

*Things should be as simple
as possible, but no simpler.
Albert Einstein (1879-1955)*

CURRICULUM VITAE

Ventzeslav Valev

Associate Professor

**College of Information Technology
Prince Mohammad Bin Fahd University
Al Khobar, Kingdom of Saudi Arabia**

M.Sc. in Computer Science, M.Sc. in Mathematics

PhD of Computer Science (Mathematical Cybernetics)

Doctor of Mathematical Sciences (Mathematical Informatics)

Fellow of the International Association of Pattern Recognition (IAPR) since 1998

Biography is published in Who's Who in America 63rd Edition 2009

Biography is published in Who's Who in the World 27th Edition 2010

Biography is published in Who's Who in America 64th Edition 2010

I. Address:

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II. Education:

M.Sc. Degree in Computer Science, received from the Wroclaw University of Technology, Faculty of Electronics, Institute of Technical Cybernetics, Wroclaw, Poland, October 1974. M.Sc. thesis advisor: Prof. Dr. Jerzy Bromirski. M.Sc. thesis: "Logical design of finite automata realizing pursuing object based on the game theory".

M.Sc. Degree in Mathematics, received from the University of Wroclaw, Faculty of Mathematics, Physics and Chemistry, Institute of Mathematics, Wroclaw, Poland, June 1974. M.Sc. thesis advisor: Prof. Dr. Maciej Syslo. E-mail: syslo@ii.uni.wroc.pl. M.Sc. thesis: "Cutting minimization problems".

III. Degrees:

PhD Degree in Computer Science (Mathematical Cybernetics), received

from the Dorodnicyn Computing Centre of the Russian Academy of Sciences, Moscow, Russian Federation, April 1979, advisor Prof. Dr. Yu. I. Zhuravlev, Academician of the Russian Academy of Sciences, E-mail: zhuravlev@ccas.ru. PhD thesis: "Multidimensional Pattern Recognition Problems".

Doctor of Mathematical Sciences Degree (Mathematical Informatics), received from the Institute of Mathematics and Informatics, Bulgarian Academy of Sciences, Sofia, Bulgaria, November 1995. Dr. Sc. thesis: "Mathematical Models for Pattern Recognition". This degree is recognized in all European countries as a major degree in sciences.

IV. Personal Information: Married with 3 children.

V. Visa Status in USA: Permanent Resident.
Country of Citizenship: Bulgaria.

VI. International Scientific Awards:

Biography is published in **Who's Who in America 64th Edition 2010** as one of the foremost achievers in Computer Science.

Biography is published in **Who's Who in the World 27th Edition 2010** as one of the foremost achievers in Computer Science.

Biography is published in **Who's Who in America 63rd Edition 2009** as one of the foremost achievers in Computer Science.

Distinguished Service Award for Five years of dedicated service at Saint Louis University, October 2005; <http://www.slu.edu/readstory/newslink/6049>.

Fellow of the International Association for Pattern Recognition (IAPR), granted by Fellow Award Committee of IAPR in 1998 for contribution to pattern recognition theory and for service to IAPR; <http://www.iapr.org/>. I am the first elected Fellow of IAPR among the scientists of former socialistic countries.

Biography is published in **Who's Who in Bulgaria, First Edition 1998**, Publishing House Trud, Sofia, 1998 (this is the only edition until today).

Award for outstanding graduate student, Rector of the Wroclaw University of Technology, Wroclaw, Poland, May 1974.

Award for M.Sc. thesis, Rector of the Wroclaw University of Technology, Wroclaw, Poland, December 1974.

VII. Academic Appointments:

Bulgarian Academy of Sciences, Institute of Mathematics and Informatics, Department of Artificial Intelligence, Sofia, Bulgaria, Assistant Professor, 1974 – 1989.

Bulgarian Academy of Sciences, Institute of Mathematics and Informatics, Department of Artificial Intelligence, Sofia, Bulgaria, Associate Professor, 1989 – August 1997.

The University of Iowa, College of Medicine, Department of Radiology, Iowa City, Iowa, USA, Associate Professor, September 1997 - August 1998.

University of Medicine and Dentistry of New Jersey, School of Health Related Professions, Department of Health Informatics, Newark, New Jersey, USA, Associate Professor, September 1998 - August 1999.

Saint Louis University, Parks College of Engineering and Aviation, Department of Computer Science, Associate Professor, St. Louis, Missouri, USA, Associate Professor, August 1999 – June 2006.

Middle East Technical University (METU) in Cyprus, branch of the Middle East Technical University in Ankara, Department of Science, Northern Cyprus, Associate Professor, August 2006 – February 2007.

Wroclaw University of Technology, Faculty of Electronics, Department of Systems and Computer Networks, Wroclaw, Poland, Professor, September 2008 – January 2009.

On leave from the Bulgarian Academy of Sciences, Institute of Mathematics and Informatics, Department of Artificial Intelligence, Sofia, Bulgaria, Full Professor, March 2007 – August 2009. Elected as Full Professor in June 2002.

The Institute of Informatics and Imaging, a division of Nth Research, a privately-owned enterprise conducting research, programming, and education in the fields of computer science and engineering with emphasis on imaging (image processing, image analysis, pattern recognition, computer vision etc.), <http://www.nthresearch.org/>, Online Instructor since 2007.

VIII. Visiting Professor Positions:

Russian Academy of Sciences, Dorodnicyn Computing Centre, Moscow, Russian Federation, September 1985 - March 1986.

Technical University Berlin, Institute of Technical Informatics, Berlin, Germany, May - July 1993.

Polytechnic University of Catalonia, Department of Informatics, Barcelona, Spain, September 1993.

Wroclaw University of Technology, Faculty of Electronics, Department of Systems and Computer Networks, Wroclaw, Poland, January - February 1996.

Friedrich-Alexander University Erlangen-Nuremberg, Faculty of Informatics, Department of Pattern Recognition (Informatics 5), Erlangen, Germany,

September - December 1996.

Bogazici University, Department of Electrical and Electronic Engineering, Istanbul, Turkey, March - August 1997.

IX. Member of Professional Societies:

Member of the Governing Board of the International Association for Pattern Recognition (IAPR), 1990 - 2000; <http://peipa.essex.ac.uk/iapr/>.

President of the Governing Board of the Bulgarian Association for Pattern Recognition, 1992 – 1998.

Member of the Governing Board of the Bulgarian Association for Pattern Recognition, 1998 - present

Member of the Union of the Bulgarian Mathematicians, 1976 – present.

Member of the Bulgarian Association for Medical Informatics, 1997 – present.

Member of the Specialized Scientific Council on Mathematics, Informatics and Mechanics of the Higher Certifying Commission, Sofia, Bulgaria, 1992 - 1995, 1997 – 1998.

Member of the Scientific Council of the Institute of Mathematics and Informatics, Bulgarian Academy of Sciences, Sofia, Bulgaria, 1997 – 1999.

X. Areas of research interest:

Information and Communication Technology and Applications including Artificial Intelligence, Pattern Recognition and Classification, Cluster Analysis, Image and Signal Processing, Computer Vision, Machine Vision, Image Understanding, Machine Learning, Data Mining and Knowledge Discovery, Neural Networks, Genetic Algorithms, and Medical Informatics.

XI. Masters' and PhD students' theses advisor:

Master students:

In Sofia University St. Kliment Ohridski, Sofia, Bulgaria, Department of Mathematics and Informatics in academic years 1971 – 1997 I have served as a master thesis advisor of more than 25 graduate students.

In the University of Medicine and Dentistry of New Jersey, Newark, NJ, in academic year 1998/1999 and in the Saint Louis University, Saint Louis, MO, in academic years 1999 – 2006, USA I have served as a master thesis advisor of more than 20 students.

PhD students:

In academic years 1992 – 1995 I was thesis advisor of the Bulgarian PhD student Petia Radeva in the Institute of Mathematics and Informatics,

Bulgarian Academy of Sciences. She defended her PhD thesis in the Autonomous University of Barcelona, Spain, where she is working as Professor at the Department of Computer Vision.

