



Curriculum Vitae

Personal Information

Name:

Nikola Kirilov Kasabov

nkasabov@aut.ac.nz

<https://kedri.aut.ac.nz/staff/staff-profiles/professor-nikola-kasabov>

Qualifications

| Qualification name: | Institution: | Date of Graduation: |
|---|----------------------------------|---------------------|
| PhD (Math. Sciences) | Technical University (TU), Sofia | 07.04.1975 |
| PostGrad Diploma (Applied Math.) | Technical University, Sofia | 30.09.1972 |
| MSc (Electrical Eng., spec. Computer Science) | Technical University, Sofia | 30.09.1971 |

Professional Affiliations/Memberships

- IEEE (Institute of Electrical and Electronic Engineers), since 1994, Fellow 2010
- RSNZ (Royal Society of New Zealand), since 1996, Fellow, 2001
- IITP (previously New Zealand Computer Society), since 1992, Fellow 2002
- INNS (International Neural Network Society) since 1995, Fellow of the INNS College of Fellows, 2019.
- APNNA (Asia-Pacific Neural Network Assembly) since 1993, Co-founder.

Distinctions (e.g., prizes, scholarships, invited memberships, notable posts, honorary degrees):

- President of the Asia-Pacific Neural Network Society (APNNS), 2019.
- Fellow of the INNS College of Fellows, since 2019.
- Honorary Professor, Teesside University, UK, since 2019.
- The INNS Ada Lovelace Meritorious Service Award, 2018.
- Doctor Honoris Causa, Obuda University, Budapest, 2018.
- New Zealand Inventor of the year (certificate, 2018)
- The Neural Networks journal best paper Award for publication in 2016.
- Advisory Professor to Shanghai Jiao Tong University, since 2010.
- Distinguished Visiting Fellowship, The Scottish Informatics & Computer Science Alliance, 2016.
- The AUT Medal for 2015 – sustained and outstanding contribution to the academic success of AUT, 2015.
- Distinguished Visiting Fellowship, the Royal Academy of Engineering (RAE), UK, 2013.
- Recipient of the ‘Outstanding Achievements Award’ of the Asia Pacific Neural Network Assembly (APNNA), 2012.
- Recipient of the INNS Gabor Award for 2012 (www.inns.org).
- EU FP7 Marie Curie Fellowship, 2011 and 2012, INI/ETH and University of Zurich.
- Distinguished Lecturer of the IEEE Distinguished Lectureship Program, CI Society (2011-2013).
- Fellow of the IEEE (the Institute of Electrical and Electronic Engineers), since 2010.
- President, International Neural Network Society (INNS, www.inns.org), 2009-2010.
- Member of the Board of Governors, INNS, since 2005.
- Honorary Guest Professor at Shanghai Jiao Tong University, China, (since 2010).
- The AUT Vice Chancellor Award for Individual Research Excellence, 2010.
- President, Asia-Pacific Neural Network Assembly, APNNA, www.apnna.net, 2008.
- Best Paper Award, IEEE International Workshop on Data Mining & Artificial Intelligence, in conjunction with 11th IEEE Int. Conference on Computer and Information Technology (ICCIT2008), Bangladesh.
- The Bayer Science Innovator Award, 2007.
- The AUT Vice Chancellor’s Award for Postgraduate Research Supervision, 2007.
- DAAD Visiting Professorship, 2005-2006, Germany.
- APNNA Excellent Service Award for overall contribution to Neuro-information Processing, 2005.

- President of the Asian Pacific Neural Network Assembly (APNNA), 1997 and 2008.
- International Neural Network Society, Vice President, 2007 and 2008
- Best Paper Award, IEEE 2003 Int. Conf. on Neural Networks & Signal Processing, Nanjing, China, December 2003.
- Fellow of the Royal Society of New Zealand, since 2001.
- The Royal Society of New Zealand Silver Medal for Contribution to Science and Technology, 2001.
- Member of the Top Achiever Doctoral Committee, Tertiary Education Committee, NZ (since 1999).
- International Neural Network Society, Distinction, Washington DC, 1999.
- New Zealand FRST Award for supervision of a PhD student (M. Laws), 1999.
- Best paper award, The Fourteenth European Meeting on Cybern. and System Research, Vienna, 04/1998.
- IFIP (International Federation for Information Processing), WG 12 for Artificial Intelligence, since 1997
- NWO/SION (Dutch Organisation for Scient./Comp.Science) Research Grant, U. Maastricht, The Netherlands, 1998.
- Research Fellowship Grant, University of Twente, The Netherlands, 1998.
- Prize for Invention with High Practical Applicability, National Institute of Inventions, Bulgaria, 1992.
- Leverhulme Trust Research Fellowship, University of Essex, United Kingdom, 1989/90.
- Czechoslovakia, Research Fellowship, Institute of Cybernetics, Bratislava, 1987.
- Research Fellowship, Research and Education Ministry, The Netherlands, 1984.

Languages (in addition to English)

- Bulgarian, fluently written and spoken
- Russian, written and spoken
- German, moderately written and spoken
- Italian, beginner

Employment History

(a) Present Positions

- Professor of Knowledge Engineering, School of Engineering, Computing, Mathematical Sciences, Auckland University of Technology (AUT), since June 2002.
- Founding Director, Knowledge Engineering and Discovery Research Institute, KEDRI (www.kedri.aut.ac.nz), AUT, since June 2002.
- George Moore Professor of Data Analytics, Ulster University, since 2020.
- Advisor-Professor, Shanghai Jiao Tong University, since 2010.

(b) Employment History

- Professor and Personal Chair, Department of Information Science, University of Otago, 02/1999 – 06/2002.
- Founding Director, Knowledge Engineering Laboratory, University of Otago, 1994 – 2002.
- Associate Professor, Department of Information Science, U.Otago, 1996 to 1998.
- Senior Lecturer, University of Otago/Department of Information Science, 1992 –1995.
- Research Fellow and Senior Lecturer, University of Essex (UK)/Department of Computer Science, 1989 –1991.
- Associate Professor, Technical University (TU) (Sofia)/Department of Computer Science, 1988 – 1989.
- Director of International Graduate School in Artificial Intelligence, TU Sofia, 1988 – 1991.
- Lecturer and Senior Lecturer, TU Sofia/ Department of Computer Science, 1978 – 1988.
- Research Fellow, TU Sofia/Department of Computer Science, 1976 – 1978.

Other Relevant Experience

(a) Experience Working in Other Countries

- EU FP7 Marie Curie Visiting Professor, INI/ETH and University of Zurich, 1.06.2011--30.11.2012.
- Germany, DAAD Visiting Professor, U. Kaiserslautern, 1.10.2005-28.02.2006.
- Italy, Visiting Professor, University of Trento: March-April 2001; March-June 2000; March – May 1998.
- The Netherlands, Visiting Research Fellow: University of Twente, 06/ 1998; Univ. Maastricht, 1-2/ 1998.
- The UK, Leverhulme Trust Research Fellow, University of Essex, 1989-1990.
- Czechoslovakia, Visiting Research Fellow, Institute of Cybernetics (Bratislava) 6-7/1987.
- The Netherlands, Research Fellow, University of Delft, 2-7/ 1984.

(b) National/International Collaboration

- MBIE funded project on Data Science NZ-Singapore, 2020-2023.
- EU funded project PANTHER, including: Poland, Hungary, Spain, Ireland, France, Australia and New Zealand, 2015-2019.
- Tripartite collaboration: Shanghai Jiao Tong University – Xinjiang University – AUT – coordinator, since 2009.
- Collaboration project with the Chinese Academy of Sciences – Institute of Automation – coordinator, since 2010.
- Partnership with several European Universities for EU projects: ETH Zurich; U. Manchester; Humboldt U., since 2011.

- Collaboration with Kyushu Institute of Technology, Japan, since 1993.
- Collaboration with the National Institute of Commun. and Information Technologies, NiCT, Tokyo, Japan, 2007-2011.
- PI of a collaborative research project “Connectionist-based intelligent information systems”, FRST/NERF NZ, 1995-2007.
- Research associate and consultant: Advanced Information Modelling Joint Venture, AUT and James and Wells, Chief Scientist, since 2011; Pacific Edge Biotechnology Ltd. - PEBL NZ, Co-founder and consultant, since 1998; NZ Bio-protection CoRE - Centre of Research Excellence, Lincoln, consultant, since 2003; SCOPE Project – U. Auckland, consultant, 2004-2009; RASP project – U. Auckland, consultant, 2008.
- Director, NZ Bioinformatics Summer School at AUT University, 2003 and 2004.
- Coordinator of SIG “Computational Intelligence in Bioinformatics” as part of BISC (Berkeley Initiative of Soft Computing), Department of Comp.Science and Electr.Engineering, U. of California at Berkeley, USA, since July 2002.
- Visiting researcher, National Cancer Institute, National Institute for Health - NIH, Frederick, Washington DC, 2002 -2008.
- Co-ordinator of exchange programmes, University of Twente and University of Maastricht, The Netherlands, since 1998.
- RIKEN, Brain Science Institute, Japan, Collaboration on research projects, since 2001.
- Founder of the Bionformatics SIG, Technical University of Sofia – branch Plovdiv, Bulgaria, 2004.
- The Int. Consortium for Speech Translation Advanced Research, C-STAR II, Japan, Affiliate member, 1996-1999.

Research Activities

(a) Research Expertise

- Neurocomputation
- Artificial Intelligence (Neural Networks, Fuzzy Systems, Evolutionary Computation)
- Machine learning
- Data Mining and Knowledge Engineering
- Neuroinformatics
- Bioinformatics
- Signal, Speech and Image Processing

(b) Experience in Applied R & D, contract research, consultancies, patents

- Co-founder and Chief Scientist of AUT spin-off *Crunchouse*.
- Co-founder and on the Advisory Board of *Pacific Edge Biotechnology Ltd*, www.pebl.co.nz, established in 2001, Dunedin, New Zealand.
- Founder of *Knowledge Engineering Consulting Ltd.*, New Zealand, established 2001.
- Consultant: PEBL (since 1997); ViaLactia Biosciences, Auckland (2005); FONTERRA, Auckland (2004-2006); Lucent-Telecom (2005); Fidelity genetics (2005); Biometric technology Ltd (2005); Waste Solutions Ltd, Dunedin (1994-2001); Hort Research (1996-2000); Steel Manufacturing Company Kremikovtsi, Sofia, Bulgaria (1988 - 1992); Institute for Agricultural Research, Plovdiv, Bulgaria (1987-89); Medical Academy, Sofia, Bulgaria (1987-88).
- Patents – total numbers 28.

