

Professor Radu Dobrescu, Ph.D.

Selected list of publications in Information Science and Technology / Systems Engineering (2001-2016)

Monographs and book chapters

1. R. Dobrescu, F. Ionescu – Large scale networks. Modeling and Simulation, CRC Press (Taylor and Francis Group), 2016
2. Gheorghe Florea , Radu Dobrescu, Oana Chenaru, Mircea Eremia, Lucian Toma, Methodology and Framework for Development of Smart Grid Control, in Th. Borangiu, A. Thomas and D. Trentesaux, Eds., Springer book series "Studies in Computational Intelligence 640", volume Service Orientation in Holonic and Multi-Agent Manufacturing, p.319-327, Springer Verlag, 2016 (eBook)
3. Grigore Stamatescu, Dan Popescu, Radu Dobrescu, Framework for Cognitive Radio Deployment in Large Scale WSN-UAV Surveillance, Book Chapter in Recent Advances in Systems Safety and Security Volume 62 of the series Studies in Systems, Decision and Control, pp 41-56, 2016
4. M. Nicolae, D. Popescu, R. Dobrescu, C. Mateescu, Improving Communication Efficiency of Hybrid UAV-WSN Systems, Book Chapter in Advances in Robot Design and Intelligent Control, Volume 371 of the series Advances in Intelligent Systems and Computing, pp 407-415, 2016
5. Radu Dobrescu, Matei Dobrescu, Gheorghe Florea, Integrating Risk and Hazard and Plantwide Control Solutions for Reconfigurability, in Th. Borangiu, A. Thomas and D. Trentesaux, Eds., Springer book series "Studies in Computational Intelligence 594", volume Service Orientation in Holonic and Multi-Agent Manufacturing and Robotics, p.103-114, Springer Verlag, 2015
6. Radu Dobrescu – Computational Aspects of Biological Patterns Formation, book chapter, in C. Vasilescu, M-L. Flonta, I. Craciun (EDS), On Form and Pattern, Editura Academiei Romane, 2015, pp. 207-226
7. Radu Dobrescu, Matei Dobrescu, Gheorghe Florea, Victor Purcarea, Optimized Location Discovery Algorithm for Cooperative Activities of a Robot Team, Service Orientation in Holonic and Multi-Agent Manufacturing and Robotics, Th. Borangiu, A. Thomas and D. Trentesaux, Eds., Springer book series "Studies in Computational Intelligence", p.343-354, Springer Verlag, 2014
8. Tanase, M., Dobrescu, R., Fractal analysis of growth processes modelled by using cellular automata mixes, Chapter book, in Fractal and Complexity, ed. Przemko Waliszewski, p.24-30, 2012.
9. Dobrescu, R and Florea, G. A unified framework for self-organizing manufacturing systems design. Book chapter, in "Service Orientation in Holonic and Multi Agent Manufacturing and Robotics", Th. Borangiu, A. Thomas and D. Trentesaux, Eds., Springer book series "Studies in Computational Intelligence", 2012
10. V. E. Oltean, R. Dobrescu, D. Popescu, On an Input Driven Hierarchy of Hybrid Automata, in I. Dumitrache (Ed.), Advances in Intelligent Control Systems and Computer Science, Springer Verlag, p. 15-30, 2012
11. D. Popescu, R. Dobrescu, N. Angelescu, Improvement of Statistical and Fractal Features for Texture Classification, in I. Dumitrache (Ed.), Advances in Intelligent Control Systems and Computer Science, Springer Verlag, p. 31-44, 2012
12. D. Popescu, R. Dobrescu, F. Ionescu, D. Stefanoiu - Modelare in ingineria proceselor industriale. Editura AGIR, Bucuresti, 2011
13. D. Popescu, R. Dobrescu, M. Nicolae - Retele de senzori mobili, Editura POLITEHNICA Press, Bucuresti, 2011, 270 p.
14. R. Qahwaji, R. Green, and E. Hines, editors. *Applied Signal and Image Processing: Multidisciplinary Advancements*, R. Dobrescu and D. Popescu, Chapter 14: *Image Processing Applications Based on Texture and Fractal Analysis*, pp. 226-250; R. Dobrescu and D. Popescu, Chapter 15: *Real-Time Primary Image Processing*, pp. 251-270. IGI Global Publishing, 2011
15. R. Dobrescu, D.A. Iordache – Complexity and Information, Editura Academiei Romane, 2010

