

BIO

Andrzej Skowron



Andrzej Skowron, ECCAI (EurAI), AAIA and IRSS Fellow, Member of Academia Europaea (MAE), Member EU Academy of Sciences, Web Intelligence Academy founding Fellow (WIA), Advisory Board member of Web Intelligence Consortium, received the Ph. D. and D. Sci. (habilitation) from the University of Warsaw in Poland. In 1991 he received the Scientific Title of Professor. He is Full Professor in the Systems Research Institute, Polish Academy of Sciences. He is Emeritus Professor in Faculty of Mathematics, Computer Science and Mechanics at the University of Warsaw. Andrzej Skowron is the (co)author of more than 400 scientific publications and editor of many books, special issues of journals and volumes of conference proceedings. His areas of expertise include reasoning with incomplete information, approximate reasoning, soft computing methods and applications, rough sets, rough mereology, (interactive) granular computing, intelligent systems, (adaptive) complex systems, perception based computing, machine learning. He was the supervisor of 22 PhD Theses. In the period 1995-2009 he was the Editor-in-Chief of *Fundamenta Informaticae* journal. He is on Editorial Boards of many others international journals. Andrzej Skowron was the President of the International Rough Set Society (1996-2000). He has delivered numerous invited talks at international conferences including a plenary talk at the 16th IFIP World Computer Congress (Beijing, 2000), a keynote talk at the 8th Joint Conference on Information Sciences (JCIS 2005) (encompassing 12 individual conferences and workshops) (USA, 2005), an invited talk at the 2006 IEEE/WIC/ACM International Conference on Intelligent Agent Technology (IAT 2006) and on Web Intelligence (WI 2006) (Hong Kong, 2006), and a plenary talk at the 2nd World Congress on Biologically Inspired Computing (Japan, 2010). He was serving as (co-)program chair or PC member of more than 200 international conferences. He was involved in numerous research and commercial projects including dialog-based search engine (Nutech), fraud detection for Bank of America (Nutech), logistic project for General Motors (Nutech), algorithmic trading (Adgam), control of UAV (Linköping University), and medical decision support (e.g., in Polish-American Pediatric Clinic in Cracow). **Andrzej Skowron was on the ICI Thomson Reuters/ Clarivate Analytics lists of the most cited researchers in Computer Science (globally) in 2012, 2016, 2017. H-index=66 (Google Scholar).**

CURRICULUM VITAE (CV)

<http://scholar.google.pl/citations?user=fYu9ryIAAAAJ&hl=pl>

<https://research.com/u/andrzej-skowron>

<https://dblp.org/pid/s/AndrzejSkowron.html>

Andrzej SKOWRON

December 2024

PERSONAL

Full Professor:

Systems Research Institute
Polish Academy of Sciences
Nawelska 6, 01-47 Warsaw, Poland

Emeritus Professor:

Institute of Mathematics
Faculty of Mathematics
Computer Science and Mechanics
Warsaw University
02-097 Warsaw, Banacha 2, Poland

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EDUCATION

1967 M.Sc. (Magna cum Laude) in Computers and Automatic Control Warsaw
University of Technology Faculty of Electronics, Department of Computers

1967 M.Sc. in Mathematics University of Warsaw Faculty of Mathematics and
Mechanics, Institute of Mathematics

1972 Ph.D. (Magna cum Laude) Theory of Computation Warsaw University Faculty
of Mathematics, Computer Science and Mechanics

1979 Doctor of Science (Dr.Sci. Habilitation) Theory of Computation Warsaw
University Faculty of Mathematics, Computer Science and Mechanics

1991 scientific title of Professor

EMPLOYMENT

1988-1990, Deputy Dean of the Faculty of Mathematics, Computer Science and Mechanics at Warsaw University

2015-present, Full Professor, Systems Research Institute, Polish Academy of Sciences, Warsaw

2019-2022, Full Professor, Multidisciplinary Research Center at UKSW, Warsaw

1993-2018, Full Professor in Faculty of Mathematics, Computer Science and Mechanics at Warsaw University (from 2015 part time)

1997-present, Polish Academy of Sciences, Institute of Computer Science, Warsaw, for many years Vice-President of Scientific Council

1999-present, Polish Academy of Sciences, System Research Institute, Member of Scientific Council

1994-2003, Member of Computer Science Section at the National Research Committee

2000-2002, senior scientist, NuTech Solutions Poland

1997-present, Member of Committee on Informatics of Polish Academy of Sciences

2004-2006, Member of the Decision Support System Section at Automation and Robotic Committee of Polish Academy of Sciences

1994-1999, Head of the Senate in the Polish-Japanese Institute of Information Technology

1980-1992, Associate Professor in Faculty of Mathematics, Computer Science and Mechanics at Warsaw University

1972- 1980, Assistant Professor in Faculty of Mathematics, Computer Science and Mechanics at Warsaw University

1969- 1972, Senior Assistant, Warsaw University

1967- 1969, Assistant, Warsaw University

CURRENT RESEARCH INTEREST:

reasoning with incomplete information, approximate reasoning, soft computing methods and applications, rough sets, rough mereology, granular computing, intelligent systems, adaptive and (complex) systems, perception based computing, machine learning

AWARDS:

Award of the Ministry of Science, High Education and Technology for the results in Ph.D. with summa cum laude, 1973;

Several Awards of the Rector of Warsaw University for the research and teaching results;

Award of the Ministry of Education for the teachers education in Computer Science
1978

Mazur's Award of the Polish Mathematical Society, 1986

Janiszewski's Award of the Polish Mathematical Society, 1988

Honorary Professor of Chongqing University of Posts and Telecommunications,
China, 2003

International Rough Set Society Award for Outstanding Research Contribution to
Theory of Rough Sets and Applications, 2005

Association for Computing Machinery Recognition of Service Award, 2005

Honorary Editor of Fundamenta Informaticae, since 2010

Nomination by the Faculty of Mathematics, Computer Science and Mechanics,
Warsaw University and the Committee on Informatics of Polish Academy of Sciences
for the Premier Award in 2009

ECCAI (EurAI) Fellow 2012

AAIA Fellow (Asia-Pacific Artificial Intelligence Association) 2022

IRSS (International Rough Set Society) Fellow 2016

Life contribution award from International Rough Set Society 2013

Cited Researcher 2012, 2016, 2017 Highly
<http://hcr.stateofinnovation.thomsonreuters.com/>



https://clarivate.com/hcr/2017-researchers-list/?utm_source=Publons&utm_medium=Blog



Member EU Academy of Sciences (since 2019)

Academia Europaea Member (2023)

Web Intelligence Academy founding Fellow (WIA) (since 2023)

CURRENT SOCIETIES AND ORGANIZATIONS:

PTM (Polish Mathematical Society),

AAAI (American Association for AI),

President of International Rough Set Society, 1996-2000

Member of Steering Committee of International Rough Set Society (2000-2014)

Member of Advisory Board of International Rough Set Society (2014 - present)

EDITOR :

Editor in Chief of Fundamenta Informaticae (1995-2009), Publisher: IOS Press

Member of Editorial Board of Fundamenta Informaticae (since 1990), Publisher: IOS Press, Honorary Editor (from 2010)

Member of the Editorial Board of Journal of Data Mining and Knowledge Discovery, Publisher: Kluwer (1997-2014)

Member of the Editorial Board of WIAS – Web Intelligence and Agent Systems: An International Journal, Publisher: IOS Press (up to to 2015)

Member of the Editorial Board of Studia Logica (1996-2000) Publisher: Kluwer

Member of Consulting Board of Past Editors of Studia Logica (from 2004) Publisher: Kluwer

Member of the Editorial Board of Handbook of KDD, Publisher: Oxford University Press, 2002.