(c) Research Grants

(1) Principal Investigator or Associate Principal Investigator

- 2015-2019, EU funded project PANTHER, including: Poland, Hungary, Spain, Ireland, France, Australia and New Zealand, NZD 2.8mln.
- 2017-2019, MBIE Advanced technologies for convective weather prediction (with Met Ocean Solution and Services), 500,000.
- 2015-2019, AUT Strategic Investment Research Fund (SRIF), 650,000.
- 2011-2019, Ministry of Education, NZ, Tripartite project with China: Advanced information technologies for environmental event prediction; 120,000NZD
- 2012-2015, MBIE, Advanced spiking neural network technologies for neurorehabilitation, 300,000NZD
- 2011-2012, EU FP7 Marie Curie EvoSpike project; INI/ETH and University of Zurich, Euro120,000 (<http://ncs.ethz.ch/projects/evospike>)
- 2008/2010, NiCT, Tokyo, Japan, Fast algorithms for cyber-security data stream on-line modelling and analysis, NZ\$360,000.
- 2002/2007, NERF, Connectionist-Based Intelligent Information Systems, \$360,000 p.a
- 2006, Fonterra, Predicting milk volume production, NZ\$78,000
- 2006, Telecom/Lucent/Medialab, Close loop optimisation, NZ\$70,000
- 2002/2006, HRC, Predicting colorectal cancer outcome using gene expression profiling, \$300,000 pa
- 2002/2004, Cancer Society of NZ, Neuroblastoma treatment prediction, \$80,000pa
- 2003/2004, Fonterra, Evaluation of evolving connectionist techniques and their applications, \$55,000
- 2004, ViaLactia Biosciences, NZ herd phenotype quality analysis, \$75,000.
- 1997-2001, University of Otago, Connectionist-Based Information Systems, Emerging Theme Research, \$20,000 pa
- 1998/2002, FRST and NERF, Connectionist-Based Intelligent Information Systems, \$360,000 p.a., 1996/98, FRST UOO-606, Connectionist-Based Information Systems, \$385,000 p.a

- 1995/98, FRST UOO-509, Spatial Analysis Systems and Management, \$303,000 p.a
- 1998/99, Otago Research Grant, Adaptive neuro-fuzzy methods in pharmaceutical sciences, \$30,000
- 1997/98, Otago Research Grant, Neuro-fuzzy methods in pharmaceutical sciences, \$35,000
- 1995, Otago Research Grant, Methods and Tools for Building Adaptable Speech Interfaces to Standard and Fuzzy Databases, \$25,193
- 1995-1997, Waste Solutions Ltd, Neuro-Fuzzy Control, \$20,000
- 1994/95, FRST, Development of a Spatial Analysis Tool Box, \$57,000
- 1994, TELECOM New Zealand Ltd, Automatic Speech Recognition, \$24,500
- 1994, Departmental Research Grant, University of Otago, A Software Environment for Building Fuzzy Connectionist Production Systems - FuzzyCOPE, \$10,000

(2) Contributing researcher:

- 2004/2008, NERF, SCOPE, subcontract to University of Auckland, 25,000pa.
- 2007-2008, Health Research Council, RASP – Rapid assessment of smoking status using change in acoustic parameters of voice. 40,000\$.
- 1998/2000, FRST, Biological Orchard Production Systems, appr.\$200,000 p.a., 1.7.1998 - 1.7.2002.
- 1998/2002, FRST, Distributed Information Systems, appr.\$350,000 p.a., 1.01.98- 31.12.2002.
- 1998/2002, FRST, Spatial Analysis Systems and Management, appr.\$100,000 p.a., 1.10.1998 - 1.10.2002.

Prior to 1992

- Principal researcher of projects funded by the Bulgarian Ministry of Science and Technology (BMST): Parallel processing systems (1989-1991); Expert systems for agricultural applications (1988-91); Expert systems for planning and decision making (1988-1991); Intelligent tutoring systems (1987-1989); The design and the implementation of GESMI- an expert system shell (1985-87).
- Principal researcher of projects funded by the Bulgarian National Institute of Inventions: Stack memory device (1985-87); Multi-register memory systems (1984-1986).
- Principal researcher of academic and industrial projects in Bulgaria (1974-1988): Multi-microprocessor systems for the Metallurgy Industry (1984-1988); Bubble-domain memories for computer systems (1984-86); Performance evaluation of computer systems (1978-1980); Information systems for financial operations in the Kazanluk textile industry (1974-1975).

(c) Supervision of PhD Students

1. Zahra Roozbehi, Novel methods for NN optimisation, 2019-
2. Sajit Jamal, Sound and speech recognition with NN, 2019-
3. Mahima Weerasinghe, Novel methods for SNN, 2019-
4. Dhvani Shah, SNN for deep learning, 2019-
5. Akshay Gollahalli, Cloud-based implementation of SNN development systems, 2017-
6. Clarence Tan, Emotion based recognition systems, 2017-
7. Hellen Bahrami, Quantum inspired SNN, 2017-
8. Zohreh Dobarjeh, SNN methods for EEG data modelling 2016-2019
9. Kaushalya Kumarasinghe, NN for neurorehabilitation, 2017-
10. Neelava Sengupta, fMRI Data Modelling, 2014-2018.
11. Maryam Dobarjeh, Brain data segmentation and modelling, 2014-2019.
12. Vivienne Breen, Personalised modelling in Bioinformatics, 2014-
13. Fahad Alvi, Age invariant face recognition, 2013-2017.
14. Reggio Hartono, Rule extraction in data mining, 2013-2017.
15. Elisa Capecci, Spiking neural networks for neurogenetic modelling, 2012-2015.
16. Nathan Scott, Neuromorphic systems, 2012-2015.
17. Norhanifah Murli, Spiking neural networks for fMRI data modelling, 2012-2015.
18. Muhaini Othman, Spiking neural networks for personalised modelling, 2012-2015.
19. Paul Davidson, Multi-agent system for economic decision support in a competitive environment, 2011-2015.
20. Kshitij Dhoble, Dynamic evolving spiking neural networks for moving object recognition, 2009-2013
21. Nuttapod Nuntalid, Evolving spiking neural networks for EEG data pattern recognition, 2009-2013
22. Linda Liang, Personalised modelling for Medical Decision Support and case study of stroke data, 2010-2013
23. Boris Basic, Connectionist and hybrid methods for video data analysis, AUT, 2004 - 2013.
24. Haza Nuzly, Quantum particle swarm optimisation: methods and applications, since 2008-2012.
25. Maggie Ma, Evolving connectionist systems for decision support in medical prognosis, NZ Top Achiever Doctoral Scholarship TAD, AUT, 2006-2012.
26. Gary Chen, On-line evolving systems for learning of large streams of data and applications for cybersecurity, 2008-2012.
27. Harya Widiputra, Dynamic interaction networks for multiple time series prediction, 2007-2011.
28. Raphael Hu, Personalised modelling for personalised medicine, 2011.
29. Frances Joseph, Design and computational intelligence, AUT, 2011.
30. Paulo Gottgroy, Integrated ontology systems for knowledge discovery, 2004-2011.
31. Stefan Schliebs, Heterogeneous probabilistic models for the optimisation of evolving spiking neural networks, 2010.

32. Anju Verma, Ontology-based personalised modelling for chronic disease prognosis, 2005-09
33. Peter Hwang, Local and personalised modelling and knowledge discovery for real world problem solving, 2005-2009.
34. Snezana Soltic, Evolving connectionist systems for environmental modelling, 2003-2009.
35. Vishal Jain, System biology – data analysis, modelling and knowledge discovery, 2004-08.
36. Simej Wysosky, Brain like speech and image integration methods and systems, 2004-2008.
37. Liang Goh, Methods for information integration and knowledge discovery on gene expression data, 2002-2005.
38. David Parry, On-line intelligent data mining for medical data, 2000-2005.
39. Michael Watts, Evolving connectionist systems, University of Otago, 1999-2004.
40. Brendon Woodford, Connectionist-based adaptive expert systems and image analysis in horticulture, Otago, 1999-2008.
41. Matthias Futschik, Microarray Gene Expression Data Analysis and Knowledge Discovery, U. Otago, NZ, 2000-2003.
42. Waleed Abdulla, Signal processing and acoustic modelling for speech recognition systems, U. Otago, 1998-2002.
43. Q.Song, Evolving connectionist systems for dynamic modelling, University of Otago, 1998-2002.
44. Mark Laws, Maori language integration in the age of information technology, Otago U., 1998 -2002.
45. R.Kilgour, Connectionist systems for speech recognition, University of Otago, 1997-2001.
46. J. Kim, Neuro-fuzzy techniques for intelligent systems, University of Otago, 1996-1999
47. S. Israel, Probabilistic-connectionist processing to improve image pattern recognition, University of Otago, 1995-1999
48. S.Shishkov, Connectionist production systems, TU, Sofia, Bulgaria, 1990-1994
49. N.Nikolaev, Denotation semantics for AI, TU, Sofia, Bulgaria, 1990-1994

(d) Selected topics of completed Masters students :

- Akshay Golhamani, EEG based rotor BCI, 2014-2015.
 Wriju, BCI with neuro-feedback, 2014-2015.
 Y.Turkova, MPhil, Modelling brain perception data, AUT, 2014.
 Rehab, BCI for P300 applications, 2012/2013.
 Linda Liang, Personalised modelling, AUT, 2008-2009.
 Nisha Mohan, Transductive reasoning and personalised modelling, 2005.
 Andreas Magusin, Bi-clustering in bioinformatics, Auckland University of Technology, 2003-04.
 M.Middlemiss, On-line decision support systems in bioinformatics, University of Otago, 2001.
 M. Laws, A Bilingual speech interface for New Zealand English to Maori, University of Otago, 2001.
 R.Kilgour, Hybrid systems and neural networks for speech recognition, University of Otago, 1994 -1996.
 M.Bailey, Intelligent systems for control, 1997.
 S.Sinclair, Multi-modular speech recognition systems, University of Otago, 1997.
 D. Nikovski, Speech recognition and neural networks, TU Sofia, 1992.
 C. Neshev, Hybrid system COPE, TU Sofia, Bulgaria, 1992. Neurofeedback, 2014-2015.
 S. Petrova, Machine learning, TU Sofia, Bulgaria, 1992.
 T.Dekova, FLIPS Fuzzy Expert System, TU Sofia, Bulgaria, 1992.
 P. Kalinkov, Neural networks for game simulation, TU Sofia, Bulgaria, 1992.
 L. Chen, Simulation of CLIPS on associative computer memory, University of Essex, 1990.
 C. Tan, Template-based learning, University of Essex, 1990-1991.
 T. Lin, MPhil, Production systems on associative memories, University of Essex, 1990-92.