16. R. Dobrescu, D. Hossu, R. Ulrich - Utilizarea tehnicilor fractale pentru modelarea traficului in retele informatice, Editura POLITEHNICA Press, 2010
17. R. Dobrescu, D. Iordache (editori) – Modelarea complexitatii, Editura POLITEHNICA Press, 2007
18. R. Dobrescu – Transmiterea Datorilor, Editura Academiei Romane, Bucuresti, 2005
19. R. Dobrescu – Evolution and trends in image compression, in Ionescu, F. & Stefanoiu, D. Eds.: Intelligent and Allied Approaches to Hybrid Modeling, Steinbeis-Edition Stuttgart/Berlin & Marin Drinov, Academic Publishing House, Sofia, 2005
20. R. Dobrescu - An informational approach in modeling molecular interactivity in Sepsis, in Catalin Vasilescu and Hans Beger, eds, Intra-abdominal SEPSIS unsolved issues, Editura Academiei Romane, 2006 HWSR 2005, pp.257-271
21. R. Dobrescu, C. Vasilescu (editori) - Interdisciplinary Applications of Fractal and Chaos Theory, Editura Academiei Romane, 2004
22. R. Dobrescu (Editor): Proceedings of the First International Symposium “Interdisciplinary Approaches in Fractal Analysis– Ed. Printech, Bucuresti 2003
23. R. Dobrescu, S. Kevorchian - *Compresia datelor*, Editura Academiei Romane, 2002

Papers in journals (ISI and other International Data Bases)

1. Oscar Martinez Mozos, Virginia Sandulescu, Sally Andrews, David Ellis, Nicola Bellotto, Radu Dobrescu, Jose Manuel Ferrandez, Stress Detection Using Wearable Physiological and Sociometric Sensors, International Journal of Neural Systems, Vol. 27, No. 2, pp. 1650041 (1-16), 2017
2. M. Nicolae, D. Popescu, R. Dobrescu, I. Costea, Scheduling Mechanism for Energy-Efficient Communication in Hybrid Wireless Sensor Networks, Journal of Control Engineering and Applied Informatics, Vol 18, No 2, p. 95-102 (2016)
3. D. Popescu, L. Ichim, R. Dobrescu - Sliding Box Method for Automated Detection of the Optic Disc and Macula in Retinal Images, Bioinformatics and Biomedical Engineering, Lecture Notes in Computer Science Volume 9043, 2015, pp. 250-261
4. I. Branescu-Raspop, V. Purcarea, R. Dobrescu, Improving Query Mechanisms for Biomedical Ontologies, Int, Journal of Biology and Biomedical Engineering, Vol. 9, pp. 56- 64, 2015
5. A. Jarnea, G. Florea, R. Dobrescu - New image processing algorithms for traffic signs recognition, International Journal of Circuits, Systems and Signal Processing, Vol. 9, 2015, pp.145-152
6. Branescu, I., Purcarea, V.L., Dobrescu, R. Solutions for medical databases optimal exploitation, Journal of Medicine and Life, Vol. VII, Iss 1, January-March 2014, p.109-118
7. G. Florea, R. Dobrescu, Risk and Hazard control hosted on Cloud, International Journal of Systems Applications, Engineering & Development, Volume 8, 2014, p.250-259
8. R. Dobrescu, G. Florea, Energy-Efficient Method for Cooperative Spectrum Sensing in Cognitive Radio Networks, International Journal of Advances in Computer Networks and Its Security– IJCNS Volume 4 : Issue 3, 2014, pp. 166-170
9. Popeanga, C., Dobrescu, R., Ionescu, G., Optimizing node response using real-time operating system in wireless sensors networks, U.P.B. Sci. Bull., Series C, Vol. 75, Iss. 1, pp. 37-46, 2013
10. C. Vasilescu, D. E. Giza, P. Petrisor, R. Dobrescu, I. Popescu and V. Herlea, Morphometrical Differences between Resectable and Non-Resectable Pancreatic Cancer: A Fractal Analysis, *Hepato-gastroenterology*, 2012;59(113), p. 284-288
11. Popeanga, C., Dobrescu, R., Ionescu, G., et al., Pseudo Fractal Tri-band Dipole Antenna for Mobile Wireless Sensors Networks, Control Engineering and Applied Informatics, Volume 14, Issue 2, Pages: 13-20, 2012
12. Virginia Ecaterina Oltean, Radu Dobrescu, Dan Popescu, Maximilian Nicolae, On a modal approach for oscillations damping in affine and piecewise affine systems, International Journal of Systems Applications, Engineering & Development, 6(1), pp. 1-8, 2012
13. Reda Albtoush, Radu Dobrescu, Florin Ionescu: A hierarchical model for emergency management systems, *U.P.B. Sci. Bull, Series C*, Vol. 73, Issue 2, 2011, p. 53-62