Member of Editorial Board of Central European Journal of Mathematics (2002-2003)

Co-editor in Chief of the journal LNCS Journal subline Transactions on Rough Sets, Springer-Verlag (2003-2023)

Associate Editor of Knowledge and Information Systems An International Journal (KAIS), Springer (2005-present), <http://www.cs.uvm.edu/~kais/main.shtml>

Member of Editorial Advisory Board of Journal of Modelling in Management (2005-present), Emerald, <http://www.emeraldinsight.com/info/journals/jm2/eabinfo.htm>

Associate Editor of Information Sciences, Elsevier
http://www.elsevier.com/wps/find/journaleditorialboard.cws_home/505730/editorialboard

Applied Intelligence: The International Journal of Artificial Intelligence, Neural Networks, and Complex-Problem Solving Technologies, Review Board,
<http://www.wkap.nl/journalhome.htm/0924-669X> (2006-present)

Member of Editorial Board of Journal of Chongqing University of Post and Telecommunications: Natural Science, Chongqing, China, ISSN 1004-5694 (from 2004)

Member of Editorial Board of International Journal of Mathematics and Mathematical Sciences (IJMMS) (2006-present, now area editor)

Member of Editorial Board of International Journal of Data Mining, Modelling and Management (IJDMMM) (2008-2014)

Member of Editorial Board of International Journal of Granular Computing, Rough Sets and Intelligent Systems (IJGRSIS) (2008-2014).

Associate Editor of Computational Intelligence An International Journal (2008-present).

Member of Editorial Board of International Journal of General Systems (published by Taylor & Francis) (2010-present)

Member of Editorial Board of Theoretical Computer Science, Section Theory of Natural Computing (2010-present)

Member of Editorial Board of Natural Computing (2010-present)

Member of Advisory Board, International Web Intelligence Consortium (<http://wi-consortium.org/>) (2015-present)

Member of Advisory Board, Granular Computing Journal (published by Springer), (2015 - present)

Associate Editor, Group Decision and Negotiation (published by Springer), (2016-present)

GUEST EDITOR OF SPECIAL ISSUES/ VOLUMES:

Computational Intelligence
Fundamenta Informaticae
International Journal of Intelligent Systems
Journal of Intelligent Information Systems
Neurocomputing
Pattern Recognition Letters
Natural Computing

Theoretical Computer Science

REVIEWER OF MANY INTERNATIONAL JOURNALS, in particular:

Artificial Intelligence
Bulletin of Polish Academy of Sciences, Ser. Math.
Bulletin of Polish Academy of Sciences, Ser. Tech.
Communications of the ACM
Computational Intelligence
Computer Journal
Fundamenta Informaticae
Fuzzy Sets and Systems
IEEE Transactions on Pattern Analysis and Machine Intelligence
IEEE Transactions on Knowledge and Data Engineering
IEEE Transactions on Systems, Man and Cybernetics
IEEE Transactions on Biomedical Engineering
IEEE Transactions on Fuzzy Systems
IEEE Intelligent Systems
Information Processing Letters
Information Sciences
International Journal of Intelligent Systems
Journal of Intelligent Systems
Neurocomputing
Pattern Recognition Letters
Studia Logica
Theoretical Computer Science
Transactions on Rough Sets

REVIEWER OF MANY Ph.D. THESIERS, HABILITATIONS AND APPLICATIONS FOR PROFESSOR TITLE IN POLAND AND IN DIFFERENT COUNTRIES (e.g., Norway, Sweden, Canada, USA, Hong Kong, India)

REVIEWER OF MANY APPLICATIONS FOR RESEARCH GRANTS IN POLAND AND ABROAD (also NASA research projects)

VISITING APPOINTMENTS, CONFERENCES AND SEMINARS:

The University of North Carolina at Charlotte USA The Department of Mathematics and Computer Science: 1983-84, Visiting Associate Professor

The University of North Carolina at Charlotte USA The Department of Mathematics and Computer Science: 1985-86, Visiting Associate Professor

Over 30 short appointments in universities in Europe, USA and Canada;

Over 60 talks at international conferences (among them many invited), invited seminar talks in the universities in USA, Canada, Japan and Europe.

In particular:

Plenary talk at 16-th World Computer Congress (IFIP'2000), Beijing

Keynote talk at the 8th Joint Conference on Information Sciences (JCIS 2005) (encompassing 12 individual conferences and workshops) July 21-26, 2005, Salt Lake City, Utah, USA.

Invited talk at the 2006 IEEE/WIC/ACM International Conference on Intelligent Agent Technology (IAT 2006) and on Web Intelligence (WI 2006) (Hong Kong, 2006)

Years 2018-2022

Invited talk: Linking Rough Sets with Reaction Systems. 1st International Workshop on Reaction Systems, June 10-15, 2018, Department of Informatics, Systems and Communication of the University of Milano-Bicocca.

Invited talk: IGrC: Computing Model for Data Science. 17th Conference on Artificial Intelligence and Soft Computing (ICAISC 2018), June 3-7, 2018, Zakopane.

Invited talk: Rough Sets: From Ontology Approximation to Understanding Medical Images. 6th International Symposium CompIMAGE'18 – Computational Modeling of Objects Presented in Images: Fundamentals, Methods, and Applications, July 2-5, 2018, Kraków.

Keynote talk: Rough Sets: Past, Present, Future. IJCRS'2018: International Joint Conference on Rough Sets 2018 (IJCRS 2018), ICISE - International Centre for Interdisciplinary Science & Education, Quy Nhon, Viet Nam, August 20-24, 2018.

Keynote talk: A. Skowron (in cooperation with Soma Dutta and Andrzej Jankowski): Toward Data Science Computing Model: Interactive Granular Computing (IGrC). 28-th International Workshop on Concurrency, Specification and Programming (CS&P 2019), Olsztyn, September 24-26, 2019.

Keynota talk: Interactive Granular Computing Model for Intelligent Systems. Fourth International Conference on Intelligence Science (ICIS2020), Durgapur, West Bengal, India, February 24-27, 2021 (online) [planned for Novemver 2020].

Plenary talk at the International Conference on Rough set theory and Mathematical Applications (ICRSMA2021), India, 8-9 January 2021.

Plenary talk: Rough Sets in Perception Based Computing, International Conference on Rough set theory and Mathematical Applications (ICRSMA2021), India, 8-9 January 2021.

Keynota talk: Toward a Computing Model Dealing with Complex Phenomena: Interactive Granular Computing. 13th International Conference on Computational Collective Intelligence (ICCCI 2021), Rhodes, Greece, September 29 – October 1, 2021

Invited talk: Modelling Rough and Fuzzy Sets in Interactive Granular Computing (IGrC). International e-Conference on Rough Sets - Generalizations and Applications, November 11–13, 2021, Organized by Fuzzy and Rough Sets Association, Agartala, Tripura, India

Keynote talk at 18th Conference on Computer Science and Intelligence Systems (FedCSIS 2022): Rough Sets Turn 40: From Information Systems to Intelligent Systems

Invited plenary talk at the special session of IEEE Intelligent Systems 2022 Conference (IEEE IS 2022): (with Dominik Ślęzak) Rough sets turn 40: What next?