During the fall semester of the academic year 2008/2009 I was thesis advisor of research projects of 10 PhD students of Wroclaw University of Technology, Wroclaw, Poland.

XII. Courses taught:

Courses taught for undergraduate students:

Sofia University St. Kliment Ohridski, Sofia, Bulgaria:

Introduction to Programming – 3 Credit Hours Course, Sofia University St. Kliment Ohridski, Department of Mathematics and Informatics, Sofia, Bulgaria, 1974 – 1979.

Introduction to Programming – 3 Credit Hours Course, Sofia University St. Kliment Ohridski, Department of Mathematics and Informatics, Sofia, Bulgaria, 1986 – 1990.

Shumen University Ep. Konstantin Preslavski, Shumen, Bulgaria:

Introduction to Programming - 3 Credit Hours Course, Shumen University Ep. Konstantin Preslavski, Department of Mathematics and Informatics, Shumen, Bulgaria, 1981 – 1983.

Numerical Analysis with FORTAN IV - 3 Credit Hours Course, Shumen University Ep. Konstantin Preslavski, Department of Mathematics and Informatics, Shumen, Bulgaria, 1981 – 1983.

Programming Language PL/I - S3 Credit Hours Course, Shumen University Ep. Konstantin Preslavski, Department of Mathematics and Informatics, Shumen, Bulgaria, 1981 – 1983.

Operational Research – 3 Credit Hours Course, Shumen University Ep. Konstantin Preslavski, Department of Mathematics and Informatics, Shumen, Bulgaria, 1981 – 1983.

Mathematical Methods for Pattern Recognition – 3 Credit Hours Course, Shumen University Ep. Konstantin Preslavski, Department of Mathematics and Informatics, Shumen, Bulgaria, 1981 – 1983.

Saint Louis University, Saint Louis, MO, USA:

Introduction to Computer Sciences with C++ – 3 Credit Hours Course, Saint Louis University, Parks College of Engineering and Aviation, Department of Computer Science, St. Louis, Missouri, USA, Fall 1999, Fall 2000, Spring 2001, Fall 2001, Spring 2002, Fall 2002, Spring 2003, Fall 2003, Spring 2004; College of Arts and Sciences, Department of Mathematics and Computer Science, Spring 2005, Spring 2006.

Numerical Analysis – 3 Credit Hours Course, Saint Louis University, Parks College of Engineering and Aviation, Department of Computer Science, St. Louis, Missouri, USA, Fall 1999, Fall 2000, Spring 2001, Fall 2001, Spring 2002, Fall 2002, Spring 2003, Fall 2003, Spring 2004; College of Arts and Sciences, Department of Mathematics and Computer Science, Spring 2005, Spring 2006.

Artificial Intelligence – 3 Credit Hours Course, Saint Louis University, Parks College of Engineering and Aviation, Department of Computer Science, St. Louis, Missouri, USA, Fall 1999, Fall 2000, Spring 2003, Spring 2004; College of Arts and Sciences, Department of Mathematics and Computer Science, Spring 2005.

Elements of Discrete Structures - 2 Credit Hours Course, Saint Louis University, Parks College of Engineering and Aviation, Department of Computer Science, St. Louis, Missouri, USA, Fall 1999, Spring 2000, Fall 2000, Spring 2001, Summer 2001, Fall 2001, Spring 2002 (two sections).

Elements of Discrete Structures - 3 Credit Hours Course, Saint Louis University, Parks College of Engineering and Aviation, Department of Computer Science, St. Louis, Missouri, USA, Fall 2002, Spring 2003, Fall 2003, Spring 2004, Fall 2004.

Advanced Discrete Structures - 3 Credit Hours Course, Saint Louis University, Parks College, Department of Computer Science, St. Louis, Missouri, USA, Spring 2000.

Computational Linear Algebra – 3 Credit Hours Course, Saint Louis University, Parks College of Engineering and Aviation, Department of Computer Science, St. Louis, Missouri, USA, Fall 2001, Fall 2002, Fall 2003, Fall 2004.

Combinatorial Algorithms - 3 Credit Hours Course, Saint Louis University, Parks College, Department of Computer Science, St. Louis, Missouri, USA, Spring 2000.

Introduction to Computer Programming with Fortran 90 - 3 Credit Hours Course, Saint Louis University, Parks College, Department of Computer Science, St. Louis, Missouri, USA, Spring 2001.

Discrete Probability and Statistics – 3 Credit Hours Course, Saint Louis University, College of Arts and Sciences, Department of Mathematics and Computer, Science, St. Louis, Missouri, USA, Spring 2005.

Discrete Mathematics – 3 Credit Hours Course, Saint Louis University, College of Arts and Sciences, Department of Mathematics and Computer, Science, St. Louis, Missouri, USA, Fall 2005.

Scientific Programming with Matlab and C++ – 3 Credit Hours Course, Saint Louis University, College of Arts and Sciences, Department of Mathematics and Computer Science, St. Louis, Missouri, USA, Fall 2005, Spring 2006.

Middle East Technical University (METU), Northern Cyprus Campus,

Cyprus:

Calculus – 4 Credit Hours Course, Middle East Technical University, Northern Cyprus Campus, Cyprus, Fall 2006.

Discrete Computational Structures – 3 Credit Hours Course, Middle East Technical University, Northern Cyprus Campus, Cyprus, Fall 2006.

Algorithms and Complexity - 3 Credit Hours Course, Middle East Technical University, Northern Cyprus Campus, Cyprus, Fall 2006.

Prince Mohammad Bin Fahd University (PMU), Al Khobar, Kingdom of Saudi Arabia:

COSC 2331 Discrete Structures - 3 Credit Hours Course, Prince Mohammad Bin Fahd University, Fall 2009.

COSC 3351 Algorithms - 3 Credit Hours Course, Prince Mohammad Bin Fahd University, Fall 2009.

GEIT 2291 Professional Ethics - 2 Credit Hours Course, Prince Mohammad Bin Fahd University, Fall 2009.

ITAP 3383 Enterprise Resources Planning Systems - 3 Credit Hours Course, Prince Mohammad Bin Fahd University, Fall 2009.

Courses taught for graduate students:**Sofia University St. Kliment Ohridski, Sofia, Bulgaria:**

Mathematical Methods for Pattern Recognition - 3 Credit Hours Course, Sofia University St. Kliment Ohridski, Department of Mathematics and Informatics, Sofia, Bulgaria, 1986 - 1990.

Introduction to Cybernetics and Control Theory - 3 Credit Hours Course, Sofia University St. Kliment Ohridski, Department of Mathematics and Informatics, Sofia, Bulgaria, 1978 – 1979.

Plovdiv University Paisii Hilendarski, Plovdiv, Bulgaria:

Introduction to Programming – 3 Credit Hours Course, Plovdiv University, Department of Mathematics and Informatics, Plovdiv, Bulgaria, Spring 1992, Fall 1996.

Mathematical Methods for Pattern Recognition - 3 Credit Hours Course, Plovdiv University, Department of Mathematics and Informatics, Plovdiv, Bulgaria, Spring 1992, Fall 1996.

The University of Iowa, Iowa City, IA, USA:

Medical Informatics and Networking. Lectures for graduate students, The University of Iowa, College of Medicine, Department of Radiology, Iowa City, Iowa, USA, Spring 1998 – 18 hours,

<http://everest.radiology.uiowa.edu/courses/classS98>.

University of Medicine and Dentistry of New Jersey, Newark, NJ, USA:

Biomedical Modeling and Decision Making Systems – 3 Credit Hours Course, University of Medicine and Dentistry of New Jersey, School of Health Related Professions, Newark, New Jersey, USA, Fall 1998.

Medical Image Processing and Visualization – 3 Credit Hours Course, University of Medicine and Dentistry of New Jersey, School of Health Related Professions, Newark, New Jersey, USA, Fall 1998.