14. Oltean Virginia Ecaterina; Dobrescu Radu; Ichim Loretta - On modelling and control of a class of tumour growth processes, *Revue Roumaine des Sciences Techniques-Serie Electrotechnique et Energetique*, Volume: 56 Issue: 1 Pages: 109-118, 2011
15. I. Apostol, P. P. Delsanto, R. Dobrescu, A. S. Gliozzi, D. Iordache - On the Evaluation of the Parameters of the Basic Stages of the Human Body Growth. I. Analysis of the Low-Volume Statistics Data, *Romanian Journal of Physics*, Volume 56, Number 9-10, p. 1173-1188, 2011
16. I. Apostol, P. P. Delsanto, R. Dobrescu, A. S. Gliozzi, D. Iordache - On the Evaluation of the Parameters of the Basic Stages of the Human Body Growth II. Analysis of the High-Volume Statistics Data, *Romanian Journal of Physics*, Volume 56, Number 9-10, p. 1189-1199, 2011
17. R. Dobrescu and V.I. Purcarea. Emergence, self-organization and morphogenesis in biological structures, *J Med Life* 4(1), 82-90, 2011
18. V.E.Oltean, R.Dobrescu, D.Popescu, M.Nicolae: Hybrid modelling and simulation approaches for a class of mechatronic systems. *Control Engineering and Applied Informatics*, Volume 12, Number 1, March 2010;
19. D.Popescu, R.Dobrescu, C.Vasilescu, M.Nicolae: Acquisition, processing and communication module of a wsn-based system for environment monitoring, *U.P.B. Sci. Bull, Series C*, Vol. 72, Issue 2, 2010, p. 27-36
20. R.Dobrescu: Informing Science as conceptual framework for Developing Information Systems, *U.P.B. Sci. Bull, Series A*, Vol. 72, Issue 2, 2010, p. 197-204
21. R.Dobrescu, D.Popescu, M.Nicolae, and S.Mocanu: Hybrid wireless sensor network for homecare monitoring of chronic patients, *International Journal of biology and biomedical engineering*, Issue 2, Volume 3, 2009, pp. 19-26;
22. R. Dobrescu, V-P. Paun, D. Popescu, A. Marin - A Fractal Model of Blood Vessel Formation in Porous Polymer Implants, *Revista de Materiale Plastice*, vol. 46, nr.1, 2009, p. 79-82.
23. R. Dobrescu, V. Purcarea – Network based model for biological processes, *Journal of Medicine and Life*, vol.2, no.2, 2009, pp.176-184
24. R. Dobrescu, D. Cărciumărescu - Interoperability of integrated services and differentiated services architectures, *U. P. B. Sci. Bull.*, Series C, Vol. 71, Iss. 1, 2009, p.21-32
25. R. Dobrescu, D. Hossu, R. Ulrich - Self-similarity Tests for Internet Traffic, *Control Engineering and Applied Informatics*, Vol. 11, No. 4, decembrie 2009, p.11-17, ISSN 1454-8658
26. R. Dobrescu, S. Popa, V. Purcarea, C. Vasilescu – Model for enzyme kinetics using Petri networks, *Farmacia*, 6, volume 57, november-december 2009, p.691-702
27. R. Dobrescu, L. Ichim, - Using fractal dimension as discriminator of infected HeLa cells from spectrophotometric images, *Int. J. Functional Informatics and Personalised Medicine*, Vol. 1, No. 1, 2008, p.53-67
28. R. Dobrescu, V.E. Oltean, M. Dobrescu – Simulations models and Zeno path avoidance in a class of piecewise linear biochemical processes, *Control Engineering and Applied Informatics*, Vol.10., nr.1, martie 2008, p.33-40
29. R.Dobrescu, V. Purcarea – Modeling cellular communication with scale-free networks, *Journal of Medicine and Life*, vol.1. No2, 2008, p.157-164
30. D. Popescu, R. Dobrescu - Plastic Surface Similarity Measurement Based on Textural and Fractal Features, *Revista de Materiale Plastice*, nr.2, 2008, p. 168-172.
31. R. Dobrescu, R. Ulrich, On the fractal nature of Internet, *Annals of the Academy of Romanian Scientists*, Series Science and Technology of Information, vol.1, nr.2, 2008, p.15-26, Editura Printech, ISBN 978-606-521-143-8
32. D. Popescu, R. Dobrescu – Carriage road pursuit based on statistical and fractal analysis of the texture, *International Journal of Education and Information Technology*, Issue 1, Vol.2, 2008, p.62-68
33. D. Popescu, R. Dobrescu, M. Nicolae, System for tracking, localization and data acquisition for moving robots through sensor networks, *Bulletin of the Transilvania University of Brasov*, vol15, Series A, special issue no.1, vol.II, 2008, p.475-480
34. D. Popescu, R. Dobrescu, M. Nicolae, Identification and localization modules based on data fusion, *Bulletin of the Transilvania University of Brasov*, vol15, Series A, special issue no.1, vol.II, 2008, p.481-486

