

CURRICULUM VITAE

(included in the website of the Systems Research Institute, Polish Academy of Sciences)



Piotr Kulczycki

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Professional interests:

Automatic control and computer science, in particular:

- systems analysis,
- control engineering,
- information technology,
- data analysis and mining,
- mathematical statistics applications,
- fuzzy logic.

Academic degrees:

Prof. Technical Sciences, Polish Academy of Sciences, Systems Research Institute, 2007.

D. Sc. (*habilitation*) Automatic Control, AGH University of Science and Technology, Faculty of Electrical Engineering, Automatic Control, Computer Science, and Electronics, 1999.

Ph. D. Automatic Control, AGH University of Science and Technology, Faculty of Electrical Engineering, Automatic Control and Electronics, 1991.

M. Sc. Applied Mathematics, Jagiellonian University, Faculty of Mathematics and Physics, 1987.

M. Sc. Automatic Control, AGH University of Science and Technology, Faculty of Electrical Engineering, Automatic Control and Electronics, 1983.

Professional career:

- 2000-pres. **Polish Academy of Sciences**, Systems Research Institute, from associate professor to full professor, since 2009 – Head of Center for Statistical Data Analysis Methods.
- 1987-pres. **Cracow University of Technology**, Faculty of Electrical and Computer Engineering, from assistant to full professor; 2000-03 – Head of Department of Control Engineering; 2003-10 – Head of Department of Automatic Control; since 2010 – Head of Department of Automatic Control and Information Technology.
- 1997-98 **AGH University of Science and Technology**, Faculty of Applied Mathematics, assistant professor.
- 1992-93 **Aalborg University** (Denmark), Department of Control Engineering, visiting professor.

List of publications (selected items):

1. Books and edited volumes:

- 1.1. P. Kulczycki
“Czasowo optymalne sterowanie stochastyczne nieciągłym układem dynamicznym”
■ Wydawnictwa Politechniki Krakowskiej, Monograph 127, Cracow (Poland), 1992.
- 1.2. P. Kulczycki
“Wykrywanie uszkodzeń w systemach zautomatyzowanych metodami statystycznymi”
■ Alfa, Warsaw (Poland), 1998.
- 1.3. P. Kulczycki
“Estymatory jądrowe w analizie systemowej”
■ WNT, Warsaw (Poland), 2005.
- 1.4. P. Kulczycki, O. Hryniewicz, J. Kacprzyk (eds.)
“Techniki informacyjne w badaniach systemowych”
■ WNT, Warsaw (Poland), 2007.

2. Articles in scientific journals (selected items):

- 2.1. P. Kulczycki
“Some Remarks on Solutions of Discontinuous Differential Equations Applied in Automatic Control”
■ Industrial Mathematics, vol. 46, no. 2, pp. 119-128, 1996.
- 2.2. H. Schiøler, P. Kulczycki
“Neural Network for Estimating Conditional Distributions”
■ IEEE Transactions on Neural Networks, vol. 8, no. 5, pp. 1015-1025, 1997.
- 2.3. P. Kulczycki
“A Random Approach to Time-Optimal Control”
■ Journal of Dynamic Systems, Measurement, and Control, vol. 121, no. 3, pp. 542-543, 1999.
- 2.4. P. Kulczycki
“Random time-optimal control for mechanical systems”
■ European Journal of Automation, vol. 33, no. 1-2, pp. 115-140, 1999.