Visualization in Biomedical Sciences – 3 Credit Hours Course, University of Medicine and Dentistry of New Jersey, School of Health Related Professions, Newark, New Jersey, USA, Spring 1999.

Clinical Problem Solving and Decision Making – 3 Credit Hours Course, University of Medicine and Dentistry of New Jersey, School of Health Related Professions, Newark, New Jersey, USA, Spring 1999.

Essentials of Health Computer Science – 4 Credit Hours Course, interactive distance learning course, University of Medicine and Dentistry of New Jersey, School of Health Related Professions, Newark, New Jersey, USA, Spring 1999, Summer 1999.

Courses taught for PhD students:

Silesian Technical University, Gliwice, Poland:

Mathematical Models for Pattern Recognition. Course for PhD students, Silesian Technical University, Department of Automatic Control, Gliwice, Poland, Fall 1996 – 18 hours.

The University of Iowa, Iowa City, IA, USA:

Medical Informatics and Networking. Lectures for PhD students, The University of Iowa, College of Medicine, Department of Radiology, Iowa City, Iowa, USA, Spring 1998 – 18 hours,

<http://everest.radiology.uiowa.edu/courses/classS98>

Wroclaw University of Technology, Wroclaw, Poland:

Artificial Intelligence – 3 Credit Hours Course, Wroclaw University of Technology, Wroclaw, Poland, Fall 2008.

Combinatorial Algorithms - 3 Credit Hours Course, Wroclaw University of Technology, Wroclaw, Poland, Fall 2008.

All lectures are posted in PowerPoint format on the web page <http://edu.kssk.pwr.wroc.pl/>, login as guest, corresponding keys are AI_2008 and CA_2008.

XIII. Invited Talks on Conferences, Workshops, Colloquia and Seminars:

5th Workshop on Theoretical Foundations of Computer Vision, Buckow, Germany, March 30 – April 3, 1992. Title “Pictorial pattern recognition by Boolean formulas”.

Department of Informatics, Polytechnic University of Catalonia, Barcelona, Spain, September, 1992. Title “Recent status of document recognition and applications in recognitions of Cyrillic alphabet, Arabic numerals and special symbols in Bulgarian cadastral maps”.

3rd Open German–Russian Workshop on Image Interpretation and Pattern Recognition, Erlangen, Germany, March 22-24, 1993 (Bavarian Research Center for Knowledge-Based Systems). Title “On the determining of non-reducible descriptors for multidimensional pattern recognition problems”.

Department of Informatics, Polytechnic University of Catalonia, Barcelona, Spain, September 1993. Title “Mathematical methods for pattern recognition”.

Institute of Technical Informatics, Technical University Berlin, Germany, May, 1993. Title “Applications of pattern recognition methods in medicine”.

Institute of Technical Informatics, Technical University Berlin, Germany, June 1993. Title “Pattern recognition methods for document recognition”.

German Association for Pattern Recognition, Berlin, July 1993. Title “Recognition of Cyrillic alphabet, Arabic numerals and special symbols in Bulgarian cadastral maps”.

Center for Image Processing and Artificial Intelligence, Autonomous University of Barcelona, Spain, September 1993. Title “Recent status of document recognition and recognition of symbols in Bulgarian cadastral maps”.

Department of Mathematics and Informatics, University of Balearian Islands, Palma de Mallorca, Spain, September 1993. Title “Mathematical methods for pattern recognition and applications”.

Department of Computer Science, Istanbul Technical University, Istanbul, Turkey, December 1993. Title “Pattern recognition methods and applications”.

Department of Electrical and Electronic Engineering, Bogazici University, Istanbul, Turkey, December 1993. Title “Mathematical methods for document recognition and applications in recognition of symbols in Bulgarian cadastral maps”.

Scientific and Technical Research Council of Turkey (TUBITAK), Gebze, Turkey, December 1993. Title “Recent achievements in pattern recognition”.

Institute of Biomedical Engineering, Porto University, Porto, Portugal, March 1995. Title “Mathematical methods for pattern recognition and applications in medicine”.

Department of Information Systems and Computer Engineering, Technical University of Lisbon, Lisbon, Portugal, April 1995. Title “Mathematical

methods for pattern recognition and applications”.

Institute for Systems and Robotics, Technical University of Lisbon (campus Alameda), Lisbon, Portugal, April 1995. Title “Data mining and knowledge discovery”.

Institute of Control and System Engineering, Wroclaw University of Technology, Wroclaw, Poland, January 1996. Title “Supervised and unsupervised pattern recognition techniques and applications”.

Institute of Computer Science, Warsaw University of Technology, Warsaw, Poland, February 1996. Title “Construction of empirical regularities”.

25th Annual Spring Conference of the Union of Bulgarian Mathematicians, Kazanlyk, Bulgaria, April 1996. Title “Non-reducible descriptors and their applications in pattern recognition problems”.

Department of Telecommunications, Technical and Agriculture Academia, Bydgoszcz, Poland, May 1996. Title “Mathematical methods for pattern recognition and applications in recognition of cadastral maps”.

Forth International Conference on Computer Graphics and Image Processing, GKPO'96, Machocice, Poland, May 1996. Title “Construction of Boolean classification rules and their applications in computer vision problems”.

Second Siberian Congress on Applied and Industrial Mathematics, Novosibirsk, Russia, June 1996. Title “Mathematical methods for construction of empirical regularities and applications”.

Department of Pattern Recognition (Informatic 5), Faculty of Informatics, Friedrich-Alexander University Erlangen-Nuremberg, Erlangen, Germany, September 1996. Title “Mathematical methods for pattern recognition and applications”.

Department of Pattern Recognition (Informatic 5), Faculty of Informatics, Friedrich-Alexander University Erlangen-Nuremberg, Erlangen, Germany, October 1996. Title “The problem of learning Boolean formulas is NP-complete”.

Department of Informatics, University of Passau, Passau, Germany, October 18, 1996. Title “Recent achievements in pattern recognition and applications”.

Institute for Medical Informatics, Medical University of Lubeck, Lubeck, Germany, November 5, 1996. Title “Pattern recognition methods and applications in medicine”.

First Balkan Workshop on Applications and Perspectives of Neural Network Technology, National Technical University of Athens, Athens, Greece, February 1997. Title “Overview of the recent studies of neural networks in Bulgaria”.

Department of Electrical and Computer Engineering, National Technical University of Athens, Athens, Greece, February 1997. Title “Mathematical

methods for pattern recognition and applications”.

Department of Electrical and Electronic Engineering, Bogazici University, Istanbul, Turkey, March 1997. Title ”Mathematical methods for pattern recognition and applications”.

Department of Computer Engineering, Middle East Technical University, Ankara, Turkey, May 1997. Title ”Construction of empirical regularities”.

Department of Computer Sciences, Bilkent University, Ankara, Turkey, May 1997. Title “Pattern recognition methods using approach of non-reducible descriptors”.

Department of Electrical and Electronic Engineering, Bogazici University, Istanbul, Turkey, May 1997. Title ”Mathematical methods for computer vision and applications”.

Scientific and Technical Research Council of Turkey (TUBITAK), Gebze, Turkey, June 1997. Title “Recognition of Turkish alphabet and Arabic numerals in Turkish newspapers”.

Department of Informatics, Aristotle’s University of Thessaloniki, Thessaloniki, Greece, June 1997. Title ”Mathematical methods for pattern recognition and applications”.

Sixth International Colloquium on Numerical Analysis and Computer Science with Applications, Plovdiv, Bulgaria, August 1997. Title “Generalized non-reducible descriptors”.

Forth International Seminar on Neural Network Applications in Electrical Engineering, NEUREL-97, Belgrade, Yugoslavia, September 1997. Title “Recurrent neural networks and applications”.

Department of Computer Science, The University of Iowa, Iowa City, Iowa, USA, October 1997. Title “Mathematical methods for pattern recognition and applications”.

Department of Electrical Engineering and Computer Science, University of Illinois at Chicago, Chicago, Illinois, USA, May 1998. Title “Mathematical methods for pattern recognition and applications”.

