



CURRICULUM VITAE

Name: **Jerzy Weres** Mobile: **+48 502 519 538**
Birth date: **8.10.1946** E-mail: **weres@up.poznan.pl**
Languages: Polish, English, French, Russian

EDUCATION AND RESEARCH DEGREES

- 1974** **Master of Science Degree in Applied Mechanics.**
Faculty of Working Machines and Vehicles, Poznan University of Technology, Poznan, Poland. Master's Thesis: "Stresses in a half-space due to constant temperature and constant concentration applied to the boundary", graded: 'very good'.
- 1979** **Doctor of Science Degree in Applied Mechanics.**
Department of Material Science and Applied Mechanics, Wroclaw University of Technology, Wroclaw, Poland. Doctor's Thesis: "Modeling thermoelastodiffusion processes in interstitial solid solutions by the finite element method in space and time", graded: 'with distinction'.
- 1992** **Post-doctoral Habilitation Degree in Agricultural Engineering.**
Faculty of Agricultural Engineering and Power, University of Agriculture in Cracow, Cracow, Poland. Habilitation Thesis: "Analysis of the effects of material properties of a dried medium on transport of water in the convective thin layer drying of corn", graded: 'with distinction'.

RESEARCH TITLE

- 2002** **Professor**
President of the Republic of Poland, procedure started at the Faculty of Agriculture of the Agricultural University in Poznan.

EXPERIENCE

- 1974 – 1980** Department of Theory of Consolidation and Thermodiffusion, Institute of Fundamental Technological Research, Polish Academy of Sciences, Poznan, Poland. *Research Assistant, Assistant Professor.*
- 1978 – 1978** Ecole Nationale Supérieure de Mécanique, Université de Nantes, Nantes, France. *Research Fellow.*
- 1980 –** Department of Applied Informatics, Institute of Agricultural Engineering, Faculty of Agriculture and Bioengineering, Poznan University of Life Sciences, Poznan, Poland. *Assistant Professor, Professor.*
- 1992 – 1993** Department of Agricultural Engineering, University of Manitoba, Winnipeg, Manitoba, Canada. *Visiting Researcher.*
- 1996 – 1999** University Computer Center, Poznan University of Life Sciences, Poznan, Poland. *Head.*
- 2001 –** Faculty of Informatics, Higher School of Humanities and Journalism, Poznan, Poland. *Professor.*
- 2003 – 2004** Industrial Institute of Agricultural Machinery, Poznan. *Research Secretary.*

RESEARCH AND TEACHING

SPECIALIZATIONS

- **Postharvest Technology and Process Engineering – inverse and direct modeling of heat and mass transport processes in agricultural, food and forest products.**
- **Applied informatics – software development methods** (*software engineering, advanced Web application technologies, programming languages*).
- **Applied informatics – image analysis, 3D geometry modeling.**
- **Applied informatics – designing numerical algorithms** (*inverse and direct Finite Element Analysis for transient, nonlinear problems in non-homogeneous, anisotropic, irregularly-shaped 3D products*).

SELECTED RECENT RESEARCH PUBLI- CATIONS

- 2005** **Weres J., Olek W.** 2005. Inverse finite element analysis of technological processes of heat and mass transport in agricultural and forest products. *Drying Technology* 23(8): 1737-1750. **Impact Factor, Institute for Scientific Information.**
- 2005** **Olek W., Perré P., Weres J.** 2005. Inverse analysis of the transient bound water diffusion in wood. *Holzforschung* 59(1): 38-45. **Impact Factor, Institute for Scientific Information.**
- 2005** **Olek W., Weres J.** 2005. Computer-aided identification of transport properties of wood and wood-based panels. *Archives of Metallurgy and Materials* 50(1): 139-146. **Impact**

Factor, Institute for Scientific Information.