- 2.5. P. Kulczycki
“Fuzzy Controller for Mechanical Systems”
■ **IEEE Transactions on Fuzzy Systems**, vol. 8, no. 5, pp. 645-652, 2000.
- 2.6. P. Kulczycki
“An Algorithm for Bayes Parameter Identification”
■ **Journal of Dynamic Systems, Measurement, and Control**, (Special Issue on the Identification of Mechanical Systems), vol. 123, no. 4, pp. 611-614, 2001.
- 2.7. P. Kulczycki, R. Wisniewski
“Fuzzy controller for a system with uncertain load”
■ **Fuzzy Sets and Systems**, vol. 131, no. 2, pp. 185-195, 2002.
- 2.8. P. Kulczycki
“Statistical Inference for Fault Detection: A Complete Algorithm Based on Kernel Estimators”
■ **Kybernetika**, vol. 38, no. 2, pp. 141-168, 2002.
- 2.9. P. Kulczycki
“A Test for Comparing Distribution Functions with Strongly Unbalanced Samples”
■ **Statistica**, vol. LXII, no. 1, pp. 39-49, 2002.
- 2.10. R. Wisniewski, P. Kulczycki
“Rotational Motion Control of a Spacecraft”
■ **IEEE Transactions on Automatic Control**, vol. 48, no. 4, pp. 643-646, 2003.
- 2.11. R. Wisniewski, P. Kulczycki
“Euler-Poincaré reduction of externally forced rigid body motion”
■ **Control and Cybernetics**, vol. 33, no. 2, pp. 297-310, 2004.
- 2.12. P. Kulczycki, R. Wisniewski, P.A. Kowalski, K. Krawiec
“Hard and soft sub-time-optimal controllers for a mechanical system with uncertain mass”
■ **Control and Cybernetics**, vol. 33, no. 4, pp. 573-587, 2004.
- 2.13. R. Wisniewski, P. Kulczycki
“Slew maneuver control for spacecraft equipped with star camera and reaction wheels”
■ **Control Engineering Practice**, (Special Section on Aerospace Control), vol. 13, no. 3, pp. 349-356, 2005.
- 2.14. P. Kulczycki, M. Charytanowicz
“Bayes sharpening of imprecise information”
■ **International Journal of Applied Mathematics and Computer Science**, vol. 15, no. 3, pp. 393-404, 2005.
- 2.15. P. Kulczycki, J. Waglowski
“On the application of statistical kernel estimators for the demand-based design of a wireless data transmission system”
■ **Control and Cybernetics**, vol. 34, no. 4, pp. 1149-1167, 2005.
- 2.16. P. Kulczycki, A. Mazgaj
“An algorithm for Bayes parameter identification with quadratic asymmetrical loss function”
■ **Control and Cybernetics**, vol. 34, no. 4, pp. 1127-1148, 2005.

- 2.17. P. Kulczycki, M. Charytanowicz
“Asymmetrical Conditional Bayes Parameter Identification for Control Engineering”
■ **Cybernetics and Systems**, vol. 39, no. 3, pp. 229-243, 2008.
- 2.18. P. Kulczycki
“Statistical Kernel Estimators for Design of a Fault Detection, Diagnosis and Prognosis System”
■ **The Open Cybernetics and Systemics Journal**, vol. 2, pp. 180-184, open access, 2008.
- 2.19. P. Kulczycki
“Applicational Possibilities of Nonparametric Estimation of Distribution Density for Control Engineering”
■ **Bulletin of the Polish Academy of Sciences; Technical Sciences**, vol. 56, no. 4, pp. 347-359, 2008.
- 2.20. P. Kulczycki, A. Mazgaj
“Parameter Identification for Asymmetrical Polynomial Loss Function”
■ **Information Technology and Control**, vol. 38, no. 1, pp. 51-60, 2009; Errata: vol. 38, no. 2, pp. 167-168, 2009.
- 2.21. P. Kulczycki, K. Daniel
“Metoda wspomagania strategii marketingowej operatora telefonii komorkowej”
■ **Przegląd Statystyczny**, vol. 56, no. 2, pp. 116-134, 2009; Errata: vol. 56, no. 3-4, p. 3, 2009.
- 2.22. P. Kulczycki, M. Charytanowicz
“A Complete Gradient Clustering Algorithm Formed with Kernel Estimators”
■ **International Journal of Applied Mathematics and Computer Science**, vol. 20, no. 1, pp. 123-134, 2010.
- 2.23. P. Kulczycki, P.A. Kowalski
“Bayes classification of imprecise information of interval type”
■ **Control and Cybernetics**, vol. 21, no. 1, 2011, in press.

3. Chapters in edited volumes (selected items):

- 3.1 P. Kulczycki
“Robust time-optimal positional stabilization containing a speed limitation task”
■ “System Structure and Control 1995”, M. Guglielmi (ed.), **Elsevier/Pergamon**, Oxford (Great Britain), 1996, pp. 349-354.
- 3.2. M. Charytanowicz, P. Kulczycki
“Algorytm bayesowskiej defuzyfikacji ciągłej warunkowej liczby rozmytej”
■ “Metody i techniki analizy informacji i wspomagania decyzji”, Z. Bubnicki, O. Hryniewicz, R. Kulikowski (eds.), EXIT, Warsaw (Poland), 2002, pp. V.49-56.
- 3.3. P. Kulczycki, C. Prochot
“Identyfikacja stanów nietypowych za pomocą estymatorów jądrowych”
■ “Metody i techniki analizy informacji i wspomagania decyzji”, Z. Bubnicki, O. Hryniewicz, R. Kulikowski (eds.), EXIT, Warsaw (Poland), 2002, pp. V.57-62.