Keynote talk at International Joint Conference on Rough Sets (IJCRS 2022): Rough Sets and Fuzzy Sets in Interactive Granular Computing

Plenary talk at Optimization, Learning and Analytics in Business (OLAB 2022): Decision Support in Problem Solving by Intelligent Systems Based on Interactive Granular Computing

Keynote at Information Processing and Management of Uncertainty in Knowledge-Based Systems (IPMU 2022): Perceptual Rough Set Approach in Interactive Granular Computing

More invited talks:

Federated Conference on Computer Science And Information Systems (FedCSIS 2012) (Wrocław 2012) (invited lecture at panel on Computing with Approximations: Theory and Practice)

Maebashi Institute of Technology, Maebashi, Japan (May 2012)

Waseda University, Kitakyushu, Japan (May 2012)

4th International Conference on Intelligent Decision Technologies (IDT'2012), (Gifu, Japan 2012)

7th International Conference on Rough Sets and Knowledge Technology (RSKT 2012) (Chengdu, China 2012)

Workshop Three Approaches to Data Mining (3ADM) (KAUST, Saudi Arabia 2012)

Meeting for prof. G. Cattaneo 70th birthday (December 14, 2012), Università degli Studi di Milano – Bicocca, Dipartimento di Informatica, Sistemistica e Comunicazione 2012

Joint Rough Sets Symposium (JRS 2013) (Halifax, Canada 2013)

Active Media Technology / Brain and Health Informatics (AMT-BI 2013) (Maebashi, Japan 2013)

5th International Conference on Pattern Recognition and Machine Intelligence (PReMI 2013) (Kolkata, India 2013)

International Conference of Facets of Uncertainties and Applications (ICFUA 2013) (Kolkata, India 2013)

SSIU 2013: International Summer School "Information and Uncertainty" (Olomouc, Czech Republic 2013)

First ICRA Project Workshop (Warsaw 2013)

2014 Joint Rough Set Symposium (Granada, Madrid 2014)

The 6th Podlasie Conference on Mathematics (Bialystok, Poland 2014)

2014 IEEE International Conference on Granular Computing (IEEE GrC2014)
(Noboribetsu, Japan 2014)

2014 International Granular Computing Forum (GrCF 2014) (Soochow University,
Suzhou, China 2014)

9th International Conference on Rough Sets and Knowledge Technology (RSKT 2014)
(Tonji University, Shanghai 2014)

10th International Conference on Rough Sets and Knowledge Technology (RSKT
2015) at Joint Conference on Rough Sets (IJCRS 2015) (Tianjin, China)

The 24th International Workshop on Concurrency, Specification and Programming
(CS&P 2015) (Rzeszow, Poland)

FedCIS 2016 (Gdańsk, 2016) Plenary Panel on the Legacy of Professor Zdzisław
Pawlak (invited talk) https://www.fedcsis.org/2016/plenary_panel/as

Computer Information Systems and Industrial Management, 15th IFIP TC8
International Conference (CISIM 2016), Vilnius, Lithuania (keynotye talk)

Invited lectures at the First Summer School on Rough Sets: Decision Making, Data Mining,
Knowledge Representation, Milan, Italy 2016

keynote talk ICIS2017 (Shanghai, 2017)

invited evening talk PReMI 2017 (Kolkata, 2017)

Chair or co-chair of many conferences, e.g., since 1995

program co-chair of International Symposium on Methodologies for Intelligent
Systems (ISMIS-97) (Poland 1997); (ISMIS-99) (USA 1997) (Poland 2011).

program chair of the First International Conference on Rough Sets and Current Trends
in Computing, June 1998, Poland

program chair of the workshop Rough Sets, Data Mining and Granular Computing
Yamaguchi, November 1999, Japan

co-program chair of the Second International Conference on Rough Sets and Current
Trends in Computing, October 2000, Canada

co-program chair of the Third International Conference on Rough Sets and Current
Trends in Computing (RSCTC'02) U.S.A.

program chair of International Workshop on Rough Sets in Knowledge Discovery
and Soft Computing (RSKD'2003), ETAPS 2003 Satellite Event April 12-13, Warsaw 2003.

general chair of the 9th International Conference on Rough Sets, Fuzzy Sets,
Data Mining and Granular Computing (RSFDGrC'2003), May 26-29, Chongqing China
2003.

program chair of International Workshop on Monitoring, Security and Rescue Techniques in
Multiagent Systems (MSRAS 2004), June 7-9, 2004, Plock, Poland.

program chair of the 2005 IEEE/WIC/ACM International Joint Conference on Intelligent Agent Technology (IAT'05) and Web Intelligence (WI'05) (France, 2005).

co-program chair International Conference on Rough Sets and Knowledge Technology (RSKT 2006) (China, 2006)

co-program chair International Conference on Rough Sets and Intelligent Systems Paradigms (RSEISP 2007), (Warsaw, 2007)

co-program chair Knowledge Discovery in Databases: PKDD 2007, 11th European Conference on Principles and Practice of Knowledge Discovery in Databases, Warsaw.

honorary chair of Doctoral Workshop at IEEE WI/ IAT'08 (Australia, 2008)

co-program chair Third International Conferences of Rough Sets and Knowledge Technology, (RSKT 2008) (China, 2008)

honorary chair of Doctoral Workshop at IEEE WI/ IAT'09 (Italy, 2009)

steering committee co-chair RSKT 2010 (China, 2010)

vice-chair of Program Committee of The 2013 IEEE/WIC/ACM International Conference on Intelligent Agent Technology (IAT 2013) (USA, 2013)

co-program chair of ISMIS 2011 (Poland, 2011)

general chair of Web Intelligence Congress 2014 (WIC 2014) (Warsaw, 2014)

honorary chair IJCRS 2016 (Santiago, Chile 2016)

general chair ISMIS 2017 (Warsaw 2017)

honorary chair IJCRS 2017 (Olsztyn, Poland 2017)

honorary chair: Rough Sets - International Joint Conference, IJCRS 2019, Debrecen, Hungary, June 17–21, 2019

honorary chair: Rough Sets - International Joint Conference on Rough Sets (IJCRS 2020), La Habana, June 29 - July 3, 2020.

Program committee member of more than 200 conferences including:

Years 2022-2018:

PC member:

IEEE ICDM 2022: 22nd IEEE International Conference on Data Mining, Nov. 28 – Dec. 1, 2022, Orlando, FL, USA

ECML PKDD 2022: European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases, Spt. 19-23, 2022, Grenoble

WI -IAT 2022: The 21st IEEE/WIC/ACM International Conference on Web Intelligence and Intelligent Agent Technology, 17-20 November 2022 in Niagara Falls, Canada

PAKDD 2022: The 26th Pacific-Asia Conference on Knowledge Discovery and Data Mining, Chengdu, China, May 16-19, 2022.

2022 SIAM International Conference on Data Mining (SDM'22), Alexandria, Virginia, on April 28 - April 30, 2022.

Steering Committee

Co-chair of Steering Committee: IJCRS 2022: International Joint Conference on Rough Sets, Suzhou, China, 11-17 November 2022.

Senior Steering Committee Member: FedCSIS 2022: 17th Conference on Computer Science and Intelligence Systems, Sofia, 4- September, 2022.

PC member:

IEEE ICDM 2021 21st IEEE International Conference on Data Mining, December 7-10, 2021, Auckland, New Zealand

5th International Cross Domain Conference for Machine Learning & Knowledge Extraction, CD-MAKE 2021, TU Wien, Vienna, Austria, August 17 – 20, 2021

29th International Workshop on Concurrency, Specification and Programming (CS&P 2021) Berlin, Germany, September 27-28, 2021

24th Pacific-Asia Conference, PAKDD 2020, Singapore, May 11–14, 2020

The 2020 IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT'20), 14-17 December 2020 - A Fully Virtual Conference

IEEE ICDM 2020, November 17-20, 2020, Sorrento, Italy

The European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases, Würzburg, Germany, September 16-20, 2019

19th IEEE International Conference on Data Mining (ICDM 2019), Beijing, China, 8-11 November 2019

28-th International Workshop on Concurrency, Specification and Programming (CS&P 2019), Olsztyn, September 24-26, 2019

Examples of activities as PC member of conferences in other years

Knowledge Discovery and Data Mining (USA) 1995, 1996, 1997, 2007, 2009.

European Conference on Principles and Practice of Knowledge Discovery in Databases (PKDD'97) (Norway 1997); (PKDD'98) (France); (PKDD'00) (France); (PKDD'01) (Germany); (PKDD'02) (Finland 2002); (PKDD-2003) (Croatia, 2003); (PKDD'04) (Italy 2004)

European Conference on Machine Learning and European Conference on Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD 2007) (Warsaw 2007) (PKDD 2007 co-program chair),
(ECML/PAKDD'08)(Belgium, 2008) (member of Advisory Board),
(ECML/PAKDD'09)(Slovenia, 2009) (member of Advisory Board),
(ECML/PAKDD'10)(Spain, 2010) (member of Advisory Board),
(ECML/PAKDD'12)(Bristol, UK 2012)
(ECML/PAKDD'14) (Nancy 2014),
(ECML/PAKDD'15, Porto, 2015),
(ECML/PAKDD'17, Skopje, 2017).

