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CURRICULUM VITAE

Nationality: Polish
Born: 10/16/1964, Elblag, Poland
Scientific degrees

- 2007, *professor in mathematics*

- 2002, *habilitation in mathematics* at Jagiellonian University, Kraków, Poland,

- 1996, *Ph. D. in mathematics* at Jagiellonian University, Kraków, Poland.

- 1990, *M. of Sc. in theoretical physics* at Jagiellonian University, Kraków, Poland.

- 1988, *M. of Sc. in mathematics* at Jagiellonian University, Kraków, Poland.

Academic positions

1988-98 assistant at the Institute of Mathematics, Jagiellonian University, Kraków, Poland.

1998-2004 adjunct at the Institute of Mathematics, Jagiellonian University, Kraków, Poland.

1998/99 NSF–NATO visiting scientist at Georgia Institute of Technology, Atlanta, Georgia, USA.

1999/2000 postdoc at Georgia Institute of Technology, Atlanta, Georgia, USA.

2000/01 visiting professor at Mathematics Dept., Indiana University, Bloomington, USA.

2004-present professor at Institute of Computer Science, Jagiellonian University, Kraków, Poland.

2005-2015 professor at WSB-NLU, Nowy Sacz, Poland

Research grants

- IX.1998–VIII.1999   NSF–NATO grant no DGE–9804459 *Topological Methods in Dynamics*

- IX.1998–IX.2000   Grant no 2PO3A 021 15 KBN (Polish Scientific Research Commitee) *Topological methods in multidimensional chaotic dynamical systems. Topological hyperbolicity*

- III.2002 - III.2005   Grant no 2PO3A 019 22 KBN (Polish Scientific Research Commitee) *Dynamics in infinite dimensions. Dissipative systems.*

- X.2006 - IX.2009   Grant no N201 024 31/2163 of Polish Ministry of Science and Higher Education, *Computer assisted proofs in dynamics of ODEs and dissipative PDEs*

- 2010–2012   Grant N N201 543238 of MNiSW (Polish Ministry of Science and Higher Education) *Topological methods for invariant manifolds*

- 2012–2015   Grant NCN no 2011/03B/ST1/04780 *Rigorous numerical methods for dissipative PDEs and ODEs with time delays*

- 2016–2018   Grant NCN no 2015/19/B/ST1/01454 *Geometric methods and rigorous numerics in Hamiltonian dynamics*

Prizes, Awards

- 2008, Polish Prime Minister Award for Scientific Achievement

Main scientific achievements

- computer assisted proofs of the existence of symbolic dynamics in the Hénon map, Rössler eq., Lorenz eq. and Henon-Heiles hamiltonian.

- a generalization of Sharkovski's theorem for multidimensional perturbations of one-dimensional maps.

- a computer assisted proof of existence of multiple fixed points and periodic orbits for Kuramoto-Sivashinsky partial differential equation using topological tools

PhD theses

- Tomasz Kapela, 2005, computer science

- Maciej Capiński, 2005, mathematics

- Zofia Mączyńska, 2011, mathematics

- Mikołaj Zalewski, 2011, mathematics

- Jacek Cyranka, 2013, computer science

- Wiesław Pałka, 2014, computer science

- Robert Szczelina, 2015, computer science

- Aleksander Czechowski, 2016, mathematics

Conferences - as organizer

- organizer of DyToComp2006, Bedlewo, Poland 2006

- organizer of DyToComp2009, Bedlewo, Poland 2009

- organizer of DyToComp2012, Bedlewo, Poland 2012

- Organizer of the minisymposium Computational dynamics and computer assisted proofs at the 6th ECM in Krakow, 2012,

- organizer of DyToComp2015, Bedlewo, Poland 2015

Conferences where I presented my results

- SCAN-95, Wuppertal, Germany

- Wazewski Conference, 1996, Kraków, Poland

- Interval'96, Wuerzburg, Germany

- IV ECMBM'96, Heidelberg, Germany

- Workshop on the Conley Index Theory, Banach Center, Warsaw, Poland, 1997

- Brussels Meeting II, 'Integrability and Chaos in Discrete Systems', Brussels, Belgium, 1997

- Symposium on Discrete Dynamical Systems, Barcelona, Spain, 1997

- TVSMNA'1997, Gdansk, Poland

- Semi-Annual Workshop on Dynamical Systems, College Park, Maryland, USA, 1998

- Dynamics Days'99, Atlanta, USA 1999

- TVMNA'99, Cuernavaca, Mexico, 1999

- Semi-Annual Workshop on Dynamical Systems, College Park, Maryland, USA, 1999

- Fifth SIAM Conference on Applications of Dynamical Systems, Snowbird, Utah, USA , 1999

- Equadiff, Berlin, Germany, 1999

- Y2K International Conference on Differential Equations and Dynamical Systems, Atlanta, GA, USA, 2000

- Siam Pacific Rim Conference on Dynamical Systems, Lahaina, Hawaii, USA, 2000

- Semi-Annual Workshop on Dynamical Systems, College Park, Maryland, USA, 2001

- MidWest Dynamical Systems Seminar, Northwestern, Chicago, USA 2001 *invited speaker*

- AMS Sectional Meeting, Las Vegas, Nevada, 2001

- TMNA'01, Bedlewo, Poland, 2001

- Conley Index Workshop, Sherbrooke, Canada, 2001 (*invited plenary speaker*)

- Workshop on Hamiltonian Dynamical Systems, Imperial College, London, 2002

- 4-th International Conference on Dynamical Systems and Differential Equations Wilmington, North Carolina, USA, 2002