Prior to 1992

- Supervised 43 successful MSc dissertations (1977-1990), Technical University of Sofia, Department of Computer Science.
- Supervised 5 successful postgraduate diplomas in Artificial Intelligence, International Graduate School of AI, Technical University of Sofia (1988 -1991).

Teaching activities

Introduced and taught the following academic courses:

- Neuroinformatics (Masters level), AUT, since 2013.
- Spiking neural networks (Rio De Janeiro, Brazil, guest course 2014).
- Machine learning, University of Padova, Italy, May 2011.
- Data mining and knowledge engineering, (Masters level), Auckland University of Technology, since 2003.
- Bioinformatics, (Masters level), Auckland University of Technology, since 2004.
- Machine learning and information visualisation, Tainan, Taiwan, 2010.
- Knowledge engineering and intelligent systems, TU Kaiserslautern, Germany, (Postgr. level), 2005/06.
- Evolving connectionist systems (Qualification level), Singapore, Malaysia, 2002,2003 and 2004.
- Data, information and knowledge (Undergraduate level), University of Otago, 2001
- Intelligent systems (Undergraduate level), University of Otago, NZ, 1992-2002

- Neural networks and fuzzy systems, 1992 -2002 (Postgraduate level) University of Otago, NZ (The course was re-named to “Advanced knowledge engineering” in 1999)
- Programming techniques, (Undergraduate level), 2000-2001, University of Essex, UK
- Expert systems (Postgraduate level), 1984, Technical University of Sofia, Bulgaria
- Parallel processing (Postgraduate level), 1984, Technical University of Sofia, Bulgaria
- Analysis and synthesis of algorithms, (Undergraduate level), 1980, TU Sofia, Bulgaria
- Computing (Undergraduate level), 1978, Technical University of Sofia, Bulgaria

University Service

(a) Positions held within Department/School/Division

- Member of the Research Committee of the School of Engineering, Computing and Mathematical Sciences, 2015-2018.
- Member of the Research Committee, Faculty of DCT, AUT, 2005-2017.
- Member of the Research Committee, Faculty of Business, AUT, 2003-2004.
- Founding director of the Knowledge Engineering Research Laboratory, U. Otago, 1994-2002.
- Member of the Graduate Committee, Inform. Science Department, U. Otago, 1994 – 2001

Prior to 1992

- Member of the Faculty Board, Faculty of Automation and Computing, TU Sofia, Bulgaria, 1987-91
- Deputy Dean for International Relations, Faculty of Radio-electronics, TU Sofia, 1987-89

(b) Positions held at University level

- Founding and present Director, Knowledge Engineering and Discovery Research Institute, www.kedri.aut.ac.nz, AUT, since June 2002.
- Member of the Academic Board, Auckland University of Technology, 2002-2004, 2013- 2018.
- Co-ordinator and principal researcher of the University Emerging Research Theme “Connectionist-based information systems”, University of Otago, 1996-2002.

Prior to 1992

Director of International Graduate School in AI, TU Sofia, 1988-91

Professional Activities

(a) Academic and Professional Advice and Services

- RSNZ and ACOLA Australia, Reviewer of AI Overview Document, 2019.
- RSNZ, Member of the new fellow selection committee, NZ, 2006-2017 (Chair in 2010).
- Top Achiever Doctoral Committee (Bright Future Scholarship Committee) TEC NZ, 1999-2009.
- Otago Institute Council (The Otago Branch of the Royal Society of New Zealand), 1998 till 2002.
- Marsden Fund, New Zealand, Reviewer, since 1996.
- FRST (Foundation for Research Science and Technology, New Zealand), Reviewer, since 1994.
- Australian Research Council, Research proposal reviewer, since 1995.
- Multiple Sclerosis Society, Australia, Research proposal reviewer, 1996.
- Royal British Society, UK, Research proposal reviewer, 1992-1997.
- School of Pharmacy, University of Otago, Consultant on a PhD research project, 1995-1998.
- School of Physical Education, University of Otago Consultant on a PhD research project, 1997.
- Depart. Psychology and Computer Science, Univ. Otago Consultant on a MSc projects, 1994-1997.
- Centre of Neuro-sciences, Sofia, Bulgaria, Consultant and project proposal reviewer, 1990 - 92.
- University of Essex, UK, Convenor of a multi-disciplinary seminar on neural networks, 1991.

(b) Service to External Academic and Professional Activities

Service to, or leadership in, academic discipline or professional associations:

- President of Asia Pacific Neural Network Association (APNNS) (www.apnns.org), 2019
- Honorary Member of the Bulgarian Informatics Society, 2017-
- Honorary Member, Greek Computer Society, since 2014.
- INNS Governor Board Member, 2011-2017.
- INNS, President, 2009 and 2010.
- APNNA, President, 2007-2008.
- INNS, President-Elect, 2008.
- INNS, Vice President and Member of the Governing Board, 2005-2007.
- IEEE, Fellow (since 2010) and Senior Member (2001-2010).
- IEEE Computational Intelligence Society, Neural Networks Technical Committee, Taskforce co-ordinator, since 2004.

- IFIP (International Federation for Information Processing) – TC12 group, chair of 12.2, 1998-2001.
- APNNA (Asia Pacific Neural Network Assembly) – Founding Member of the Governing Board, since 1993.
- New Zealand Computer Society, Chairman of the "Artificial Neural Networks and Expert Systems" SIG 1993-1996.
- IEEE Robotics and Automation Society, Member of an International Board, 1996-98.

General Conference Chair and co-chair of professional conferences

1. WCCI – IJCNN 2018, Technical Co-Chair
2. NCEI, 2015, Auckland, General Chair
3. NCEI, 2012, Auckland, General Chair (www.kedri.info)
4. ICONIP'2008, 25-28.11.2008, Auckland, General Chair
5. INNS NNN08, 24-25.11.2008, Auckland, Program Chair
6. HIS 2007, Program co-chair, Kaiserslautern, Germany, September, 2007
7. IJCNN'2007, Florida, USA, Program Co-Chair
8. HIS & NCEI'06, Auckland 13-15 2006, General Chair
9. EFS, 2006, Lancaster UK, Co-Chair
10. ICANN'2005, Poland, Tutorial chair
11. ICONIP'2004 – Calcutta, November 2004, Program Chair
12. IJCNN/FUZZ IEEE, 2004 – Program, vice-chair, Budapest, 2004
13. ICONIP'2003 – The 13th Int. Conf. on Neural Information Processing, Istanbul, July 2003, Tutorial Chair.
14. WCCI'2002 – The World Congress of Computational Intelligence, May 2002, Hawaii, Program co-chair of IJCNN2002
15. JCIS'2002, Chair of the Workshop on “Adaptive systems for speech recognition” Durham, March, 2002
16. FUZZ/IEEE 2001 – The 10th IEEE Int. Conf. Fuzzy Systems, Melbourne, Australia, Dec.2001, Scientific Area Chair.
17. ANNES'2001 - The 5th NZ Int. Conf. Artificial Neural Networks and Expert Systems, Dunedin, November 2001.
18. IES'2001 – The 5th Australasia-Japan Joint Workshop on Intell. and Evolutionary Systems, Dunedin, NZ, Nov.2001.
19. ICONIP'2001 – The 8th Int. Conf. on Neural Inform.Processing, Shanghai, Nov. 2001, Chair (International Promotion).
20. IIZUKA'2000 – An international conference on soft computing, Japan, Program chair.
21. ICONIP'99 - The 6th Asian Pacific Int. Conf.Neural Information Processing, ANZIIS'99,ANNES'99, Perth, 1999.
22. ICONIP'97 - The 4th Asian Pacific Int.Conf. Neural Information Processing, ANZIIS'97, ANNES'97, Dunedin,1997.
23. ANNES'95 - The 2nd NZ Int. Two-Stream Conf. on Artificial Neural Networks and Expert Systems, Dunedin, 1995.
24. ANNES'93 - The 1st NZ Int.Two-Stream Conf. Artificial Neural Networks and Expert Systems, Dunedin, Nov.1993.

Organiser and Chairman of Invited Sessions/Workshops/Tutorials at International Conferences

1. 2020, WCCI, Workshop on SNN.
2. 2020, WCCI, Tutorial on SNN.
3. 2018, IJCNN , Special session, Rio de Janeiro, Brazil.
4. 2017, ICONIP, Tutorial and Special Session, Guangzhou, China
5. 2016, ICONIP, Tutorial and Special Session, Kyoto
6. 2016, WCCI, Tutorial and Special Session, Vancouver.
7. 2015, INNS Big Data conference: Tutorial and Workshop, San Francisco, August 2015
8. 2014, WCCI, Beijing, July 2014, Tutorial
9. 2013, ICONIP, Daegu, Korea, Tutorial and Special Session
10. 2012, WCCI, Brisbane, Tutorial.
11. 2010, WCCI, Barcelona.
12. 2009, IJCNN 2009, Atlanta, USA, special session
13. ICONIP 2008, Auckland
14. 2008, WCCI, Hong Kong, special session
15. 2007, ICONIP, Japan, special session
16. 2006, WCCI - IJCNN and FUZZ-IEEE, 3 special sessions, Vancouver, 2006
17. 2005, IJCNN'2005, special session on computational neurogenetic modelling (with L.Benuskova)
18. 2004, ICONIP'2004, special session on adaptive intelligent systems (with Prof. Yamakawa)
19. 2003, JCIS'2003, Chair of the Workshop on “Adaptive systems and brain-like computing”, Durham, September, 2003
20. 2003, Track organiser, ICONIP'2003, July, 2003, Istanbul
21. 2002, Special session organiser, ICONIP'2002, Singapore, November
22. 2002, Special session organiser, JCIS'2000 – Joint Conference on Information sciences, USA
23. 2000, Workshop organiser, JCIS'2000 – Joint Conference on Information sciences, USA, Atlantic City
24. 1999, Workshop “Future directions for intelligent systems and information sciences”, November, Dunedin, 1999
25. 1999, Special session “Adaptive speech recognition”, ICONIP'99, Perth
26. 1996, Neuro-fuzzy models and adaptive information systems, ICONIP'96, Hong Kong, 13-17 September
27. 1996, Hybrid systems for knowledge engineering, Iizuka'96, Japan, 3-7 October
28. 1994, Hybrid systems, Iizuka'94, Japan, 1-8 August
29. 1994, WWW'94-IEEE/Nagoya University Wise person Workshop on Fuzzy Logic and Neural Networks/Evolutionary Computation, Nagoya, Japan