International Workshops on Rough Sets (Kiekrz, Poland 1992); (Banff, Canada 1993); (San Jose, USA 1994); (Tokyo, Japan 1996); (Wrightsville Beach, USA, 1997); (NC, USA 1998); (Yamaguchi, Japan 1999); (Shimane, Japan 2001); (RSKD'03, Poland 2003).

9th International Conference on Rough Sets, Fuzzy Sets, Data Mining and Granular Computing (RSFDGrC'2003), May 26-29, Chongqing, China 2003,

International Conference on Rough Sets and Knowledge Technology: RSKT 2012, (Chengdu, China 2012), RSKT 2014 (Tongji University, Shanghai).

International Conference on Rough Sets and Current Trends in Computing (RSCTC98) (Poland 1998); (RSCTC'00) (Canada 2000); (RSCTC'02) (USA 2002); (RSCTC'04) (Sweden 2004); (RSCTC 2006) (Japan 2006); RSTCT 2008 (USA 2008) RSCTC 2010 (Poland),

International Joint Conference on Rough Sets (IJCRS 2014) (Granada, Madrid 2014), (IJCRS 2015: RSFDGrC2015, RSKT 2015) (Tianjin, China 2015).

International Symposium on Methodologies for Intelligent Systems (ISMIS'96) (Poland 1996); (ISMIS'97) (USA 1997); (ISMIS'00) (USA 2000); (ISMIS 2002) (France 2002); (ISMIS 2003) (Japan 2003); (ISMIS 2005) (USA 2005) (ISMIS 2008) (Toronto 2008), (ISMIS 2009) (Prague 2009), (ISMIS 2012) (Macau 2012), (ISMIS 2014) (Roskilde 2014) (member of Steering Committee), (ISMIS 2015) (Lyon, 2015) (member of Steering Committee), (ISMIS 2017) (Warsaw, 2017) (member of Steering Committee).

Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2000) (Japan); (PAKDD 2005) (Vietnam 2005); (PAKDD 2007)(China 2007); (PAKDD 2008) (Japan 2008), (PAKDD 2012) (Kuala Lumpur, Malaysia 2012), (PAKDD 2013) (Sydney 2013), (PAKDD 14) (Taiwan 2014), (PAKDD 2015) (Vietnam 2015), (PAKDD 2016, New Zeland)

Intelligent Agent Technology (IAT'99) (Hong-Kong 1999); (IAT'01) (Japan 2001); (IAT 2003) (Canada 2003); (IAT '04) (China 2004); (IAT'06)(China, 2006); (IAT'07)(USA 2007); (IAT'08)(Australia, 2008), (IAT'09) (Italy, 2009), (IAT'12) (Macau 2012), (IAT'15) (Singapore, 2015).

2012 IEEE/WIC/ACM International Conference on Web Intelligence (WI 2012) (Macau 2012) , (WI 2009) (Italy, 2009), (WI 2015) (Singapore 2015), (WI 2017) (Lipsk 2017)

International Conference on Artificial Intelligence and Symbolic Computation Theory, Implementations and Applications (AISC'98) (USA 1998); (AISC'00) (Spain 2000); (AISC'02) (France 2002)

Flexible Query Answering Systems (FQAS'00) (Poland, 2000); (FQAS'02) (Copenhagen, 2002); (FQAS'04) (Lyon 2004), (FQAS'06) (Milan 2006), (FQAS'09) (Roskilde 2009), (FQAS'13) (Granada 2013), (FQAS'17) (London 2017)

Workshop on Concurrency, Specification and Programming (CS&P 2002-2017)

Member of the Advisory Board of the JSAI International Workshop on Rough Set Theory and Granular Computing (RSTGC'01), May 2001, Japan

Member of the Advisory Board of the Conference on Web Intelligence (WI'2001), Japan

15-th European Conference on Artificial Intelligence (ECAI2002), France, 2002

IEEE International Conference on Data Mining Sponsored by the IEEE Computer Society, (ICDM'01) (USA 2001); (ICDM'02) (Japan 2002); (ICDM'03) (USA 2003); (ICDM'04 UK 2004) (ICDM 2006, Hong Kong); (ICDM 2007)(USA, 2007) (ICDM 2012) (Brussels 2012), (ICDM 2013) (USA 2013) , (ICDM 2016) (Spain 2016)

International Symposium Intelligent Information Systems (Poland 1993-2002)

IIS'03 New Trends in Intelligent Information Processing and Web Mining (IIPWM'03) (Poland 2003); (IIPWM'04) (Poland 2004)

1st Atlantic Conference on Web Mining Conference (AWIC'03), Madrid, Spain 2003

International Conference on Data Warehousing and Knowledge Discovery (DaWaK 2002) (France 2002); (DaWaK 2003) (Czech 2003)

Fundamentals of Computation Theory FCT 2003, Sweden 2003

Intelligent Information Technology (ICIIT-2002), September 22-25, Beijing, China 2002

International Conference on Data Engineering (ICDE'2003) Sponsored by the IEEE Computer Society, Bangalore, India 2003

IJCAI'03 Workshop on Issues in Designing Physical Agents for Dynamic Real-Time Environments: World modeling, planning, learning, and communicating, Acapulco, Mexico, 2003.

International Conference on Artificial Intelligence and Soft Computing (ICAISC 2004), Poland, 2004.

SIAM Bioinformatics Workshop at the Fourth SIAM International Conference on Data Mining, April 24, 2004, Lake Buena Vista, FL, USA.

Third International Semantic Web Conference (ISWC2004), Hiroshima, Japan, November 7-11, 2004.

International Workshop Autonomous Intelligent Systems - Agents and Data Mining (AIS-ADM-05 Workshop), St. Petersburg, Russia, June 6-8, 2005.

Seventh IEEE International Conference on Data Mining, Oct 28-31, 2007, Omaha, USA.

5th International Central and Eastern European Conference on Multi-Agent Systems 25-27 September 2007, Leipzig, Germany.

6th IEEE International Conference on Cognitive Informatics (ICCI'07), August 6-8, 2007, Lake Tahoe, USA.

9th International Conference on Data Warehousing and Knowledge Discovery (DaWaK 2007), Regensburg, Germany, September 3-7, 2007

Indian International Conference on Artificial Intelligence (IICAI-07) December 17-19 2007, Pune, India

First International Symposium on Data, Privacy, and E-Commerce (ISDPE'07), Chengdu, November 1-3, 2007

Annual Meeting of the North American Fuzzy Information Processing Society (NAFIPS'07), San Diego, California, USA, June 24-27, 2007

Advisory Committee of the Conference on Pattern Recognition and Machine Intelligence (PReMI) at Indian Statistical Institute, Kolkata (India) 2005, 2007, 2015, 2017 (steering Committee Member).