- 2007 **Olek W., Weres J.** 2007. Effects of the method of identification of the diffusion coefficient on accuracy of modeling bound water transfer in wood. *Transport in Porous Media* 66(1-2): 135-144. *Impact Factor, Institute for Scientific Information.*
- 2007 **Rogacki P., Mueller W., Weres J.** 2007. Object modeling in the process of developing information system supporting research and design of pebble-bed heat regenerators (in Polish). *Inżynieria Rolnicza* 2(90): 257-263.
- 2008 **Mueller W., Joachimiak H., Weres J.** 2008. Information systems for agriculture based on the .NET 2005 and SQL Server 2005 technologies (in Polish). *Journal of Research and Applications in Agricultural Engineering* 53(1): 32-34.
- 2008 **Kozłowski R.J., Weres J.** 2008. Web-based decision support system "Rzepinfo" for winter oilseed rape protection (in Polish). *Inżynieria Rolnicza* 2(100): 101-109.
- 2008 **Weres J.** 2008. Computer-aided analysis of selected properties of agricultural and forest products (in Polish). In: *Elements of systems engineering for agriculture* (in Polish). Eds. Weres J. et al. Wyd. UP Poznań. 205-218.
- 2008 **Weres J., Krysztofiak A.** 2008. A school of systems engineering for agriculture in XXI century (in Polish). In: *Elements of systems engineering for agriculture* (in Polish). Eds. Weres J. et al. Wyd. UP Poznań. 11-17.
- 2009 **Joachimiak H., Mueller W., Weres J., Nowakowski K.** 2009. Visualization of heat transport in a pebble-bed regenerator with the use of the TAO Framework technology (in Polish). *Journal of Research and Applications in Agricultural Engineering* 54(2): 48-50.
- 2009 **Koszela K., Weres J.** 2009. Neuronal classification of images of dried vegetables (in Polish). *Inżynieria Rolnicza* 8(117): 61-67.
- 2009 **Tomczak R.J., Weres J.** 2009. Neuronal analysis of an acoustic signal spectrum in determining physical properties of grain kernels (in Polish). *Inżynieria Rolnicza* 8(117): 237-241.
- 2009 **Weres J., Kujawa S., Olek W.** 2009. Software development for inverse FEA, 3D mesh generation from image analysis and visualization for heat and mass transport in biomaterials. *Proc. of the 18th International Conf. on Computer Methods in Mechanics - CMM-2009*, 18-21 May 2009, Zielona Góra, ed. M. Kuczma, K. Wilmański, W. Szajna, 2 pp. Zielona Góra: Polish Academy of Sciences, Polish Association for Computational Mechanics, University of Zielona Góra.
- 2009 **Weres J., Nowakowski K., Koszela K., Rogacki P., Jarysz M.** 2009. Image analysis and 3D geometry modeling in investigating agri-food product properties, 7 pp. *Proc. of the Joint International Agricultural Conference JIAC 2009*, 6-9 July 2009, Wageningen, Netherlands. Wageningen: ECPA, EFITA, ECPLF.
- 2009 **Weres J., Olek W., Kujawa S.** 2009. Comparison of optimization algorithms for inverse FEA of heat and mass transport in biomaterials. *Journal of Theoretical and Applied Mechanics* 47(3): 701-716. *Impact Factor, Institute for Scientific Information.*
- 2010 **Siatkowski M., Weres J., Kujawa S., Szabelska A., Zyprych J.** 2010. Growth curve functions in modeling the thin-layer drying of corn. *Inżynieria Rolnicza* 6(124): 89-95.
- 2010 **Siatkowski M., Weres J., Kujawa S.** 2010. Comparison of global optimization algorithms in inverse modeling of drying processes of agricultural products (in Polish). *Inżynieria Rolnicza* 7(125): 191-198.
- 2010 **Weres J.** 2010. Information system for acquiring data on geometry of agricultural products exemplified by a corn kernel (in Polish). *Inżynieria Rolnicza* 7(125): 229-236.
- 2010 **Weres J., Kujawa S., Nowakowski K., Koszela K.** 2010. Image analysis, 3D geometry modeling and inverse FEA in investigating properties of agri-food and forest products, 8 pp. *Proc. of the CIGR XVIIth World Congress and the 8th World Congress on Computers in Agriculture*, 13-17 June, 2010, Québec City, Canada. Quebec: Agriculture and Agri-Food Canada (Electronic Edition).
- 2010 **Weres J., Mueller W., Kozłowski R., Kluza T.** 2010. Advanced technologies in developing Web-based decision support systems for agriculture, 6 pp. *Proc. of the CIGR XVIIth World Congress and the 8th World Congress on Computers in Agriculture*, 13-17 June, 2010, Québec City, Canada. Quebec: Agriculture and Agri-Food Canada (Electronic Edition).