Department of Computer Science, North Carolina A&T State University, Greensboro, North Carolina, USA, June 1998. Title “Construction of empirical regularities and applications”.

Department of Computer Science, Saint Cloud State University, Saint Cloud, Minnesota, USA, June 1998. Title ”Pattern recognition and computer vision methods”.

Department of Computer Science, The University of Texas - Pan American, Edinburg, Texas, USA, July 1998. Title “Pattern recognition methods, neural networks and applications”.

Engineering Division, Penn State University Great Valley, Malvern, Pennsylvania, USA, March 1999. Title “Achievements in machine learning

and knowledge discovery”.

Department of Computer Science, New York Institute of Technology, New York City, New York, USA, April 1999. Title “My experience as principal investigator in projects supported by the European Union and by the National Institutes of Health of USA”.

Department of Physics, Computer Science and Engineering, Christopher Newport University, Newport News, Virginia, USA, April 1999. Title “Pattern recognition and computer vision techniques and applications”.

Department of Computer Science, Saint Louis University, Saint Louis, Missouri, USA, April 1999. Title “Mathematical methods for pattern recognition and applications”.

Computing Science Research Center, Bell Laboratories, Murray Hill, New Jersey, USA, July 1999. Title “Mathematical methods for construction of empirical regularities”.

Computer Based Experiments, Learning and Teaching. International Conference organized by Wroclaw University of Technology, Wroclaw, Poland, September 1999. Title “On the experience of teaching biomedical modeling at the University of Medicine and Dentistry of New Jersey”.

Department of Electrical and Computer Engineering, School of Engineering, University of California, Irvine, California, USA, November 1999. Title “From features to predicates in pattern recognition”.

Jean H. Bakewell Section of Image Guided Surgery, Division of Neurosurgery, School of Medicine, Saint Louis University, Saint Louis, Missouri, USA, May 2000. Title “Pattern recognition techniques and applications in medicine”.

Institute of Mathematics and Informatics, Bulgarian Academy of Sciences, Sofia, Bulgaria, June 2000. Title “Virtual reality in medicine”.

Department of Signal, Image and Speech Processing, University of Surrey, Guildford, Surrey, United Kingdom, June 2001. Title “Pattern recognition and combining classifiers”.

Department of Informatics, Aristotle’s University of Thessaloniki, Thessaloniki, Greece, June 2001. Title “Virtual reality techniques in medicine”.

Institute of Biomedical Engineering, Porto University, Porto, Portugal, June 2002. Title “Virtual reality in medicine (Virtual colonography)”.

Department of Electrical and Electronic Engineering, Bogazici University, Istanbul, Turkey, July 2004. Title “Techniques of CT colonography”

Department of Electrical and Electronic Engineering, Bogazici University, Istanbul, Turkey, July 2004. Title “Supervised pattern recognition and combining classifiers”.

Indiana University School of Informatics at IUPUI, Indianapolis, Indiana,

USA, April 2005. Title "From features to predicates in supervised pattern recognition".

Department of Computer Science, Florida Southern College, Lakeland, Florida, USA, May 2006. Title "Mathematical methods for pattern recognition and applications".

Department of Computer Science, Morehouse College, Atlanta, Georgia, USA, May 2006. Title "Supervised pattern recognition and applications".

Department of Computer Science, University of Maryland, Eastern Shore, Princess Anne, Maryland, May 2006. Title "Pattern recognition methods and combining classifiers".

Department of Science, Middle East Technical University (METU), Northern Cyprus Campus, Cyprus, January 2007. Title "Computer vision techniques".

Institute of Mathematics and Informatics, Bulgarian Academy of Sciences, Sofia, Bulgaria, Conference 60 years Institute of Mathematics and Informatics, Sofia, Bulgaria, July 2007. Title "Supervised pattern recognition with different type of features".

Faculty of Electronics, Wroclaw University of Technology, Wroclaw, Poland, June 2, 2008. Title "Supervised pattern recognition problems by non-reducible descriptors".

Faculty of Electronics, Wroclaw University of Technology, Wroclaw, Poland, June 3, 2008. Title "Multidimensional pattern recognition problems and combining classifiers".

Faculty of Electronics, Wroclaw University of Technology, Wroclaw, Poland, June 4, 2008. Title "Virtual colonoscopy".

Department of Cognitive Systems, Faculty of Informatics, Technical University of Karlsruhe, Karlsruhe, Germany, June 9, 2008. Title "Multidimensional pattern recognition problems and combining classifiers".

Department of Measurement and Control, Karlsruhe Institute of Technology, Technical University of Karlsruhe, Karlsruhe, Germany, June 19, 2008. Title "Multidimensional pattern recognition problems and combining classifiers".

Department of Pattern Recognition (Informatic 5), Faculty of Informatics, Friedrich-Alexander University Erlangen-Nuremberg, Erlangen, Germany, June 27, 2008. Title "Multidimensional pattern recognition problems and combining classifiers".

Department of Information Technology, The Academy of Humanities and Economics in Lodz, Lodz, Poland, January 19, 2009. Title "Virtual colonoscopy".

XIV. Advisory Board of Books and Journals:

Member of the Advisory Board of the *International Journal of Machine GRAPHICS & VISION* since 1996; <http://www.ipipan.waw.pl/MGV/MGV.html>

Member of the Editorial Board of the *International Journal of Biomedical Engineering Research (BER)* and Section Editor of *Biomedical Imaging/Optics* since 2007; <http://www.biomedenggat.com/>

Member of the Editorial Board of the book entitled "Emergent Web Intelligence", 2008, published by Springer Verlag in the series Studies in Computational Intelligence; <http://www.u-bourgogne.fr/DBconf/Springer/>

XV. Reviewer and Author for the following journals:

- *Pattern Recognition*
- *Pattern Recognition Letters*
- *Journal of Machine GRAPHICS & VISION*
- *Pattern Recognition and Image Analysis: Advances in Mathematical Theory and Applications*
- *Critical Reviews in Biomedical Engineering*
- *Springer Series on Lecture Notes in Computer Science (LNCS)*
- *IEEE Transactions on Medical Imaging*
- *Academic Radiology*
- *Medical Physics*
- *X-ray Science and Technology*
- *Informatica*
- *IEEE Transactions on Biomedical Engineering*
- *International Journal of Biomedical Engineering Research (BER)*
- *International Journal of Pattern Recognition and Artificial Intelligence*
- *International Journal of Applied Mathematics and Computer Science (AMCS)*

XVI. Program Committee Member of International Conferences:

First International Conference on Artificial Intelligence, Scientific Secretary,

Varna, Bulgaria, September 1987.

Second International Conference on Artificial Intelligence, Sozopol, Bulgaria, 29 May - 2 June 1989.

5th International Conference on Computer Analysis of Images and Patterns, CAIP '93, Budapest, Hungary, 13 - 15 September 1993.

5th International Conference on Computer Graphics and Image Processing, GKPO '96, Potok Zloty, Poland, 18 - 22 May 1996.

4th International Symposium on Neural Network Applications in Electrical Engineering, NEUREL - 1997, Belgrade, Yugoslavia, 8 - 9 September 1997.

First International Workshop on Computer Vision, Pattern Recognition and Image Processing, CVPRIP'98 in 1998 Joint Conference on Information Sciences, Program Committee Member and Session Chair, Research Triangle Park, North Carolina, USA, October 24-28, 1998.

3rd Iberoamerican Symposium on Pattern Recognition, SIARP 1999, Havana, Cuba, March 21-26, 1999.

First International Conference on Computer Based Experiments, Learning and Teaching, COMBELET'99, organized by Wroclaw University of Technology, Szklarska Poreba, 28th September - 1st October 1999; <http://www.zssk.pwr.wroc.pl/zssk/combelet/>.

3rd International Conference on Computer Vision, Pattern Recognition and Image Processing, CVPRIP'2000, in conjunction with the Fifth Joint Conference on Information Sciences (JCIS2000), Atlantic City, USA, February 27 - March 3, 2000; <http://www.ee.duke.edu/JCIS/>

11th Portuguese Conference on Pattern Recognition, RECPAD 2000, Porto, Portugal, May 11-12, 2000; <http://ineb.fe.up.pt/recpad2000/>.

