



Professor Jan Awrejcewicz

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institution's website: www.abm.p.lodz.pl

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http://www.amazon.co.uk/s?_encoding=UTF8&search-alias=books-uk&field-author=Jan%20Awrejcewicz

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<http://www.wseas.us/conferences/2012/kos/cm/Plenary2.htm>

Professor: Department of Automation and Biomechanics
The Technical University of Lodz, Lodz, Poland

Biography:

Jan Awrejcewicz (www.abm.p.lodz.pl) graduated from the Technical University of Lodz in 1977 (Mechanics) and from the University of Lodz in 1978 (Philosophy), Poland. He obtained PhD (Habilitation) in 1981 (1990), and became a Full Professor in 1997. He authored and/or co-authored: 39 monographs, 2 textbooks, 252 journal papers, 305 conference papers, 35 chapters in books, 13 journal special issues, edited 5 books and 13 conference proceedings, and supervised 17 PhD theses. He serves/ed in editorial boards of 38 journals, gave 80 invited seminars at international universities, delivered 28 plenary/keynote lectures and served as a member of scientific committees to 110 conferences. He carried out 10 years of research abroad supported by Fulbright

Award (University of California, Berkeley), Kosciuszko Foundation Award (University of Illinois, Urbana), Research Centre for Advanced Science and Technology and Japanese Society for Promotion of Science (JSPS), Tokyo University, Alexander von Humboldt Foundation, The University of Braunschweig, TEMPRA and Région Rhône-Alpes (France), NATO Grant Award, Lyon, Central European University (Budapest), among other. He is a recipient of the HUMBOLDT RESEARCH AWARD, 2011; MASTER Grant Award, Foundation for Polish Science, 2010-2012; Golden Lamp Award (PGNiG) in Poland, 2006, and numerous awards of the Ministry of Science and Education of Poland.

Main Scientific Activities:

All aspects of theoretical, computational and experimental nonlinear mechanics. Approximate analytical techniques of nonlinear dynamics (discrete, continuous and discrete-continuous systems, including time delay), numerical techniques of global analysis of dynamical systems, periodic and quasi-periodic orbits, bifurcation and chaos, biomechanics (skeleton, ear and heart modeling), non-homogeneous plates and shells in nonlinear dynamics, control of systems with impacts and friction, multibody dynamics, and other (see list of papers and books publications). The research is mainly theoretically oriented, but it is supported by computational and experimental (laboratory) techniques.

Qualifications: Ph.D. (Habilitation), University of Lodz, Poland, 1981

Honors, Awards and Certificates:

1. The Humboldt Research Award - 2010
2. The Technical University of Lodz Rector's Award for Organizational Activity - 2010
3. Faculty of Mechanical Engineering Award of the TU Lodz for the Scientific Achievements in the research on "Nonlinear Dynamics of Continuous Mechanical Systems and Modeling in Biomechanics" - 2009.
4. The MISTRZ Programme Award (3-year grant for distinguished Polish scholars) - 2009
5. Individual prize of the Minister of Science and Higher Education for the monographs "Mechanics" and "Mathematical Modelling of Systems" - 2008
6. The Technical University of Lodz Rector's Award for Organizational Activity - 2007
7. The Technical University of Lodz Rector's Award for Scientific Achievements - 2007
8. Prize of the Minister of Science and Higher Education for monograph "Nonlinear Dynamics of a Wheeled Vehicle" - 2006
9. The Golden Lamp Award – 2006
10. Chair of the International Federation of Theory of Machines and Mechanism (IFTToMM) of the Technical Committee on Nonlinear Oscillations between 2006-2009
11. The Author of the Year 2006 - Digital Library of the Technical University of Lodz
12. The Medal for the 60th anniversary of Technical University of Lodz - 2005
13. A Full Member of The Scientific Society of Lodz, Poland -13.06. 2005
14. A Full Member of The Academy of Engineering in Poland -15.06. 2005
15. The silver cross for the 60th anniversary of the Mechanical Technological Faculty of the Silesian University - 2005
16. NATO Grant Award (Service des Bourses de Recherche Scientifique et Technique du Traite de l'Atlantique Nord (OTAN)); 6.01.2005-6.04.2005. ENTPE, Vaulx-en-Velin (Lyon), France
17. Nomination for Candidates for the Japan Prizes
18. 10 prizes of the Rector of TU ofLodzfor the scientific work and didactic activities
19. The Technical University of Lodz Rector's Awards for Organizational Activity