35. D.Popescu, R.Dobrescu, N.Angelescu: Statistical texture analysis of road for moving objectives, *U.P.B. Sci. Bull, Series C*, Vol.70, No.4, 2008
36. R. Dobrescu, D. Cârciuărescu - Using differentiated services to improve performance in high speed networks, *Control Engineering and Applied Informatics*, Vol. 10, No. 4, 2008, p.29-25
37. D. A. Crisan, M. Lesaru, R. Dobrescu, C. Vasilescu - Utilizarea spectrului fractal în diagnosticarea leziunilor mamare, *Chirurgia*, Vol.102, nr. 1, 2007, p. 27-30
38. D. A. Crisan, R. Dobrescu, Fractal dimension spectrum as an indicator for training neural networks, *U. P. B. Sci. Bull., Series C*, Vol. 69, No. 1, 2007, p.23-32
39. D.Popescu, R. Dobrescu, M. Nicolae – Complementary data fusion in mobile robot navigation, *Buletinul Institutului Politehnic Iasi*, tom LII (LVI), fascicula 7B, p.139-144, ISSN 1011-2855
40. Daniela Andone, Radu Dobrescu, Andrei Hossu, Matei Dobrescu - Application of fuzzy model predictive control to a drum-boiler, *Integrated Computer-Aided Engineering*, volume 13, Number 4, 2006, p.347-360, ISSN 1069-2509
41. R. Dobrescu, M. Rothenberg - A method for inferencing of network characteristics based on traffic similarities, *Bul. UPB, vol.67*, seria C Inginerie Electrica, nr.1, 2005, pag.23-32
42. R. Dobrescu, D. Andone, M. Dobrescu, - MDL based compression algorithm for packet-DWT processed biomedical signals, *Revue Roumaine des Sciences techniques, seria Electrotechnique et Energetique*, tom 47, nr.1, 2002, p.85-95
43. R. Dobrescu, C. Sandu – A labview applications for an e-manufacturing traceability project, *Control Engineering and Applied Informatics*, vol.4, no.2, June 2002, p.55-62
44. R. Dobrescu, G. Ionescu, D. Popescu – Image matching algorithm for pattern recognition, *Electrotehnica, Electronica, Automatica*, vol.49, nr.1-2, 2001, p. 34-38