6th International Conference on Computer Graphics and Image Processing, GKPO'2000, Poland, 15 - 19 May, 2000; <http://www.ipipan.waw.pl/MGV/GKPO/>.

4th Iberoamerican Symposium on Pattern Recognition, SIARP 2000, Lisbon, Portugal, September 11-13, 2000; <http://alfa.ist.utl.pt/~siarp/>.

5th International Symposium on Neural Network Applications in Electrical Engineering, NEUREL-2000, Belgrade, Yugoslavia, 25 - 27 September 2000; <http://galeb.etf.bg.ac.yu/~neurel/>.

3rd International Conference on Information Reuse and Integration, IRI - 2001, November 27 - 29, 2001, Las Vegas, Nevada, USA; <http://www.isca-hq.org/IRI-2001/>.

4th International Conference on Computer Vision, Pattern Recognition and Image Processing, CVPRIP'2002; <http://www.ee.duke.edu/JCIS/>, in conjunction with the Sixth Joint Conference on Information Sciences, JCIS20002; <http://www.ee.duke.edu/JCIS/>, Mar. 8 - 12, 2002, Durham, North

Carolina, USA; <http://www.cs.usu.edu/cheng/CVPRIP2002/>.

12th Portuguese Conference on Pattern Recognition, RECPAD 2002, Porto, Portugal, June 28-30, 2002; <http://ineb.fe.up.pt/recpad2002/>.

International Conference on Computer Vision & Graphics, ICCVG 2002, Zakopane, Poland, September 25-29 '2002; <http://www.zts.ia.polsl.gliwice.pl/iccvg/>.

6th International Symposium on Neural Network Applications in Electrical Engineering, NEUREL - 2002, Belgrade, Yugoslavia, 26 – 28 September 2002; <http://galeb.etf.bg.ac.yu/~neurel/>.

5th International Conference on Computer Vision, Pattern Recognition and Image Processing, CVPRIP'2003, September 26 - 30, 2003, Research Triangle Park, North Carolina, USA.

The 2003 IEEE International Conference on Information Reuse and Integration, IRI-2003, October 27-29, 2003, Las Vegas, Nevada, USA; <http://parks.slu.edu/IRI2003/>.

5th International Conference on Computer Vision, Pattern Recognition and Image Processing, CVPRIP 2003, September 26-30, 2003, Research Triangle Park, North Carolina, USA; <http://www.cs.usu.edu/cheng/CVPRIP2003/>. In conjunction with the Seventh International Joint Conference on Information Sciences, JCIS 2003, Research Triangle Park, North Carolina, USA; <http://www.ee.duke.edu/JCIS/>.

8th Iberoamerican Congress on Pattern Recognition, CIARP'2003, Havana, Cuba, November 26-29, 2003; <http://cimaf2003.iespana.es/text%B4s/ciarp2003/>.

7th International Symposium on Neural Network Applications in Electrical Engineering, NEUREL 2004, Belgrad, September 23 - 25, 2004, Serbia; <http://neurel.etf.bg.ac.yu/~neurel/>.

International Conference of Computer Graphics and Vision, ICCVG 2004, Warsaw, Poland, September 22 - 24, 2004; <http://atena.polsl.pl/iccvg>.

The 2004 IEEE International Conference on Information Reuse and Integration, IRI 2004, November 8-10, 2004, Las Vegas, Nevada, USA; <http://www.cs.fiu.edu/IRI04/>.

9th Iberoamerican Congress on Pattern Recognition, CIARP'2004, Puebla, Mexico, October 26-29, 2004; <http://ccc.inaoep.mx/CIARP2004/>.

Fourth International Conference on Computer Recognition Systems, organized by the Department of Systems and Computer Networks of Wroclaw University of Technology, CORES'2005, Rydzyna Castle near Leszno, Poland, May 22-25, 2005; <http://cores.pwr.wroc.pl/>.

10th Iberoamerican Congress on Pattern Recognition, CIARP'2005, Havana, Cuba, November 15-18, 2005; <http://xciarp.cenatav.co.cu/>.

6th International Conference on Computer Vision, Pattern Recognition and Image Processing, CVPRIP'2005, July 21-26, 2005, Salt Lake City, Utah USA; in conjunction with the Eight International Joint Conference on Information Sciences, JCIS 2005, Salt Lake City, Utah, USA; <http://www.jcis.org/>.

8th International Symposium on Neural Network Applications in Electrical Engineering, NEUREL 2006, Belgrad, September 25 - 27, 2006, Serbia; <http://neurel.etf.bg.ac.yu/~neurel/>.

World Congress on Engineering & Computer Science 2007, San Francisco, USA, 24 - 26 October 2007; <http://www.iaeng.org/WCECS2007/>.

International Conference on Soft Computing and Applications, ICSCA'07, San Francisco, USA, 24 - 26 October, 2007; <http://www.iaeng.com/WCECS2007/ICSCA2007.html>.

International Conference on Signal Processing and Imaging Engineering, ICSPIE'07, San Francisco, USA, 24 - 26 October, 2007; <http://www.iaeng.com/WCECS2007/ICSPIE2007.html>.

Fifth International Conference on Computer Recognition Systems, CORES'07, organized by the Department of Systems and Computer Networks of Wroclaw University of Technology, 22 - 25 October 2007, Wroclaw, Poland; <http://cores.pwr.wroc.pl/index.php>.

12th Iberoamerican Congress on Pattern Recognition, CIARP'2007, Vina Del Mar, Valparaiso, Chile, November 13 - 16, 2007; <http://www.ciarp.org/>.

Member of the Editorial Board of the book entitled "Emergent Web Intelligence", 2008, published by Springer Verlag in the series Studies in Computational Intelligence; <http://www.u-bourgogne.fr/DBconf/Springer/>.

8th Polish – British Workshop on Computer Systems Engineering Theory and Applications, Sokolowsko, Poland, 28 May – 1 June, 2008, organized by Wroclaw University of Technology, Wroclaw, Poland and Coventry University, Coventry, The United Kingdom.

The 2008 High Performance Computing & Simulation Conference, HPCS 2008. In conjunction with The 22nd European Conference on Modeling and Simulation, ECMS 2008, Nicosia, Cyprus, June 3 - 6, 2008; <http://cisedu.us/cis/hpcs/08/>.

13th Iberoamerican Congress on Pattern Recognition, XIII CIARP, Havana, Cuba, September 9 – 12, 2008; <http://www.ciarp.org/>.

9th International Symposium on Neural Network Applications in Electrical

Engineering, NEUREL 2008, Belgrad, September 25 - 27, 2008, Serbia;
<http://neurel.etf.bg.ac.yu/>.

Fifth IEEE International Conference on Soft Computing as Transdisciplinary Science and Technology, CSTST'08, 26 - 30 October, 2008, Cergy-Pontoise, Paris, FRANCE; <http://cstst.insa-lyon.fr/>.

World Congress on Engineering & Computer Science 2008, San Francisco, USA, 22 - 24 October 2008;
<http://www.iaeng.org/WCECS2008/>.

Sixth International Conference on Computer Recognition Systems, CORES'09, organized by the Department of Systems and Computer Networks of Wroclaw University of Technology, 25 - 28 May 2009, Jelenia Gora, Poland; <http://cores.pwr.wroc.pl/index.php>.

The 2009 High Performance Computing & Simulation Conference, HPCS 2009. In conjunction with the International Wireless Communications and Mobile Computing Conference, IWCMC 2009, Leipzig, Germany, June 21 - 24, 2009; <http://cisedu.us/cis/hpcs/09/>.

International Conference on Management of Emergent Digital EcoSystems, MEDES'09, INSA de Lyon, Lyon, France, October 27 - 30, 2009; <http://sigappfr.acm.org/MEDES>.

