

Małgorzata Krętowska

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Curriculum Vitae

Academic background

1991 – 1996 Studies at the Institute of Computer Science, Białystok University of Technology

1996 M.S. in computer science (with distinction), Institute of Computer Science, Białystok University of Technology
Title of thesis: Basis exchange algorithms and their application in the synthesis of classifiers

09.07.2002 Ph.D. in biocybernetics and biomedical engineering (with distinction), Institute of Biocybernetics and Biomedical Engineering, Polish Academy of Sciences, Warsaw
Title of dissertation: Artificial neural networks as a tool for survival analysis

07.02.2020 D.Sc. in computer science, Białystok University of Technology
Title of scientific achievement: Tree-based prediction models in survival data analysis

Professional appointments

1995 -1996 The Centre of Informatics ZETO, Białystok, Poland
Position: Database programmer

1996 - 2002 Faculty of Computer Science, Białystok University of Technology
Position: Teaching assistant

2002 - 2020 Faculty of Computer Science, Białystok University of Technology
Position: Assistant professor

2020 - present Faculty of Computer Science, Białystok University of Technology
Position: Associate professor

Professional experience

1996 - present Lectures and computer classes in the following subjects:

- Probabilistic methods and statistics
- Multidimensional data analysis methods
- Databases
- Programming languages
- Artificial neural networks

- Database-driven applications

Classes for ERASMUS and ERASMUS+ students:

- Probabilistic methods and statistics
- Database systems
- Introduction to databases
- Database-driven applications

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| 1996 - present | Cooperation with the Medical University of Bialystok in the field of medical data analysis |
| 2010 – 2013 | Classes within the course "Bioinformatics with elements of genomics" (project "Higher quality of education as a key to the development of the Medical University of Bialystok" co-financed by the European Union under the European Social Fund) |

Research interests

My research interests focus on data analysis by using both statistical and non-statistical methods. I work on applications of artificial intelligence in classification and survival analysis.

Scientific internships

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| 23.11.1998 – 06.12.1998 | Stay in Milan, Italy (Istituto Nazionale Tumori - Milano) as part of the PAN-CNR project: Artificial Neural Networks as Exploratory Tools in Survival Analysis. |
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Courses and trainings

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| 07.2019 | Summer school DeepLearn 2019, Warsaw |
| 12.2018 | Training "Increasing access to universities for people with disabilities" (Foundation Institute for Regional Development), Bialystok |
| 26.10.2020 | Training "World of touch and sound" (Foundation Chance for the Blind) |

Projects

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| 1996-1998 | Polish Committee for Scientific Research grant no. 1104/T11/96/11: "DaVinci" |
| 1997-1999 | PAN (Poland) – CNR (Italy) grant: Artificial Neural Networks as Exploratory Tools in Survival Analysis |
| 2002-2004 | Bialystok University of Technology grant no. W/WI/1/02: "Knowledge exploration in databases using bionic concepts" |
| 2001-2005 | European Action COST-282: "Knowledge Exploration in Science and Technology" |
| 2005-2007 | Bialystok University of Technology grant no. W/WI/4/05: "Knowledge discovery methods as an event history tool" |
| 2006-2009 | Ministry of Science and Higher Education grant no. 3 T11F 011 30: "Temporal knowledge representation and its implementation in IT systems" |

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| | supporting medical management” |
| 2008-2009 | Bialystok University of Technology grant no. W/WI/4/08: “Computational intelligence algorithms in the analysis of event history” |
| 2010-2012 | Project “Higher quality of education as a key to the development of the Medical University of Bialystok” co-financed by the European Union under the European Social Fund (organization of three editions of the course “Bioinformatics with elements of genomics”) |
| 2010-2012 | Bialystok University of Technology grant no. S/WI/2/08 |
| 2013-2017 | Bialystok University of Technology grant no. S/WI/2/2013: „Methods of exploration and modelling of multidimensional data sets” |
| 2018-present | Bialystok University of Technology grant no. S/WI/2/2018: “Exploration of big datasets “ |