Papers in volumes of international conferences (ISI Proceedings)

1. Florea, G, Chenaru, O., Dobrescu, R., Popescu, D. Evolution from Power Grid to Smart Grid: Design challenges, 19th International Conference on System Theory, Control and Computing (ICSTCC), 2015. pp.912-916
2. Virginia Sandulescu, Radu Dobrescu - Wearable System for Stress Monitoring of Firefighters in Special Missions, Proc. of 5-th edition of the International Conference on e-Health and Bioengineering, EHB 2015, on CD 3. V. Sandulescu, S. Andrews, D. Ellis, R. Dobrescu, O. M. Mozos - Mobile App for Stress Monitoring using Voice Features, Proc. of 5-th edition of the International Conference on e-Health and Bioengineering, EHB 2015
3. S. Popa, R. Dobrescu - Petri Net Models in Computational Biology Proc. of 5-th edition of the International Conference on e-Health and Bioengineering, EHB 2015
4. Radu Dobrescu, Loretta Ichim, Stefan Mocanu, Dan Popescu, Benign and Malignant Breast Tumors: Diagnosis Using Fractal Measures, Proceedings of the 18th International Conference on System Theory, Control and Computing, 2014, p.82-86
5. G.Stamatescu, D. Popescu, and R. Dobrescu, Cognitive Radio as Solution for Ground-Aerial Surveillance through WSN and UAV Infrastructure, Proc. of ECAI Int. Conf., 2014
6. I. Popa, C., Mocanu, S., Dobrescu, R., Audience indicators for geospatial marketing using traffic data from cellular networks, Proc. of the 2nd International Conference on Systems and Computer Science (ICSCS), p. 268-273, 2013, ISBN 978-1-4799-2020-4
7. Gheorghe Florea, Radu Dobrescu, Oana Rohat, From bridge to control hub — The power Smart Grid evolution, Proc. of the 2nd International Conference on Systems and Computer Science (ICSCS), p. 111-120, 2013
8. Gheorghe Florea, Radu Dobrescu, Dan Popescu, Matei Dobrescu, Wearable System for Heat Stress Monitoring in Firefighting Applications, Recent Advances in Computer Science and Networking, Proceedings of the 2nd International Conference on Information Technology and Computer Networks (ITCN '13), pp.129-134, 2013, ISBN: 978-960-474-336-0
9. Radu Dobrescu, Loretta Ichim. Characterization of Tumor Angiogenesis Using Fractal Measures, Proc. of the 19th International Conference on Control Systems and Computer Science (CSCS), p.345-349, May 21-27, 2013