- 3.4. P. Kulczycki, C. Prochot
“Wykrywanie elementów odosobnionych za pomocą metod estymacji nieparametrycznej”
■ “Badania operacyjne i systemowe: podejmowanie decyzji – podstawy teoretyczne i zastosowania”, R. Kulikowski, J. Kacprzyk, R. Slowinski (eds.), EXIT, Warsaw (Poland), 2004, pp. 313-328.
- 3.5. P. Kulczycki, K. Daniel
“Algorytm wspomaganie strategii marketingowej operatora telefonii komarkowej”
■ “Badania operacyjne i systemowe 2006: metody i techniki”, J. Kacprzyk, R. Budzinski (eds.), EXIT, Warsaw (Poland), 2006, pp. 245-256.
- 3.6. P. Kulczycki
“Estymatory jądrowe w zagadnieniach badań systemowych”
■ “Techniki informacyjne w badaniach systemowych”, P. Kulczycki, O. Hryniewicz, J. Kacprzyk (eds.), WNT, Warsaw (Poland), 2007, pp. 79-105.
- 3.7. P. Kulczycki
“Analiza danych z użyciem estymatorów jądrowych w zastosowaniu do diagnostyki systemów”
■ “Diagnostyka procesów i systemów”, J. Korbicz, K. Patan, M. Kowal (eds.), EXIT, Warsaw (Poland), 2007, pp. 231-238.
- 3.8. P. Kulczycki
“Kernel Estimators in Industrial Applications”
■ “Soft Computing Applications in Industry”, B. Prasad (ed.), **Springer-Verlag**, Berlin (Germany), 2008, pp. 69-91.
- 3.9. P. Kulczycki, M. Charytanowicz
“Kompletny algorytm gradientowej klasteryzacji”
■ “Sterowanie i automatyzacja: aktualne problemy i ich rozwiązania”, K. Malinowski, L. Rutkowski (eds.), EXIT, Warsaw (Poland), 2008, pp. 312-321.
- 3.10. M. Charytanowicz, P. Kulczycki
“Nonparametric Regression for Analyzing Correlation between Medical Parameters”
■ “Information Technologies in Biomedicine”, E. Pietka, J. Kawa (eds.), **Springer-Verlag**, Berlin (Germany), 2008, pp. 437-444.
- 3.11. S. Lukasik, P.A. Kowalski, M. Charytanowicz, P. Kulczycki
“Fuzzy Models Synthesis with Kernel-Density Based Clustering Algorithm”
■ “Fifth International Conference on Fuzzy Systems and Knowledge Discovery”, J. Ma, Y. Yin, J. Yu, S. Zhou (eds.), **IEEE Computer Society**, Los Alamitos (USA), 2008, vol. 3, pp. 449-453.
- 3.12. P. Kulczycki, S. Lukasik
„Redukcja wymiaru i liczności próby dla potrzeb syntezy statystycznego układu wykrywania uszkodzeń”
■ „Systemy wykrywające, analizujące i tolerujące usterki”, Z. Kowalczyk (ed.), PWNT, Gdansk (Poland), 2009, pp. 139-146.
- 3.13. M. Charytanowicz, J. Niewczas, P. Kulczycki, P.A. Kowalski, S. Lukasik, S. Zak
“Complete Gradient Clustering Algorithm for Features Analysis of X-Ray Images”
■ “Information Technologies in Biomedicine”, E. Pietka, J. Kawa (eds.), **Springer-Verlag**, Berlin (Germany), 2010, vol. 2, pp. 15-24.

3.14. P.A. Kowalski, P. Kulczycki

“Data Reduction for Classification of Interval Information Using Neural Network Sensitivity Analysis”

■ “Artificial Intelligence: Methodology, Systems, and Applications”, D. Dicheva, D. Dochev (eds.), **Lecture Notes in Artificial Intelligence**, Springer, Berlin (Germany), 2010, pp. 271-272.

4. Participation at scientific conferences (selected items):

4.1. P. Kulczycki

“Time-Optimal Stochastic Positional Control”

■ **12th World Congress IFAC**, Sydney (Australia), 18-23 July 1993, vol. 7, pp. 443-448.

