

PERSONAL INFORMATION

Name: Belciug, Smaranda

ORCID: <https://orcid.org/0000-0003-2950-3501>

Email: sbelciug@inf.ucv.ro

Website: <http://inf.ucv.ro/~sbelciug/>

Date of Birth: February 15, 1984

EDUCATION

2023 Habilitation in Computer Science, Romanian Academy.

2014-2015 Postdoctoral Researcher in Artificial Intelligence, University of Craiova, Romania

2007 - 2011 PhD in "Machine learning techniques in computer-aided diagnosis", Department of Computer Science, Faculty of Mathematics and Computer Science, University of Pitești, Romania, Supervisor: Prof. Nicolae Tandareanu

2006-2008 Master's Degree in Artificial Intelligence, Department of Computer Science, Faculty of Mathematics and Computer Science, University of Craiova, Romania

2002-2006 Bachelor's Degree in Computer Science, Department of Computer Science, Faculty of Mathematics and Computer Science, University of Craiova, Romania

CURRENT POSITIONS

2024 – present PhD Supervisor at Simion Stoilow Institute of Mathematics of the Romanian Academy

2023 - present Editor, Journal of Biomedical Informatics

2022 – present Associate Member, The Royal Society of Medicine

2022 – present, Expert, European Commission Horizon Europe Health Research Programme

2022 – present, Senior Editor, BMC Medical Informatics and Decision Making

2021 – Present, Data Scientist, Molecular Tumor Board – Multidisciplinary Commission for Personalized Therapeutic Indication based on a Comprehensive Molecular (Genetic) Assessment

2016 – Present, Associate Professor, Department of Computer Science, Faculty of Sciences, University of Craiova, Romania

2015 – Present, Expert, E-COST of the European Commission

PREVIOUS POSITIONS

2014 – 2016 Assistant Professor, Department of Computer Science, Faculty of Mathematics and Natural Sciences, University of Craiova, Romania

2011 – 2014 Teaching Assistant, Department of Computer Science, Faculty of Mathematics and Computer Science, University of Craiova, Romania

2008 – 2011 Teaching Assistant, Department of Computer Science, Faculty of Mathematics and Computer Science, University of Craiova, Romania

RESEARCH GRANTS

Principal Investigator - PN-III-P4-PCE-2021-0057 - "Recognition of shapes and anomaly detection in fetal morphology using Deep learning and statistical learning", 2022-2024, 248,826.96 EUR

Member - PN-II-PT-PCCA-2013-4-1153 "Intelligent medical information system for diagnosis and treatment monitoring in patients with colorectal neoplasm", Coordinating institution University of Craiova, Partners: University of Medicine and Pharmacy Craiova, Blue Logic S.R.L., amount 1,226,501.00 RON ~ 278,118 EUR, University of Craiova 498,487 lei

Member – 99CI/2017, PN-III-P2-2.1-CI-2017-0469, "Automated prediction of the stock values trend for customers of a Financial Services and Investments Company", July 2017 - December 2017, 44,946 lei.

Member - Internal competitive research grant, University of Craiova, no. 42C/2014, "Evolution of prototypes in classification with support vector machines and neural networks", January 2014 - December 2014

SCHOLARSHIPS AND AWARDS

2023 Gala Capital Top Performers in Health Award, Excellence in Education and Research category

2022 "Mihai Drăgănescu" Award of the Romanian Academy for the year 2020

2021 Excellence Diploma 3rd place in the Excellence in Research Ranking – Excellence Researchers, Scientific Research Gala 2021, University of Craiova, for outstanding research results obtained during the year 2020

2021 Honor Diploma 2nd place Scientific Research Gala 2021, University of Craiova, for outstanding research results obtained during the year 2020 in the field of Mathematics and Natural Sciences.

