CURRICULUM VITAE

Personal data:

First and last names:	**Grzegorz ZBOIŃSKI**
Date and place of birth:	**11.05.1954, Gdańsk (POLAND)**
Office address:	**Institute of Fluid Flow Machinery** **Polish Academy of Sciences** **ul. Fiszera 14** **80-952 Gdańsk** **POLAND** **tel. (48) (58) 699-52-19** **fax (48) (58) 341-61-44** **E-mail: zboi@imp.gda.pl**
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Titles awarded:

1. **M.Sc.**, Department of Heavy Machines (Cranes and Conveyors), Faculty of Mechanical Engineering, Gdańsk Technical University, 1978, thesis on: Analysis of a Wharf, Level Luffing Jib Crane of the MAN System, defended with a very good mark.
2. **Ph.D.** in Mechanical Engineering, Faculty of Mechanical Enginieering, Gdańsk Technical University, 1991, thesis on: Kineto-Static Stress and Strain Analysis of Turbomachinery Blade Attachments, awarded with the mark of preference.
3. **D.Sc.** in Mechanics (Solid Mechanics), Institute of Fluid Flow Machinery, Polish Academy of Sciences, 2002, thesis on: Hierarchical Modelling and Finite Element Method for Adaptive Analysis of Complex Structures.

Scientific interests:

1. **Applied mechanics.** Elasticity and elasto-plasticity. Contact mechanics. Variational principles. Hierarchical modelling of structures.
2. **Computational mechanics.** Theory of finite difference methods (FDM) and finite element methods (FEM). Non-linear problems of FEM. Adaptive methods (modelling, approximation, error estimation and adaptivity issues).
3. **Mechanical engineering**. Application of FEM to mechanical engineering. Advanced and/or non-linear analysis of technological objects. Stress, strain, contact and vibration analysis of turbomachinery elements.

Education:

- **Graduate studies** at the Technical University of Gdańsk, Faculty of Mechanical Engineering, Department of Heavy Machines, Gdańsk, POLAND, 1974-1978;

- **Postgraduate studies** on machine dynamics at the Saint Cross University, Faculty of Mechanics, Kielce, POLAND, 1980-1982;

Professional career:

Engineering experience:

- **assistant designer** at the Technique Center of Shipbuilding Industry, Gdańsk, POLAND, 1978-1979;
- **designer** at the Vehicles Institute of The Saint Cross Technical University, Kielce, POLAND, 1983-1984;

Academic and research experience:

- **assistant and senior assistant** at the Department of Mechanics and Strength of Materials, Faculty of Mechanical Engineering, Gdańsk Technical University, Gdańsk, POLAND, 1985-1991 (classes in mechanics, laboratory classes in: theory of machines and mechanisms, automatics, informatics);
- **research engineer** at the Institute of Fluid Flow Machinery, Polish Academy of Sciences, Gdańsk, POLAND, 1988-1989;
- **post-doctoral research assistant** at the Institute of Fluid Flow Machinery, Polish Academy of Sciences, Gdańsk, POLAND (1992-2002); lectures in adaptive finite element methods and supervision of masters' thesis (commissioned by Gdańsk Technical University);
- **associate professor** at the Institute of Fluid Flow Machinery, Polish Academy of Sciences, Gdańsk, POLAND, from 2002;
- **associate professor** at the Faculty ofTechnical Sciences of University of Warmia and Mazury, Olsztyn , POLAND, from 2003 (lectures on: basis of numerical methods, computational mechanics, structural dynamics, and signal processing; also supervision of masters' theses); **chair in Mechanics and Machine Design** (since 2005);

Foreign experience:

- **research engineer** and **advisor**, Instituto de Investigaciones Electricas, Cuernavaca, Morelos, MEXICO, 1988-1989 (almost 2 years);
- **visiting researcher,** Texas Institute for Computational and Applied Mathematics, The University of Texas at Austin, Austin, Texas, USA, 1993-1994 (1 year).