4.2. P. Kulczycki, H. Schiøler

“Parameter Identification by Bayes Decision and Neural Networks”

■ 10th IFAC Symposium on System Identification, Copenhagen (Denmark), 4-6 July 1994, vol. 3, pp. 477-482.

4.3. P. Kulczycki

“Robust Time-Optimal Positional Stabilization Containing a Speed Limitation Task”

■ IFAC Conference on System Structure and Control, Nantes (France), 5-7 July 1995, pp. 382-387; post-proceedings: point 3.1 stated above.

4.4. P. Kulczycki

“Bayes Estimation Using Kernel Estimators”

■ **15th IMACS World Congress on Scientific Computation, Modelling and Applied Mathematics**, Berlin (Germany), 24-29 August 1997, vol. “Abstracts” p. 118, vol. 1 (Computational Mathematics), pp. 627-632, CD: vol_IP_627 (6 pages).

4.5. P. Kulczycki, L.T. Koczy

“A Fuzzy Approach to Time-Optimal Control”

■ **IEEE World Congress on Computational Intelligence**, IEEE International Conference on Fuzzy Systems, Anchorage (USA), 4-9 May 1998, vol. 1, pp. 410-415, CD: F073 (6 pages).

4.6. P. Kulczycki, H. Schiøler

“Estimating Conditional Distributions by Neural Networks”

■ **IEEE World Congress on Computational Intelligence**, IEEE International Joint Conference on Neural Networks, Anchorage (USA), 4-9 May 1998, vol. 2, pp. 1344-1349, CD: J0246J (6 pages).

4.7. P. Kulczycki

“Robust Controller for Fuzzy Mechanical Systems”

■ **14th World Congress IFAC**, Beijing (China), 5-9 July 1999, vol. K, pp. 195-200, CD: K-3e-09-4 (6 pages).

4.8. P. Kulczycki

“A Statistical Fault Detection System”

■ **16th IMACS World Congress on Scientific Computation, Applied Mathematics and Simulation**, Lausanne (Switzerland), 21-25 August 2000, vol. “Abstracts” p. 317, CD: 216-4 (6 pages).

- 4.9. P. Kulczycki
“Time-Optimal Control via Random Differential Inclusions”
■ 6th IFAC Symposium on Dynamics and Control of Process Systems, Jeju Island (Korea), 4-6 June 2001, pp. 708-713.
- 4.10. P. Kulczycki
“A Statistical Inference System for Fault Detection”
■ 4th IFAC Workshop on On-line Fault Detection and Supervision in the Chemical Process Industries, Jeju Island (Korea), 7-8 June 2001, pp. 245-250.
- 4.11. P. Kulczycki
“A Fuzzy Approach for Mechanical System with Uncertain Load”
■ **European Control Conference**, Porto (Portugal), 4-7 September 2001, pp. 2658-2663, vol. “Abstracts” p. 118, CD: ecc4561 (6 pages).
- 4.12. R. Wisniewski, P. Kulczycki
“General Attitude Control Algorithm for Spacecraft Equipped with Star Camera and Reaction Wheels”
■ **15th World Congress IFAC**, Barcelona (Spain), 21-26 July 2002, vol. “Book of Abstracts” p. 151, CD: 1786 (6 pages).
- 4.13. P. Kulczycki
“Bayes Parameter Identification with Reference to Nonlinear Optimal Control”
■ **15th World Congress IFAC**, Barcelona (Spain), 21-26 July 2002, vol. “Book of Abstracts” p. 244, CD: 1329 (6 pages).
- 4.14. P. Kulczycki, R. Wisniewski
“Fuzzy Controller for an Uncertain Dynamical System”
■ 8th IEEE International Conference on Methods and Models in Automation and Robotics, Szczecin (Poland), 2-5 September 2002, vol. 1, pp. 683-688, CD: N2-5 (6 pages).
- 4.15. P. Kulczycki, A. Mazgaj
“Parameter Identification with Nonsymmetrical Quadratic Loss Function for Optimal Control”
■ 9th IEEE International Conference on Methods and Models in Automation and Robotics, Miedzyzdroje (Poland), 25-28 August 2003, vol. 1, pp. 689-694, CD: I1-5 (6 pages).
- 4.16. P. Kulczycki, J. Wąglowski
“Optimal Base-Stations Locations in the LMDS Wireless Data Transmission System”
■ First African Control Conference, Cape Town (South Africa), 3-5 December 2003, pp. 375-380, CD: 108 (6 pages).
- 4.17. P. Kulczycki
“Kernel Estimators for Analysis of Systems with Fuzzy Uncertainty”
■ IEEE International Conference on Fuzzy Systems, Budapest (Hungary), 25-29 July 2004, vol. “Program” p. 175, CD: 0207-1354 (6 pages).
- 4.18. R. Wisniewski, P. Kulczycki
“Euler-Poincaré Reduction of a Rigid Body Motion”
■ 10th IEEE International Conference on Methods and Models in Automation and Robotics, Miedzyzdroje (Poland), 30 August – 2 September 2004, vol. 2, pp. 813-818, CD: 0057 (6 pages).