2018 Erasmus training program, Université Paris Est, Paris, France (April 2018)

2017, 2013 Erasmus training program, Branderburgische Technische Universitat Cottbus, Lehrstuhl Internet Technologie, Cottbus, Germany (April 2017, January – February 2013)

2016, 2013 Erasmus teaching program, School of Computing and Information Engineering, University of Ulster, Northern Ireland, United Kingdom (April 2016, September – October 2013)

2014 – 2015 Postdoc Scholarship, University of Craiova, Romania, no. POSDRU 159/1.5/S/133255 2007 Erasmus Scholarship Master Securite des Systemes Informatique, Faculte de Sciences et Technologie, Paris 12, Val de Marne, Paris, France (January 2007 – June 2007)

2018 Special Mention, Young Researchers in Science and Engineering – Prof. Rada Mihalcea, University of Michigan, competition organized by the City Hall of Cluj Napoca, Romania

2013 – 2024 12 national awards received for UEFISCDI articles, Romania

2014 – 2024 Excellence Awards in Research, University of Craiova, Romania

CONFERENCE SPEAKER

2022 – Keynote speaker KES- Smart Digital Futures 2022, Rhodes

2021 - Invited speaker – RoMedInf, Cluj

SUPERVISION OF THESIS/DISSERTATION/DOCTORAL WORK

2022 Doctoral committee member for Renato Constantin Ivanescu, University of Craiova.

2022 Member of the competition committee for the position of lecturer, University of Medicine and Pharmacy Craiova

2022 Coordinator of a research group consisting of 11 researchers in the PN-III-P4-PCE 2021-0057 project, "Recognition of shapes and anomaly detection in fetal morphology using Deep learning and statistical learning"

2022 Chair of the master's thesis defense committee, Faculty of Sciences, Department of Computer Science 2021 Chair of the competition commission for the lecturer position, University of Craiova.

2014 – Present supervision of 14 dissertation theses, Department of Computer Science, Faculty of Sciences, University of Craiova, Romania.

2012 – Present supervision of 34 bachelor's theses, Department of Computer Science, Faculty of Sciences, University of Craiova, Romania.

2019 Member of the doctoral committee for Mircea Sebastian Șerbănescu, University of Pitesti.

2012-present Coordinator of a research group consisting of students: coordinator of 5 papers presented in national competitions for students - 3 prizes won.

TEACHING ACTIVITIES

2021-present 'Advanced Information Security Techniques' (English), course for 25 master students, University of Craiova, Romania

2020-present 'Elements of neural and evolutionary computing', course for 50 master students, University of Craiova, Romania

2015-present 'Exploratory data analysis', course for 25 master students, University of Craiova, Romania

2015-present 'Stochastic modelling' (English), course for 25 master students, University of Craiova, Romania

2015-present 'Data structures and algorithm design techniques', course for 180 bachelor students, University of Craiova, Romania

2015-present 'Forecasting and classification', course for 80 bachelor students, University of Craiova, Romania

2013 a course on 'Artificial Intelligence' for 100 bachelor students, a course on 'Artificial Intelligence' for 25 master students, a course on 'Artificial Intelligence' for 7 doctoral students, University of Ulster, Northern Ireland, United Kingdom

2012 a course on 'Artificial Intelligence' for 25 investigative journalists, Freedom House, Romania

INSTITUTIONAL RESPONSIBILITIES

2008 – Present member of the Department of Computer Science, University of Craiova

2020 – Present Year Dean for master students, Department of Computer Science, University of Craiova

2014 – 2020 Erasmus coordinator, Department of Computer Science, University of Craiova

REVIEWING ACTIVITIES

2023 – Editor, Journal Of Biomedical Informatics

2020 – Present Senior Editor BMC Medical Informatics and Decision Making

2018 – Present Associate Editor Journal of Medical Artificial Intelligence

2018 – Present Associate Editor International Journal of Computers in Healthcare 2013 – Present Editorial Review Board, Egyptian Computer Science Journal, Egypt

2012 – Present Reviewer for: Elsevier Academic Press Publishing House, Springer Nature Publishing House, Expert Systems with Applications, Journal of Biomedical Informatics, Applied Soft Computing, PlosOne, BMC Medical Informatics and Decision Making, IEEE Transactions on Neural Network, BMC Gastroenterology, Journal of Medical Informatics, Computers Methods and Programs in Biomedicine, BMC Cancer, Lung, Pattern Analysis and Applications, Neural computing and applications, Expert Systems, Zentralblatt Math.