Career related studies and courses:

1. Course on *Chaos in Mechanical Systems*, Udine, ITALY, 1986 (1 week);
3. Course on *Computational Methods in Structural Mechanics*, Warsaw, POLAND, 1987 (1 week);
4. **Studies in Pedagogical Development od Academic Teachers**, Gdańsk Technical University, Gdańsk, POLAND, 1986 (1 year);
5. **British Council Language Course**, Gdańsk, POLAND, 1986-1987 (2 years).
6. Course on *Adaptive Finite Elements in Linear and Nonlinear Solid and Structural Mechanics*, Udine, ITALY, 1999 (1 week);

Languages known:

1. **Polish** - native;

2. **English** - fluent in reading, speaking and writing (State Examination Certificate and University of Cambridge First Certificate in English);
3. **Russian** - fluent in reading, speaking and writing;
4. **Spanish** - reading.

Awards:

1. **Awards of the Chancellor of Gdańsk Technical University** to scientific achievements 1986, 1987, 1989, 1990 (4 times);
2. **Awards of the Chancellor of Gdańsk Technical University** to industry commissioned works, 1987, 1988 (2 times);
3. **Mark of preference** awarded to Ph. D. Thesis, Faculty of Mechanical Engineering, Gdańsk Technical University, 1991;
4. Acceptance of biographical notes in *Who's Who in the World*, 14th-24th Editions, 1997-2006, in *Who's Who in Finance and Industry*, 30th Edition and next ones, from 1998, as well as in *Who's Who in Science and Engineering*, 8th Edition, 2005.
5. **Scientific Award of the Polish Academy of Sciences** to monographical series of articles on contact problems of elasticity and elasto-plasticity, 1997.
6. **Award of the Director of the Fluid Flow Machinery Institute** for publications in prestigious international journals, 1999.

Foreign grants:

1. **Scientific internship** (as a part of the project commissioned by Comision Federal de Electricidad) at the Instituto de Investigaciones Electricas (IIE), Cuernavaca, Morelos, Mexico, 1988-1989 (19 months);
2. **Fulbright Research Grant** in *Senior* category, awarded by USA governmental agencies, 1993-1994 (10 months);
3. **TICAM Faculty Research Grant**, Texas Institute for Computational and Applied Mathematics, The University of Texas at Austin, 1994 (2 months).

Main foreign and Polish projects

Title	Character	Duration	Awarded by	Financed by	Contribution
A model and algorithm for determination of kineto-static stress, natural frequencies and mode shapes of turbine blades	Research sub-project	1987, 6 months	Ministry of Science and Education	Ministry of Science and Education	Co-performer
The method and algorithm for elastic and elasto-plastic kineto-static analysis of turbine blades	Research sub-project	1987, 12 months	Ministry of Science and Education	Ministry of Science and Education	Main performer
Development of computer programs for kineto-static analysis of turbine blades	Research sub-project	1988, 6 months	Ministry of Science and Education	Ministry of Science and Education	Manager and main performer
Development of the FE programs for design and diagnostics of turbo-generators	Research project	1988-1989, 18 months	Commision Federal de Electricidad (MEXICO)	Commision Federal de Electricidad (MEXICO)	Main performer
Elasto-plastic contact problems – development of variational inequal-ities and finite element methods	Research project	1991-1993, 36 months	State Commit-tee for Scien-tific Research	State Commit-tee for Scien-tific Research	Main performer
Advanced finite element anlysis of	Research	1993-1994,	Fulbright	Council for	Main performer

turbomachinery blades	project	12 months	Comission (USA)	International Exchange of Scholars (USA)	
Static and dynamic analysis of the blade of Mertaniemi II turbine stage	Technical project	1994-1995, 12 months	ABB Poland	ABB Poland	Main performer
Hierarchical modelling of complex mechanical systems	Research project	1998-2000, 36 months	State Committee for Scientific Research	State Committee for Scientific Research	Manager and main performer
Thin-walled structures in adaptive analysis of complex mechanical systems	Research project	2003-2004, 12 months	State Committee for Scientific Research	State Committee for Scientific Research	Consultant
Adaptive analysis of natural frequencies and modes of vibration of mechanical systems	Research project	2003-2005, 36 months	State Committee for Scientific Research	State Committee for Scientific Research	Manager and main performer
Computer code for strength, free vibration, and forced vibration analyses of stiffened panels of ship hulls and superstructures	Technical project	2005, 9 months	Ship Design and Research Centre	Ship Design and Research Centre	Main performer

Scientific attainments:

1. **Author or co-author of 139 scientific and technical articles, papers and reports**;
2. **Author and co-author of 3 large, professional finite elemenet computer codes** for: static and dynamic analysis of turbomachinery blades, elastic and elasto-plastic contact analysis of turbomachinery elements, and hierarchical modeling and adaptive analysis of complex structures;
3. **Main performer of 2 foreign research projects**, **co-performer**, **main performer, consultant or manager and main performer of 9 big domestic research or technical projects or sub-projects**;
4. **Author of 2 reviews of the scientific papers** in: *An International Journal Computers and Structures* and *Proc Inst. Mech. Engineers. Part C: Journal of Mechanical Engineering Science*;
5. **Author of 14 reviews** of the research projects within the 6th and 7th Frame Programmes of the European Comission, and of **2 reviews** of the projects for the Polish Scientific Research Committee;
6. Reviewer of 1 Ph.D. Thesis;
7. Reviewer of 3 academic handbooks;
8. Supervisor of 6 master's theses;
9. **Editorial board member** of *Applied Mathematics, Informatics and Mechanics* (2003-2006) and *The Open Numerical Methods Journal* (since 2008),
10. **Member of the Section of Computational Mechanics of the Committee of Mechanics of the Polish Academy of Sciences** (since 2003).

List of books, papers and reports:

Books, monographs, chapters:

1. **G. Zboiński**. *Hierarchical Modelling and Finite Element Method for Adaptive Analysis of Complex Structures (in Polish)*. Zesz. Nauk. IMP PAN w Gdańsku. Studia i Materiały. 520/1479/2001, Gdańsk 2001.

2. **G. Zboiński**, M. Jasiński. *Adaptive analysis of natural frequencies and modes of vibration of simple and complex mechanical systems (in Polish)*. IFFM Publishers, Gdańsk (Poland) 2009.

International journals papers:

3. **G. Zboiński**. Incremental Variational Principles for Frictional Contact Problems of Linear Elasticity. *J. Appl. Mech*., **60** (1993), 982-985.
4. **G. Zboiński**. Derivation of the Variational Inequalities of the Incremental Frictional Elastic Contact Problems. *Archives of Mechanics*, 47 (1995), 725-743.
5. **G. Zboiński**. Numerical Contact Analysis of Turbomachinery Blade Attachments. *The Archive of Mechanical Engineering*, **32** (1992), 317-331.
6. **G. Zboiński**. The Incremental Variational Principle and Finite Element Displacement Approximation for Frictional Contact Problem of Linear Elasticity. *Journal of Non-Linear Mechanics*, **28** (1993), 13-28.
7. **G. Zboiński**. FE Algorithm for Incremental Analysis of Large 3D Frictional Contact Problems of Linear Elasticity. *Computers and Structures*, **46** (1993), 669-677.
8. **G. Zboiński**. FE Computer Program for Incremental Analysis of Large 3D Frictional Contact Problems of Linear Elasticity. *Computers and Structures*, **46** (1993), 679-687.
9. **G. Zboiński**. Numerical Research on 3D Contact Problems of Turbomachinery blade Attachments in the Elastic Range. *Journal of Mechanical Sciences*, **35** (1993), 141-165.
10. **G. Zboiński**. Physical and Geometrical Non-Linearities in Contact Problems of Elastic Turbine Blade Attachments. *Proc. of the Instn. of Mechanical Engineers*, **209** (1995), 273-286.
11. **G. Zboiński**. Application of the 3D Triangular-Prism hpq Adaptive Finite Element to Plate and Shell Analysis. *Computers and Structures,* **67** (1997), 497-514.
12. **G. Zboiński**, W. Ostachowicz. A General FE Algorithm for 3D Incremental Analysis of Frictional Contact Problems of Elastoplasticity. *Finite Elements in Aanlysis and Design,* **27** (1997), 289-305.
13. **G. Zboiński**, W. Ostachowicz. A General FE Computer Program for 3D Incremntal Analysis of Frictional Contact Problems of Elastoplasticity. *Finite Elements in Aanlysis and Design,* **27** (1997), 307-322.
14. **G. Zboiński**, W. Ostachowicz. An Algorithm of a Family of 3D-Based, Solid-to-Shell, *hpq/hp*-Adaptive Finite Elements. *Journal of Theoretical and Applied Mechanics,* **38** (2000), 791-806.
15. **G. Zboiński**, W. Ostachowicz. Three-Dimensional Elastic and Elasto-Plastic Frictional Contact Analysis of Turbomachinery Blade Attachments. *Journal of Theoretical and Applied Mechanics,* **39** (2001), 769-790.
16. **G. Zboiński**. A posteriori error estimation for *hp*-approximation of the 3D-based first order shell model. Part I. Theoretical aspects. *Applied Mathematics, Informatics and Mechanics,* **8** (1), (2003), 104-125.
17. **G. Zboiński**. A posteriori error estimation for *hp*-approximation of the 3D-based first order shell model. Part II. Implementation aspects. *Applied Mathematics, Informatics and Mechanics,* **8** (2), (2003), 59-83.