20. The prize of the Minister of National Education and Sport for monograph "Nonclassical Thermoelastic Problems in Nonlinear Dynamics of Shells" - 2004
21. Member of Senate Appealing Commission - 2004
22. American Biographical Institute, Consulting Editor of The Contemporary Who's Who - 2004
23. Member of Lodz Branch of the Polish Academy of Sciences - 2007-2010.
24. Member of Polish Committee of the Theory of Machines and Mechanisms of the Committee for Mechanical Engineering, Polish Academy of Sciences - 2003-2006.
25. Central European University (Fellowship Program), Department of Mathematics and Its Applications (August / September, 2003, one month of research).
26. Région Rhône-Alpes, TEMPRA PECO grants for mobility in 2001 (1.5 months) and 2002 (1.5 months of research) E.N.T.P.E., Vaulx-en-Velin, France.
27. Knight's cross, Order of Poland Reborn, 2001.
28. The Fulbright Award (Senior Grant), Department of Electrical Engineering and Computer Science and Department of Mechanical Engineering, The University of California, Berkeley, 2001 (1 year of research) - only 2 scientists were awarded from Engineering Sciences.
29. Instituto de Materiales y Modelos Estructurales, Facultad de Ingenieria, Universidad Central de Venezuela, Caracas (July 2000, 1 week of research).
30. European Congress on Computational Methods in Applied Sciences and Engineering, ECCOMAS 2000, Barcelona, Spain, 2000.
31. The Kosciuszko Foundation (New York), Mechanical and Industrial Engineering, University of Illinois, Urbana IL 61801, USA (1999/2000), 3 months of research (only 10 scientists were awarded from physical and mathematical sciences in Poland).
32. Member of the Committee of Machine Design of Polish Academy of Sciences (Section of Design Principles), 1999-2002.
33. Member of Polish Committee Theory of Machines and Mechanism of the Committee of Machine Design of Polish Academy of Sciences, 1999-2002.
34. République Française, Ministère de l'Éducation nationale, de la recherche et de la technologie, E.N.T.P.E., Vaulx-en-Velin, 1999 (1 month of research).
35. American Biographical Institute, Research Board of Advisors, 1999, 2004.
36. Member of the Commission of Biomedical Materials, Polish Academy of Sciences in Lodz, 1999-2002, 2003-2005.
37. The medal of the Minister of Education, Warsaw, 1998.
38. Fourth World Congress on Computational Mechanics, Buenos Aires, Argentina, 1998.
39. The golden cross of merit from the President of Poland, Warsaw, 1996.
40. Department of Mathematics, The Waikato University, Hamilton, 1996/1997 (1 month of research).
41. The prize of the Minister of Education for the scientific activities - 1996.
42. Member of the Sections T07A and T11F of State Committee of Scientific Research (KBN), 1995-
43. The cross for the 50th Anniversary of Technical University of Lodz, 1995.
44. E.N.T.P.E., Région, Rhône-Alpes, 'TEMPRA' (1995), Lyon, France, six months of research.
45. Member of the Committee of Mechanics of Polish Academy of Sciences 1993-1995, 1996-1998, 1999-2002.
46. Research Centre for Advanced Science and Technology, The Tokyo University, Mitsubishi Endowed Chair, Japan, 1992, 9 months of research.
47. Department of Mechanical Engineering, The Tokyo University, Japan, 1991, 3 months of research.
48. Japanese Society for the Promotion of Science, The Tokyo University, Japan, 1990-1991, 1 year of research.

49. Alexander von Humboldt Foundation, The Carolo-Wilhelmina University of Braunschweig, Germany, 1987-1990 and 1993, 2 years of research.
50. Department of Dynamics and Control, The Strathclyde University, Glasgow, Scotland, 1987, 1 month of research

Memberships in Associations or Institutions:

Polish Society of Mechanical Engineers, 1981;
Polish Society of Theoretical and Applied Mechanics, 1981;
Humboldtiana Polonorum Societas, 1987;
American Mathematical Society, 1993;
European Mechanics Society, 1994;
Canadian Mathematical Society, 1994;
AIAA, 1994;
SIAM, 1994;
GAMM, 1995;
Society of Applied Electromagnetism, 1993;
Technical Committee for Nonlinear Oscillation of the IFToMM, 1995, 2006-2009;
Committee of Theory of Mechanisms and Machines, Polish Academy of Sciences, 1995;
Polish Society of Biomechanics, 1999;
American Association for the Advancement of Science, 2001 and other

Patent: Intracoronary stent against ischaemic heart disease (with K. W_Bodarczyk and P. Dura).

Selected Books:

1. J. Awrejcewicz, Bifurcation and Chaos in Simple Dynamical Systems. World Scientific, Singapore, 1989
2. J. Awrejcewicz, Bifurcation and Chaos in Coupled Oscillators. World Scientific, Singapore, 1991
3. J. Awrejcewicz, I.V. Andrianov, L.I. Manevitch, Asymptotic Approach in Nonlinear Dynamics: New Trends and Applications. Springer-Verlag, Berlin 1998
4. J. Awrejcewicz, V.A. Krysko, Nonclassical Thermoelastic Problems in Nonlinear Dynamics of Shells. Springer-Verlag, Berlin 2003
5. J. Awrejcewicz, C.-H. Lamarque, Bifurcation and Chaos in Nonsmooth Mechanical Systems. World Scientific Publishing, Singapore 2003
6. J. Awrejcewicz, I.V. Andrianov, L.I. Manevitch, Asymptotical Mechanics of Thin Walled Structures. A Handbook. Springer-Verlag, Berlin 2004
7. J. Awrejcewicz, V.A. Krysko, A. F. Vakakis, Nonlinear Dynamics of Continuous Elastic Systems. Springer-Verlag, Berlin 2004
8. J. Awrejcewicz, R. Andrzejewski, Nonlinear Dynamics of a Wheeled Vehicle. Springer-Verlag, Berlin 2005
9. J. Awrejcewicz, V.A. Krysko, Introduction to Asymptotic Methods. Chapman and Hall, CRC Press, Boca Raton, New York 2006
10. J. Awrejcewicz, V.A. Krysko, A.V. Krysko, Thermodynamics of Plates and Shells. Springer-Verlag, Berlin 2007
11. J. Awrejcewicz, M.M. Holicke, Smooth and Nonsmooth High Dimensional Chaos and the Melnikov-Type Methods. World Scientific Publishing, Singapore 2007
12. J. Awrejcewicz, V.A. Krysko, Chaos in Structural Mechanics. Springer-Verlag, Berlin, 2008

13. J. Awrejcewicz, Yu. Pyryev, *Nonsmooth Dynamics of Contacting Thermoelastic Bodies*. Springer-Verlag, New York 2009.