2011 – Present Member of scientific committees; reviewer for: KES-InMED, Innovation in healthcare and medicine, ICEIS International Conference on Enterprise Information Systems, International Conference on Biomedical Informatics and Health Informatics, INTAP Intelligent Technologies and Applications, ICEIS Enterprise Information Systems, IEEE EHB e-Health and Bioengineering, CD-MAKE Cross Domain Conference for Machine Learning and Knowledge Extraction, AIMA Artificial Intelligence in Medical Applications, Management and Information Technology, USAB Enriching Health Data for Research and Practice, ICIT Artificial Intelligence in e-learning and education, ICICIS Intelligent Computing and Information Systems, IEEE Conference of Machine Learning and Applications, Global Health Challenges, KCBMDH Knowledge Computing in Bio-Medical and Digital Health, KCHI Knowledge Computing in Health Informatics.

2016–Present Evaluator, Austrian Science Fund, Austria, UEFISCDI, Romania

MEMBERSHIP IN SCIENTIFIC SOCIETIES

2013 – Present member, Research Network “Human-Centered AI Lab” (Holzinger Group), Austria

COLLABORATIONS

Prof. Sally McClean, University of Ulster, Prof. Jain Lakhmi (editor), University of Technology, Sydney, Australia, Prof. Andreas Holzinger (Holzinger Group), Medical University of Graz, Prof. Abdel Badeeh Salem (co-author), Ain Shams University, Cairo, Egypt, Prof. CP Lim (editor), Deakin University, Australia, Prof. George Tsihrintzi (editor), University of Pireus, Greece, Prof. Peter Vilmann(co-author), Copenhagen University, Denmark, Prof. Yhosimasa Masuda (Carnegie Mellon, University School of Computer Science, Keio University), Prof. Yen-Wei Chen (Ritsumeikan University, Japan).

CAREER BREAKS

August 17, 2014 – December 17, 2014 – Maternity leave (4 months) July 24, 2020 – September 2, 2020
– Maternity leave (1 ½ months)

AREAS OF EXPERTISE

Artificial intelligence, neural networks, evolutionary computing, machine learning, applied statistics / biostatistics

Web of Science h-index: 12,

Scopus h-index: 16,

Google Scholar h-index: 19.

PUBLISHED BOOKS

1. S. Belciug, Iliescu, D.G., *Pregnancy with Artificial Intelligence. A 9,5 months journey from preconception to birth*, Springer Nature, 2023
2. Belciug, S., *Artificial Intelligence in Cancer - Diagnostic to tailored treatment*, Elsevier, 2020
3. Belciug, S., Gorunescu, F., *Intelligent Decision Support Systems—A Journey to Smarter Healthcare*, Springer Nature, 2020

Publication List

A. Books and book chapters

1. Smaranda Belciug, Dominic Iliescu, *Pregnancy with Artificial Intelligence. A 9,5 months journey from preconception to birth*, Springer Nature, <https://doi.org/10.1007/978-3-031-18154-2>, 978-3-031-18153-5, (2023).
2. Smaranda Belciug, *A Survival Analysis Guide in Oncology*. In: Lim, C.P., Vaidya, A., Chen, YW., Jain, V., Jain, L.C. (eds) *Artificial Intelligence and Machine Learning for Healthcare. Intelligent Systems Reference Library*, vol 229. Springer-Nature, Cham. https://doi.org/10.1007/978-3-031-11170-9_2, (2023).
3. Smaranda Belciug, *An Introduction to Artificial Intelligence in Healthcare*. In: Lim, CP., Vaidya, A., Chen, YW., Jain, T., Jain, L.C. (eds) *Artificial Intelligence and Machine Learning for Healthcare. Intelligent Systems Reference Library*, vol 228. Springer-Nature, Cham. https://doi.org/10.1007/978-3-031-11154-9_1, (2023).