Member of international programme committees

1. IJCNN 2020.
2. EANN 2020 (Honorary chair)
3. ICONIP 2019, Sydney.
4. ICONIP, 2018, Siem Reap, Cambodia,
5. IJCNN' 2018, Brazil.
6. ICONIP 2017, Guangzhou, China
7. ICONIP 2016, Kyoto, October 2016
8. WCCI/IJCNN 2016, Vancouver
9. INNS Big Data, San Francisco, 2015
10. IJCNN 2015, Ireland
11. ICONIP, 2015, Istanbul, November 2015.
12. EANN 2014, Sofia, September (Honorary Chair)
13. ICONIP 2014, Kuching, Malaysia, November
14. WCCI/IJCNN 2014, Beijing, July
15. ICONIP 2013, Daegu, Korea, November 2013
16. ICANN 2013, Sofia, September (Honorary Chair)
17. IJCNN 2013, Texas, August, 2013
18. IJCNN, 2012, Brisbane, June 2012
19. IJCNN, 2011, San Jose, July 2011
20. WCCI, 2010, Barcelona, July 2010
21. ICONIP 2009, Bangkok
22. IJCNN'2009, Atlanta, USA.
23. WCCI 2008, Hong Kong
24. ICANN 2007, Porto
25. IJCNN 2006, Vancouver
26. FUZZ-IEEE 2006, Vancouver
27. ICANN 2006, Athens
28. KES 2006, UK
29. IJCNN'2005, Montreal
30. ICANN'2005, Warsaw
31. ICONIP'2004, Calcutta
32. IJCNN'2004, Budapest
33. ICONIP'2003, Istanbul
34. ICONIP'2002, Singapore
35. IAE'2002, Australia
36. ICAIS'2002 - Australia
37. ICONIP'2001 – Shanghai, November 2001
38. CEC'2001, Korea, May 2001
39. IJCNN'2000 – Como, Italy, July 2000
40. Iizuka'2000 – Iizuka, Japan
41. CEC'2000, San Diego, July 2000
42. ICONIP'2000 – Seoul, November 2000
43. Neural Computation'2000 – Berlin, 2000
44. Joint Conference on Information Sciences JCIS, Atlantic City, USA, 2000
45. ICONIP'99 - The Sixth Asian Pacific Int. Conf. Neural Information Processing, Sydney, October 1999
46. IJCNN'99- Washington DC, July 1999
47. ICONIP'98 - Kitakyushu, Japan, October 1998
48. IIZUKA'98 – Int. Conference on neural networks, fuzzy systems and soft computing, Iizuka, Japan, October 1998
49. ICNN&B'98 - International Conference on Neural Networks and Brain, Beijing, 27-30 October 1998
50. AI'98, Australian Joint Conference on Artificial Intelligence, 13-17 July 1998, Brisbane, Australia
51. NC'98 – International Symposium on Neural Computation, Vienna, Austria, September 23-25 1998
52. GeoComputation'97, University of Otago, August 1997
53. IFSA'97 Seventh World Congress of the International Fuzzy Systems Association, June 25-27 1997, Prague
54. BOFL'96 - International workshop on breakthrough opportunities for fuzzy logic, Yokohama, Japan, December 1996
55. ACNN'96 - The Seventh Australian Conference on Neural Networks, Sydney
56. ICONIP'96 - Hong Kong
57. IIZUKA'96 - Iizuka, Japan
58. ANZIIS'96 - The 4th Australian NZ Conf. on Intelligent Inform. Systems, Adelaide, Nov.1996, Liaison Chair.
59. AID'96 - International Conference on AI in Design, Carnegie Mellon University, USA, Vice-chair for New Zealand
60. FLAMOC'96 - International Conference on Fuzzy Logic and the Management of Complexity, Sydney.
61. FUBEST'96 - The Second Workshop on fuzzy based expert systems, Sofia, October 1996.
62. SIC'96 - International Panel Conference on Soft and Intelligent Computing, Budapest, October 1996
63. ICONIP'95 - The Second International Conference on Neural Information Processing, Beijing
64. ANZIIS'95 - Perth, 1995, Liaison Chair for New Zealand

65. ACNN'95 - The Fifth Australian Conference on Neural Networks, Sydney,
66. WWW'95 - IEEE/Nagoya U. Wise Person Workshop on Fuzzy Logic and Neural Netw./Evolutionary Comp., Japan.
67. CFSA/IFIS/SOFT'95 - International Conference on Fuzzy Theory and Applications, Taiwan
68. ICONIP'94 - The First International Conference on Neural Information processing, Seoul, Korea
69. ANZIIS'94 - Brisbane, Liaison Chair for New Zealand.
70. AIA'94 - The Second International Round-Table on Abstract Intelligent Agents, Rome, Italy.
71. AIMSA'90 - Artificial Intelligence - Methodology, Systems, Applications, Varna, Bulgaria.
72. AI'88 - Artificial Intelligence, Sozopol, Bulgaria, Vice-chair of the programming committee.

Editorship of journals and periodicals.

Founder and EiC:

Springer series of Bio/Neuro Systems, since 2012

Co-Founder and Co-Editor in Chief

Evolving Systems: Interdisciplinary Journal for Advanced Science and Technology, Springer, 2010-

Associate Editor:

1. Neural Networks, Elsevier, since 2007.
2. Information Sciences, Elsevier Science, since 2001.
3. IEEE Trans. On Cognitive and Developmental Systems , since 2018
4. IEEE Transactions of Fuzzy Systems, 2006-2010.
5. Int. J. Functional Informatics and Personalised Medicine, 2010-2015.
6. IEEE Transactions of Neural Networks, 2005-2009.
7. International Journal of Neural Systems, World Scientific, 2005-2009.
8. Computational and Theoretical Nanoscience, American Scientific Publishers, 2003-2005.
9. The International Journal of Hybrid Intelligent Systems, 2004-2008.
10. IEEE Transactions of Industrial Informatics, 2004-2007.
11. Applied Soft Computing, Elsevier, since 2000.
12. International Journal of Computational Intelligence and Applications, Imperial College Press, London, 2000-2007.
13. Neural Information Processing: Letters and Reviews, since 2004.
14. Journal of Advanced Computational Intelligence and Intelligent Informatics, Japan, since 1997.
15. Biomedical Fuzzy and Human Sciences, Japan, since 1996.
16. Australian Journal of Intelligent Information Processing Systems, since 1996.

Guest editor of special issues of journals:

1. Neural Networks, 2019 and 2015.
2. Neurocomputation, 2019.
3. Neural Networks and Applications, Springer, 2013.
4. IEEE Transactions on Autonomous Mental Development, 2011.
5. Neural Networks and Applications, 2011.
6. IEEE Transactions of Fuzzy Systems, 2008.
7. Journal of Computational and Theoretical Nanoscience, Comp. Intelligence for Bioinformatics, 2005.
8. Int. Journal of Comp. Intelligence and Applications, 2004.
9. Information Sciences: 2003, 2001, 1998 and 1997.
10. Journal of Advanced Computational Intelligence: 1998.
11. Australian Journal of Intelligent Information Processing Systems: 1998 and 1996.
12. International Journal of Intelligent Systems: 1997.
13. Fuzzy Sets and Systems: 1996.

Reviewer of international journals:

1. Neural Networks, since 1993
2. IEEE Transactions on Neural Networks, since 1994
3. IEEE Transactions on Fuzzy Systems, since 1995.
4. IEEE Transactions on Systems, Man, and Cybernetics, since 1995.
5. Information Sciences, since 1995.
6. IEEE Transactions on Industrial Electronics, 1997.
7. IEEE Trans. Data and Knowledge Engineering, since 2003.
8. Informatica, since 1997.
9. Journal of Advanced Computational Intelligence and Informatics, since 1997.
10. BioSilico, 2004-2007.
11. Applied Soft Computing, since 2003.
12. Int. Journal of Comp. Intelligence and Applications, since 2002.

13. Australian Journal of Intelligent Information Processing Systems, since 1994.
14. Fuzzy Sets and Systems, since 1994.
15. Lecture Notes in Computer Science/Artificial Intelligence, since 1994.
16. Medical and Biological Engineering and Computing, England, 1992 -1996.

Examiner of postgraduate research theses at other Universities

1. Pakistan, PhD, 2018.
2. NTU, Singapore, PhD, 2018.
3. NTU, Singapore, PhD, 2016
4. University of Auckland, PhD, 2016
5. University of Auckland, MSc, 2016
6. University of Auckland, PhD, 2015.
7. University of Otago, PhD, 2015.
8. University of Malaya, PhD thesis, 2015.
9. University of Canterbury, NZ, 2015.
10. University of Auckland, NZ, 2015.
11. AUT and TUT (France), PhD thesis, 2014.
12. Aalto University, Finland, PhD thesis, 2014.
13. Indian Statistical Institute, Calcutta, PhD thesis, 2014
14. The University of Auckland, PhD, June 2014.
15. Nanyang Technological University (NTU), 2013
16. University of Malaya, 2011
17. The University of Auckland, PhD thesis, 2009
18. University of Malaysia, PhD thesis, 2008
19. University of Otago, PhD thesis, 2008
20. The University of Auckland, Masters thesis, 2008
21. Nanyang Technological University, Singapore, PhD Thesis, 2007
22. Nanyang Technological University, Singapore, PhD Thesis, 2007
23. Indian Statistical Institute, PhD thesis, 2007
24. Nanyang Technological University, Singapore, PhD Thesis, 2006
25. Indian Statistical Institute, PhD thesis, 2006
26. Auckland University of Technology, Masters thesis, 2006
27. The University of Auckland, PhD thesis, 2005
28. Lincoln University, PhD thesis, 2004
29. Deakin University, Australia, PhD thesis, 2004
30. University of Auckland, PhD thesis, 2002
31. Deakin University, Australia, PhD thesis, 2003
32. University of Auckland, PhD thesis, 2002
33. University of Auckland, Masters thesis, 2002
34. University of Auckland, PhD thesis, 2001
35. Massey University, PhD thesis, 2001
36. University of South Australia, PhD Thesis, 2000
37. University of Western Australia, PhD Thesis, 2000
38. Auckland University, PhD thesis, June 2000
39. Swinburn University, Australia, PhD Thesis, September 1999
40. Auckland University, PhD thesis, September, 1999
41. Swinburn University, Australia, PhD Thesis, March, 1999
42. Auckland University, PhD thesis, April, 1999
43. Swinburn University, Australia, PhD Thesis, 1998
44. Massey University, PhD Thesis, 1998
45. Swinburn University, Australia, PhD Thesis, 1997
46. University of New South Wales, Australia, PhD thesis, 1997
47. Massey University, PhD thesis, 1997
48. Auckland University, PhD thesis, 1997
49. Auckland University, Masters thesis, 1996
50. Massey University, Masters thesis, 1996
51. University of Canterbury, Masters thesis, 1996
52. University of Canterbury, PhD thesis, 1995
53. Massey University, 2 PhD theses, 1995
54. Auckland University, PhD thesis, 1994
55. Nanyang University of Technology, Singapore, 2 Masters dissertations, 1994