10. Șt. Arghir, R. Dobrescu, G. Florea, A Knowledge Based Algorithm for Plant Operation in Critical Situations, Proceedings of the 14-th IFAC Symposium on Information Control Systems in Manufacturing, 2012, p.1000-1004
11. Popescu, Dan; Dobrescu, Radu; Maciucă, Andrei; et al., Smart sensor network for continuous monitoring at home of elderly population with chronic diseases, Proc. of 20th Telecommunications Forum (TELFOR) Pages: 603-606, 2012
12. C. Popeanga, R. Dobrescu, N. Cristov - Smart monitoring and controlling of wind turbines farms based on wireless sensors networks, 1st International Conference on Systems and Computer Science (ICSCS), 2012
13. S. Arghir, R. Dobrescu, F. Ionescu "Using boolean delay equations for predicting fractal processes", *Proc. of the 18th Int. Conf. on Control Systems and Computer Science*, CSCS18, 2011, vol. 2, pp. 913–915
14. R. Dobrescu, M. Tanase „Using a mix of cellular automata in tumor margin analysis”, Proc. of the 8-th European Conference on Mathematical and Theoretical Biology, Krakow, 2011
15. Oltean, V. E., Dobrescu, R., Popescu, D., Nicolae, M. Udrea, A. - Some aspects concerning the oscillations damping in a class of affine systems - a driveline simulation example, 15th International Conference on System Theory, Control, and Computing (ICSTCC), 2011
16. N. Angelescu, D. Popescu, R. Dobrescu - Fractal Analysis of Textures Based on Modified Box-Counting Algorithm, *Proc. of the 18th Int. Conf. on Control Systems and Computer Science*, CSCS18, 2011, vol. 2, pp. 894–898
17. Oltean, V. E., Dobrescu, R., Popescu, D. - On a Hierarchy of Hybrid Automata Models - an Example, *Proc. of the 18th Int. Conf. on Control Systems and Computer Science*, CSCS18, 2011, vol. 2, pp. 905–912
18. M. Tanase, R. Dobrescu - Self-organised Criticality in Complex Networks, *Proc. of the 18th Int. Conf. on Control Systems and Computer Science*, CSCS18, 2011, vol. 2, pp. 916–922
19. R. Dobrescu, M. Dobrescu, S. Mocanu, D. Popescu: Malignant skin lesions detection based on texture and fractal image analysis, *Proceedings of the 10th WSEAS Int. Conference on Multimedia Systems & Signal Processing MUSP'10*, Hangzhou, China, 2010, pp 15-20
20. S. Arghir, R. Dobrescu, D. Popescu, H. Humaila: Critical Resource Infrastructure Supervision and Intervention System, *The Second IFAC Symposium on Telematics Applications TA 2010*, Timisoara, Romania, 5-8 October 2010, pp.56-62;
21. R. Dobrescu, M. Dobrescu, D. Hossu, Balancing strategies for parallel content-based data retrieval algorithms in a k-tree structured database, *Proceedings of the Int. Conf. on Computer, Electrical, and Systems Science, and Engineering*, Year 6, issue 70, 2010, pp.241-248
22. R. Dobrescu, E. Iancu, and E. Petre: The control of Infected Cell populations, *Proceedings of the 14th International Conference on System Theory and Control*, 2010, pp.178-183
23. R. Dobrescu, M. Dobrescu, D. Popescu, H.G. Coanda - Embedded Wireless Homecare Monitoring System, *Proceedings of the International Conference on Telemedicine (eTELEMED'09)*, p.66-71
24. Radu Dobrescu, Matei Dobrescu - A "flows consistency" model for message ordering in collaborative distributed systems, *Preprints of the 13th IFAC symposium on Information control problems in Manufacturing*, 2009, pp.1644-1649
25. Virginia Ecaterina Oltean, R. Dobrescu. D. Popescu - On hybrid modelling approaches in a class of nonlinear mechatronic systems, *Proc. of 18-th Int. Workshop on Robotics in Alpe-Adria-Danube region*, RAAD 2009, paper 19, Brasov, Romania, May 25-27, 2009
26. R. Dobrescu, L. Ichim - Two Dimensional Modeling and Fractal Characterization of Tumor Vascular Network, *Proc. of International Joint Conferences on System Biology, Bioinformatics and Intelligent Computing (IJCSB 09)*, p.837-842
27. R. Dobrescu, L. Dobrica, D. Popescu - A methodology to design Complex Adaptive Systems, *Proc. of the IFAC Workshop Supplementary Ways for Improving International Stability*, SWIIS 2009, p.85-90
28. V. E. Oltean, R. Dobrescu, L. Dobrica, L. Ichim - Behaviour Prediction and Simulation of Partition-Based Biological Models – Some Open Issues of Lattice Paradigms, *Proc. of the IFAC Workshop Supplementary Ways for Improving International Stability*, SWIIS 2009, p.97-102