18. **G. Zboiński**, M. Jasiński. 3D-Based *hp*-adaptive first order shell finite element for modelling and analysis of Complex Structures. Part 1. The model and the approximation. *International Journal for Numerical Methods in Engineering,* **70** (2007), 1513-1545.
19. **G. Zboiński**. 3D-Based *hp*-adaptive first order shell finite element for modelling and analysis of Complex Structures. Part 2. Application to structural analysis. *International Journal for Numerical Methods in Engineering,* **70** (2007), 1546-1580.

Polish journals papers:

20. A. Polański, **G. Zboiński**. On a new method of determination of velocoties of non-cohesive media within screw conveyors (in Polish). *Zesz. Nauk. Polit. Święt*., *Mechanika* **31** (1983), 173-180.
21. A. Polański, **G. Zboiński**. On a possibility of application of plastic flow theory to 3D kinematic problems of non-cohesive media (in Polish). *Roczniki Rol*., *Seria C*, **77** (1987), 125-141.
22. **G. Zboiński**. Modelling of turbine blades with solid, shell and transition elements. An algorithm (in Polish). *Zesz. Nauk. Polit. Śl*., *Mechanika* **103** (1991), 283-286.
23. **G. Zboiński**. Modelling of turbine blades with solid, shell and transition elements. A computer program and results (in Polish). *Zesz. Nauk. Polit. Sl*., *Mechanika* **103** (1991), 287-290.
24. W. Ostachowicz, **G. Zboiński**. Influence of load modelling on stress state within turbine blade attachment in case of FEM analysis (in Polish). *Zesz. Nauk. Polit. Śl*., *Mechanika* **103** (1991), 189-192.
25. **G. Zboiński**, W. Ostachowicz. Influence of boundary constraints modelling on stress state within turbine blade attachment (in Polish). *Zesz. Nauk. Polit. Śl*., *Mechanika* **107** (1992), 445-453.
26. **G. Zboiński**. Influence of contact constraints modelling on stress state within turbine blade attachment (in Polish). *Zesz. Nauk. Polit. Śl*., *Mechanika* **107** (1992), 437-444.
27. **G. Zboiński**, W. Ostachowicz. Influence of friction on stress state within turbine blade attachment (in Polish). *Zesz. Nauk. Polit. Śl*., *Mechanika* **113** (1993), 437-443.
28. **G. Zboiński**. Mathematical model of an incremental contact problem of two elastic bodies (in Polish). *Zesz. Nauk. Polit. Śl*., *Mechanika* **113** (1993), 429-435.
29. **G. Zboiński**, W. Ostachowicz. FEM algorithm for analysis of elasto-plastic contact problems (in Polish). *Zesz. Nauk. Katedry Mechaniki Technicznej*, **1** (1996), 253-258.
30. **G. Zboiński**, W. Ostachowicz. FEM computer program for analysis of elasto-plastic contact problems (in Polish). *Zesz. Nauk. Katedry Mechaniki Stosowanej*, **4** (1997), 373-378.
31. **G. Zboiński**, W. Ostachowicz. Application of the prismatic, adaptive *hpq* solid element to plate analysis (in Polish). *Zesz. Nauk. Katedry Mechaniki Stosowanej*, **4** (1997), 379-384.
32. **G. Zboiński**, W. Ostachowicz. Application of the prismatic, adaptive *hpq* solid element to shell analysis (in Polish). *Zesz. Nauk. Katedry Mechaniki Stosowanej*, **7**

(1998), 423-428.