4. Dominic Iliescu, Smaranda Belciug, Ioana Gheonea, Practical Guide to Simulation in Delivery Room Emergencies, Editors Gilda Cinnella, Renata Beck and Antonio Malvasi, Springer Nature International Publishing, 9783031100666 (in press), (2023)
5. Smaranda Belciug, Bed-Occupancy Management and Hospital Planning: A Handbook. In: Shen, H., Zeng, Y., Li, L., Wang, X. (eds) Regionalized Management of Medicine. Translational Bioinformatics, vol 17. Springer-Nature, Singapore. https://doi.org/10.1007/978-981-16-7893-6_10, (2022).
6. Smaranda Belciug, Artificial Neural Networks for Precision Medicine in Cancer Detection. In: Virvou, M., Tsihrintzis, G.A., Jain, L.C. (eds) Advances in Selected Artificial Intelligence Areas. Learning and Analytics in Intelligent Systems, vol 24. Springer-Nature, Cham. https://doi.org/10.1007/978-3-030-93052-3_11, (2022).
7. Smaranda Belciug, Learning Paradigms for Neural Networks for Automated Medical Diagnosis. In: Tsihrintzis, G.A., Virvou, M., Esposito, A., Jain, L.C. (eds) Advances in Assistive Technologies. Learning and Analytics in Intelligent Systems, vol 28. Springer-Nature, Cham. https://doi.org/10.1007/978-3-030-87132-1_7, (2022).
8. Smaranda Belciug, A Statistical Analysis Handbook for Validating Artificial Intelligence Techniques Applied in Healthcare. In: Lim, CP., Chen, YW., Vaidya, A., Mahorkar, C., Jain, L.C. (eds) Handbook of Artificial Intelligence in Healthcare. Intelligent Systems Reference Library, vol 212. Springer-Nature, Cham. https://doi.org/10.1007/978-3-030-83620-7_3, (2022).
9. Smaranda Belciug, Florin Gorunescu, Intelligent Decision Support Systems—A Journey to Smarter Healthcare, DOI, <https://doi.org/10.1007/978-3-030-14354-1>, Springer Nature Switzerland AG 2020, Print ISBN 978-3-030-14353-4, Online ISBN 978-3-030-14354-1, (2019).
10. Florin Gorunescu, Smaranda Belciug, Intelligent Decision Support Systems in Automated Medical Diagnosis, Advances in Biomedical Informatics, (Holmes, D., Jain, L, Eds.) pp. 161-186, ISSN: 1868-4394, ISBN: 978- 319 - 67512 - 1, SpringerNature, (2017).
11. Florin Gorunescu, Smaranda Belciug, Reference Module in Biomedical Sciences, Genetic Algorithms for Breast Cancer Diagnostics, Elsevier <https://doi.org/10.1016/B978-0-12-801238-3.00000-3>, (2019).
12. Smaranda Belciug, Machine Learning Solutions in Computer-Aided Medical Diagnosis, Machine Learning for Health Informatics, State-of- the-art and Future Challenges, Springer International Publishing, DOI:10.1007/978-3-319-50478-0, ISBN 978-3-319-50478-0, pp. 289-302, (2016).
13. Smaranda Belciug, Elemente de calcul neuronal cu aplicatii in diagnosticul automat, Editura Sitech, ISBN 978-606-11-4693-2, (2015).
14. Florin Gorunescu, Smaranda Belciug, Incursiune în biostatistică, Editura Albastră – Grupul MicroInformatica, ISBN: 978-973—650 -302 -3 , (2014) .

15. Smaranda Belciug, Marina Gorunescu, Data mining: modele predictive si de clasificare. Implementare in Matlab si Java, Editura Albastra, Microinformatica, ClujNapoca, ISBN 978-973-650-290-3, (2012).
16. Smaranda Belciug, Machine learning techniques in Computer Aided Diagnosis, Seria Computer Science, Editura Universitaria Craiova, ISBN 978-606-14-0225-0, (2011).