Professional societies

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| 1996 – 2002 | Polish Society of Computer Simulation |
| od 1999 | International Society of Clinical Biostatistics |

Organisational activities

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| 1996 | III Scientific Workshops of Polish Society of Computer Simulation, Wigry, Poland (organizing committee) |
| 1999 | VI Scientific Workshops of Polish Society of Computer Simulation, Bialystok – Bialowieza (organizing committee) |
| 1999 | European Simulation Multiconference (ESM’99), Warsaw (organizing committee) |
| 2000, 2002, 2005, 2008, 2011, 2014, 2016, 2017 | Seminar of the International Centre of Biocybernetics: International Seminar Statistics and Clinical Practice, Institute of Biocybernetics and Biomedical Engineering, Polish Academy of Sciences, Warsaw (organizing committee) |
| 2005 | International Conference on “Building information society in healthcare in the Euroregion Niemen”, Bialystok (organizing committee) |
| 2018 – present | Coordinator for students with disabilities of the Faculty of Computer Science, Bialystok University of Technology |
| 10.01.2020 – present | A member of the “BUT Available” project team as part of competition no. POWR.03.05.00-IP.08-00-DOS/19 |

Honours

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| 1996 | Bronze Award in the <i>Primus inter Pares</i> contest organized by the Polish Society of Students, Bialystok Branch |
| 1997 | Polish Society for Computer Simulation award |
| 1999 | Bialystok University of Technology Award for organizational activity |
| 2001 | Best Young Investigator Paper award. The Twelfth Conference on Biocybernetics and Biomedical Engineering, Warsaw, Poland |

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| 2002 | Bialystok University of Technology Award for scientific achievements |
| 2004 | Distinction for a cycle of 4 works on etiopathogenesis and endocrinopathic therapy awarded by the Minister of Health |
| 2006 | Bialystok University of Technology Award for organizational activity |
| 2019 | Bialystok University of Technology Award for scientific achievements |
| 2020 | Bialystok University of Technology Award for scientific achievements |

Participation in expert and competition teams

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| 2015 | The team for the education program at the second degree studies in Computer Science appointed by the Council of the Faculty of Computer Science of the Bialystok University of Technology |
| 2019 | Jury member of the 4th edition of the national eliminations of the International Statistical Skills Competition |
| 2020 | The team for the evaluation of engineering works in the field of computer science and econometrics at the Faculty of Computer Science of the Bialystok University of Technology |

Reviewing

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| Journals | <p>Studies in Logic Grammar and Rhetoric (series Logical Statistical and Computer Methods in Medicine)</p> <p>Australian & New Zealand Journal of Statistics</p> <p>PeerJ</p> <p>Concurrency and Computation: Practice and Experience</p> <p>Expert Systems With Applications</p> <p>Computing and Informatics</p> <p>Biocybernetics and Biomedical Engineering</p> <p>Mathematical Problems in Engineering</p> |
| Conferences | <p>13th International Conference on Artificial Intelligence and Soft Computing</p> <p>40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society</p> <p>17th International Conference on Artificial Intelligence and Soft Computing</p> <p>8th International Conference on Pattern Recognition Applications and Methods</p> <p>2nd International Conference on Data Intelligence and Security (ICDIS 2019)</p> <p>18th International Conference on Artificial Intelligence and Soft Computing</p> <p>41st Annual International Conference of the IEEE Engineering in Medicine and Biology Society</p> <p>9th International Conference on Pattern Recognition Applications and Methods” - ICPRAM 2020</p> <p>19th International Conference on Artificial Intelligence and Soft Computing</p> <p>42nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)</p> <p>10th International Conference on Pattern Recognition Applications and Methods” - ICPRAM 2021</p> |

Languages

Fluent in Polish. Good knowledge in English.
Passive knowledge of German, French and Russian.