Seminar talks and lectures at other Universities and Faculties

1. Shanghai Jiao Tong University, 2019, 2018, 2017.
2. China Academy of Sciences, Institute of Automation, 2019,2018,2017
3. Peking University, 2018.
4. University of Russe, Bulgaria, 2018.
5. University of Aberdeen, DVF SICSA, September 2016.
6. RGU, Scotland, DVF SICSA, 2016.
7. UHI, Ergin, DVF SICSA, 2016.
8. University of Naples, 2015.
9. University of Milano, 2015.
10. Shanghai JiaoTong University, June 2014
11. University Tunn Hussein Onn Malaysia (UTHM), June 2014.
12. University of Technology Malaysia (UTM), June 2014.
13. University of Ulster, DVF RAE UK, lecture, October 2013.
14. University of Lancaster, DVF RAE UK, lecture, October 2013.
15. University of Manchester, DVF RAE UK, lecture, October 2013.
16. University of Essex, DVF RAE UK, lecture, October 2013.
17. University of Surrey, DVF RAE UK, lecture, October 2013.
18. University of Portsmouth, DVF RAE UK, lecture, October 2013.
19. IEEE CIS Distinguished Lecture in Catholic University of Rio de Janeiro, Brazil, April 2013
20. IEEE CIS Distinguished Lecture in Sao Carlos University, Brazil, April 2013
21. Shanghai- Jiao Tong University, China, November 2012
22. Denjiang University, Shanghai, 2012
23. Shanghai- Jiao Tong University, China, May 2011
24. University of Xinjiang, China, May 2011
25. Institute for Neuroinformatics, Zurich – ETH, 2010, Probabilistic Spiking Neural Networks
26. University of Cambridge, UK, 2010, Personalised and Neuro-genetic Modelling.
27. Multinational University, Beijing, China, 2010, Personalised Modelling for Medical Decision Support.
28. Shanghai Jiao Tong University, China, 2010, Brain-, gene-, and quantum inspired intelligent systems.
29. Auckland University of technology, 2009
30. The University of Auckland, 2008
31. University of Oxford, Oxford, UK, October 2007
32. Imperial College, London, UK, October 2007
33. University of Reggio di Calabria, Italy, October 2007
34. University of Trento, Italy, September 2007
35. University of Coimbra, Portugal, September 2007
36. University of Ulster, Londonderry, October 2006
37. Mackay University, Queensland, Australia, April 2006
38. University of Lausanne, Switzerland, December 2005
39. University College of London, Medical School, December 2005
40. Fraunhofer Institute and UNI-Kaiserslautern, Germany, November 2005
41. University of Lancaster, UK, September, 2005
42. Bulgarian Academy of Sciences, August 2005
43. University of Nagoya, Nagoya, Japan, June 2005
44. University of Natural Sciences, Ho Chi Min City, Vietnam, June 2005
45. University College London, 2004
46. TU of Sofia, Bulgaria, 2004
47. TU of Kaiserslautern, Germany, 2004
48. Kyushu Institute of Technology, Japan, 2004, 2001
49. Kobe University, Japan, 2004
50. Ritsumeikan University, Japan, March 2003 and May 2002
51. University of California at Berkeley, July 2002 and December 2003
52. Stanford University, USA, July 2002
53. National Cancer Institute, Washington DC, May 2002
54. Pohang University, Korea, 2000
55. University of Auckland, June 2000
56. IRST and University of Trento, May, 2000
57. University of California at Berkeley, July 1999
58. University of Milano, June 1999
59. University of Ulm, Germany, June 1999
60. University of Venice, May, 1998
61. University of Trento, Italy, May, 1998
62. University of Naples, Italy, April, 1998
63. University of Essex, UK, December 1997
64. University of New South Wales, Sydney, Australia, April 1997

65. University of Kaiserslautern, Germany, 1995
66. University of Trento, Italy, 1995
67. National Research Institute in Milano, 1995
68. University of Canterbury, 1995
69. Nanyang University of Technology, Singapore, 1993
70. University of Nottingham, U.K., 1991
71. King's College, University of London, UK, 1991
72. University of York, U.K., 1991
73. University of Essex, U.K., 1991

Community Service

Media commentaries and columns on professional matters:

- TV1, Breakfast show, 2018.
- NZ Herald, 2018.
- National radio NZ, 9 to noon, 2017.
- NZ Herald, 2017
- NZ Herald, 2016
- NZ Herald, 2015.
- Bnews.bg, 2015.
- National Radio, NZ, 2015.
- TVNZ1, Brain signals for robot control, video, 2011
- Idealog, Auckland, June 2009 (also on YouTube)
- Computer World, Dec.2008
- The NZ Business Review, September 2008
- NZ Herald, April, 2008
- The NZ National Business Review Magazine, The Bayer Innovation in Science Winner, 2007
- NZ Computer World, November, 2005
- NZ Herald, 2002
- Who is Who in the World, entries since 1995
- Who is Who in Science and Engineering, entries since 1995
- Who is Who in New Zealand, since 1999
- Otago Daily Times, December, 2001, September 1999, May 2000
- Who is Who in Asia and the Pacific Nations, since 1999
- People of the 20th century, Cambridge Biographical Centre, since 1999
- International authors and writers - Who is Who, Cambridge Biographical centre, since 1999
- Marquis Who's Who in America, entries 1995- 2000.
- World Directory of Mathematicians, listed in the NZ's entry, 1998.
- Bulgarian National Radio, Interview, 01/1998.
- Bulgarian newspaper "24 hours", Article on Intelligent Robots, 01/1998.
- TVNZ, 2 interviews, 11/1977.
- Quickface, The NZ Comp. Soc.Monthly Bulletin, 8 articles on intelligent inform. systems and ANNES SIG, 1995-96.
- National Radio, NZ, Interview with Diana Burns on Intelligent information systems, 11/1996.
- Southern Television news report on ANNES'95 conference and on a Research Project, 11/95.
- Otago Daily Times, Report on ANNES'95 conference and on a Talking Computer Project, 11/95.
- Campus Review, vol.5, 1029, article on a research project, 1995.
- 4XO Gold Radio Station Dunedin, Interview, 07/1995.
- Dunedin Star Weekender, article by Frank Campbell, 06/1995.
- Five articles on computing published in a general public magazine "Eni Hayat", Bulgaria; 1982-88 (in Bulgarian).
- A series of five radio programmes on Computer science, National Radio, Bulgaria; 1982 (in Bulgarian).

Public lectures

1. "Spiking neural networks for brain-inspired AI", Meet-Up, Auckland, IBM, 2018.
2. "AI", AI-Days, 2018.
3. "Artificial Intelligence – From Aristotle to deep learning machines", University of Auckland, 2017.
4. "The AI Revolution", Christchurch, 2017.
5. "The World of Information, where Science, Art and Engin. Meet", Fac. Design and Creative Techn.,AUT, April 2007.
6. "Knowledge Engineering, Neurocomputing and Knowledge Discovery", Royal Society of NZ, Wellington, Nov., 2002.
7. "Knowledge Engineering and Knowledge Discovery", Inaugural Prof. Lecture, AUT, Sept. 2002.
8. "Artificial Intelligence – Myth, or reality", Eranos lecture, University of Otago, September 2001.
9. "Connectionist systems for data mining and knowledge discovery in Bioinformatics", U. Otago, 2001.

10. "Data, information and knowledge and their metamorphoses" – lecture at the Otago Royal Society of NZ, 2000.
11. "Intelligent systems for a knowledge-based society", Inaugural Prof. Lecture, University of Otago, 22 September 1999.
12. "Intelligent Information Systems: the present and the future", To the IEEE Chapter, Singapore, November 1994.

Provision of continuing education

Hands-on-Science summer school - project leader, University of Otago, 1995.
 Hands-on-Science summer school - project leader, University of Otago, 1994.

Supporting Polytechnics, Colleges, Schools

- Established and sponsored 2 annual high school student awards at SOU Pavlikeni, Bulgaria, since 2006.
- Polytechnic, assistance in curriculum development, Southland Polytechnic, Invercargill, 1995
- Southland Polytechnic, Invercargill, a series of lectures - 1993 and 1994
- Joint projects with secondary schools, Sofia, Bulgaria, 1987-89
- Joint seminars for university and school students, Sofia, Bulgaria, 1987-89

Cultural and/or Scientific Access, Participation and Development

Participation at musical concerts at the conferences Iizuka' 2000, 1996, 1994, and ICONIP 07, Japan.
 Participation at folk music festivals, Dunedin, 1994

Publications

Prof. N. Kasabov's Publications and Citations on Google Scholar:

http://scholar.google.com/citations?hl=en&user=YTa9Dz4AAAAJ&view_op=list_works

Contribution to the citations of the Computer Science Department at AUT:

https://scholar.google.co.nz/citations?user=_I2g8ssAAAAJ&hl=en&authuser=1

(a) Books

Authored

1. Kasabov, N., Time-Space, Spiking Neural Networks and Brain-Inspired Artificial Intelligence, Springer (2018) 750p., <https://www.springer.com/gp/book/9783662577134>
2. Kasabov, N. *Evolving Connectionist Systems: The Knowledge Engineering Approach (new edition)*, Springer Verlag, London, (2007) 458p
3. Benuskova, L. and N.Kasabov, Computational neuro-genetic modelling: Integrating bioinformatics and brain science data, information and knowledge via computational intelligence, Springer, New York, 2007, 290 pages
4. Kasabov, N. *Evolving connectionist systems: Methods and applications in bioinformatics, brain study and intelligent machines*, Springer Verlag, London, (2003) 308p
5. Kasabov, N. *Foundations of Neural Networks, Fuzzy Systems and Knowledge Engineering*. Cambridge, Massachusetts, MIT Press (1996) 550p
6. Kasabov, N. and Romanski, R. *Computer Architectures and Techniques* Sofia, Technika (1992) 435p (in Bulgarian)
7. Stoichev, S. and Kasabov, N. *Programming in PASCAL*. Sofia, Technika (1989) 136p (in Bulgarian)
8. Stoichev, S. and Kasabov, N. *Synthesis and Analysis of Algorithms*. Sofia, Technika (1988) 84p (in Bulgarian)
9. Stoichev, S. and Kasabov, N. *Computer Architectures and Techniques*. Sofia, Technika (1986) 348p (in Bulgarian)
10. Stoichev, S. and Kasabov, N. *Computers - Theory and Practice (Programming of Microprocessors)*. Sofia, Technika (1984) 120p (in Bulgarian)

Edited scientific, research books:

1. M. Hadjiski, N.Kasabov, D.Filev, V.Jotsov (eds) *Novel Applications of Intelligent Systems*, Springer, 2016.
2. Koprinkova-Hristova, P., Mladenov, V., & Kasabov, N. (2015). *Artificial Neural Networks Methods and Applications in Bio-/Neuroinformatics (Vol. 4)*. Springer. doi:10.1007/978-3-319-09903-3
3. N.Kasabov (ed) *The Springer Handbook of Bio- and Neuroinformatics*, Springer (2014) 1230 p
4. P.Angelov, D.Filev, and N.Kasabov (eds) *Evolving intelligent systems*, IEEE Press and Wiley, 2010
5. Kasabov, N. (ed.) *Future Directions for Intelligent Systems and Information Sciences*, Heidelberg, Physica-Verlag (Springer Verlag) (2000), 420pp
6. Kasabov, N. and Kozma, R. (eds.) *Neuro-Fuzzy Techniques for Intelligent Information Systems*, Heidelberg, Physica-Verlag (Springer Verlag) (1999), 450pp
7. Amari, S. and Kasabov, N. (eds.) *Brain-like Computing and Intelligent Information Systems*, Singapore, Springer Verlag (1998), 533 p.