29. R. Dobrescu, S.Popa, M. Dobrescu - Dependable Model for Enzyme Kinetics using Petri Networks, *Preprints 2nd IFAC Workshop on Dependable Control of Discrete Systems*, 2009, pp.211-216
30. R. Dobrescu, V.E. Oltean, M. Dobrescu _ Some aspects concerning hybrid automata models of biochemical interactions – hysterezis and Zeno behaviour, Proc. of the 6th EUROMECH Nonlinear Dynamics Conference (ENOC 2008)
31. V. E. Oltean, R. Dobrescu, M. Dobrescu On qualitative representations of a piecewise-linear model of a two genes regulatory network - comparative approaches, Proc. of the 6th EUROMECH Nonlinear Dynamics Conference (ENOC 2008)
32. R. Dobrescu, L. Ichim, S. Mocanu, S. Popa - A fractal model for simulation of biological growth processes, in Proc. of the Int. Conf. on Mathematics and Computers in Biology and Medicine (MCBC'08), p.88-93
33. R.Dobrescu, M. Dobrescu, D. Hossu, S. Taralunga - Using Internet Traffic Self-Similarity for Detection of Network Anomalies, *Proceedings of the 11th Int. Conf. on Optimization of Electrical and Electronic Equipments OPTIM'08*, p.81-86
34. P. Flondor, M. Olteanu, R. Dobrescu, C. Vasilescu, A time-delayed model for endotoxin tolerance based on ST2 dynamics, *Proc. of the 7th International Conference on Complexity in Acute Illness (within the International Shock Congress)* Cologne, Germany, 2008
35. Loretta Ichim, Radu Dobrescu, Catalin Vasilescu - Two Dimensional Modeling and Computer Simulation of Tumor Growth, *Proceedings of the International Conference on Bioinformatics and Computational Biology (BIOCOMP'08)*, eds. H.R. Arabnia, M.Q. Yang and J.Y. Yang, vol. 1, p.328-333, CSREA Press, 2008
36. R. Dobrescu, M. Dobrescu, Daniela Hossu, Sebastian Taralunga - Fractal Analysis of Internet Traffic using a Parallel Processing Network Simulator, *Proceedings of the Sixth International Symposion Communication Systems, Networks and Digital Signal Processing*, Eds. E. Leitgeb, W. Kogler and Z. Ghassemlooy, p. 622-625
37. Radu Dobrescu, Max Nicolae, Dan Popescu, Radu Varbanescu – Analysis of routing protocols for Wireless Sensor Networks, *Proceedings of the 16-th Int. Conf. CSCS 16, PRINTECH*, vol 1, p. 481-488
38. Radu Dobrescu, Matei Dobrescu, Daniela Andone - “Adding fractal dimension as textural feature for analysis of images” (authors:) in the *Proceedings of the EVA 2007 Florence Conference* – Editors Vito Cappellini and James Hemsley, p.114-119
39. Radu Dobrescu - Modeling complexity with scale free networks, *Proceedings of the IEEE-EURASIP Workshop on Nonlinear Signal and Image Processing*, eds. P. Cristea, I. Tabus, R. Tuduce, ISBN 978-973-708-254-1, p. 29-34,
40. Radu Dobrescu, Loretta Ichim – Fractal dimension of Mie Scattering Spectra for the Appraisal of Infected HeLa cells in culture, *Proceedings of the 7-th IEEE International Conference on Bioinformatics and Bioengineering – BIBE 2007*, Eds. J. Yang, M.Q. Yang, M. Zhu, Y. Zhang, H. Arabnia, Y. Deng and N. Bourbakis, ISBN 1-4244-1509-8, p.908-913
41. Daniela Crisan, Radu Dobrescu, Peter Planinšič, Mammographic Lesions Discrimination Based on Fractal Dimension as an Indicator, *Proceedings of the 14th International Conference on Systems, Signals and Image Processing, IWSSIP 2007*, p. 275-280
42. Radu Dobrescu, Stefan Mocanu, Using Fractal Dimension as Texture Discriminator for Content Base Image Retrieval, *Proceedings of the 14th International Conference on Systems, Signals and Image Processing, IWSSIP 2007*, p333-338
43. R. Dobrescu, E.V. Oltean, D. Popescu – Adaptive hybrid model of the immune system response in Sepsis, *Proceedings of the International Symposium on Systems Theory –SINTES 13*, vol1., 2007, p.89-94
44. R. Dobrescu, M. Dobrescu, St. Mocanu – Convergence of Communication with Computing for a remote oriented mobile minirobot, *Information Control Problems In Manufacturing 2006*, A Proceedings volume from the 12th IFAC International Symposium, 2006, Edited by A. Dolgui, G. Morel, C. Pereira, pp. 179-185
45. Radu Dobrescu, Daniela Andone, Matei Dobrescu, Stefan Mocanu, Differential Equations Systems versus Scale Free Networks in Sepsis Modeling, *Proceedings of the 3rd IEEE Conference On Intelligent Systems (IEEE IS 06)*, Londra, 2006