World Congress on Engineering & Computer Science 2009, San Francisco, USA, 20 - 22 October 2009; <http://www.iaeng.org/WCECS2009/>.

International Symposium Understanding Intelligent and Complex Systems, Petru Maior University, Targu Mures, Romania, 22 - 23 October 2009;
<http://uics.upm.ro/>.

14th Iberoamerican Congress on Pattern Recognition, CIARP2009, Guadalajara, Mexico, 15 - 18 November, 2009;
<http://www.ciarp.org/xiv/index.php>.

1st Mexican Workshop on Pattern Recognition, MWPR2009, Guadalajara, Mexico, 14 November, 2009; <http://ccc.inaoep.mx/~mwpr2009/>.

International Conference on Information Systems and Software Engineering, Meenakshi Sundararajan Engineering College, Anna University, Chennai, Tamil Nadu, India, 28 - 30 December 2009; <http://www.icisse.org/>.

The 2010 International Conference on High Performance Computing & Simulation, HPCS 2010. In conjunction with the 6th International Wireless Communications and Mobile Computing Conference, IWCMC 2010, Caen, Normandy, France, June 28 - July 2, 2010;
<http://cisedu.us/cis/hpcs/10/main/callForPapers.jsp>.

International Conference of Computer Graphics and Vision, ICCVG 2010, Warsaw, Poland, September 20 - 22, 2010;
<http://www.iccv2010.pjwstk.edu.pl/>; <http://www.tpo.org.pl/iccv2010>.

Second Mexican Conference on Pattern Recognition, MCPR2010, Puebla City, Mexico, September 27 – 29, 2010;

XVII. Chair of Program Committees on International Conferences:

Chair of Session on the 15th International Conference on Pattern Recognition, 15 IAPR, September 3-8, 2000, Barcelona, Spain;
<http://www.cvc.uab.es/ICPR2000/>.

Chair of Session on the 5th International Conference on Computer Vision, Pattern Recognition and Image Processing, CVPRIP'2003, September 26-30, 2003, Research Triangle Park, North Carolina, USA;
<http://www.cs.usu.edu/cheng/CVPRIP2003/>.

Co-chair of the Conference Committee of the International Conference on Machine Learning and Data Analysis 2007, ICMLDA'07, San Francisco, USA, 24 - 26 October 2007;
<http://www.iaeng.org/WCECS2007/ICMLDA2007.html>, and member of the Program Committee of the World Congress on Engineering & Computer Science 2007, San Francisco, USA, 24 - 26 October 2007;
<http://www.iaeng.org/WCECS2007/>.

Program Chair and Organizer of the Special Session on Pattern Analysis and Recognition, PAR'2008 as part of the 2008 High Performance Computing & Simulation Conference, HPCS 2008. In conjunction with The 22nd European conference on Modeling and Simulation, ECMS 2008, Nicosia, Cyprus, June 3 - 6, 2008; <http://cisedu.us/cis/hpcs/08/>.

Co-chair of the Conference Committee of the International Conference on Machine Learning and Data Analysis 2008, ICMLDA'08, San Francisco, USA, 22-24 October 2008;
<http://www.iaeng.org/WCECS2008/ICMLDA2008.html>, as a part of the World Congress on Engineering & Computer Science 2008, San Francisco, USA, 22-24 October 2008; <http://www.iaeng.org/WCECS2008/>.

Program Chair and Organizer of the Special Session on Pattern Analysis and Recognition, PAR'2009;
<http://cisedu.us/cis/hpcs/09/main/storageDocs.jsp?doc=/storage/docs/hpc/s/09/sessions/SS1-PAR2009-CFP.htm>
 as part of the 2009 High Performance Computing & Simulation Conference, HPCS 2009. In conjunction with the International Wireless Communications and Mobile Computing Conference, IWCMC 2009, Leipzig, Germany, 21 – 24 June, 2009;
<http://cisedu.us/cis/hpcs/09/main/callForPapers.jsp>.

Co-chair of the Conference Committee of the International Conference on Machine Learning and Data Analysis 2009, ICMLDA'09, San Francisco, USA, 20-22 October 2009;

<http://www.iaeng.org/WCECS2009/ICMLDA2009.html>, and member of the Program Committee of the World Congress on Engineering & Computer Science 2009, San Francisco, USA, 20-22 October 2009; <http://www.iaeng.org/WCECS2009/>.

Program Chair and Organizer of the Special Session on Pattern Analysis and Recognition, PAR'2010; as part of the 2010 International Conference on High Performance Computing & Simulation, HPCS 2010. In conjunction with The 6th International Wireless Communications and Mobile Computing Conference, IWCMC 2010, Caen, Normandy, France, June 28 – July 2, 2010; <http://cisedu.us/cis/hpcs/10/main/callForPapers.jsp>.

XVIII. Committee Assignments at Saint Louis University, Saint Louis, MO, USA:

College Affairs Committee – member 2000/2001; chair 2001/2002

Graduate and Research Affairs Committee – member 2002/2003

Students Affairs Committee – member 2002/2003, 2003/2004

Academic Affairs Committee – member 2003/2004

XIX. Committee Assignments at Prince Mohammad Bin Fahd University (PMU), Al Khobar, Kingdom of Saudi Arabia for the Academic year 2009/2010:

I. PMU Committees:

1. Library Service Committee – member
2. Student Affairs Committee – member
3. Learning and Teaching Committee – Deputy Chair
- 4.

II. College of Information Technology Committees:

1. Curriculum Review and Development Committee – member
2. Research Committee – Chair
3. Promotions Committee – member

XX. Participation in Grants, Projects and Contracts:

Principal investigator of the team from the Institute of Mathematics and Informatics of the Bulgarian Academy of Sciences in joint project, supported by the program of the European Union COST. COST is an intergovernmental framework for European Co-operation in the field of Scientific and Technical Research. COST, Ref.No.10239, ICICM Innovative Computer-Aided Interpretation of Cadastral Maps. Participating countries were Germany,

Slovakia and Bulgaria for the period January 1993 – December 1994.

Individual mobility grant supported by the European Union COST Ref. No. CIPA3510PL920644, Document Structural Analysis, Recognition and Understanding, Technical University Berlin, Germany, May - July 1993.

Individual mobility grant supported by the European Union, TEMPUS Ref. No. IMG-93-BG-1182, Polytechnic University of Catalonia, Barcelona, Spain, September-October 1993.

Principal investigator of the team from the Bulgarian Academy of Sciences in joint project, supported by the Bulgarian Ministry of Defense for Computer Prediction of Short Term Weather Forecasting for Bulgarian airports using archive data for the last 10 years of the weather in Europe, May 1993 – April 1995.

Individual grant supported by DAAD (Deutscher Akademischer Austauschdienst), German Academic Exchange Service, Ref. No. 324-bg-96-ub SO-Europe, Erlangen-Nurnberg University, Erlangen, Germany, September - November 1996.

Individual mobility grant supported by the European Union, Directorate-General III (Industry), Contract No. 109707/1996, Ireland, October 1996.

Principal investigator of the team from the Institute of Mathematics and Informatics of the Bulgarian Academy of Sciences in joint project with the Dorodnicyn Computing Centre of the Russian Academy of Sciences, Moscow, Russian Federation, on Algebraic Methods for Pattern Recognition, January 1996 – December 1997.

Individual grant supported by the Scientific and Technical Research Council of Turkey (TUBITAK), Bogazici University, Istanbul, Turkey, March - July 1997.

Investigator in the project GARILDI on Optical Character Recognition of Turkish Newspapers, supported by the Scientific and Technical Research Council of Turkey (TUBITAK), Gebze, Turkey, March - July 1997.

Investigator in the medical project NIH DK50184 on Gastrointestinal Tract Unraveling by Spiral Computer Tomograph, supported by the National Institutes of Health of USA in the University of Iowa, College of Medicine, Department of Radiology, Iowa City, Iowa, USA, for the period September 1997 – August 1998.

Reviewer and expert in the Seventh Research Framework Program of the European Union.