c). Journal articles ISI/BDI

1. Smaranda Belciug, Learning deep neural networks' architectures using differential evolution. Case study: medical imaging processing, Computers in Biology and Medicine, 146, 105623, <https://doi.org/10.1016/j.compbimed.2022.105623>, IF: 6.698, 2022.
2. ¹Dominic Iliescu, Smaranda Belciug (corresponding author), Renato Ivanescu, Roxana Dragusin, Monica Cara, Laurentiu Dira, Prediction of labor outcome pilot study: evaluation of primiparous women at term, American Journal of Obstetrics & Gynecology MFM, 4 (6), 100711, <https://doi.org/10.1016/j.ajogmf.2022.100711>, IF: 8.679, 2022.
3. ¹Renato Ivanescu, Smaranda Belciug, ²Andrei Nascu, ³Mircea Serbanescu, Dominic Iliescu, Evolutionary computation paradigm to determine deep neural networks architectures, International Journal of Computers Communications & Control, 17, 5, <https://doi.org/10.15837/ijccc.2022.5.4886>, IF: 2.635, 2022.
4. Smaranda Belciug, Parallel versus cascaded logistic regression trained single-hidden feedforward neural network for medical data, Expert Systems with applications, 170, 114538, <https://doi.org/10.1016/j.eswa.2020.114538>, IF: 8.665, 2021.
5. Laurentiu Mihai Dira, Stefania Tudorache, Panagiotis Antsaklis, George Daskalakis, Dagklis Themistoklis, Smaranda Belciug, Ruxandra Stoean, Marius Novac, Monica Laura Cara, Roxana Dragusin, Maria Florea, Ciprian Patru, Lucian Zorila, Rodica Nagy, Dan Ruican, Dominic Gabriel Iliescu, Sonographic Evaluation of the Mechanism of Active Labor (SonoLabor Study): observational study protocol regarding the implementation of the sonopartogram, BMJ open, 11 (9), e047188, <http://dx.doi.org/10.1136/bmjopen-2020-047188>, IF: 3.006, 2021.
6. Dan Ruican, Ana-Maria Petrescu, Anda Ungureanu, Daniel Pirici, Marius Cristian Marinaş, Anca Maria Ofiteru, ³Mircea Serbanescu, Cristina Simionescu, Anne Marie Badiu, Gabriela-Camelia Roşu, Smaranda Belciug, Dominic Gabriel Iliescu, Virtual autopsy and confirmation of normal fetal heart anatomy in the first trimester using three-dimensional (3D) reconstruction of histological sections, Romanian Journal of Morphology and Embryology, 62 (1), 101-108, 10.47162/RJME.62.1.09, IF: 0.833, 2021.
7. Smaranda Belciug, Adrian Sandita, Hariton Costin, Silviu Bejinariu, Pericle Matei, Competitive/Collaborative Statistical Learning Framework for Forecasting intraday stock market prices: a case study, Studies in Informatics and Control, 30 (2), 43-54, IF: 1.826, 2021.

8. Smaranda Belciug, Logistic regression paradigm for training a single-hidden layer feedforward neural network. Application to gene expression datasets for cancer research. *Journal of Biomedical Informatics*, 102, <https://doi.org/10.1016/j.jbi.2019.103373>, IF: 6.68, 2020.
9. Smaranda Belciug, Silviu Bejinariu, Hariton Costin, An artificial immune system approach for a multi-compartment queuing model for improving medical resources and inpatient bed occupancy in pandemics, *Advances in electrical and computer engineering*, 20 (3), 23-30, IF: 0.825, 2020.
10. ³Mircea Serbanescu, Nicolae Manea, Liliana Streba, Smaranda Belciug, Emil Plesea, Ionica Pirici, Raluca Bungardean, Mihail Plesa, Automated gleason grading of prostate cancer using transfer learning from general-purpose deep-learning networks, *Romanian Journal of Morphology and Embryology*, doi: 10.47162/RJME.61.1.17, IF:0.833, 2020.
11. Smaranda Belciug, ¹Renato Ivanescu, A Bayesian framework for extreme learning machine with application for automated cancer detection, *Annals of the University of Craiova-Mathematics and Computer Science Series*, 46 (1), 189-202, 2019.
12. ⁴Robert Berglund, Smaranda Belciug, Improving Extreme Learning Machine Performance using Ant Colony Optimization Feature Selection. Application to automated medical diagnosis, *Annals of the University of Craiova, Mathematics and Computer Science, Science Series*, Vol. 45 (1), 151-155, 2018.
13. Smaranda Belciug, Florin Gorunescu, Learning a single-hidden layer feedforward neural network using rank correlation-based strategy with application to high dimensional gene expression and proteomic spectra datasets in cancer detection, *Journal of Biomedical Informatics*, 83, 159-166, <https://doi.org/10.1016/j.jbi.2018.06.003>, IF: 3.457, 2018.
14. Zhongheng Zhang, Victor Trevino, Sayed Shahabuddin Hoseini, Smaranda Belciug, Arumugam Manivanna Boopathi, Ping Zhang, Florin Gorunescu, Velappan Subha, Songshi Dai, Variable selection in Logistic regression model with genetic algorithm, *Annals of translational medicine*, 6, 3, 2018
15. Smaranda Belciug, Adrian Sandita, Business Intelligence: Statistics in predicting stock market, *Annals of the University of Craiova, Mathematics and Computer Science, Science Series*, Vol. 44, No. 2, pp. 292-298, 2017.
16. Florin Gorunescu, Smaranda Belciug, Boosting backpropagation algorithm by stimulus-sampling: Application in computer-aided medical diagnosis, *Journal of Biomedical Informatics*, <https://doi.org/10.1016/j.jbi.2016.08.004>, 63, 74-81, IF: 3.291, 2016.
17. Smaranda Belciug, Florin Gorunescu, A hybrid genetic algorithm - queuing multicompartment model for optimizing inpatient bed occupancy and associated cost, *Artificial Intelligence in Medicine*, <https://doi.org/10.1016/j.artmed.2016.03.001>, 68, 59-69, IF: 2.705, 2016.