46. Radu Dobrescu, Maximilian Nicolae, Florin Stoica, Radu Varbanescu - Design of an Intelligent Sensor Network Node, *Proc. of the 10th Int. Conf. on Optimization of Electrical and Electronic Equipments OPTIM'06*, Brasov, 2006, p. 71-78
47. M. Dobrescu, R. Dobrescu, G. Ionescu, D. Popescu, B. Barliga, Using fractal dimension for image compression predictors performance evaluation, *Proc. of the 1st International Computer Engineering Conference: New Technologies for the Information Society~ICENCO'2004*, Cairo, Egypt, 2004, pp.243-249
48. R. Dobrescu, M. Dobrescu, 'MDL based algorithm for packet-DWT tree pruning', *EURASIP Int. Conf. EC-VIP-MC 2003*, Zagreb, Croatia
49. R. Dobrescu, F. Talos, C. Vasilescu, A. Herlea, B. Ivanov - Differences between intestinal and diffuse type of gastric carcinoma: a fractal analysis, *Proc. of the Symposium "Interdisciplinary Approaches in Fractal Analysis" – Bucuresti 2003*
50. R. Dobrescu, M. Dobrescu, D. Andone - Dedicated Hardware and Software Architecture for Multipoint Services over ATM Networks, *5th International Conference on Knowledge-Based Intelligent Information Systems*, Osaka, Japan, September 2001, p.288-292

Grants and Research Projects

(prof. R. Dobrescu project director)

1. Preparing the national system of E-Administration in Romania – SMIS, PODCA / UEFISCDI, 2014-2015
2. Mobilized Lifestyle with Wearables, ITEA2_Life Wear / Eureka, FP 7, 2012-2013
3. Models and morphometric techniques with applications in diagnostic imaging improvement of digestive cancers and evaluation of new therapies – IMAGO, PN2 / CNMP, 2008-2011
4. Simulation environment based on scale-free networks for modeling biological processes with nonlinear dynamics of evolution, IDEI / CNCSIS, 2007-20101.
5. Telesensorics based embedded system for monitoring and controlling parameters in systems distributed over large areas – ESTELLA, CEEEX / INFOSOC, 2006-2009
6. Impact of total splenectomy versus partial splenectomy over humoral and cellular immunity, CEEEX by Viasan, 2007-2008
7. Applications of chaos theory and fractal theory methods in medicine, CNCSIS, 2005-2006
8. Modeling complex systems with scale-free networks, CNCSIS, 2004-2005
9. Applications of fractal analysis in image processing, CNCSIS, 2003-2004
10. Distributed architecture for development of techniques for multimedia communications in networks, CNCSIS / World Bank, 2000-2002

Romanian patents (granted)

1. Distributed processing platform with applications in fractal analysis, Dobrescu R., Tarălungă S., Ichim L., L., Mocanu St., Patent Number: RO123593-B1/ 28.03.2014
2. Method for pointing out the self-similar behaviour of Internet traffic, Ulrich R., Dobrescu, R., Hossu D., Patent number : RO125569-B1/28.11.2014