- Geometric Theory of Dynamical Systems, Kraków, Poland, 2002

- FoCM'02, Minneapolis, USA, 2002

- Dynamical Methods for Differential Equations, Valladolid, Spain, 2002

- Space Days, Paderborn University, Germany, 2002

- Taylor Models workshop, Miami Beach, USA, 2002

- Variational Methods in Celestial Mechanics, Palo Alto, USA, 2003

- TMNA'03, Bedlewo, Poland, 2003

- Equadiff 2003, Hasselt, Belgium, 2003

- Taylor Models workshop, Miami Beach, USA, 2003

- SCAN 2004, Fukuoka, Japan, 2004

- Qualitative numerical analysis of high-dimensional nonlinear systems, Bristol, UK, 2005

- International Conference in Dynamical Systems in memory of Wieslaw Szlenk, Warsaw, Poland, 2005

- FoCM'05, Santander, Spain, 2005

- DyToComp2006, Bedlewo, Poland 2006

- Nolta 2006, Bologna, Italy, 2006

- NCTS Workshop on Dynamical Systems, Hsinchu Taiwan, 2007 (invited mini-course speaker)

- SCICADE-07, St. Malo, France, 2007

- AMS-PTM First Joint Meeting, Warsaw, Poland, 2007

- Workshop on computer assisted proofs in hyperbolic dynamical systems, Imperial College, London, UK 2008

- FoCM'08, Hong-Kong, China, 2008

- International Conference in Dynamical Systems On the occasion of the 60th birthday of Michal Misiurewicz, Bedlewo, Poland, 2008 (invited speaker)

- ECIT 2008, Yalta, Ukraine, 2008

- Workshop on Stability and Instability in Mechanical Systems, Barcelona, Spain, 2008

- International workshop on verified computations and related topics, Karlsruhe, Germany, 2009 (invited speaker)

- INDAM meeting: Theoretical and computational methods in nonlinear differential equations, Bertinoro, Italy, 2009 (invited speaker)

- Workshop on Computational Differential Geometry, Topology and Dynamics, Fields Institute, Toronto, Canada, 2009, (invited speaker)

- 8th AIMS conference on Dynamical Systems, Differential Equations and Applications, Dresden, Germany, 2010

- SIAM/RSME-SCM-SEMA Meeting Emerging Topics in Dynamical Systems and Partial Differential Equations DSPDEs'10, Barcelona, Spain, 2010

- Workshop on Analytic and Computational Techniques in Spectral Theory and Related Topics, 2011, Gregynog, UK (invited speaker)

- Computational Methods in Dynamics, Trieste, Italy, 2011 (invited speaker)

- Workshop on Analysis and Stochastic Analysis, Krakow, Poland, 2011

- 12th Conference Mathematics in Technical and Natural Sciences, Krynica, Poland, 2011

- Symposium on Nonlinear Analysis, Torun, 2011

- Workshop in Rigorous Computations in Dynamics, Uppsala, Sweden, 2011

- Seventh International Symposium on Classical and Celestial Mechanics, Siedlce, Poland, 2011

- ICMC Summer Meeting on Differential Equations 2012 Chapter, Sao Carlos, Brazil

- Dynamics, Bifurcations, and Strange Attractors, Nizhny Novgorod, Russia, 2013

- Workshop 'Engaging flows', IMPAN Warsaw, Poland, 2013

- 10th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Madrid, Spain, 2014

- Rigorously Verified Computing for Infinite Dimensional Nonlinear Dynamics, Banff, Canada, 2014

- Information Based Complexity 2015, Bedlewo, Poland, 2015

- Global Dynamics in Hamiltonian Systems, Girona, Spain 2015

- Mathsflows 2015, Porquerolles, France 2015

- Computational Dynamics, ICERM, Providence, USA 2016

- X Forum of partial differential equations, Bedlewo, Poland, 2016

- IBC on the 70th anniversary of Henryk Woniakowski, Bedlewo, Poland, 2016

Talks at seminars abroad

1996: TU Karlsruhe, Germany

1997: Udine, Italy;   Trieste, Italy   TU Budapest, Hungary;   FU Berlin, Germany

1998: Georgia Tech, Atlanta, USA;   IUPUI, Indianapolis, USA

1999: Georgia Tech, Atlanta, USA

2000: Caltech, USA   Indiana University, Bloomington, USA,   IUPUI, Indianapolis,USA   Northeastern, Chicago,USA   Georgia Tech, Atlanta, USA

2001: Indiana University, Bloomington, USA   IUPUI, Indianapolis,USA   Northeastern, Chicago,USA   Paderborn University, Germany

2002: Georgia Tech, Atlanta, USA

2003: ETH Zurich, Switzerland

2004: Paderborn University, Germany; MPI, Leipzig, Germany

2005: Osaka University, Japan; Kyoto University, Japan; Waseda University, Tokyo, Japan

2006: University of Missouri - Columbia, USA

2007: University of Barcelona, Spain (course - 10 lectures); Uppsala University, Sweden

2008: National Chiao Tung University, Hsinchu, Taiwan; University of Barcelona, Spain; University i Bergen, Norway

2009: University of Texas, Austin, USA; Czech Academy of Sciences, Prague, Czech Republik

2010: University of Barcelona, Spain; University of Texas, Austin, USA

2011: BCAM Bilbao, Spain

2012: Laval University, Quebec City, Canada; UPC, Barcelona, Spain

2013: Uppsala University, Sweden

2014: UPC, Barcelona, Spain

2015: UPC, Barcelona, Spain; Uppsala University, Sweden

Fields of interest

- dynamical systems, ordinary and partial differential equations
- chaos theory
- rigorous numerical methods for ODE's and PDE's
- computer assisted proofs in dynamical systems