to T.-C. Kuo Seminar in the Department of Mathematics,  
 Sydney University, Sydney (Australia).  
 1989 Warwick Symposium on Singularity Theory  
 and its Applications, one-month visit.  
 1991 3rd Tri-annual Joint Berkeley-Stanford-Santa Cruz  
 Differential Geometry Conference - Spring Meeting.  
 1992 Workshop on Interfaces between Physics and  
 Mathematics, Vienna, March 2-6.  
 1992 Two-weeks visit to the Faculty of Mathematical Studies  
 University of Southampton, U.K.  
 1992 Workshop on Dynamical Systems,  
 Kazimierz Dolny,16-20, December, Poland.  
 1993 Departement de Mathematiques, Facultes Universitaires de Namur,  
 Research Grant - two months.  
 1993 Banach Center Symposium on Geometry in Nonlinear  
 Control, Warsaw, May 31 - June 25.  
 1993 Banach Center Symposium on Singularities and  
 Differential Equations (coorganisation).  
 Warsaw, September 26 - November 6.  
 1994 SERC - Research Grant, Faculty of Mathematical Studies,

- University of Southampton, U.K. two months.
- 1995** Banach Center Symposium on Differential Geometry and Mathematical Physics,(coorganisation), Warsaw, April 18 - May 31.
- 1995** XIV Workshop on Geometric Methods in Physics, Białowieża, Poland, July 9 - 15.
- 1995** 6th International Conference on Differential Geometry and Applications, Brno, Czech Republic, 08.28-09.01.
- 1996** XV Workshop on Geometric Methods in Physics, *Quantizations, Deformations and Coherent States*, Białowieża, Poland, July 1 - 7.  
(Member of the Scientific Adv. Committee)
- 1996** 2nd European Congress of Mathematics, Budapest, July 22-26.
- 1996** Singularity Theory Conference, Terry Wall's Birthday Meeting, Liverpool, August 19-24.
- 1996** Symposium on Singularities, on the 70th birthday of Stanislaw Łojasiewicz, 24-29 September, Kraków.
- 1997** Tokyo-Sapporo Conference "Tour of Singularity", Tokyo-Sapporo 17-22 February.
- 1997** Topological and Variational Singularities Methods in Nonlinear Analysis, Gdańsk, September 15-20,  
(Member of the Scientific Committee).
- 1998** Banach Center Symposium on Geometry and Topology of Caustics, CAUSTICS'98,(coorganisation), Warsaw, June 15 - 27.
- 1998** Visit to the Valley Geometry Seminar, University of Massachusetts, Holyoke College, USA.
- 1999** Banach Center Symposium "Complex Methods in PDEs" Warsaw, 8-13 March.
- 1999** European Research Conference on "Geometry, Analysis and Mathematical Physics, Obernai, 4.06-9.06,1999, France
- 2000** Research visit to Isaac Newton Institute for Mathematical Sciences, Cambridge, 1 month
- 2000** Nato Advanced Study Institute: "New Developments in Singularity Theory", Cambridge, 24.07.-11.08.
- 2000** Seminar on Nonlinear Systems (R. Ribotta), Universite de Paris-Sud, Orsay, France, 23.11.-28.11.
- 2000** Conference "Singularity Theory and Applications to Geometry" Liverpool, England, 15-21.12.
- 2000** Workshop "Singularity Theory and applications to wave propagation and Dynamical Systems", Isaac Newton Institute, Cambridge, 22.09.-01.10.
- 2001** Research visit to Max-Planck-Institut für Mathematik, Bonn,8-15.02.
- 2001** Warwick Symposium on Geometric Mechanics and Symmetry, 08.12 - 14.12. 2001, Mathematical Research Center, Warwick.
- 2002** Research visits to Max-Planck-Institut für Mathematik, Bonn, 1 - 28.02. 2002 and 1 - 30.06.2002

- 2003** Research visits to University of Savoie at Chambéry, France, 1 - 30.03. 2003 and 1 - 30.07.2003
- 2004** Real Analytic and Algebraic Geometry, Annual Meeting, Salamanca, Spain, 22 - 27.06.
- 2004** VIII Rencontre de Sao Carlos - Singularities Reelles et Complexes, Luminy, France, 19 - 23.07. 2004
- 2004** 27.10. 7.11. 2004. Research visit to Weizmann Institute, Rehovot (Y. Yomdin Seminar), Technion, Haifa, Department of Mathematics,(M. Zhitomirski Seminar), Israel, 16.05. - 24.05. 2004. Research visit to Centro di Ricerca Matematica Ennio De Giorgi, Pisa, Włochy.
- 2005** Real Algebraic and Analytic Geometry annual meeting, Passau, 5-9. 09, 2005, Germany.
- 2005** Research and conference visit, Singularities, CIRM, Luminy, France, 7.02.2005-25.02.
- 2005** University of Sao Paulo at Sao Carlos, Brasil, 14.05. - 2.06.
- 2006** Conference on Differential Equations and Dynamical Systems, Suzdal, Russia, 10.07. - 15.07.
- 2006** University of Sao Paulo at Sao Carlos, Brasil, 19.07. - 10.08.
- 2007** Technion, Haifa, Department of Mathematics, Israel, 4.05. - 10.05.
- 2007** SMS on Hamiltonian Dynamical Systems and applications, 18-28. 06. Montreal, Kanada.
- 2007** Arnold70, ANALYSIS and SINGULARITIES, Moscow, Russia, August 2024.
- 2008** A Conference in Algebraic Geometry HIRZ80 17-24.05. Bar Ilan Israel.
- 2008** 10th International Workshop on Real and Complex Singularities, Sao Carlos, Brazil, 27.07. - 01.08.
- 2008** International Conference on Differential Equations and Dynamical Systems 27.06. - 02.07. Suzdal, Russia,
- 2008** Frobenius structures and singularity theory, Bedlewo, Poland 25-29.08.

#### **Areas of interest.**

Singularity theory of differentiable maps.  
 Singularity theory of Lagrangian varieties.  
 Singularity theory methods in physics: phase transitions, mathematical theory of optics, bifurcations in stochastic dynamical systems, control of static mechanical systems.  
 Canonical resolution of singularities of Lagrangian varieties,

classification of constrained Lagrangian varieties.  
Singularities of symmetric Lagrangian varieties  
and breaking of symmetry.  
Singularities of caustics and wavefronts, reduction of functional  
moduli in normal forms of Lagrangian submanifolds.  
Canonical symplectic structures in invariant theory of binary forms.  
Classification of singularities of isotropic varieties in  
degenerated symplectic geometry.  
Classification of diffractive isotropic submanifolds.  
Singularities of systems of rays in sub-Riemannian geometry.  
Generic properties of a general exponential maps.  
Generic properties of ovals, measure of symmetry.  
Singular symplectic spaces, singular phase spaces,  
Classification of singularities of differential forms  
Symplectic invariants of systems of surfaces.  
Characteristic classes for isotropic varieties.  
Cohomological invariants in discrete dynamical systems.  
Product stratifications of Lagrangian Grassmannian, Geometry  
and Topology of symplectic relations. Applications to nonconvex  
billiards and equilibrium configurations in mathematical physics.  
implicit differential equations - applications to control systems.  
Symplectic bifurcations of curves and surfaces.