## Personal data:

Surname:	Gamberger
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Place and date of birth:	Zagreb, 11 October, 1951
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## **Education:**

- Ph.D. degree in Computer Science from University of Zagreb (1986)
- MS degree in Electrical Engineering from University of Zagreb (1978).
- Bachelor of Science in Electrical Engineering from University of Zagreb (1974).

#### **Employment:**

- Since 2017 pensioner retired by law at the age of 65. Currently serving as an external collaborator at Rudjer Boskovic Institute, Zagreb, Croatia.
- 1975-2016 Rudjer Boskovic Institute as a scientist at different levels. Senior scientist with a permanent position 2004-2016. Head of Laboratory for information systems 2000-2016.

## **Teaching:**

 Faculty of Medicine at University of Zagreb, a curriculum at doctoral studies: Knowledge Discovery in Medical Domains (with own on-line handbook "Data Mining for Knowledge Discovery Tasks" in Croatian <u>http://lis.irb.hr/Prirucnik/prirucnik-otkrivanje-znanja.pdf</u>)

#### Web applications:

• Random Rules for predictive induction.

http://rr.irb.hr/rr/

- Subgroup Discovery for descriptive induction. http://rr.irb.hr/dms/
- Exploratory Clustering for unsupervised machine learning. http://rr.irb.hr/exploC/

## **Projects:**

- Project leader: Machine learning algorithms for insightful analysis of complex data structures (for Croatian Science Foundation) 2014-2016 <u>http://lis.irb.hr/MLCS/index.html</u>
- Project leader: Machine Learning Algorithms and their Applications 2007-2011 (Croatian national project)
- Program leader Computational Knowledge Discovery in Scientific Applications 2007-20111 (Croatian national program)
- European FP7 project "Learning from massive, incompletely annotated, and structured data" 2014-2017 (researcher).
- European FP7 project "Forecasting Financial Crises" 2011-2013 (researcher)).
- European FP7 project "e-LICO An e-Laboratory for Interdisciplinary Collaborative research in Data mining and Data-Intensive Sciences" 2010-2012 (researcher).
- COST action IS0905: "The Emergence of Southern Multinationals and their Impact on Europe" 2010-2014 (representative for Croatia).
- European FP6 project "HEARTFAID A Knowledge Based Platform of Services for Supporting Medical-clinical Management of Heart Failure within Elderly Population" 2006-2009 (workpackage leader and responsible person for Rudjer Boskovic Institute)

- According to Scopus in total 87 publications citied 1000 times (h-index 17)
- Co-author of a book: Fuernkranz, J., Gamberger, D., Lavrač, N. (2012). Foundations of Rule Learning. Springer.

## List of recent publications:

Gamberger, D., Stare, T., Miljkovic, D., Gruden, K., Lavrač, N. (2019) Discovery of relevant response in infected potato plants from time series of gene expression data. *Machine Learning and Knowledge Extraction* 1(1): 400-413.

Gamberger, D., Lavrač, N., Srivatsa, S., Tanzi, R. E., Doraiswamy, P. M. (2017) Identification of clusters of rapid and slow decliners among subjects at risk for Alzheimers disease. *Scientific Reports* 7:6763-1-6763-12

Gamberger, D., Ženko, B., Mitelpunkt, A., Lavrač, N.(2016) Homogeneous clusters of Alzheimer's disease patient population. *Biomedical Engineering Online*, 15 (Suppl 1):S78.

Gamberger, D., Ženko, B., Mitelpunkt, A., Shachar, N., Lavrač, N.(2016) Clusters of male and female Alzheimer's disease patients in the Alzheimer's Disease Neuroimaging Initiative (ADNI) database. *Brain Informatics*, 3:169-179.

Sluban, B., Gamberger, D., Lavrač, N. (2014) Ensemble-based noise detection: noise ranking and visual performance evaluation. *Data Mining and Knowledge Discovery*, 28(2):265-303.

Gamberger, D. Šmuc, T. (2013) Good Governance Problems and Recent Financial Crises in Some EU Countries. *Economics: The Open-Access, Open-Assessment E-Journal*, 7:2013-41.

Krstačić, G., Parati, G., Gamberger, D., Castiglioni, P., Krstačić, A., Steiner, R. (2012) Heart rate variability and nonlinear dynamic analysis in patients with stress-induced cardiomyopathy. *Medical & Biological Engineering & Computing*, 50(10):1037-1046.

Jović, A., Gamberger, D., Krstačić. G. (2011) Heart failure ontology. *Bio-algorithms and med-systems*, 7(2):101-110.

# Most cited publications:

Gamberger, D. and Lavrač, N. (2002) Expert-guided subgroup discovery: Methodology and Application. *Journal of Artificial Intelligence Research*, Vol. 17 pp.501-527.

Lavrač, N., Cestnik, B., Gamberger, D., and Flach, P. (2004) Decision support through subgroup discovery: Three case studies and the lessons learned. *Machine Learning*, Vol. 57(1-2): 115-143.

Gamberger, D., Lavrač, N., Krstačić, G. (2003) Active subgroup mining: A case study in a coronary heart disease risk group detection. *Artificial Intelligence in Medicine*, Vol. 28 pp.27-57.