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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 Committee) *Topological methods in multidimensional chaotic dynamical systems. Topological hyperbolicity*
- III.2002 - III.2005 Grant no 2PO3A 019 22 KBN (Polish Scientific Research Committee) *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