33. **G. Zboiński**, W. Ostachowicz. An algorithm of a new adaptive *hp* element to plate and shell analysis (in Polish). *Zesz. Nauk. Katedry Mechaniki Stosowanej*, **7** (1998), 417-422.
34. **G. Zboiński**, W. Ostachowicz. Application of the new, adaptive *hp* element to plate and shell analysis (in Polish). *Zesz. Nauk. Katedry Mechaniki Stosowanej*, **9** (1999), 303-308.
35. **G. Zboiński**, W. Ostachowicz. Problems of numerical finite element analysis of thin-walled structures (in Polish). *Zesz. Nauk. Katedry Mechaniki Stosowanej*, **15** (2001), 353-358.
36. M. Jasiński**, G. Zboiński**. Enforcement of plane strains within 3D-based, first order shell element (in Polish). *Zesz. Nauk. Katedry Mechaniki Stosowanej*, **18** (2002), 165-170.
37. **G. Zboiński**. Three-dimensional hierarchic models for adaptive analysis of complex structures (in Polish). *Zesz. Nauk. Katedry Mechaniki Stosowanej*, **20** (2003), 469-474.
38. **G. Zboiński**, W. Ostachowicz. Adaptive analysis of complex structures. Connection of elements of different models, sizes and orders of approximation (in Polish). *Zesz. Nauk. Katedry Mechaniki Stosowanej*, **20** (2003), 475-480.
39. **G. Zboiński**. Adaptive analysis of complex structures. A posteriori error estimation (in Polish). *Zesz. Nauk. Katedry Mechaniki Stosowanej*, **23** (2004), 501-506.
40. **G. Zboiński**, W. Ostachowicz. Adaptive analysis of complex structures. Control of mesh and model adaptation (in Polish). *Zesz. Nauk. Katedry Mechaniki Stosowanej*, **23** (2004), 507-512.
41. **G. Zboiński**. A posteriori detection of the improper solution limit, locking and boundary layer in adaptive analysis of plates and shells (in Polish). *Zesz. Nauk. Katedry Mechaniki Stosowanej*, **29** (2005), 527-533.
42. **G. Zboiński**. Effectivity of a posteriori error estimation with Residual Equilibration Method in adaptive analysis of plates and shells (in Polish). *Modelowanie Inżynierskie*, **1** (32), (2006), 521-528.

International conferences papers:

43. **G. Zboiński**. Application of the FDM to the problem of plastic flow of non-cohesive media in screw conveyors. *Proc. of 1st Int. Conf. Math. Meths in Engineering*, Karlovy-Vary (Czechoslovakia), December 1986, 439-444.
44. **G. Zboiński**. Mathematical modeling and FDM algorithm for the axial plastic flow of non-cohesive media in screw conveyors. *Proc. of Euromech 223 Vibration and Stability of Axially Moving Materials*, Tampere (Finland), June 1987, 20.
45. **G. Zboiński**, J. A. Kubiak. Application of the thick shell and transition elements for analysis of the long turbine blades. Part I - An algorithm. In: *Latest Advances in Steam Turbine Design, Blading, Repairs, Condition Assessment, and Condenser Interaction*. **Pwr-7**, ASME, New York 1989, 23-30.
46. J. A. Kubiak, **G. Zboiński**, R. Gomez. Application of the thick shell and transition elements for analysis of the long turbine blades. Part II - A Computer program. In: *Latest Advances in Steam Turbine Design, Blading, Repairs, Condition Assessment,*