- 4.19. P. Kulczycki
“Kernel Estimators for Systems Research”
■ 3rd International Conference on Disordered Systems, Goa (India), 24-26 September 2004, vol. “Abstract Book”, p. 42.
- 4.20. P. Kulczycki, J. Waglowski
“Optymalny układ stacji bazowych bezprzewodowego systemu transmisji danych LMDS”
■ XV Krajowa Konferencja Automatyki, Warsaw (Poland), 27-30 June 2005, vol. 2, pp. 351-356, CD: tom II, rozdział XIII/6 (6 pages).
- 4.21. P. Kulczycki, A. Mazgaj
“A Parameter Identification Algorithm with Asymmetrical Quadratic Losses of Estimation Errors”
■ **6th Asian Control Conference**, Bali (Indonesia), 18-21 July 2006, vol. “Abstracts” p. 99, CD: ASCC2006420023 (6 pages).
- 4.22. P. Kulczycki, A. Mazgaj
“Bayes Identification of Parameters’ Vector with Quadratic Asymmetrical Loss Function”
■ 19th International Conference on Production Research, Valparaiso (Chile), 29 July – 2 August 2007, CD: 250 (6 pages).
- 4.23. P. Kulczycki, M. Charytanowicz
“Automatic Control Tasks Featuring Asymmetrical Conditional Identification of Parameters”
■ 13th IEEE/IFAC International Conference on Methods and Models in Automation and Robotics, Szczecin (Poland), 27-30 August 2007, vol. “Abstracts” pp. 66-67, CD: 0236 (7 pages).
- 4.24. P. Kulczycki, M. Charytanowicz
“Kompletny algorytm gradientowej klasteryzacji”
■ XVI Krajowa Konferencja Automatyki, Szczyrk (Poland), 11-15 May 2008, CD: pol_06_rozdzial4, pp. 40-49; post proceedings: point 3.9 stated above.
- 4.25. M. Charytanowicz, P. Kulczycki
“Nonparametric Regression for Analyzing Correlation between Medical Parameters”
■ I International Conference on Information Technologies in Biomedicine, Kamien Slaski (Poland), 16-18 June 2008, post-proceedings: point 3.10 stated above.
- 4.26. P. Kulczycki, A. Mazgaj
“Bayes Parameter Identification with Polynomial Asymmetrical Loss Function”
■ **17th World Congress IFAC**, Seoul (Korea), 6-11 July 2008, pp. 12395-12400, vol. “Final Program & Book of Abstracts” Thursday p. 211, CD: 12395 (6 pages).
- 3.27. S. Lukasik, P.A. Kowalski, M. Charytanowicz, P. Kulczycki
“Fuzzy Models Synthesis with Kernel-Density Based Clustering Algorithm”
■ Fifth International Conference on Fuzzy Systems and Knowledge Discovery, Jinan (China), 18-20 October 2008, CD: 3305c449 (5 pages); post-proceedings: point 3.11 stated above.
- 4.28. P. Kulczycki
“Nonparametric Estimation for Control Engineering”
■ 4th WSEAS/IASME International Conference on Dynamical Systems and Control, Corfu (Greece), 26-28 October 2008, pp. 115-121.