18. Smaranda Belciug, Florin Gorunescu, Improving hospital bed occupancy and resource utilization through queuing modeling and evolutionary computation, Journal of Biomedical Informatics <http://dx.doi.org/10.1016/j.jbi.2014.11.010>, 53, pp. 261-269, IF: 3.949, 2015
19. Smaranda Belciug, Florin Gorunescu, Error-correction learning for artificial neural networks using the Bayesian paradigm. Application to automated medical diagnosis, Journal of Biomedical Informatics, <http://dx.doi.org/10.1016/j.jbi.2014.07.013>, 52, pp. 329-337, IF: 3.609, 2014
20. Florin Gorunescu, Smaranda Belciug, Evolutionary strategy to develop learning-based decision systems. Application to Breast Cancer and Liver Fibrosis Stadialization, Journal of Biomedical Informatics, <http://dx.doi.org/10.1016/j.jbi.2014.02.001>, vol. 49, pp. 112-118, IF: 3.609, 2014.
21. Smaranda Belciug, Florin Gorunescu, A hybrid neural network/genetic algorithm system applied to the breast cancer detection and recurrence, Expert Systems, The Journal of Knowledge Engineering, Willey & Blackwell, Vol 30, No.3 , 243 – 254, IF: 1, 2013.
22. Smaranda Belciug, Mircea-Sebastian Serbanescu, Florin Gorunescu, Evolutionarybased intelligent decision model to optimize the liver fibrosis stadialization, Annals of the University of Craiova, Mathematics and Computer Science Series, Vol. 40(2), pp. 237-248, 2013.
23. Florin Gorunescu, Smaranda Belciug, Marina Gorunescu, Radu Badea, Intelligent decision-making for liver fibrosis stadialization based on tandem feature selection and evolutionary-driven neural network, Expert Systems with Applications, 39, pp. 1282412832, IF: 3.316, 2012.
24. Florin Gorunescu, Marina Gorunescu, Adrian Saftoiu, Peter Vilmann, Smaranda Belciug, Competitive/Collaborative Neural Computing System for Medical Diagnosis in Pancreatic Cancer Detection, Expert Systems, The Journal of Knowledge Engineering, 28, No.1, 33 - 48, IF: 1.231, 2011.
25. Florin Gorunescu, Marina Gorunescu, Elia El-Darzi, Smaranda Belciug, A statistical framework for evaluating neural networks to predict recurrent events in breast cancer, International Journal of General Systems , Vol. 39, No. 5, pp. 471-488 (ISI 2010 Impact Factor 0.826), Taylor & Francis, ISSN 0308-1079 , 2010.
26. Adrian Saftoiu, Peter Vilmann, Florin Gorunescu, Dan Gheonea, Marina Gorunescu, Smaranda Belciug, Endoscopic ultrasound elastography in the diagnosis of pancreatic cancer, Annals of Gastroenterology, 23, 3, 200-201, 2010.
27. Dan Ionut Gheonea, Adrian Saftoiu, Tudorel Ciurea, Florin Gorunescu, Sevestita Iordache, Gabriel Lucian Popescu, Smaranda Belciug, Marina Gorunescu, Larisa Sandulescu, Real-time sono-elastography in the diagnosis of diffuse liver diseases, World Journal of Gastroenterology, 16, 14, 1720-1726, IF: 2.081, 2010.