Computer Science and Technology Conference (ICSTC-2008), March 31-April 3, 2008 National University, San Diego, California, USA

International Forum on Knowledge Technology (IFKT 2008) (China 2008)

2008 Annual Meeting of the North American Fuzzy Information Processing Society (NAFIPS'08), New York City, USA, May 18-21, 2008

7th International Conference on Cognitive Informatics (ICCI 2008) (USA, 2008)

The 5th International Conference on Fuzzy Systems and Knowledge Discovery (FSKD'08) (China, 2008)

6th Atlantic Web Intelligence Conference (AWIC 2008) (South Africa, 2008)

9-th International Conference on Artificial Intelligence and Soft Computing (ICAISC 2008) (2008, Poland)

2009 Annual Meeting of the North American Fuzzy Information Processing Society (NAFIPS'09), Cincinnati, Ohio, USA, June 14-17, 2009

Member of Steering Committee of the 4th International Conference on Rough Sets and Knowledge Technology (Australia, 2009)

1st International Conference on Computational Collective Intelligence - Semantic Web, Social Networks & Multiagent Systems (Poland, 2009)

The 2009 International Conference on Advanced Data Mining and Applications (ADMA 2009) (China, 2009)

Fourth Workshop on Agents and Data Mining Interaction (ADMI-09) (Hungary, 2009)

Intelligent Information Systems (IIS'09, IIS'10) (Poland, 2009, 2010)

IEEE International Conference on Data Mining (ICDM 2010) (Sydney, 2010)

WI/IAT 2010 (Toronto, 2010)

2012 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE): FUZZ- IEEE 2010 (Barcelona, 2010), FUZZ-IEEE 2012 (Brisbane, Australia 2012)

2012 International Conference on Brain Informatics (BI 2012) (Macau 2012)

8th International Conference on Advanced Data Mining and Applications (ADMA 2012) (Nanjing, China 2012)

The Eighth International Workshop on Agents and Data Mining Interaction (ADMI 2012) (Valencia 2012)

1st Indo-Japan Conference on Perception and Machine Intelligence (PerMIn 2012) (Kolkata 2012)

Fourth International Conference of Soft Computing and Pattern Recognition (Brunei 2012)

4th International Conference on Intelligent Decision Technologies (IDT 2012), (Gifu, Japan 2012)

2012 ACM SIGHIT International Health Informatics Symposium (IHI 2012) (New York 2012)

7th International Conference on Intelligent Information Processing (IIP 2012) (Guilin, China 2012)

Second World Congress on Information and Communication Technologies (WICT 2012) (India 2012)

2013 IFSA World Congress NAFIPS Annual Meeting (IFSA NAFIPS 2013) (Canada 2013)

8th International Conference on Intelligent Systems and Knowledge Engineering (ISKE2013) (China 2013)

HCI-KDD@CD-ARES 2013 : Human-Computer Interaction & Knowledge Discovery @ CD-ARES'13 (Regensburg, Germany 2013)

Federated Conference on Computer Science and Information Systems (FedCSIS 2013) (Cracow 2013)

The 3rd International Conference On Man-Machine Interactions (ICMMI 2013) (Beskidy, Poland 2013)

IAT'14, WI'14, BIH'2014, AMT'2014 (WIC 2014 Web Intelligence Congress) (Warsaw 2014)

The Tenth International Workshop on Agents and Data Mining Interaction (Paris 2014)

The Eighth International Conference on Sensor Technologies and Applications (Lisbon 2014)

2014 IFIP International Conference on Intelligent Information Processing (Hangzou, China 2014)

The 27th International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems (Kaohsiung, Taiwan 2014)

IEEE International Conference on Cognitive Informatics & Cognitive Computing (ICCI*CC): (ICCI*CC 2012) (Kyoto, Japan), (ICCI*CC 2013) (New York 2013), (ICCI*CC 2014) (London, UK 2014), (ICCI*CC 2017) (Stanford, USA 2016) , (ICCI*CC 2017) (Oxford, UK 2017)

International Conference on Man-Machine Interactions (Beskidy, Poland, 2015)

International Conference on Artificial Intelligence and Soft Computing (Zakopane, Poland 2013), (Zakopane, Poland, 2014), (Zakopane, Poland, 2015)

16th World Congress of the International Fuzzy Systems Association and the 9th Conference of the European Society for Fuzzy Logic and Technology (Gijon, Spain, 2015)

2015 IEEE International Conference on Data Science and Advanced Analytics (Paris, 2015)

4th International Conference on Frontiers in Intelligent Computing: Theory and Applications (Durgapur, India 2015) (member of Advisory Committee)

The International Conference on Ambient Computing, Applications, Services and Technologies (Porto 2013), (Rome 2014), (Nice 2015)

International Conference on Pervasive and Embedded Computing and Communication Systems (Anger, France 2015)

SUPERVISOR:

More than 100 Master Theses at Warsaw University

23 Ph.D. Theses at Warsaw University and Polish Academy of Sciences.

PROJECTS in 1990-2016:

3 TEMPUS projects (1990-1994) - contact person in Warsaw University

Logic and knowledge representation, Grant of the National Research Committee (Poland) 1992-1993 (supervisor)

Reasoning in knowledge representation systems, Grant of the National Research Committee (Poland) 1994-1995 (supervisor)

Synthesis of complex decision systems, Grant of the National Research Committee (Poland) 1996-1998 (supervisor)

Synthesis of concept approximation, Grant of the National Research Committee (Poland) 2000-2003 (supervisor)

Nets of classifiers, Grant of the National Research Committee (Poland) 2004-2007 (supervisor)

Interactive discovery of process models from data, Grant from The Ministry of Science and Higher Education (Poland) N N516 368334, 2008-2011 (supervisor)

Approximate Bayesian networks, Grant of the National Research Committee (Poland) 2000-2001 (supervisor)

Adaptive methods in approximate reasoning, Grant of the National Research Committee (Poland) 2000-2001 (supervisor)

Applications of rough sets in conflict analysis, Grant of the National Research Committee (Poland) 2000-2001 (supervisor)

Automated reasoning from knowledge bases based on searching for analogies, Grant of the National Research Committee (Poland) 2003-2005 (supervisor)

Interactive computations in knowledge discovery from complex data sources, Grant of the Ministry of Science and Higher Education (Poland), N N516 077 837, 2009-2011 (principal investigator)

Selected scalability aspects of data mining and knowledge discovery in data bases methods Grant of the National Research Committee (Poland) DEC 2011/01/B/ST6/03867 NCN, 2011-2014 (principal investigator)

Decision support with application of interactive granular computing Grant of the National Research Committee (Poland), DEC 2012/05/B/ST6/03215, 2013-2016 (principal investigator)

Perception based computing Grant of the National Research Committee (Poland) DEC 2011/01/D/ST6/06981, 2011-2016 (principal investigator)

Interdisciplinary System for Interactive Scientific and Scientific Technical Information (SYNAT), Strategic grant of the National Center for Research and Development, SP/I/1/77065/10, 2010 - 2015 (team member)

Modern Engineering Tools for Decision Support for Commanders of the State Fire Service of Poland during Fire & Rescue operations in the buildings, Grant of the National Center for Research and Development, O/ROB/0010/03/001, 2013-2016 (team member)

Interactive Computations in Layered Granular Networks, Grant of the Foundation for Polish Science, N N516 077 837, 2011-2013 (mentor)

Polish-Norwegian grant: Rough sets and applications, 1996-1997 (supervisor)

Polish-British grant (British Council): Uncertainty Management in Information Systems: Foundations and applications of non - invasive methods, Faculty of Informatics, University of Ulster 1998-2001(team member)

Polish-Indian grant: Reasoning under uncertainty about complex objects: theoretical foundations and applications, 1996-1998 (supervisor)

CRIT-2: Esprit project no. 20288: Technologies for Approximate Synthesis of decisions and Specifications from Complex Autonomous or Distributed Knowledge Based (data tables) 1997-2000 (supervisor)

WITAS project: The Wallenberg laboratory for research on Information Technology and Autonomous Systems (Linköping University, Sweden) 2000-2003, member of the Warsaw Node

Collaboration In Basic Science And Engineering (COBASE), National Research Council, Office of International Affairs, USA, collaboration with Professor R. Swiniarski (San Diego State University)

Theory and Applications of Relational Structures as Knowledge Instruments European Cooperation in the field of Scientific and Technical Research

<http://cost.cordis.lu/src/home.cfm> (COST Action 274. MC, Work Area 1: Logical and Algebraic Foundations of Real World Relations www.tarski.org)

Projects in Nutech Solutions: Intelligent Search Engine, Fraud Detection and others.