- 2010** **Majka J., Weres J., Olek W.** 2010. Alteration of wood hygroscopic properties after thermal modification, 117-121. Proc. of the 6th IUFRO Symposium Wood Structure and Properties '10. September 6-9, 2010, Podbanské, High Tatras, Slovakia. Eds. Kúdela J., Lagaña R. Zvolen: Arbora Publishers.
- 2011** **Olek W., Perré P., Weres J.** 2011. Implementation of a relaxation equilibrium term in the convective boundary condition for a better representation of the transient bound water diffusion in wood. Wood Science and Technology 45: 677-691. *Impact Factor, Institute for Scientific Information.*
- 2011** **Weres J.** 2011. Information technologies in agriculture (in Polish). In: Contemporary agricultural engineering – research and applications (in Polish). Eds. Juliszewski T., Kurpaska S. PTIR. Kraków. 375-392.

**SELECTED
RESEARCH PRO-
JECTS**

- 1988 – 1990** Governmental Research Project of the CPBR 10-16, 3.2.15/32. In-bin cereal grain drying technology with a moisture content homogenization approach to reduce energy consumption and to improve quality of dried grain (*Project leader*).
- 1988 – 1990** Governmental Research Project of the CPBP 0509, A.1.20. Computer simulation of effects of material properties of single grain kernels and drying air parameters on convective thin layer drying of cereal grains (*Project leader*).
- 1989 – 1991** Governmental Research Project of the RPBR RRI-14 i 134/90/Bp/G. Computer system for analyzing technological processes of Drying cereal grains (*Project leader*).
- 1992 - 1993** Research Project of the NSERC. Analysis of carbon dioxide transport in stored grain (*Visiting researcher*).
- 1996 – 1997** Research Project of the Mellon Foundation. Development of Computer Connections between the Departmental Local Area Networks and the University Backbone Network (*Project leader*).
- 1996 – 1999** Governmental Research Project of the KBN 8 T11F 010 11. Numerical methods for solving inverse heat and mass transport problems in biomaterials (*Project leader*).
- 2000 – 2001** Governmental Research Project of the KBN 7 T07C 132 2000 C/5044. Suction blower for pneumatic transporting grains (*Project leader*).
- 2001 – 2002** Governmental Research Project of the KBN 10 T07 029 2000 C/5386. Series of mobile dryers for cereal grains and other seeds (*Project leader*).
- 2001 - 2002** Research Project of the Hamburg University, Hamburg. a) Stofftransport in Holzwerkstoffmatten, b) Einfluss der Stapellagerung auf die Eigenschaften von Holzwerkstoffen (*Researcher*).
- 2003 - 2004** Research Project of the Hohenheim University, Stuttgart. Information technology in agriculture and distance learning (*Researcher*).
- 2004 – 2005** Governmental Research Project of the KBN 2 P06R 056 27. Decision Support information system for Drying and storing cereal grains (*Project Supervisor*).
- 2004 – 2005** Governmental Research Project of the KBN 2 P06R 103 27. Analysis of image recognition methods for operating agricultural mobile robot (*Project supervisor*).
- 2005 – 2006** Governmental Research Project of the KBN 2 P06R 088 28. Distributed expert system supporting agricultural advisory in protecting rapeseed plantation (*Project supervisor*).
- 2005 – 2008** Governmental Research Project of the MNiSW No. 2 P06L 017 29. Identification of thermal properties of wood-type materials by an inverse problem metod (*Researcher*).
- 2009 – 2011** Governmental Research Project of the MNiSW No. N N313 264136. Neuronal image analysis in identifying quality parameters of cereal grain kernels and rapeseeds (*Researcher*).
- 2009 - 2010** Municipal Research Project of the City of Poznan. Evaluation of a knowledge testing process by means of e-learning portals (*Researcher*).
- 2010 – 2012** European Research Project of the 7th Framework Programme of the EU. 24495. A common data exchange system for agricultural systems (*Researcher, Leader for Poland*).
- 2010 - 2013** Governmental Research Project of the MNiSW No. N N313 273939. Compost quality evaluation with the use of computer image analysis and neural modeling (*Researcher*).
- 2011 - 2012** Governmental Research Project of the MNiSW No. N N313 774840. Semantic data integration for managing agricultural production processes (*Researcher*).
- 2011 - 2013** Governmental Research Project of the MNiSW No. N N310 720740. Measurement of the