Edited Conference Proceedings:

1. Angelov, P., Atanassov, K.T., Doukovska, L., Hadjiski, M., Jotsov, V., Kacprzyk, J., Kasabov, N., Sotirov, S., Szmidt, E., Zadrozny, S. (Eds.) (2015) Proceedings of the 7th IEEE International Conference Intelligent Systems IS'2014, September 24-26, 2014, Warsaw, Poland, Volume 1: Mathematical Foundations, Theory, Analyses, Springer, 2015.
2. V.Mladenov, P.Koprinkova, B.Apoloni, N.Kasabov, Proc. of ICANN 2013, Sofia, 2013, Springer LNCS, 2013.
3. M.Koeppen, N.Kasabov and G.Coghill, Advancements in Neural Information Processing, Proc. off ICONIP 2008, Springer LNCS, vol. 5506/5507, 2009
4. J.Si, R.Sun, D.Brown, I.King and N.Kasabov (eds) Proceedings of the Int Joint Conference on Neural Networks – IJCNN, 12-16 August 2007, IEEE Press, 2007
5. A.Koenig, M.Koeppen, A.Abraham, C.Igel and N.Kasabov, Proc. Seventh Int. Conference on Hybrid Intelligent Systems – HIS 2007, 17-19 Sept.2007, IEEE Comp.Soc.Press
6. P.Angelov, D.Filev, N.Kasabov, O.Cordon (eds) Proc. 2006 Int. Symp. Evolving Fuzzy Systems, Lancaster, UK, IEEE Press, 2006
7. N. Pal, Nikola Kasabov et al, (eds) Proc. of the Int. Conf. on Neuro Information Processing, Calcutta, November 2004, Springer Verlag, Vol. 3316, ICONIP'2004, Heidelberg, 2004
8. M.Barley, N.Kasabov (eds) Intelligent Multi-agent Systems, LNAI, vol. , 2004
9. Kasabov N., Pang S., (eds) International Journal of Computers, Systems and Signals, Volume 5 No. 2, 2004
10. K. Chen, Shu Heng Chen, Heng Da Cheng, David K.Y. Chiu, Sanjoy Das, Richard Duro, Zhen Jiang, Nik Kasabov, Etiene Kerre, Hong Va Leong, Qing Li., Mi Lu, Manuel Grana Romay, Don Ventura, Paul P. Wang, Jie Wu (eds) Proceedings of the 7th Joint Conference on Information Sciences, JCIS 2003, 1780 pages
11. Kasabov, N, Zeke S.H. Chan (eds) Proceedings of the Conference on Neuro-Computing and Evolving Intelligence, November 2003, Auckland University of Technology, (2003) 122 pages
12. Kasabov, N. Proceedings of the Neurocomputing Colloquium and Workshop, October, AUT, (2002) 85 pages
13. Kasabov, N., B.Woodford (eds) Proceedings of the ANNES'2001, University of Otago (2001) 150 pages
14. Gedeon, T., P.Wong, S.Halgamuge, N.Kasabov, D.Nauack, and K.Fukushima (eds) ICONIP'99-Proceedings of the 6th Inter. Conf. on Neural Information Processing, 16-20.11.1999, Perth, IEEE Press (1999), Vol. I & II, 842 pages
15. Kasabov, N., and K.Ko, (eds) Emerging Knowledge Engineering and Connectionist-based Information Systems. Proceedings of the ICONIP/ANZIIS/ANNES'99 Workshop "Future directions for intelligent systems and information sciences, Dunedin, 22-23 Nov.1999, University of Otago (1999)
16. Kasabov, N., Kozma, R., O'Shea, R., Ko, K., Coghill, G., and Gedeon, T., (eds) Advances in Connectionist-Based Information Systems. Proc. Int. Conf. Neural Information Processing ICONIP'97, Springer Verlag, (1998), 1550 pages
17. Kasabov, N. and Coghill, G. (eds) Proceedings of the Second New Zealand International Conference on Artificial Neural Networks and Expert Systems, ANNES'95, Dunedin, IEEE Computer Soc. Press, Los Alamitos (1995) 401 pages.
18. Kasabov, N. (ed.) The First New Zealand International Conference on Artificial Neural Networks and Expert Systems, Proceedings of ANNES'93 Dunedin, IEEE Computer Society Press (1993) 346 pages

(b) Book Chapters

1. Kasabov, N. (2015) Evolving connectionist systems: From neuro-fuzzy-, to spiking – and neurogenetic, in: Kacprzyk and Pedrycz (eds) Springer Handbook of Computational Intelligence, Springer, 771-782.
2. Kasabov N.K. Integrative Computational Neurogenetic Modeling. In: Arthur W. Toga, editor. Brain Mapping: An Encyclopedic Reference. Academic Press: Elsevier; 2015. pp. 667-674.
3. Kasabov, N. (2014). Understanding Nature Through the Symbiosis of Information Science, Bioinformatics and Neuroinformatics. In Springer Handbook of Bio-/Neuroinformatics.
4. Kasabov, N. (2014). Brain, Gene, and Quantum Inspired Computational Intelligence. In N. Kasabov (Ed.), Springer Handbook of Bio-/Neuroinformatics. Springer.
5. Georgieva, P., Silva, F., Milanova, M., & Kasabov, N. (2014). EEG Signal Processing for Brain-Computer Interfaces. In N. Kasabov (Ed.), Springer Handbook for Bio-/Neuroinformatics. Springer.
6. Schliebs, S., & Kasabov, N. (2014). Computational Modelling with Spiking Neural Networks. In N. Kasabov (Ed.), Springer Handbook of Bio-/Neuroinformatics.
7. Tegginmath, S., Pears, R., & Kasabov, N. (2014). Ontologies and Machine Learning Systems. Springer. In N. Kasabov (Ed.), Springer Handbook of Bio-/Neuroinformatics.
8. Liang, L., Krishnamurthi, R., Kasabov, N., & Feigin, V. (2014). Information methods for predicting risk and outcome of stroke. In N. Kasabov (Ed.), Springer Handbook of Bio-/Neuroinformatics.
9. Hu, Y., Kasabov, N., & Liang, W. (2014). Personalised Information Modelling Technologies for Personalised Medicine. In N. Kasabov (Ed.), Springer Handbook of Bio- and Neuroinformatics (pp. 1-32). Springer..
10. Kasabov, N. (2013). The Evolution of the Evolving Neuro-Fuzzy Systems: From Expert Systems to Spiking-, Neurogenetic-, and Quantum Inspired. In R. Seising, E. Trillas, C. Moraga, & S. Termini (Eds.), On Fuzziness A Homage to Lotfi A Zadeh (Vol. 298, pp. 271-280). Springer.
11. Kasabov, N., Evolving Spiking Neural Networks and Neurogenetic Systems for Spatio- and Spectro-Temporal Data Modelling and Pattern Recognition, Springer-Verlag Berlin Heidelberg 2012, J. Liu et al. (Eds.): IEEE WCCI 2012, LNCS 7311, pp. 234–260

- 12 Widiputra, H., Pears, R., and Kasabov, N., Dynamic learning of multiple time series in a non-stationary environment, In: Sayed-Mouchaweh, Moamar; Lughofer, Edwin (Eds.), *Learning in Non Stationary Environments: Methods and Applications*, ISBN 978-1-4419-8019-9, Springer, 2012.
- 13 S.Soltic, N.Kasabov (2011) A Biologically Inspired Evolving Spiking Neural Model with Rank-Order Population Coding and a Taste Recognition System Case Study, Chapter 7 in : Turgay Temel (Ed) *System and Circuit Design for Biologically-Inspired Intelligent Learning*, IGI Global, 136-155, ISBN13: 9781609600181, 2011
- 14 H. Nuzly Abdull Hamed, Nikola K. Kasabov and Siti Mariyam Shamsuddin., *Quantum-Inspired Particle Swarm Optimization for Feature Selection and Parameter Optimization in Evolving Spiking Neural Networks for Classification Tasks*, *Evolutionary Algorithms*, Eisuke Kita (Ed.),pp 133-148, ISBN: 978-953-307-171-8, InTech, 2011
- 15 H. Widiputra, Russel Pears, Nikola Kasabov, Kalman Filter to Estimate Dynamic and Important Patterns of Interaction between Multiple Variables, in: Joaquín M. Gomez (ed) *Kalman Filtering*, Nova Science-New York, pp. 289-320, ISBN: 978-1-61761-462-0, 2011
- 16 S Ozawa, S Pang and N Kasabov, On-line Feature Extraction for Evolving Intelligent Systems, in: P.Angelov, D.Filev, and N.Kasabov (eds) *Evolving intelligent systems*, IEEE Press and Wiley, 2010, (7) 151-172.
- 17 Wysoski SG, Benuskova L, Kasabov N, Brain-Like Evolving Spiking Neural Networks for Multimodal Information Processing. In *Brain-Inspired Information Technology*. Editors: Hanazawa A, Miki T, Horio K. 266: 15-27. Springer 2010.
- 18 Shimo N, Pang S, Horio K, Kasabov N, Tamukoh H, Koga T, Sonoh S, Isogai H, Yamakawa T, Effective and Adaptive Learning Based on Diverse/Specific Curiosity. In *Brain-Inspired Information Technology*. Editors: Hanazawa A, Miki T, Horio K. 266: 171-175. Springer 2010.
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285. Dakovski, L., and Kasabov, N. Logical-, register- and system design in homogenous cellular structures in Proceedings of the Radio and Communication Annual Symposium, Sofia, Bulgaria (1978) 91-95
286. Borovski, B., Egorov, A., and Kasabov, N. Probabilistic models for evaluating the performance of computer systems in Proceedings of the Radio and Communication Annual Symposium, Sofia, Bulgaria (1978) 78-83
287. Kasabov, N. On the generation of algebraic transformations and the design of discrete systems – possibilities and problems in Proceedings of the Radio and Communication Annual Symposium, Sofia, Bulgaria (1977) 75 - 79
288. Dakovski, L., and Kasabov, N. Structural synthesis of random number generators in Proceedings of the 2nd Bulgarian Conference on Computer Science, Sofia, Bulgaria (1973) 86 – 91

