

Prof. Dr. Janusz A. Hołyst
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CURRICULUM VITAE

Professor Dr. Janusz A. Hołyst (*1955) is a Full Professor at Faculty of Physics, Warsaw University of Technology where he leads a Center of Excellence of Complex Systems Research. His current research field includes models of emotions in cybercommunities, economic and social networks, collective bankruptcies, collective opinion formation, non-equilibrium statistical physics, cellular automata, self-organized criticality and phase transitions. He is one of the pioneers in applying physical methods to economical and social systems and is the Co-Founder and Chairman of the Section Physics in Economy and Social Sciences of Polish Physical Society. He was a scientific advisor of 7 completed Ph.D. thesis on nonlinear dynamics and complex systems. His list of publications includes over 120 papers (www.if.pw.edu.pl/jholyst) in peer reviewed journals that have been cited over 800 times.

Prof. Hołyst has organized or co-organized 15 international interdisciplinary workshops or conferences on complex systems. He acts an Associate Editor of European Journal of Physics B, Guest Editor of *Physica A*, *Acta Physica Polonica*, *Acta Physica Polonica B* and as a referee many other physical journals. Prof. Hołyst maintains a close collaboration with many Institutes in Germany, France, and Italy, where he spent over six years as Guest Scientist, Visiting Professor or a fellow of Humboldt Foundation. He has been a coordinator or a partner of several European Union Projects, ICt Project Collective Emotions in Cyberspace (Cyberemotions), NEST Project *Critical Events in Evolving Networks* (CREEN), NEST Project *Measuring and Modelling of Complex Networks Across Domains* (MMCOMNET), COST P10 Action *Physics of Risk* and COST Action MP0801 *Physics of Competition and Conflicts*. Hołyst is a Co-Founder and the President of Polish Council for Research Projects Coordinators.

Prof. Hołyst has worked as an adviser on modelling of marketing and economic processes for American Company *Bunge*.

FULL CURRICULUM VITAE

Name: Janusz Hołyst

Date and place of birth: 19.11.1955., Elbląg (Poland)

Address: Faculty of Physics, Warsaw University of Technology, Koszykowa 75,
00-662 Warsaw, Poland, e-mail: jholyst@if.pw.edu.pl, <http://www.if.pw.edu.pl/~jholyst>

Studies: 1974 - 1979 Faculty of Technical Physics and Applied Mathematics,
Warsaw University of Technology (WUT)

Qualifications:

- 1979 M.Sc. & Eng. of Technical Physics (from WUT)
- 1985 Doctor of Physics (Solid State Physics, from WUT).
Thesis: Solitons in quasi-one-dimensional magnetic systems.
Supervisor: Prof. Dr. A. Sukiennicki
- 1993 Habilitation in Theoretical Physics (from University of Warsaw).
Thesis: Nonlinear effects in spin dynamics
- 2001 State Title *Professor of Physics*

Posts held: (all positions held at the Institute of Physics WUT)

- 1979 – 1982 Scientific Assistant
- 1982 – 1988 Assistant Lecturer
- 1988 – 1993 Assistant Professor
- 1993 – 1998 Associated Professor
- 1998 – 2007 Professor Adjoint
- 2007 – Full Professor
- 1997 – Leader of the Working group *Nonlinear Dynamics of Complex Systems*
(currently *Physics in Economy and Social Sciences*)
- 2002 – Director of the Center of Excellence *Complex Systems Research*.

Training, visits, etc.:

- 1986, IAESTE/DAAD Scholarship (3 months) at Institute for Applied Physics
University of Kiel, Germany

- 1985 -1986 (one year), visitor at Inst. for Theoret. Physics, Polish Academy of Sciences, Warsaw.
- 1986 and 1991 (3 months), visitor at Internat. Centre of Theoret. Physics, Trieste.
- 1986-1988 (21 months), Alexander von Humboldt Research Fellowship at Institute for Theoretical Physics, University Hannover.
- 1988, 1990, 1992, 1994 and 1997 (18 months) visitor in the Institute of Solid State Physics, Technical University Darmstadt.
- 1991-1992 and 1993 (5 months), guest scientist of the Institute of Theoret. Physics ETH Zürich.
- 1993 (3 months) Alexander von Humboldt Research Fellowship at Institute of Theoretical Physics, University of Stuttgart.
- 1995 (6 months) ACE-PHARE Fellowship in the Institute for Applied Economic Research in Tübingen.
- 1997 (3 months) Alexander von Humboldt Research Fellowship at Institute of Physics, Humboldt University Berlin.
- 1998, 1999, 2000, 2001, 2004 (14 months), visiting scientists, Max-Planck-Institute for Physics of Complex Systems, Dresden, Germany.
- Invited lectures presented at Institutes in Darmstadt, Dresden, Florence, Geneva, Jülich, Hannover, Stuttgart, Tübingen, Trieste, Zürich and in other places.