XXI. Books:

V. Valev, G.Gluhchev. *Methods for Pattern Recognition*. Scientific and Technical Unions, Publishing House, Sofia, Bulgaria, 1986.

XXII. Published selected papers:

1. V.Valev. Pattern recognition problems with very large training tables – a method for selecting the essential subproblems. Proceedings of the Shumen University, Shumen, 1982, pp.195-204, in Russian.
2. G.Gluhchev, V.Valev. Visual pattern recognition software. In the book: Information and Control Systems for Robots. D.E.Okhotsimski (Ed.). Moscow, 1982, pp.121-124, in Russian.
3. G.Gluhchev, V.Valev. Pattern recognition in robotics. Proceedings of 2nd International Conference on Artificial Intelligence and Information-Control Systems of Robots, Smolenice, Czechoslovakia, 1982, pp.96-98, in Russian.
4. V.Valev. A program system for finding optimal solution of a system of linear inequalities and its application for solving pattern recognition problems. Proceedings of the 11th Annual Spring Conference of the Union of the Bulgarian Mathematicians, Publishing House of the Bulgarian Academy of Science, Slantchev Briag, Bulgaria, April 1982, pp.338-344, in Russian.
5. V.Valev. Pattern recognition problems with very large training tables. Proceedings of the 11th Annual Spring Conference of the Union of the Bulgarian Mathematicians, Publishing House of the Bulgarian Academy of Science, Slantchev Briag, Bulgaria, April 1982, pp.330-337, in Russian.
6. V.Valev. A method for automatic recognition objects by colors. Problems of Technical Cybernetics and Robotics, Vol.18, Publishing House of the Bulgarian Academy of Science, 1983, pp.37-39, in Russian.
7. V.Valev. Principle of verification of set partitions. Proceedings of the 12th Annual Spring Conference of the Union of the Bulgarian Mathematicians, Publishing House of the Bulgarian Academy of Science, Slantchev Briag, Bulgaria, April 1983, pp.167-170, in Russian.
8. V.Valev. Set partition principles. Transactions of the Ninth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes, Prague, June 28 - July 2, 1982, Publishing House of the Czechoslovak Academy of Science, Prague, 1983, pp.251-256.
9. E.Matveeva, V.Valev. Quantitative determination of oxygen debt values and respiration of organisms in sea sediments. Comptes rendus de l'Academie Bulgare des Sciences, Biology, Vol.36, No.8, 1983, pp.1115-1118.
10. D.Mutafov, G.Gluhchev, V.Valev, St.Dimitrova. A system for image recognition. In the book: Knowledge Representation in Man-machine Robotic Systems. Vol. D. Computing Center of the Russian Academy of Sciences, Moscow, 1984, pp.166-172, in Russian.
11. D.Tashev, I.Vassilev, V.Valev, N.Kovatcheva. Statistical analysis of caste polymorphism in *Camponotus ligniperda* (Latreille) (Hym., Formicidae). Annual of Sofia University St. Kliment Ohridski, Department

- of Biology, Book Zoology, Vol.76, 1984, pp.72-78, in Bulgarian.
12. D.Mutafov, G.Gluhchev, St.Dimitrova, V.Valev. Microprocessor pattern recognition system. Proceedings of Bulgarian-Polish Symposium on Optimization, Decision Making and Microprocessor Systems, Sofia, 1985, pp.199-202, in Russian.
 13. E.Decheva, V.Valev. A chromosome analysis system. Proceedings of 1st International Seminar on Theory and Applications of Artificial Intelligence, Varna, Bulgaria, 1987, pp.101-105, in Russian.
 14. V.Valev. Method for transforming real training data into k-values in pattern recognition problems. Annual of Sofia University St. Kliment Ohridski, Department of Mathematics and Mechanics, Book Mathematics, Vol.80, 1987, pp.23-28, in Russian.
 15. V.Valev. On the representation of training tables in a k-valued code and the construction of empirical regularities. Proceedings of 9th International Conference on Pattern Recognition, 9th ICPR, Rome, November 14-17, 1988, IEEE Computer Society Press, 1988, Vol.II, pp.779-781.
 16. V.Valev. Representation of training tables in k-valued code in the pattern recognition problems with the random search algorithm with adaptation. Proceedings of 2nd International Conference on Artificial Intelligence, Sozopol, Bulgaria, May 29 - June 2, 1989, pp.116-121, in Russian.
 17. E.Decheva, V.Valev. Knowledge-based automated chromosome analysis system - a conception. Proceedings of 3rd International Conference on Computer Analysis of Image and Patterns, CAIP'89, Leipzig, Germany, September 8-10, 1989, pp.99-101.
 18. V.Valev, Yu.Zhuravlev. Integer-valued problems of transforming the training tables in k-valued code in pattern recognition problems. Pattern Recognition, 1991, Vol.24, No.4, pp.283-288.
 19. V.Valev, M.Velikov, E.V.Djukova. A program system for solving pattern recognition problems on the basis of construction of empirical regularities (for the platform IBM 4341). Preprint of the Computing Center, Russian Academy of Sciences, Moscow, Russia, 1991, 20 pp., in Russian.
 20. V.Valev, P.Radeva. Determining structural description by Boolean formulas. In the book: Advances in Structural and Syntactic Pattern Recognition. H. Bunke (Ed.). Series in Machine Perception and Artificial Intelligence, Vol.5, World Scientific Publishing Co., 1992, pp.131-140.
 21. V.Valev, P.Radeva. A method for solving pattern or image recognition problem by learning Boolean formulas. Proceedings of 11th International Conference on Pattern Recognition, 11th ICPR, Hague, Netherlands, August 30 - September 3, 1992, IEEE Computer Society Press, Vol.II, 1992, pp.359-362.
 22. V.Valev. The problem of learning Boolean formulas is NP-complete. Extended abstract, Proceedings of the 12th World Computer Congress, Stream: Algorithms and Efficient Computation, Madrid, Spain, September

- 7-11, 1992, pp. 249-256.
23. V.Valev. Pictorial pattern recognition by Boolean formulas. In the book: Mathematical Research, Theoretical Foundation of Computer Vision, R.Klette and W.Kropatsch (Eds.). Volume 69, Proceedings of 5th Workshop on Theoretical Foundation of Computer Vision, Buckow, Germany, March 29 - April 3, 1992. Akademie Verlag, Mathematical Research, 1993, Vol.69, pp.241-250.
 24. V.Valev, P.Radeva. On the determining of non-reducible descriptors for multidimensional pattern recognition problems. Pattern Recognition and Image Analysis: Advances in Mathematical Theory and Applications, published by Interperiodica Publishing in cooperation with the "Cybernetics" Scientific Council, Russian Academy of Sciences, Vol.3, No.3, 1993, pp.258-265.
 25. V.Valev. A model-based image quantization technique in supervised image recognition. 5th International Conference on Computer Analysis of Images and Patterns, CAIP'93, Budapest, Hungary, September 13-15, 1993, In the book: Computer Analysis of Images and Patterns, D.Chetverikov and G.Kropatsch (Eds.). Lecture Notes in Computer Science (LNCS), Vol.719, Springer-Verlag, Berlin, Heidelberg, 1993, pp.128-132.
 26. V.Valev, P.Radeva. Structural pattern recognition by non-reducible descriptors. In the book: Shape, Structure and Pattern Recognition. D.Dori and A.Bruckstein (Eds.). Series on Machine Perception and Artificial Intelligence, World Scientific Publishing Co., 1994, pp.221-230.
 27. V.Valev, P.Radeva. ECG recognition by non-reducible descriptors. Proceedings of 7th Portuguese Conference on Pattern Recognition, RECPAD 1995, Aveiro, Portugal, March 23-24, 1995, pp.321-325.
 28. V.Valev, P.Radeva. Constructing of quantitative non-reducible descriptors. Proceedings of 9th Scandinavian Conference on Image Analysis, 9th SCIA, Uppsala, Sweden, June 6-9, 1995, pp.981-988.
 29. V.Valev. Non-reducible descriptors and their applications in pattern recognition problems. Proceedings of 25th Annual Spring Conference of the Union of the Bulgarian Mathematicians, Publishing House of the Bulgarian Academy of Science, Kazanlyk, Bulgaria, April 1996, pp.29-44, in Bulgarian.
 30. V.Valev. Construction of Boolean classification rules and their applications in computer vision problems. International Journal on Machine GRAPHICS & VISION, Vol.5, Nos.1/2, 1996, pp.5-23.
 31. V.Valev, P.Radeva. Construction of Boolean decision rules for ECG recognition by non-reducible descriptors. Proceedings of 13th International Conference on Pattern Recognition, 13th ICPR, Vienna, Austria, August 25-30, 1996, Vol.B, pp.111-115.
 32. V.Valev. Overview of the recent studies of neural networks in Bulgaria.