development degree of the root system of selected plants on the basis of computer image analysis (*Researcher*).

2011 - 2014 Governmental Research Project of the NCN (National Science Center) No. xxx. Integrated information system supporting determination and analysis of geometric, thermal and diffusive properties of agri-food and forest products. (Project leader).

INTERNATIONAL COOPERATION

- 1978** France, Université de Nantes, Ecole Nationale Supérieure de Mécanique, Nantes, "International Research Fellowship", 8 months.
- 1979** United Kingdom, University of Wales, Swansea, 2 weeks.
- 1992 – 1993** Canada, University of Manitoba, Dept. of Agric. Engineering, Winnipeg, MB, "International Scientific Exchange Award" of the Natural Sciences and Engineering Research Council of Canada (*NSERC*), 12 months.
- 1995** USA, Purdue University, School of Agriculture, West Lafayette, IN, 2 weeks.
- 1996** Lithuania, University of Vilnius (*OECD*), 1 week.
- 1996** Spain, Technical University of Madrid (*EurAgEng*), 1 week.
- 1998** Norway, University of Oslo (*EurAgEng*), 1 week.
- 1998** USA, University of Florida, Inst. of Food and Agric. Sc., Information Technologies, 2 weeks.
- 2001-2002** Germany, Universität Hamburg, Ordinariat für Holztechnologie, short research visits.
- 2003** Germany, Universität Hohenheim, Osteuropazentrum, 1 week.
- 2004** Belgium, Katholieke Universiteit Leuven, Dept. of Agro-engineering and Economics, 1 week.
- 2007** United Kingdom, Glasgow Caledonian University (*EFITA*), 1 week.
- from 2007** European Federation for Information Technology in Agriculture, Food and the Environment (*EFITA*). Cooperation as a Board Member.
- from 2007** International Commission of Agricultural and Biosystems Engineering (*CIGR*). Cooperation as the Representative of the Committee of Agricultural Engineering of the Polish Academy of Sciences.
- from 2008** European Cooperation in the field of Scientific and Technical Research (*COST*) - Action FP0802: Experimental and Computational Micro-Characterisation Techniques in Wood Mechanics. Cooperation as a member of WG3 "Computational Modelling".
- from 2009** The Netherlands, Wageningen University and Research Centre, Agricultural Economics Research Institute (LEI-WUR). Cooperation within the 7th Framework Programme of the European Commission.
- from 2009** Association for Computing Machinery (*ACM*), cooperation in: SIG on Software Engineering, SIG on Programming Languages, SIG on Computer Graphics and Interactive Techniques.
- from 2010** International Commission of Agricultural and Biosystems Engineering (*CIGR*). Cooperation as: 1) Member of the Executive Board of *CIGR*, 2) Member of the Board of the Technical Section VI: Postharvest Technology and process Engineering, 3) Member of the Working Group: Image Analysis for Agricultural Processes and Products.