(f) Other Significant Conference Presentations and Publications

Invitational Addresses, Keynote Speeches

1. Keynote, EANN2020 (on-line)
2. Keynote, ACIIDS2020 (on-line),
3. Plenary, IJCNN, 2019, Budapest.
4. Keynote, CompSysTech, Russe, Bulgaria, 2018
5. Keynote, ANNA2018, Varna, Bulgaria, 2018.
6. Keynote, EANN 2016, Aberdeen, 2016
7. Keynote, IS 2016, Sofia, 2016
8. Keynote, IEEE SMC, Budapest, 2016
9. Keynote, ANNPR, Ulm, 2016
10. Keynote, DMBD, Bali, 2016
11. Keynote, ICONIP 2015, Istanbul, November 2015.
12. Invited talk, C-TRIC Translational Medicine, Londonderry, September 2015.
13. Keynote, EANN 2015, Rhodes, Greece, September 2015
14. Keynote, SIREN/ Italy, May, 2015
15. Keynote, ACIIDS, Bali, March, 2015
16. Keynote, EANN, Sofia, September 2014
17. Keynote, SCDM 2014, Soft Computing and Data Mining, Malaysia, June 2014
18. Invited, ICONIP 2014, Kuching, Malaysia
19. Keynote, ICANN 2013, Sofia, 10- 13.09.2013
20. Keynote, EANN 2013, Halkidiki, Greece, 13-16.09.2013
21. Keynote, 6th Balkan Conf. on Informatics, 17th Panhellenic Conf. in Informatics, Thessalonica, Greece, 19-21.09.2013
22. Keynote, ICIC 2013, 28-31 July 2013, Nanning, China
23. Plenary, ICONIP 2012, 25-27 November, Qatar
24. Keynote, EANN 2012, 23-25 September, London
25. Keynote, ANNPR, September 17-19, Trento, Italy
26. Keynote, IEEE IS 2012, 7-9 September, Sofia
27. Invited, WCCI 2012, 10-15 June, Brisbane, Australia
28. Plenary, ICONIP 2011, Shanghai
29. Keynote, EANN 2011, Greece, September 2011.
30. Keynote, CIBB 2011, Italy.
31. Keynote, the Irish AICS (Artificial Intelligence and Cognitive Systems) conference (September 2011), Londonderry.
32. Keynote, ICANNGA (Int. Conf. ANN and GA), Ljubljana, April 2011: Neurogenetic modelling.
33. Keynote, INNS Education Symposium on Neural Networks, Lima, Peru, February, 2011: New Directions for NN.
34. Keynote, First INNS Indian Symp. on New Directions in Neural Networks, December, 2010
35. Keynote, ICANN 2010, Thessaloniki, Evolving spiking neural networks,
36. Keynote, KES 2010, Cardiff, Brain-, Gene- and Quantum Inspired Connectionist Systems for Computational Intelligence and Knowledge Engineering.
37. Keynote, ICSI, Beijing, Peking University, June 2010
38. Keynote, ICDI, Qinghuangdao, China, June 2010
39. 2009, Plenary talk, ICONIP 2009, Bangkok
40. 2009, Keynote Talk, EANN 2009, London, August 2009
41. 2009, Keynote Talk, ICONS 2009, Istanbul, September, 2009
42. 2009, Keynote Talk, ICAIS 2009, Klagenfurt, Austria, September 2009
43. 2009, Invited talk, IJCNN, Atlanta, June, 2009

44. 2009, Invited talk, Dynamic Brain Forum, 1-4 March, Atami, Japan, 2009
45. 2008, Invited talk, INNS NNN'2008 Symposia, Auckland, NZ, 2008
46. 2008, Plenary Talk, Brazilian Congress on NN and AI, October 2008
47. 2008, Plenary Talk, World Computer Congress WCC2008, Milano, 7-10.09.2008
48. 2007, Plenary talk, Automatics and Informatics 2007, Sofia, Bulgaria, October, 2007
49. 2007, Plenary talk, HIS 2007, Germany, September, 2007
50. 2007, Invited talk, Dynamic Brain Forum, Hakuba, Japan, March, 2007
51. 2006, Keynote speech, KES'2006, Bournemoth, UK, October 2006
52. 2006, Invited talk, ICONIP'2006, Hong Kong, October 2006
53. 2006, Keynote speech, Int. Conference 9th Fuzzy Days, Dortmund, Germany, September 2006
54. 2005, Keynote talk, BCS AI 2005, Cambridge, UK, December 2005
55. 2005, Invited talk, BISCSE, UC Berkeley, 3-5, November, 2005
56. 2005, Keynote speech, SOFA Int. conference, Szeged-Arad, Hungary, August 2005
57. 2005, Keynote speech, SAER, Varna, 2005, Bulgaria
58. 2005, Keynote speech, BioInfo, Plovdiv, Bulgaria
59. 2005, Invited talk, ARSO'2005 – Advanced Robotics and their Social Impact, Nagoya, June 2005
60. 2005, Keynote speech, Intern. Symposium on Computational Intelligence, Korea, 1-2 Febr.2005
61. 2004, Keynote speech, Int. Conf. on Hybrid Intelligent Systems, HIS'04, Kitakushu, Japan, December 2004
62. 2004, Keynote speech, ICONIP'2004 – Int. Conf. Neuro Information Processing, Calcutta, 2004
63. 2004, Keynote speech, The Founding meeting for the German chapter of the IEEE Comp. Intell. Society, Keiserslautern.
64. 2004, Open lecture, Bioinformatics: The knowledge engineering approach, Techn.Univ. Sofia -Plovdiv, Bulgaria, July 2004
65. 2004, Plenary talk, IEEE Symposium on Intelligent Systems, Varna, Bulgaria, June
66. 2002, Invited talk, ICONIP'2002, November, Singapore
67. 2002, Keynote speech, Int. Conf.on Industrial Applications of Intelligent and Expert Systems, IAE, Cairns, June 2002
68. 2001, Plenary Chair and invited talk, CEC'2001, Seoul, Korea
69. 2000, Invited talk, ICONIP'2000, Taijon, Korea
70. 2000, Closing Speech, Iizuka'2000, Fukuoka, Japan, 1-4 October 2000.
71. 1999, Invited lecture, Innovation in wastewater treatment, national seminar, Auckland, 30/04/99
72. 1998, Keynote presentation, 3rd On-line World Conference on Soft Computing in Engineering Design and Manufacturing, 21-30 June 1998, World Wide Web
73. 1998, Keynote speech, Neuro-Fuzzy Day, 11 June 1998, University of Twente, The Netherlands
74. 1998, Invited talk, Fuzzy neural networks and speech recognition, International workshop on Future Devices for Human-Computer Interaction, Japanese Ministry for Science and Technology, Beppu, Japan, 16-24 January, 1998
75. 1997, Opening lecture, Connectionist-based systems in the age of technology, ICONIP'97, Dunedin, 24-28 November.
76. 1996, Keynote speech, International Discourse on Fuzzy Logic and the Management of Complexity FLAMOC'96, Sydney University of Technology, 15-18 January (1996),
77. 1996, Invited talk, Int.Conf. on Neural Information Processing ICONIP'96, Hong Kong, 14-18 September, 1996,
78. 1996, Invited talk, Int.Conf.on Fuzzy Systems, Neural Networks and Soft Computing, Iizuka'96, Japan, KIT.
79. 1996, Invited talk, International Panel Conference on Soft and Intelligent Computing, SIC'96, Budapest
80. 1995, Invited talk (with T.Cohen, M.Bailey, P.Mason), Annual Conference of the New Zealand Biotechnology Association, Dunedin, 30 August,
81. 1994, Keynote speech, New Zealand Computer Society, ANNES SIG national seminar, Auckland
82. 1994, Keynote speech, New Zealand Computer Society, ANNES SIG national seminar, University of Otago,
83. 1982, Invited talk, Stack Memory Devices. International conference on Memory Devices '82. Veliko Turnovo, Bulgaria
84. 1982, Invited talk, Utilisation of the semigroup theory for exchange operations in magnetic domain memory. International conference on Memory Devices, Veliko Turnovo, Bulgaria

Tutorials and Workshops presented at International Conferences and published:

1. 2017, Tutorial on SNN and Brain-inspired AI, ICONIP, Guangzhou, China.
2. 2014, Tutorial on spiking neural networks, WCCI/IJCNN, Beijing July
3. 2013, Tutorial on evolving systems, Texas, IJCNN 2013 (with P.Angelov)
4. 2010, Workshop on evolving systems (with P.Angelov and D.Filev), WCCI, Barcelona, July 2010.
5. 2008, Tutorial on evolving systems, CBR Brazilian Symposium on NN, Salvador, Brazil, Oct., 2008
6. 2007, Tutorial on evolving intelligent systems, ICANN 2007, Porto, September 2007
7. 2007, Tutorial on evolving intelligent systems, IJCNN 2007, Orlando, August, 2007
8. 2007, Tutorial on evolving intelligent systems, IEEE Symposia, Hawaii, April 2007
9. 2006, Tutorial on evolving intelligent systems, ICANN, September 2006, Athens
10. 2006, Tutorial on evolving intelligent systems, WCCI 2006, Montreal, August, 2006
11. 2005, Tutorial on evolving connectionist systems, IJCNN,05, Montreal, July 2005
12. 2005, Tutorial on evolving connectionist systems, ICANN'05, Warsaw, Sept. 2005
13. 2004, Tutorial on evolving connectionist systems, ICONIP'04, Calcutta, Nov. 2004
14. 2004, Tutorial on data mining and knowledge discovery in bioinformatics, Int. Joint Conf. on Neural Networks – IJCNN, Budapest, 2004