28. Smaranda Belciug, Monica Lupsor, A multi-layer based procedure for detecting liver fibrosis, Annals of the University of Craiova, Mathematics and Computer Science Series, ISSN 1223-6934, Vol. 36, No. 1, pp. 64-70, 2009.

d). *Conference papers*

1. Smaranda Belciug, Florin Gorunescu, Marina Gorunescu, Abdel-Badeeh Salem, Clustering-based approach for detecting breast cancer recurrence, Proceedings of the 10th IEEE International Conference on Intelligent Systems Design and Applications (ISDA), Cairo, pp. 533 - 538, 29 Nov - 1 Dec, 2010.
2. Smaranda Belciug, Elia El-Darzi, A partially connected neural network-based approach with application to breast cancer detection and recurrence, Proceeding of the IEEE Conference on Intelligent Systems, IS2010, 191-196, 2010, London, UK, 2010.
3. Florin Gorunescu, Elia El-Darzi, Smaranda Belciug, Marina Gorunescu, Patient grouping optimization using a hybrid Self-Organizing Map and Gaussian Mixture Model for length of stay-based clustering system, Proceedings of the IEEE Conference on Intelligent Systems, IS2010, 173-178, 2010, London, UK, 2010.
4. Marina Gorunescu, Smaranda Belciug, Salem Abdel Badeeh, Monica Lupsor, Radu Badea, Horia Stefanescu, *A machine learning-based diagnosis for liver diseases using the Fibroscan medical ultrasound technique*, Proceedings 4thACM International Conference on Intelligent Computing and Information Systems ICICIS09, Cairo 18 - 22 March 2009, pp. 243-248, 2009.
5. Smaranda Belciug, Patients length of stay grouping using the hierarchical clustering algorithm, The 9th International Conference on Artificial Intelligence and Digital Communications, Craiova September, Annals of the University of Craiova, Mathematics and Computer Science Series, ISSN 1223-6934, Vol 36, No 2, pp. 7984, 2009.
6. Florin Gorunescu, Marina Gorunescu, Elia El-Darzi, Smaranda Belciug (Gorunescu) A statistical evaluation of neural computing approaches to predict recurrent events in breast cancer, Proceedings 4th International IEEE, Conference on Intelligent Systems - IS08, Varna, Bulgaria 6-8.09.2008, pp. 38-43, 2008.
7. Smaranda Belciug, Bayesian classification vs. k-nearest neighbor classification for the non-invasive hepatic cancer detection, The 8th International Conference on Artificial Intelligence and Digital Communications, Craiova, September 2008, 108, pp. 31-35, 2008.
8. Florin Gorunescu, Marina Gorunescu, Elia El-Darzi, Marius Ene, Smaranda Belciug (Gorunescu), *Statistical Comparison of a Probabilistic Neural Network Approach in Hepatic Cancer Diagnosis*, Proceedings IEEE International Conference on Computer as a tool- Eurocon2005, Belgrade, Serbia, pp. 237-240, IEEE Press, 2005.

9. Florin Gorunescu, Marina Gorunescu, Elia El-Darzi, Smaranda Belciug (Gorunescu), *An Evolutionary Computational Approach to Probabilistic Neural Network with Application to Hepatic Cancer Diagnosis*, Proceedings 18th IEEE International Symposium on Computer-Based Medical Systems –IEEE CBMS 2005 Dublin, Ireland, IEEE Computer Science Press (Eds. A. Tsybal and P. Cunningham), pp. 461-466, 2005.
10. Florin Gorunescu, Marina Gorunescu, Elia El-Darzi, Smaranda Belciug (Gorunescu), Kenneth Revett, Aurangzeb Khan, *A Cancer Diagnosis System Based on Rough Sets and Probabilistic Neural Networks*, Proceedings 1st East European Conference on Health Care Modelling and Computation-HCMC2005, Craiova, Romania (Eds. F. Gorunescu, M. Gorunescu, E. El-Darzi), Medical University Press, Craiova, 149-159, 2005.