SUPERVISED DOCTORAL THESES

- 8 (ended with the Doctoral Degree) + 6 (under elaboration)

DISSERTATION REVIEWS

- Professor Title documentation: 3
- Habilitation Degree theses: 15
- Doctoral Degree theses: 21

SELECTED ACTIVITIES

- from 1991** Vice-Director for Research, Institute of Agricultural Engineering, Poznan University of Life Sciences, Poznan (*PULS*), Poland.
- 1993 – 1999** Head, University Council for Information Systems.
- 1994 – 2006** Head, Department of Agricultural Machinery and Equipment, Institute of Agricultural Engineering, *PULS*.
- 1996 – 1999** Head, University Computer Center.
- 1999 – 2008** University President's Representative for Computer Networks and Information Systems.

- from 2006** Head, Department of Applied Informatics, Institute of Agricultural Engineering, *PULS*.
- from 2008** Head, Curriculum Council for Informatics and Agri-Engineering.
- from 1993** Member, Vice-Head, Council of Users of the Poznan Supercomputing and Networkin Center.
- from 1998** Member, Agricultural Machinery Commission, Polish Standardization Committee.
- from 1999** Head, Informatics Section, Committee of Agricultural Engineering, Polish Academy of Sciences, and member of the Presidium of the Committee.
- from 1999** Vice-President, President, Polish Society for Information Technology in Agriculture, Forestry and Food production (*POLSITA*).
- 1999 – 2003** Vice-Chairperson, Scientific Council, Industrial Institute of Agricultural Machinery.
- 1999 – 2007** Member, Scientific Council, Institute for Buildings, Mechanization and Electrification of Agriculture.
- from 2001** Member, Scientific Program Board, *Journal of Research and Applications in Agricultural Engineering*.
- from 2005** Member, Scientific Program Board, Journals of the Committe of Agricultural Engineering, Polish Academy of Sciences.
- from 2006** Member, Scientific Council, Institute of Agrophysics, Polish Academy of Sciences.
- from 2007** Board Member, European Federation for Information Technology in Agriculture, Food and the Environment (*EFITA*).
- from 2007** Head, National Committee for Cooperation with International Commission of Agricultural Engineering (*CIGR*).
- from 2008** Member, Scientific Program Board, Research Network AgEngPol.
- from 2009** Member, Computing Sciences Section, Committee of Computer Science, Polish Academy of Science.
- from 2010** Member of the Executive Board of the International Commission of Agricultural and Biosystems Engineering (*CIGR*)
- from 2010** Member of the Board of the Technical Section VI: Postharvest Technology and Process Engineering, International Commission of Agricultural and Biosystems Engineering (*CIGR*)

MEMBERSHIP

- from 1991** Polish Society of Agricultural Engineering (*PTIR*), member.
- from 1993** American Society of Agricultural and Biological Engineers (*ASABE*), member.
- from 1993** Canadian Society for Bioengineering (*CSBE*), member.
- from 1997** Polish Association for Computational Mechanics (*PTMKM*), member.
- from 1999** Polish Society for Information Technology in Agriculture, Forestry and Food production (*POLSITA*), V-President, President.
- from 2001** European Society of Agricultural Engineers (*EurAgEng*), member.
- from 2007** European Federation for Information Technology in Agriculture, Food and the Environment (*EFITA*), Board Member.
- from 2007** International Commission of Agricultural and Biosystems Engineering (*CIGR*), Representative of the Committee of Agricultural Engineering of the Polish Academy of Sciences.
- from 2008** European Cooperation in the field of Scientific and Technical Research (*COST*) - Action FP0802: Experimental and Computational Micro-Characterisation Techniques in Wood Mechanics, member of WG3 "Computational Modelling".
- from 2009** Association for Computing Machinery (*ACM*), member of: SIG on Software Engineering, SIG on Programming Languages, SIG on Computer Graphics and Interactive Techniques.
- from 2009** Polish Society of Agrophysics (*PTA*), member.