and Condenser Interaction. **Pwr-7**, ASME, New York 1989, 31-36.
47. **G. Zboiński**. Application of the geometric stiffness matrix for analysis of rotating long turbine blades modeled with thick shell, transition and solid elements. *Proc. of 6th Int. Conf. Math. Meths in Engineering*, Plzen (Czechoslovakia), May 1991, 349-354.
48. **G. Zboiński**, W. Ostachowicz. FE approach as applied to 3D contact problems of turbomachinery blade attachments. *Proc. of the 1st European Conf. on Numerical Methods in Engineering*, Brussels (Belgium), September 1992, 119-126.
49. **G. Zboiński**. A new thick shell finite element for analysis of long turbine blades. *Proc. of the 17th International Seminar on Modal Analysis and Structural Dynamics*, Leuven (Belgium), September 1992, 977-993.
50. **G. Zboiński**, W. Ostachowicz. FE algorithm as applied to 3D contact problems of turbomachinery blade attachments. *Proc. of the 2nd Asian-Pacific Conference on Computational Mechanics*, Sydney (Australia), August 1993, 277-282.
51. **G. Zboiński**, W. Ostachowicz. Finite Element Analysis of Elasto-Plastic Contact Problems. *Proc. of Section 17 of Applied Mechanics of An International Scientific Conference*. Ostrava (Czech Republic), September 1995, 90-95.
52. **G. Zboiński**, W. Ostachowicz. Adaptive hierarchical modelling and FE method for analysis of complex structures. *Book of Abstracts the of the 4th EUROMECH Solid Mechanics Conference*. Metz (France), June 2000, 304.
53. **G. Zboiński**, W. Ostachowicz. A unified approach to Adaptive Modeling and Analysis of Complex Structures. *Abstract book of the 20th International Congress of Theoretical and Applied Mechanics*. Chicago (USA), August-September 2000, 59.
54. **G. Zboiński**, W. Ostachowicz. A family of 3D-based, compatible, shell, transition and solid elements for adaptive hierarchical modelling and FE analysis of complex structures. *Abstracts of European Congress on Computational Methods in Applied Sciences and Engineering*. Barcelona (Spain), September 2000, 1011 and *CD-ROM Proceedings of European Congress on Computational Methods in Applied Sciences and Engineering.* Barcelona (Spain), September 2000, 1-20.
55. **G. Zboiński**. Hierarchical models and approximations in adaptive modelling and analysis of complex structures. *Short Papers of the 15th International Conference on Computer Methods in Mechanics*. Gliwice/Wisła (Poland), June 2003, 365-366 and *CD-ROM Proceedings of the 15th International Conference on Computer Methods in Mechanics*. Gliwice/Wisła (Poland), June 2003, 1-9.
56. **G. Zboiński**. Adaptive modelling and analysis of complex structures with use of 3D-based hierarchical models and *hp*-approximations. *Adaptive Modeling and Simulation. (Eds N.-E. Wiberg, P. Diez), Proceeding of the First International Conference on Adaptive Modeling and Simulation.* Göteborg (Sweden), September/October 2003, 50 & CD-ROM 1-24.
57. M. Jasiński, **G. Zboiński**. A Case of Multi-point Constraints – a Finite Element Code Implementation Issues. *Book of Abstracts, Vol. I. 4th European Congress on Computational Methods in Applied Sciences and Engineering*. Jywäskalä (Finland), July 2004, 430 and *CD-ROM Proceedings, Vol. I. 4th European Congress on Computational Methods in Applied Sciences and Engineering*. Jywäskalä (Finland), July 2004, 1-8.

58. **G. Zboiński**, M. Jasiński. Problems of application of hierarchical modelling, displacement FEM and a posteriori residual error estimation to static and dynamic adaptive analysis of complex structures. *Abstract Book of the 21st International Congress of Theoretical and Applied Mechanics*. Warsaw (Poland), August 2004, 209 & *CD-ROM Proceedings*, 1-2 & *Mechanics of the 21st Century, CD-ROM,* 1-2, Springer, Dordrecht 2005.
59. **G. Zboiński**. Numerical tools for a posteriori detection and assessment of the improper solution limit, locking and boundary layers in analysis of thin walled structures. *Adaptive Modeling and Simulation 2005. (Eds N.-E. Wiberg, P. Diez), Proceeding of the Second International Conference on Adaptive Modeling and Simulation.* Barcelona (Spain), September 2005, 321-330.
60. M. Jasiński, **G. Zboiński**. An *hp*-adaptive analysis of some linear free vibration problems. *III European Conference on Computational Mechanics. Solids, Structiures and Coupled Problems in Engineering. (Eds., C. A. Mota et al.). Book of Abstracts*, 405 and CD-Rom Proceedings, 1-9, Lisbon (Portugal), June 2006.
61. **G. Zboiński**. Estimation of total, modelling and approximation errors in adaptive elastostatic and elastodynamic analysis of complex structures. *7th World Congress on Computational Mechanics*. CD ROM, 212, Los Angeles (USA), 2006.
62. **G**. **Zboiński**. Unresolved problems of adaptive hierarchical modelling and *hp*-adaptive analysis within computational solid mechanics. *Short Papers of the 18th International Conference on Computer Methods in Mechanics*. Zielona Góra (Poland), May 2009, 103-104.
63. M. Nosarzewska, **G. Zboiński**. An algorithm of the enhanced 3D-based solid-to-shell transition elements for adaptive modelling and analysis of complex structures. *Short Papers of the 18th International Conference on Computer Methods in Mechanics*. Zielona Góra (Poland), May 2009, 333-334.