- 4.29. P. Kulczycki, R. Wisniewski, P.A. Kowalski, K. Krawiec
“Hard and Soft Sub-Time-Optimal Robust Controllers”
■ 9th IFAC Symposium on Robot Control, Gifu (Japan), 9-12 September 2009, pp. 689-694, CD: S1A1 (6 pages).
- 4.30. P. Kulczycki
“Statistical Kernel Estimators for Data Analysis and Exploration Tasks – Theory and Applications”
■ 14th WSEAS International Conference on Applied Mathematics, Puerto de la Cruz (Spain), 14-16 December 2009, pp. 257-262, CD: MATH-42 (6 pages).
- 4.31. M. Charytanowicz, J. Niewczas, P. Kulczycki, P.A. Kowalski, S. Lukasik, S. Zak
“Complete Gradient Clustering Algorithm for Features Analysis of X-Ray Images”
■ 2nd International Conference on Information Technologies in Biomedicine, Kamien Slaski (Poland), 7-9 June 2010, post-proceedings: point 3.13 stated above.
- 4.32. P.A. Kowalski, P. Kulczycki
“Data Reduction for Classification of Interval Information Using Neural Network Sensitivity Analysis”
■ 14th International Conference on Artificial Intelligence: Methodology, Systems, and Applications, Varna (Bulgaria), 8-10 September 2010, post-proceedings: point 3.14 stated above.
- 4.33. P. Kulczycki
„Data Analysis and Exploration for a Fault Detection, Diagnosis, and Prognosis System”
■ IEEE International Energy Conference & Exhibition, Manama (Bahrain), 18-22 December 2010, CD: 1569326787 (6 pages).

5. Supervised doctoral theses:

- 5.1. J. Waglowski, “Metoda planowania optymalnego układu stacji bazowych bezprzewodowego systemu transmisji danych LMDS”, supervisor P. Kulczycki.
■ Polish Academy of Sciences, Systems Research Institute, research field: automatic control, commencement of procedure 12 April 2002, conferred of degree 26 January 2005, **with honors**.
- 5.2. A. Mazgaj, “Modelowanie niepewności parametrów obiektu dla potrzeb sterowania optymalnego”, supervisor P. Kulczycki.
■ AGH University of Science and Technology, Faculty of Electrical Engineering, Automatic Control, Computer Science, and Electronics, research field: automatic control, commencement of procedure 30 January 2003, conferred of degree 28 April 2005, **with honors**.
- 5.3. M. Charytanowicz, “Bayesowska determinizacja informacji nieprecyzyjnej w zagadnieniach medycznych”, supervisor P. Kulczycki.
■ Polish Academy of Sciences, Systems Research Institute, research field: computer science, commencement of procedure 25 September 2002, conferred of degree 10 June 2005, **with honors**.
- 5.4. K. Daniel, “Metoda wspomaganie strategii marketingowej operatora telefonii komórkowej”, supervisor P. Kulczycki.
■ Polish Academy of Sciences, Systems Research Institute, research field: computer science, commencement of procedure 23 June 2006, conferred of degree 20 March 2009.

- 5.5. P.A. Kowalski, “Klasyfikacja bayesowska informacji niedokładnej typu przedziałowego”, supervisor P. Kulczycki.
■ Polish Academy of Sciences, Systems Research Institute, research field: computer science, commencement of procedure 27 March 2007, conferred of degree 4 December 2009.
- 5.6. S. Lukasiak, “Algorytm wymiaru i liczności próby dla celów procedur eksploracyjnej analizy danych”, supervisor P. Kulczycki.
■ Polish Academy of Sciences, Systems Research Institute, research field: computer science, commencement of procedure 20 June 2008.

6. Participation in projects:

- 6.1. “Fuzzy and stochastic models and algorithms and their applications in vehicle engineering and telecommunications”
■ Hungarian Ministry of Education, MKM-FKFP 21295.
- 6.2. “Attitude Control System for the Champ Satellite”
■ GeoForschungsZentrum, Potsdam (Germany).
- 6.3. “Fuzzy rule base and stochastic control approaches applied in modelling and control vehicle dynamic systems”
■ Hungarian Scientific Research Fund, OTKA 019671.
- 6.4. “Life Cycle Assessment of Mining Projects for Waste Minimisation and Long Term Control of Rehabilitated Sites”
 Member of “Mining life cycle modelling” Technical Committee.
■ 5th European Union Framework Program.
- 6.5. “Fuzzy control”
 Project Coordinator on behalf of the Cracow University of Technology.
■ CEEPUS, SK-42.
- 6.6. “Projekt studiów zamawianych na kierunku *Informatyka* Wydziału Inżynierii Elektrycznej i Komputerowej Politechniki Krakowskiej”
 Project Coordinator for Science, Promotion and Information.
■ Ministry of Science and Higher Education (Poland), POKL-04.01.02-00-107/10.

Avocational interests:

- ancient and Napoleonic history,
- classical music,
- modelling,
- gardening,
- international tourism.