- Proceedings of the Workshop on Applications and Perspectives of Neural Network Technology in Greece and the Broader Balkan Area, 21 February 1997, National Technical University of Athens, Athens, Greece, 1997, pp.130-136.
33. V.Valev, P.Radeva. ECG recognition by Boolean decision rules. Proceedings of the 14th Medical Informatics Conference - Europe'97, MIE'97, Studies in Health Technology and Informatics, Vol.43, C.Pappas, N.Maglaveras and J.-R.Scherrer (Eds.), 1997, pp.556-560.
 34. V.Valev, I.Baruh. Recurrent neural networks and applications. Proceedings of the 4th Seminar on Neural Network Applications in Electrical Engineering, NEUREL-97, Faculty of Electrical Engineering, University of Belgrade, Yugoslavia, September 8-9, 1997, pp.115-126.
 35. V.Valev. Set partition principles revisited. In the book: Advances in Pattern Recognition, A.Amin, D.Dori, P.Pudil and H.Freeman (Eds.). Lecture Notes in Computer Science (LNCS), Vol.1451, Springer-Verlag, Berlin, Heidelberg, 1998, pp.875-881.
 36. V.Valev, G.Wang, M.W.Vannier. Techniques of CT colonography (Virtual Colonoscopy). Critical Reviews in Biomedical Engineering, Vol. 27, Issues 1&2, 1999, pp.1-26.
 37. V.Valev. Supervised pattern recognition by feature partitioning. Proceedings of the Eight Turkish symposium on artificial intelligence and neural networks, TAINN'99, June 23-25, 1999, Bogazici University, Istanbul, Turkey, pp.115-121.
 38. V.Valev. On the experience of teaching biomedical modeling at the University of Medicine and Dentistry of New Jersey. Proceedings of the International Conference on Computer Based Experiments, Learning and Teaching, COMBELET'99, organized by Wroclaw University of Technology, Szklarska Poreba, Poland, September 24 – October 1, 1999, pp.263-268.
 39. V.Valev, A.Asaithambi. Multidimensional pattern recognition problems and combining classifiers. Proceedings of 11th Portuguese Conference on Pattern Recognition, RECPAD 2000, Porto, Portugal, May 11th - 12th, 2000, pp.393-397.
 40. V.Valev, P.Radeva, B.Sankur. Generalized non-reducible descriptors. Proceedings of 15th International Conference on Pattern Recognition, 15th IAPR, Barcelona, Spain, September 3-8, 2000, Vol.2: Pattern Recognition and Neural Networks, pp.394-397.
 41. V.Valev, A.Asaithambi. Multidimensional pattern recognition problems and combining classifiers. Pattern Recognition Letters, Vol.22, 2001, pp. 1291-1297.
 42. A.Asaithambi, V.Valev. A decision-tree approach to the discovery of empirical regularities. Proceedings of 3rd International Conference on Information Reuse and Integration, A Publication of IEEE Systems, Man,

- and Cybernetics Society (SMC), IRI 2001, Las Vegas, Nevada, USA, November 27-29, 2001, pp.18-23.
43. V.Valev, A.Asaithambi. On computational complexity of non-reducible descriptors. 12th Portuguese Conference on Pattern Recognition, RECPAD 2002, Aveiro, Portugal, June 27-28, 2002, on CD.
 44. V.Valev, A.Asaithambi. Fuzzy non-reducible descriptors. 5th International Conference on Computer Vision, Pattern Recognition and Image Processing, CVPRIP 2003, Research Triangle Park, North Carolina, USA, September 26-30, 2003, Proceedings of the 7th Joint Conference on Information Sciences, JCIS 2003, pp.651-654.
 45. V.Valev. Supervised pattern recognition by parallel feature partitioning. 5th International Conference on Computer Vision, Pattern Recognition and Image Processing, CVPRIP 2003, Research Triangle Park, North Carolina, USA, September 26-30, 2003 Proceedings of the 7th Joint Conference on Information Sciences, JCIS 2003, pp.833-836.
 46. V.Valev, A.Asaithambi. On computational complexity of non-reducible descriptors. Proceedings of 5th International Conference on Information Reuse and Integration, A Publication of IEEE Systems, Man, and Cybernetics Society (SMC), IRI 2003, Las Vegas, Nevada, USA, October 27-29, 2003, pp.208-211.
 47. V.Valev, A.Asaithambi. Fuzzy non-reducible descriptors. International Journal on Machine GRAPHICS & VISION, Vol.12, No.3, 2003, pp.353-361.
 48. V.Valev. Supervised pattern recognition by parallel feature partitioning. Pattern Recognition, Vol.37, No.3, 2004, pp.463-467.
 49. A.Asaithambi, V.Valev. Construction of all non-reducible descriptors. Pattern Recognition, Vol.37, No.9, 2004, pp.1817- 1823.
 50. V.Valev, B.Sankur. Generalized non-reducible descriptors. Pattern Recognition, Vol.37, No.9, 2004, pp.1809-1815, included in Zentralblatt MATH Database (1931-2008) 1070.68602.
 51. V.Valev. Supervised pattern recognition with heterogeneous features. 9th Iberoamerican Congress on Pattern Recognition, CIAPR 2004, Puebla, Mexico, October 26-29, 2004. In the book: Progress in Pattern Recognition, Image Analysis and Applications. A.Sanfeliu, J.F.Martinez Trinidad and J.A.Carrasco Ochoa (Eds.). Published by Lecture Notes in Computer Science (LNCS), Vol. 3287, Springer-Verlag, Berlin, Heidelberg, 2004, pp.693-700.
 52. V.Valev. Supervised pattern recognition with heterogeneous features. International Journal on Machine GRAPHICS & VISION, Vol.13, No.4, 2005, pp.345-353.
 53. V.Valev. Technical Cybernetics. Technical Encyclopedia of Physics, Mathematics and Techniques, Vol. 3, Bulgarian Academy of Sciences,

Bulgarian Encyclopedia, Academic Publishing Company "Prof. Marin Drinov", Sofia, Bulgaria, 2008, p. 379.

XXIII. Impact factor of journals for corresponding years of publications:

- Comptes rendus de l'Academie Bulgare des Sciences, one publication in 1983, impact factor 0.091.
- Pattern Recognition, one publication in 1991, impact factor 0.805.
- Pattern Recognition, 3 publications in 2004, impact factor 2.176.
- Pattern Recognition Letters, one publication in 2001, impact factor 0.552.
- International Journal on Machine GRAPHICS & VISION, 3 publications in 1996, 2003, and 2004, rejection rate for the year 2004 is 0.58.
- Critical Reviews in Biomedical Engineering, one publication in 1999, impact factor 0.722.
- Lecture Notes in Computer Science (LNCS), one publication in 1993, impact factor 0.125.
- Lecture Notes in Computer Science (LNCS), one publication in 1999, impact factor 0.872.
- Lecture Notes in Computer Science (LNCS), one publication in 2004, impact factor 0.513.

XXIV. Citations of the obtained results:

Obtained theoretical and practical results are used and cited by many authors more than 100 times in computer science journals, conference proceedings and periodicals with impact factor.

XXV. References:

Upon request.