Polish conferences papers:

64. **G. Zboiński**. Modelling of plastic flow of non-cohesive media within screw conveyor (in Polish). *Prace XXV Sympozjonu Modelowanie w Mechanice*, Kudowa, Marzec 1986, 227-233.
65. W. Ostachowicz, **G. Zboiński**. A model and algorithm for determination of kineto-static stresses within turbomachinery fir-tree blade attachments (in Polish). *Prace XXVII Symp. Modelowanie w Mechanice*, Wisla, Kwiecien 1988, 367-375.
66. W. Ostachowicz, **G. Zboiński**. Determination of kineto-static stresses within blade attachments of ZAMECH design (in Polish). *Prace IV Międzynarodowej Konferencji Turbiny Parowe Dużych Mocy*, Gdańsk, Wrzesień 1988, 299-308.
67. W. Ostachowicz, **G. Zboiński**. A computer program for static and dynamic analysis of long turbine blades and their groups (in English). *Prace 15 Sympozjum Drgania w Układach Fizycznych, Błażejewko* (Poland), May 1992, 169.
68. **G. Zboiński**, W. Ostachowicz. Finite element analysis of 3D frictional contact problems of linear elasticity (in English). *Proc. of the 29th Polish Solid Mechanics Conference*, Rytro (Poland), September 1992, 150.
69. **G. Zboiński**. Finite element algorithm for non-linear contact problems of linear elasticty (in English). *Proc of the XIth Polish Conference Computers Methods in Mechanics*, Kielce (Poland), May 1993, 991-1000.

70. **G. Zboiński**, W. Ostachowicz. Finite element program for non-linear contact problems of linear elasticty (in English). *Proc. of the XIth Polish Conference Computers Methods in Mechanics*, Kielce (Poland), May 1993, 1001-1007.
71. **G. Zboiński**, W. Ostachowicz. A family of 3D-based adaptive finite elements for analysis of complex structures (in English). *Proc. of the 6th Conference Shell Structures, Theory and Applications*, Jurata (Poland), October 1998, 291-292.
72. **G. Zboiński**, W. Ostachowicz. Hierarchical modelling and FE adaptive methods for analysis of complex structures (in English). *Proc. of the XIV Polish Conference on Computer Methods in Mechanics*, Rzeszów (Poland), May 1999, 409-410.
73. **G. Zboiński**, W. Ostachowicz. An Algorithm of a family of 3D-based, hpq/hp-adaptive, transition finite elements (in Polish). *XXXIX Sympozjon Modelowanie w Mechanice. Streszczenia referatów*, Wisła (Poland), February 2000, 343-345.
74. **G. Zboiński**, W. Ostachowicz. Problems of numerical finite element analysis of thin-walled structures (in Polish). *XL Sympozjon Modelowanie w Mechanice. Streszczenia referatów*, Wisła, February 2001, 291-292.
75. M. Jasiński**, G. Zboiński**. Enforcement of plane strains within 3D-based, first order shell element (in Polish). *XLI Sympozjon Modelowanie w Mechanice. Streszczenia referatów*, Wisła, Luty 2002, 70-71.
76. **G. Zboiński**. 3D-based hierarchical models for adaptive analysis of complex structures (in Polish). *XLII Sympozjon Modelowanie w Mechanice. Streszczenia referatów*, Wisła, February 2003, 227-228.
77. **G. Zboiński**, W. Ostachowicz. Connection of elements of different models, sizes and orders of approximation in adaptive analysis of complex structures (in Polish). *XLII Sympozjon Modelowanie w Mechanice. Streszczenia referatów*, Wisła, February 2003, 229-230.
78. **G. Zboiński**. A posteriori error estimation in adaptive analysis of complex structures (in Polish). *XLIII Sympozjon Modelowanie w Mechanice. Streszczenia referatów*, Wisła, February 2004, 207-208.
79. **G. Zboiński**, W. Ostachowicz. Controlling adaptation in analysis of complex structures (in Polish). *XLIII Sympozjon Modelowanie w Mechanice. Streszczenia referatów*, Wisła, February 2004, 209-210.
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