Projects in Adgam and Wistech: Forex

LIST OF PUBLICATIONS

Andrzej Skowron

<https://mimuw.edu.pl/~skowron/CV/>

1. (1970). "Semantic translation of programming languages", *Bull. Acad. Polon. Sci., Ser. Sci. Math. Astronom. Phys.* 18, 597-601.
2. (1970). "A syntactic translation of the machine determined languages" *Bull. Acad. Polon. Sci., Ser. Sci. Math. Astronom. Phys.* 18, 603-607.
3. (with Z. Pawlak) (1970). *Elements of Computer Science for Secondary Schools*, (in Polish), Warsaw 1970, 1-105.
4. (1970). *Computation Theory: Exercises*, (in Polish), Warsaw, 1-35.
5. (1971). "Semantic translation of the certain class of programming languages", *Bull. Acad. Polon. Sci., Ser. Sci. Math. Astronom. Phys.* 19, 773-779.
6. (1971). "K-substitution", *Bull. Acad. Polon. Sci., Ser. Sci. Math. Astronom. Phys.* 19, 645-647.
7. (1972). *Semantic Translation of Machine Languages*, (in Polish) Ph.D., PWN Warsaw, 1-79.
8. (1972). "Equivalences of generalized machines", *Proc. Math. Foundations of Computer Science*, Warsaw-Jablonna, 1-12.
9. (1972). *An Introduction to Theory of Algorithms*, (in Polish), IKN Warsaw 1974, 1-174.
10. (1973). "Stored program machine programs", *Bull. Acad. Polon. Sci., Ser. Sci. Math. Astronom. Phys.* 21, 459-463.
11. (1973). "Basic operations on semantic translations", *Bull. Acad. Polon. Sci., Ser. Sci. Math. Astronom. Phys.* 21, 467-470.
12. (1973). "Existence of semantic translations", *Bull. Acad. Polon. Sci., Ser. Sci. Math. Astronom. Phys.* 21, 637-641.

13. (1973). "Translators in stored program machines", *Bull. Acad. Polon. Sci., Ser. Sci. Math. Astronom. Phys.* 21, 741-745.
14. (1973). "On a certain class of stored program machines", *Bull. Acad. Polon. Sci., Ser. Sci. Math. Astronom. Phys.* 21, 859-865.
15. (1973). "Programming languages", *Bull. Acad. Polon. Sci., Ser. Sci. Math. Astronom. Phys.* 21, 1005-1010.
16. (1973). "Machines with input and output", *Proc. Symp. Summ. School on Math. Found. of Computer Science*, Strbske Pleso, 317-319; see full version in: Functions computable by machines (in Polish), *CC PAS Reports* 105 (1973) 1-44.
17. (1974). "Simulation", *Lecture Notes in Computer Science*, Springer - Verlag, Berlin, 184-201; see full version in: Algebraic properties of simulation, *CC PAS Reports* 183 (1975) 1-29.
18. (1976). "A mathematical model for parallel information processing", *Lecture Notes in Computer Science* 45, Springer - Verlag, Berlin, 530-536.
19. (1976). *Universal Algorithms*, (in Polish), Warsaw, 1-66.
20. (with W. Bartol, Z.W. Ras) (1977). "Theory of computing systems", *Banach Center Publications* 2, 101-165.
21. (1979). *Effectiveness in Iterative Systems*, (in Polish), habilitation, PWN Warsaw, 1-157.
22. (1980). "Concurrent programs", *Proc. Logics of Programs and Their Applications*, August 25-30, 1980, Poznan, *Lecture Notes in Computer Science* 148, Springer - Verlag, Berlin (1983), 258-269.
23. (with S. Radev, D. Vakarelov) (1980). "A propositional computational logic", *Proc. 3rd Symp. on Math. Found. of Computer Science*, January 21-26, 1980, Zaborow, *ICS PAS Reports* 411 (1980) 64-66.
24. (1981). "The mixing operation and concurrent programs", *Proc. of Conf. on Information Sciences and Systems*, March 25-27, 1981, Baltimore, The John Hopkins University, 290-296.
25. (1981). "Automata", in: W. Marciszewski (ed.), *Dictionary of Logic as Applied in the Study of Languages*, W. Martinus Nijho Publishers 33-38.
26. (with A. Pettorossi) (1982). "Efficient execution of parallel programs and proofs of their correctness using computing agents and communications", *Proc. Les Mathematiques de l'Informatique*, Paris, March 16-18, 1982, Agence de l'Informatique Centre National d'Etudes des Telecomuncations Thomson CSF 1982, 451-461.
27. (with A. Pettorossi) (1982). "Some contributions of mathematics to recent development of theoretical computer science", *Proc. 2nd World Conference on Mathematics at the Service of Man*, Las Palmas, June 28-July 3, 1982, Universidad Politecnica de Las Palmas, 588-595.
28. (with A. Pettorossi) (1982). "Communicating agents for applicative concurrent programming", *Proc. 5th International Symposium on Programming*, Torino, Italy, April 6-8, 1982, *Lecture Notes in Computer Science* 137, Springer - Verlag, Berlin, 305-322.

29. (with J. Krempa, A. Pettorossi) (1982). "F-computable numbers", *Proc. 4th Symposium on Mathematical Foundations of Computer Science*, Diedrichshagen, DDR, December 5-11, 1982, Humboldt Universitat zu Berlin 1982, 24-39.
30. (with A. Pettorossi) (1983). "*Complete modal theories for verifying communicating agents behavior in recursive equations programs*", Department of Computer Science, University of Edinburgh 1983, CSR-128-83, 1-25.
31. (with A. Pettorossi) (1984). "Higher order communications for concurrent programming", *Parallel Computing* 1(3-4), North Holland, 331-336; see also in: the report IASI-CNR R.94 Roma 1984, 1-13.
32. (ed.) (1984). *Computer Science*, (in Polish), WSiP Warsaw, 1984.
33. (with H. Rasiowa) (1984). "Rough concepts logic", *Proc. of the 5th Symp. on Computation Theory*, Zaborow, December 3-8, 1984.
34. (with Keh-Hsun Chen, A. Pettorossi and Z.W. Ras) (1984). "Attributes and rough properties in information systems", *Proc. of Conf. on Information Sciences and Systems*, March 14-16, Princeton University Press, Princeton 362-366.
35. (with Rasiowa, H.) (1985). "Rough concepts logic", in: A. Skowron (ed.), *Computation Theory*, Lecture Notes in Computer Science 208 (1985) 288-297.
36. (with Rasiowa, H.) (1985). "Approximation logic", *Proc. of Mathematical Methods of Specification and Synthesis of Software Systems Conference*, Akademie Verlag, Band 31, Berlin 123-139.
37. (ed.) (1985). *Computation Theory*, Proc. of the 5-th Symptom Computation Theory, Zaborów 1984, Lecture Notes in Computer Science 208, Springer - Verlag, Berlin.
38. (with A. Pettorossi) (1985). "A methodology for improving parallel programs by adding communications", *Proc. of the 5-th Symposium on Computation Theory*, Zaborów (Poland) December 3 - 8, 1984, Lectures Notes in Computer Science 208, Springer - Verlag, Berlin, (1985), 228-250; see also in: the report IASI-CNR R.126 Roma 1985, 1-37.
39. (with A. Pettorossi) (1985). "A system for developing distributed communicating programs", *Proc. of Int. Conf. on Parallel Computing*, Berlin, September 23-25, (1985) North Holland 1986, 241-246.
40. (with H. Rasiowa) (1986). "The first step towards an approximation logic", in: Meeting of The Association for Symbolic Logic, Chicago 1985, *Journal of Symbolic Logic* 51(2) (1986) 509.
41. (with J. Doroszewski, Keh-Hsun Chen, A. Pettorossi and Z.W. Ras) (1986). "Mathematical foundations of an expert system for medical diagnosis", *Proc. of the First International Conference on Artificial Intelligence and its Impacts in Biology and Medicine*, 29 September - 2 October 1986 Montpellier, France, Centre National de la Recherche Scientific 1986, 87-92.
42. (with A. Pettorossi) (1986). "Theories for verifying communicating agents behavior in recursive equations programs", *Proc. 20th Annual Conf. on Information Sciences and Systems*, Princeton, March 19-21, 1986, Princeton University, 828-833.