15. 2003, Adaptive neural networks for data mining and knowledge discovery, Tutorial at the Int. Joint Conf. on Neural Networks (IJCNN'03), July 2003, Portland, Oregon, IEEE and INNS
16. 2003, Knowledge-based Neural Networks for Bioinformatics, University of California at Berkley, BISC Workshop on FLINT-CIBI (USA)
17. 2000, Evolving Connectionist Systems: Methods, Tools, Applications, Tutorial at ICONIP'2000 (Taejon, Korea)
18. 2000, Evolving connectionist systems, Tutorial, euroComputation conference NC'2000 (Berlin)
19. 1999, Workshop "Future directions for intelligent systems and information sciences", Dunedin, November 1999
20. 1999, Evolving connectionist systems – methods, tools, applications, Tutorial, ICONIP'99, Nov. 1999, Perth
21. 1999, Speech and language recognition, Tutorial Track at IJCNN'99, Washington DC, July 1999
22. 1997, Connectionist-Based Intelligent Information Systems, Tutorial, ICONIP'97, Dunedin, 24-28 November 1997
23. 1997, Hybrid Connectionist-Based Intelligent Information Systems – Methodologies, Tools, Industrial Applications, Tutorial, World Manufacturing Congress, WMC'97, 18 November 1997, Auckland
24. 1997, AI/GIS systems and their applications, Tutorial, The 2nd Annual Conf. on Geo Computation, Dunedin, June 1997
25. 1997, Hybrid Intelligent Information Systems, Tutorial, ICNN'97 (The IEEE International Conference on Neural Networks), Houston, USA, May
26. 1996, Hybrid AI/GIS systems and their applications, Tutorial, Australian Urban and Resource Planning Information Society AURISA'96, Hobart, November 1996
27. 1996, Hybrid (neuro-fuzzy) intelligent information systems: methods, tools, industrial applications, Tutorial at Iizuka'96, (International Conference on fuzzy systems, neural networks and soft computing), Iizuka, Japan, September 1996
28. 1995, Intelligent Hybrid Systems for Problem Solving and Knowledge Acquisition, Workshop at the Second New Zealand International Conference on Artificial Neural Networks and Expert Systems ANNES'95, Dunedin, November 1995
29. 1995, Hybrid (Connectionist, Fuzzy, Symbolic) Environments and Their Applications for Building Complex Decision Making Systems, Tutorial, International Conference on Neural Information Processing (ICONIP'95- Beijing), Beijing, 1995
30. 1995, Fuzzy Data Analysis, Workshop, Eight Colloquium of the Spatial Information Research Centre of the University of Otago, Palmerston North.
31. 1994, Hybrid (Symbolic-, Connectionist-Fuzzy-, Chaotic) Systems, Tutorial, AI'94 – the Joint Australian Conference on Artificial Intelligence, Armidale
32. 1993, The Basics of Fuzzy Systems, Tutorial, ANNES'93 conference, Dunedin, U. Otago
33. 1993, Neural Networks for Problem Solving. Tutorial, ANNES'93 conference, Dunedin, U. Otago

(g) Audio-Visual Recordings Published as CDs

- 2018, Video on the Nature Scientific Reports paper.
- 2010, The science gets personal, AUT and YouTube.
- 2008, The KEDRI Repository of Intelligent Connectionist Based Systems – RICBIS.
- 2000, Smart Voice Technologies, CD, Information Science Department, University of Otago.
- 1999, Speech and language Processing, Tutorial Track 8, CD, IJCNN'99, Washington DC, July.
- 1998, Connectionist-based Inform. Systems, CD UOO606 FRST project results (software, papers) (1998)
- 1996, Fuzzy system implementation on the Fisher & Paykel's PSC-III, Video film, in collaboration with the University of Otago Audio Visual Centre.

(h) Computer Software - Developed and Published

1. N.Kasabov et al, NeuCube – a spiking neural network spatio-temporal data machine, KEDRI, 2013-2019.
2. N.Kasabov et al, EvoSpike - a spiking neural network software environment for modelling spatio-temporal data, 2013, <http://ncs.ethz.ch/projects/evospike/>
3. R.Hu, N.Kasabov et al, The KEDRI Personalised Modelling Development System, March 2012.
4. S.Schliebs, N.Kasabov et al, The KEDRI EvoSpike Development System, February 2012.
5. N.Kasabov et al, The KEDRI RICBIS Computational Intelligence Repository 2008.
6. N.Kasabov, L.Benuskova, V.Jain, P.Gottgroy, BGO – The KEDRI Brain-Gene Ontology (www.kedri.info)
7. Z.Chan, N.Kasabov, V.Jain, GenNetXP – A gene regulatory network modelling software (www.kedri.info), 2003-2005
8. D. Greer, N. Kasabov, Q. Song, L.Goh – Siftware: A Gene Expression Profiling Software, 2003-2005
9. P.Hwang, D. Greer, N. Kasabov, Q. Song, P. Pang, NeuCom – A Neurocomputing environment for intelligent decision support systems, (www.the.neucom.com), 2003 - 2006
10. Richard Walton, Dougal Greer, Nik Kasabov, Qun Song – Cardio Vascular Disease Prediction System, 2003
11. Song, Q. and N.Kasabov, ECOS MATLAB Toolbox, (www.kedri.info), 2002-2003
12. Abdula, W. and N.Kasabov, Speech recognition development environment, Department of Information Science, University of Otago, 1999
13. Deng, D., Koprinska, I., Kasabov, N., et al, The NZ Repository of Intelligent Connectionist-Based Modules and Systems – NZ-RICBIS, <http://divcom.otago.ac.nz/infosci/kel/CBIIS.html>
14. Kilgour, R., Kasabov, N., Kozma, R., Laws, M., et al. HySPEECH/2 - An experimental software system for speech recognition and translation from English to Maori, Windows95, PGSF FRST NZ/University of Otago, 1998, <http://kel.otago.ac.nz>

15. Watts, M., Kasabov, N., and Pearson, S. FuzzyCOPE/3 - A hybrid fuzzy connectionist production systems environment, MS Windows/Windows95, June 1998, University of Otago, <http://kel.otago.ac.nz>
16. Purvis, M., Kasabov, N., Zhang, F., et al, AI/GIS hybrid intelligent information system for spatial information processing, UNIX/SUN-ArchInfo, FRST NZ/University of Otago, 1997
17. Kasabov, N., Garden, J., Jones, P., Kilgour, R., Gray, A., et al. FuzzyCOPE-1 & 2 - A hybrid fuzzy connectionist production systems environment, MS Windows/Windows95, 1995-1997; University of Otago
18. Watson, C., Kasabov, N., Sinclair, S., Laws, M., Kilgour, R., and Kassabova, D., Otago Speech Corpora on New Zealand English, CD, Windows95/UNIX, University of Otago, 1995, <http://kel.otago.ac.nz>
19. Kasabov, N. et al, COPE - Connectionist production systems environment, Technical University of Sofia, 1992
20. Kasabov, N. and Nikolaev, N. GESPAR - Generator of Expert Systems for Parallel Computers, TU Sofia, 1990
21. Kasabov, N., Besenshek, D., Georgiev and Svetlin. GESMI - Generator of Expert Systems, TU Sofia, 1987

(i) Patents

1. N.Kasabov, V.Feigin, Z.Hou, Y.Chen, Improved method and system for predicting outcomes based on spatio/spectro-temporal data, PCT patent WO2015/030606 A2, US2016/0210552 A1. Granted/Publication date: 21 July 2016.
2. N.Kasabov, Data Analysis and Predictive Systems and Related Methodologies, US patent 9,002,682 B2, 7 April 2015.
3. R. North, M. Blumenstein, M. McMaster, N. Kasabov, M. Black, G. Cooper, L. McCowan, Biomarkers for prediction of preeclampsia and/or cardiovascular disease, PCT, WO2009/108073A1, 27.02.2009.
4. N.Kasabov, M. Futschik, M.Sullivan, A.Reeve, Method and Medical Decision Support System Utilizing Gene Expression and Clinical Information, PCT/US03/25563, 15.08. 2003
5. N.Kasabov, A.Reeve, M. Futschik, M.Sullivan, and P. Guildford, Medical Applications of Adaptive Learning Systems using Gene Expression Data, Patent USA, PCT WO 03/079286
6. N. Kasabov, A. Ghobakhlou, Adaptive Sound and Image Learning System and Method, PCT WO 2005/038774 A1.
7. Kasabov, N., and Q. Song, Transductive Neuro-Fuzzy Inference Method for Personalised Modelling, PCT WO 2005/048185 A1.
8. Kasabov, N., Adaptive learning system and method, Patent US 7,089,217B2, Apr.10, 2001.
9. Kasabov, N., and Abdulla, W., Speech recognition system and method, PCT WO 02/23525 A1.
10. Kasabov, N., Multi-microprocessor system, 258015 Czechoslovakia, 2/6/1989
11. Kasabov, N. and Dakovski, L. Stack Memory Device, 1026164 Russia, 1/3/1983 (in Russian)
12. Dakovski, L. and Kasabov, N. Bus-register device for information processing, 4 362 926 USA, 7/12/1982
13. Dakovski, L. and Kasabov, N. Numerical Control of Machines, 2037040 UK, 24/11/1982
14. Dakovski, L. and Kasabov, N. Stack Memory Device, 4 305 138 USA, 8/12/1981
15. Dakovski, L. and Kasabov, N. Arithmetische Registereinrichtung Offenlegungsschrift, DE3128816A1 Bundesrepublik Deutschland, 22/7/1980
16. Dakovski, L. and Kasabov, N. Dispositif memoire formant pile, 79 26385 France, 24/10/1979
17. Kasabov N. et al, A variable word- length computer memory, 62135, Bulgaria, 19/08/1983
18. Kasabov, N. Multi-microprocessor system, 36605 Bulgaria, 22/9/1983
19. Kasabov, N. and Dakovski, L. Method for permutation of data records, 35714 Bulgaria, 1/4/1983
20. Kasabov, N. et al, An electronic device for a direct access to computer memory, 36902 Bulgaria, 18/11/1983
21. Kasabov, N. and Dakovski, L. Arithmetic register device, 33404 Bulgaria, 22/07/1980
22. Kasabov, N. n – switch element, 29707 Bulgaria, 05/02/1979
23. Kasabov, N. and Dakovski, L. Cyclic automata, 27684 Bulgaria, 3/5/1978
24. Dakovski, L. and Kasabov, N. 2n – Universal device for realisation of permutation automata, 26333 Bulgaria, 1/3/1978
25. Dakovski, L. and Kasabov, N. A method and a device for realisation of asynchronous automata, 26334 Bulgaria, 27/3/1978
26. Dakovski, L. and Kasabov, N. An electronic device for realisation of finite automata, 26335 Bulgaria, 27/3/1978
27. Kasabov, N. and Dakovski, L. A method and a bus register device for the realisation of sequential finite automata, 29106 Bulgaria, 08/11/1978
28. Dakovski, L. and Kasabov, N. Stack Memory Device, 29114 Bulgaria, 08/11/1978
29. Dakovski, L. and Kasabov, N. A method for discrete signal commutation and control of electronic commutation devices, 25630 Bulgaria, 31/5/1977

(j) Other Creative Works

1. Kasabov, N, 20 entries to the Short Bulgarian Encyclopaedia for Mathematical and Physical Sciences, 1988-90 (in Bulgarian)

August 2020