Experience: Theory and applications of complex systems. Special topics include: complex networks, econophysics, sociophysics, cellular automata, game theory, stochastic resonance, deterministic chaos, chaos control

Achievements: over 120 publications, over 200 conference contributions on physics of complex systems, nonlinear dynamics, application of physics in social and economical sciences. over citation references from other authors, supervisor of 6 completed Ph.D. thesis and 21 completed Master Thesis. Total number of citations: above 600 (Dec. 2007)

List of 10 Major Publications

1. R. Lambiotte, M. Ausloos, J. A. Hoyst; *Majority model on a network with communities*; PHYS REV E 75 (3): art. no. 030101 Part 1 MAR 2007
2. Agata Fronczak, Piotr Fronczak, Janusz A. Hoyst, *Fluctuation-dissipation relations in complex networks*, Phys. Rev. E 73 (1): art. no. 016108 Part 2, Jan 2006

3. A. Krawiecki, J.A. Hoyst and D. Helbing, *Volatility Clustering and Scaling for Financial Time Series due to Attractor Bubbling*, Phys. Rev. Lett. 89 (15), 158701 (4) (2002)
4. L. Matassini, H. Kantz, J.A. Holyst, and R. Hegger, *Optimizing of recurrence plots for noise reduction*, Phys. Rev. E 65, 021102 (2002)
5. A. Aleksiejuk, J. A. Hoyst and D. Stauffer, *Ferromagnetic Phase Transition in Barabasi-Albert Networks*, Physica A 2002, 310, 260 (2002)
6. J.A. Hoyst, K. Kacperski and F. Schweitzer, *Social impact models of opinion dynamics*, Annual Review of Comput. Phys. 9, 253-273 (2001).
7. F. Schweitzer and J.A. Hoyst, *Modelling of collective opinion formation by means of active Brownian particles*, European Physical Journal B, 15 723-732 (2000)
8. Wolfram Just, Ekkehard Reibold, Krzysztof Kacperski, Piotr Fronczak, Janusz A. Hoyst, and Hartmut Benner, *Influence of stable Floquet exponents on time- delayed feedback control*, Phys. Rev. E. 61 5045-5056 (2000).
9. W. Just, E. Reibold, H. Benner, K. Kacperski, P. Fronczak and J. Hoyst, *Limits of time-delayed feedback control*, Phys. Lett. A. 254 158-164 (1999).
10. J.A. Hoyst, T. Hagel, W. Weidlich and G. Haag, *How to control a chaotic economy ?*, Journal of Evolutionary Economics, 6, 31-42 (1996).

List of supervised Ph.D. students and Ph.D. thesis

1. Dr. Krzysztof Kacperski, *Crisis in chaotic spin dynamics in the presence of pulse magnetic field and anisotropy*, 1994 - 1998 (with honors).
2. Dr. Sławomir Matyjaśkiewicz, *Influence of fractal structure of attractors and their attraction basins on stochastic resonance in chaotic systems*, 1999 - 2003.
3. Dr. Piotr Fronczak *Control and synchronization of dynamical systems with various numbers of degrees of freedom*, 1999 - 2003 (with honors).
4. Dr. Agata Fronczak, *Structural and critical properties of evolving networks and random graphs* 1999 - 2004 (with honors).
5. Dr. Krzysztof Urbanowicz, *Methods of estimation and reduction of noise level in chaotic systems*, 2000 - 2004.
6. Dr. Jarosław Białecki, *Hydrodynamical instability of liquid layer in the presence of surface velocity gradient*, 2000 - 2004.

7. Dr. Krzysztof Suchecki, *Critical properties of voter model and Ising model in complex networks*, 2003 - 2008.
8. M.Sc.Eng. Julian Sienkiewicz, doctoral studies since 01.10.04

Collaboration: Institutes of Physics, Economy and Social Sciences in Amsterdam, Berlin, Boston, Darmstadt, Dresden, Stuttgart, Dublin, Karlsruhe, Kyoto, Liege, Oxford, Zurich.

Membership: Polish Physical Society (Chairman of the Section *Physics in Economy and Social Sciences*), German Physical Society, European Physical Society, Societas Humboldtiana Polonorum, Chairman of the Polish Council for Research Projects Coordinators.

Participation in EU Grants:

- Coordinator of the Project *Collective Emotions in Cyberspace* (Cyberemotions), in the 7th EU Framework Programme (ICT Programme), 2008 - 2012.
- Vice-Chairman of Management Committee of COST Action MP0801 *Physics of Competition and Conflicts*, 2008 - 2012
- Vice-Chairman of Management Committee of COST Action P10 *Physics of Risk*, 2003 - 2007.
- Coordinator of the Project *Critical Events in Evolving Networks* (CREEN), in the 6th EU Framework Programme (NEST Action), 2005 - 2007.
- Leader of Work Package in the Project *Measuring and Modelling Complex Networks Across Domains* (MMCOMNET) in the 6th EU Framework Programme (NEST Action), 2005 - 2008
- Vice-Chairman of Management Committee of COST Action P10 *Physics of Risk*, 2003 - 2007.
- Partner in EU Projects: STOCHDYN (European Science Foundation, 2003 - 2008), GIACS and ONCE-CS (EU Coordination Actions, 2005 - 2009).

Others:

- Associate Editor of European Physical Journal B
- Referee of Physical Review, Physical Review Letters, Journal of Physics, Physica A, Journal of Evolutionary Economics and by other Journals.
- Chairman or Member of Committees for about 10 International Workshops, Schools and Conferences.

12. September 2009

Professor Dr. Janusz Hołyst