43. (with A. Pettorossi) (1986). "Using facts for improving the parallel execution of functional programs", *Proc. 1986 International Conference on Parallel Processing*, August 19-22, 1986, St. Charls, Illinois, Computer Science Press 1986, 616-623.
44. (with A. Pettorossi) (1986). "Factual knowledge for developing concurrent programs", *Proc. AAAI-86 Fifth National Conference on Artificial Intelligence*, August 11-15 (1986) Philadelphia, Morgan-Kaufman 1986, Vol.1-Science, 26-30.
45. (with A. Pettorossi) (1987). "Higher order generalization in program transformation", *Proc. of the International Joint Conference on Theory and Practice of Software Development*, Pisa, Italy, March 23-27, 1987, Lecture Notes in Computer Science 250, Springer - Verlag, Berlin, 182-196.
46. (1987). "Automata" (in Polish), in: W. Marciszewski (ed.), *Formal Logic - Applications in Computer Science and Linguistics*, PWN Warsaw, 200-214.
47. (with A. Pettorossi) (1988). "The parallel evaluation of functional programs", (invited lecture), Advanced Int. Summer School and Conference on Mathematical Logic and Its Applications, September 24-October 4, 1986, Bulgaria, Druzba , see full version in: D.G. Skordev (ed.) *Mathematical Logic and Its Applications*, Plenum Press 1988, 149-165.
48. (1988). "Recent and current research on reasoning with incomplete information", *Bulletin of Applied Non-Classical Logics*, 2-4.
49. (with Keh-Hsun Chen, A. Pettorossi, and Z.W. Ras) (1988). "Attributes and rough properties in information systems", *International Journal of Approximate Reasoning* 2(4) 365-376.
50. (1989). "Rough decision problems in information systems", *Bull. Polish. Acad. Sci. Tech.* 37(1-2) 59-65.
51. (1989). "The relationship between the rough set theory and evidence theory", *Bull. Polish Acad. Sci. Tech.* 37(1-2) 87-90.
52. (1989). "The evidence theory and decision tables", *Bulletin of the European Association for Theoretical Computer Science* 39 199-204.
53. (with A. Pettorossi) (1989). "The Power of the lambda abstraction strategy for program derivation", *Journal Inf. Process. Cybern. EIK* 25(5-6) 263-281.
54. (with A. Pettorossi) (1989). "The lambda abstraction strategy for program derivation", *Fundamenta Informaticae* 12, 541-562.
55. (1990). "The rough sets theory and evidence theory", *Fundamenta Informaticae* 13, 245-262.
56. (with J. Doroszewski, K. Czechowcz-Janicka and J. Janik) (1991). "A proposition of diagnostico-therapheutic system for some processes of glaucoma" (in Polish), *Proc. of Conference on Application of Computer Science in Medicine*, Łódź.
57. (with J. Stepaniuk) (1991). "Towards an approximation theory of discrete problems", *Fundamenta Informaticae* 15(2), 187-208.
58. (with J. Stepaniuk) (1991). "Searching for classifiers", in: M. de Glas and D. Gabbay (eds.), *Proc. First World Conference on the Fundamentals of Artificial Intelligence*, 1-5 July, Angkor, Paris, 447-460.

59. (with C. Rauszer) (1992). "The Discernibility Matrices and Functions in Information Systems", in: J. Grzymała-Busse, R. Słowiński (eds.), *Intelligent Decision Support - Handbook of Applications and Advances of the Rough Sets Theory*, Kluwer, Dordrecht, 331-362.
60. (with J. Stepaniuk) (1992). "Intelligent Systems Based on Rough Set Approach", *Proc. International Workshop Rough Sets: State of the Art and Perspectives*, Poznan-Kiekrz 1992, Extended Abstracts, 62-64; see also full version: *Foundations of Computing and Decision Sciences* 18(3-4), 343-360; also: ICS Research Report 17, Warsaw University of Technology.
61. (with Z. Pawlak) (1993). "A rough set approach to decision rules generation", *Proceedings of the Workshop W12: The Management of Uncertainty in AI at 13th IJCAI*, Chambéry Savoie, France, August 30, also in: ICS Research Report 23/93, Warsaw University of Technology 1993, 1-19.
62. (with Z. Pawlak), (1993). "Rough membership functions: A tool for reasoning with uncertainty", in: *Algebraic Methods in Logic and Computer Science*, Banach Center Publications, Vol.28, Polish Academy of Sciences, Warsaw, 135-150.
63. (1993). "Extracting laws from decision tables" (abstract of the invited lecture), *Proceedings of the International Workshop on Rough Sets and Knowledge Discovery*, RDSK'93, Banf, Alberta, Canada, October 11-15, 101-104, see also: ICS Research Report 45/93, Warsaw University of Technology 1993.
64. (1993). "Management of uncertainty in AI - a rough set approach", invited lecture, *Proceedings of the International Workshop on Incompleteness and Uncertainty in Information Systems*, Montreal, Canada, October 8-9, 36-62, see also ICS Research Report 46/93, Warsaw University of Technology 1993; see also full version: (1994). "Management of uncertainty in AI: A rough set approach", in: V.A.Alagar, S.Bergler and I.Q.Dong (eds.), *Incompleteness and Uncertainty in Information Systems*, Workshops in Computing, Springer-Verlag & British Computer Society, London, Berlin, 69-86.
65. (1993). "Boolean reasoning for decision rules generation", in: J. Komorowski, and Z.Ras (eds.), *Proceedings of the 7th International Symposium on Methodologies for Intelligent Systems*, ISMIS'93, Trondheim, Norway, June 1993, Lecture Notes in Artificial Intelligence 689, Springer-Verlag, Berlin, 295-305.
66. (1993). "A synthesis of decision rules: Applications of discernibility matrix", invited lecture, *Proceedings of the International Conference on Intelligent Information Systems*, Augustow, June 7-11, 30-46.
67. (with Z. Suraj) (1993). "Synthesis of concurrent systems specified by information Systems, Part 1", *ICS Research Report 4/93*, Warsaw University of Technology, 1-53.
68. (with Z. Suraj) (1993). "Rough sets and concurrency", *Bull. Polish Acad. Sci. Tech. Sci.*, 41(3), 237-254.
69. (with Z. Suraj) (1993). "Synthesis of concurrent systems specified by information systems, Part 2: Examples of Synthesis", *ICS Research Report 38/93*, Warsaw University of Technology, 1-34.
70. (with Z. Suraj) (1993). "A rough set approach to the real-time state identification for decision making", in: *ICS Research Report 18/93*, Warsaw University of Technology; see also: (1993). "A rough set approach to the real-time state

identification" *EATCS Bulletin of the European Association for Theoretical Computer Science* 50 264-275.

71. (with J. Stepaniuk) (1993). "Variable precision rough sets", *Proceedings of the International Workshop on Rough Sets and Knowledge Discovery, RDSK'93*, Banf, Alberta, Canada, October 11-15, 159-162.

72. (with Z. Pawlak) (1994). "Rough Membership Functions", in: R.R. Yager, M.Fedrizzi, and J.Kacprzyk (eds.) *Advances in the Dempster-Shafer Theory of Evidence*, John Wiley and Sons, New York, 251-271.

73. (with Z. Pawlak), (1993). "Rough membership functions: A tool for reasoning with uncertainty", in: *Algebraic Methods in Logic and Computer Science*. Banach Center Publications, Vol. 28, Polish Academy of Sciences, Warsaw, 135-150.

74. (with J. Bazan, H. S. Nguyen, T.T. Nguyen, and J. Stepaniuk) (1994). "Some Logic and Rough Set Applications for Classifying Objects". *ICS Research Report 38/94*, Warsaw University of Technology.

75. (with J. Bazan, and P. Synak) (1994), "Dynamic reducts as a tool for extracting laws from decision tables", *Proc. of the Symp. on Methodologies for Intelligent Systems*, Charlotte, NC, October 16-19, 1994, Lecture Notes in Artificial Intelligence Vol. 869, Springer-Verlag, 346-355; see also in: ICS Research Report 43/94, Warsaw University of Technology 1994.

76. (with L. Polkowski and J. Zytkow) (1994). "Rough foundations for rough sets", Conference *Proceedings (RSSC'94) The Third International Workshop on Rough Sets and Soft Computing*, San Jose State University, CA, November 10-12, 142-149, see also: (1995). "Rough foundations for rough sets, In: T.Y. Lin, and A.M. Wildberger (eds.), *Soft Computing*, Simulation Councils, Inc., San Diego, 55-58.

77. (with L. Polkowski) (1994). "Rough mereology", *Proc. of the Symp. on Methodologies for Intelligent Systems*, Charlotte, NC, October 16-19, 1994, Lecture Notes in Artificial Intelligence Vol. 869, Springer Verlag, Berlin, 85-94; see also: ICS Research Reports 11/94, 44/94, Warsaw University of Technology.

78. (with L. Polkowski) (1994). "Introducing rough mereological controllers. Rough quality control" (invited talk), *Conference Proceedings (RSSC'94) The Third International Workshop on Rough Sets and Soft Computing*, San Jose State University, CA, November 10-12, 78-85; see also: (1995). "Introducing rough mereological controllers, Rough quality control", in: T.Y. Lin, and A.M. Wildberger (eds.), *Soft Computing*, Simulation Councils, Inc., San Diego, 240-243; and also: ICS Research Report 42/94, Warsaw University of Technology.

79. (with L. Polkowski) (1994). "Adaptive decision algorithms" (invited talk), *Proc. of the Int. Workshop on Intelligent Information Systems*, Wigry, Poland, June 6-10, Institute of Foundations of Computer Science PAS, Warsaw, 103-120.

80. (with L. Polkowski) (1994). *Decision Support Systems: A Rough Set Approach*, (manuscript prepared for TEMPUS project course).

81. (with L. Polkowski) (1994). "Logic of rough inclusion, Rough mereological functions, Rough functions", *ICS Research Report 12/94*, Warsaw University of Technology.

82. (with J. Grzymala-Busse) (1994). "From Rough Set Theory to Evidence Theory", in: R.R. Yager, M.Fedrizzi, and J.Kacprzyk (eds.) *Advances in the Dempster-Shafer Theory of Evidence*, John Wiley and Sons, New York, 193-236.
83. (with J. Bazan, P. Synak) (1994). "Market Data Analysis", *ICS Research Reports* 6/94, Warsaw University of Technology.
84. (1994). "Data Filtration: A rough set approach", in: W. Ziarko (ed.), *Rough Sets, Fuzzy Sets and Knowledge Discovery*, Workshops in Computing, Springer-Verlag & British Computer Society, London, Berlin, 108-118.
85. (with J. Stepaniuk) (1994). "Approximation of relations", in: W.Ziarko (ed.), *Rough Sets, Fuzzy Sets and Knowledge Discovery*, Workshops in Computing, Springer-Verlag & British Computer Society, London, Berlin, 161-166; see also: (1994). "Approximation of relations", in: ICS Research Report 20/94, Warsaw University of Technology.
86. (with J. Stepaniuk) (1994). "Generalized approximation spaces", in: T.Y. Lin and A.M. Wildberger (eds.), *The Third International Workshop on Rough Sets and Soft Computing Proceedings (RSSC'94)*, San Jose State University, San Jose, California, USA, November 10-12, 156-163; see also: (1994). ICS Research Report 41/94, Warsaw University of Technology; and see also in: (1995). "Generalized approximation spaces", in: T.Y. Lin, and A.M. Wildberger (eds.), *Soft Computing*, Simulation Councils, Inc., San Diego, 18-21.
87. (with J. Stepaniuk) (1994). "Decision rules based on discernibility matrices and decision tables", in: T.Y. Lin and A.M. Wildberger (eds.), *The Third International Workshop on Rough Sets and Soft Computing Proceedings (RSSC'94)*, San Jose State University, San Jose, California, USA, November 10-12, 602-609; see also: (1995). "Decision rules based on discernibility matrices and decision matrices", in: T.Y. Lin, and A.M. Wildberger (eds.), *Soft Computing*, Simulation Councils, Inc., San Diego, 6-9; also in: ICS Research Report 40/94, Warsaw University of Technology.
88. (with Z. Suraj) (1994). "Synthesis of concurrent systems specified by information systems", *ICS Research Report* 39/94, Warsaw University of Technology.
89. (with J. Bazan and P. Synak) (1995). "Discovery of decision rules from experimental data", in: T.Y. Lin and A.M. Wildberger (eds.), *The Third International Workshop on Rough Sets and Soft Computing Proceedings (RSSC'94)*, San Jose State University, San Jose, California, USA, November 10-12, 276-279; also in: ICS Research Report 40/94, Warsaw University of Technology 1994; see also: (1995). "Discovery of decision rules from experimental data", in: T.Y.Lin, and A.M.Wildberger (eds.), *Soft Computing*, Simulation Councils, Inc., San Diego, 276-279.
90. (with T. Nguyen, R. Swiniarski, J. Bazan, and K. Thagarajan) (1995). "Applications of rough sets, neural networks and maximum likelihood for texture classification based on singular value decomposition", in: T.Y. Lin and A.M. Wildberger (eds.), *The Third International Workshop on Rough Sets and Soft Computing Proceedings (RSSC'94)*, San Jose State University, San Jose, California, USA, November 10-12, 332-339; see also in T.Y. Lin, and A.M. Wildberger (eds.), *Soft-Computing*, Simulation Councils, Inc., San Diego, 157-160.
91. (with J. Bazan, H. S. Nguyen, T. T. Nguyen, and J. Stepaniuk) (1995). "Application of modal logics and rough sets for classifying objects", in: M. De Glass, and Z.Pawlak (eds.),

Proc. Second World Conference on Fundamentals of Artificial Intelligence, Paris, July 3-7, Angkor, Paris, 15-26.

92. (with M. Kretowski, L. Polkowski, and J. Stepaniuk) (1995). "Data reduction based on rough set theory", in: Y.Kodratov, G.Nakhaeizadeh, Ch.Taylor (eds.), *Proc. of the Workshop on Statistics, Machine Learning and Knowledge Discovery in Data Bases*, Crete, Greece, April 25-27; see also: *ICS Research Report 13/95*, Warsaw University of Technology.

93. (with H. S. Nguyen) (1995). "Quantization of real value attributes", *Proc. Second Joint Annual Conf. on Information Sciences*, Wrightsville Beach, North Carolina, September 28- October 1 1995, USA, 34-37; see also full version: (1995). "Quantization of real value attributes", in: *ICS Research Report 11/95*, Warsaw University of Technology 1995.

94. (with L. Polkowski) (1995). "Rough mereology and analytical mereology: new developments in rough set theory", *Proc. of the Workshop on Rough Sets and Data Mining at 23-rd Annual Computer Science Conference*, Nashville, Tennessee, March 2, 1-15; see also: "Rough mereology and analytical morphology: New developments in rough set theory", *Second World Conference on Fundamentals of Artificial Intelligence*, July 13-7, Angkor, Paris, 343-354.

95. (1995). "Extracting laws from decision tables", *Computational Intelligence* 11(2) 371-388.

96. (with L. Polkowski) (1995). "Rough mereological foundations for design, analysis, synthesis and control in distributive systems" (invited talk), *Proc. Second Joint Annual Conference on Information Sciences*, Wrightsville Beach, North Carolina, 28 September- 1 October, USA, 346-349; see also full version: *ICS Research Report 65/95*, Warsaw University of Technology.

97. (with L. Polkowski), (1995). "Vagueness in synthesis of complex systems" (abstract), (invited talk), *Proc. Third Polish-Spanish Conf. on System Analysis and Computer Science*, Barcelona, October 11-13.

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