



## Monica Dascălu

Date of birth: 20 Jul 1968

Gender: Female

Nationality: Romanian

### Contact details

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## Education and training

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### Master degree

University of Bucharest, Faculty of Journalism and Communication Sciences

2014 – 2016 Bucharest Romania

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### PhD in Microelectronics

Politehnica University of Bucharest, Faculty of Electronics and Telecommunications

1992 – 1998 Romania

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### Electronic Engineer, Specialization in Microelectronics

Politehnic Institute of Bucharest, Faculty of Electronics and Telecommunications

1986 – 1991 Romania

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### Highschool and Baccalaureate degree (mathematics and physics)

Nicolae Balcescu Highschool

1982 – 1986 Bucharest Romania

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## Work experience

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### Professor

National University of Science and Technology Politehnica Bucharest

1 Oct 2017 – Current Bucharest, Romania

Teaching activities at undergraduate and master levels. Subjects: Digital Electronics, Integrated Digital Circuits, Digital Processing, Microsystems, PhD advisor since 2017, Coordination of student research activities, diploma and master degree thesis.

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### Senior researcher

Romanian Academy of Sciences, Research Institute for Artificial Intelligence (RACAI)

1 Apr 2005 – Current Bucharest, Romania

Research activities in the field of new electronic architectures, artificial intelligence, coordination of research activities, elaboration of research projects

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### **Academic career: teaching assistant, lecturer, associate professor**

Politehnica University of Bucharest, Faculty of Electronics

1 Oct 1993 – 1 Oct 2017 Bucharest, Romania

My academic career in the Politehnica University of Bucharest, Telecommunications and Information Sciences, started immediately after I graduated and enrolled in the PhD Studies. Some subject matters I taught: Electronic Devices and Circuits, Digital Integrated Circuits, Functional Electronics, Advanced digital Circuits, Microsystems' Structure, Digital Electronics, Digital Processing.

I took part in several research projects of the University, and I also coordinated research projects, and students research activities. I developed and updated the Digital Circuits Laboratory, elaborated teaching materials and tutored the students.

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### **Researcher**

Romanian Academy of Sciences, RACAI

Bucharest, Romania

I started my research career as assistant researcher at the Center for New Electronic Architectures, which became part of RACAI in 1995. I was promoted in 1998 and 2005 to superior research degrees. Since 2000, I was the head of the Center for New Electronic Architectures and coordinated the research program of this group.

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### **Language skills**

Mother tongue: Romanian

### **Other Languages**

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	<b>Understanding</b>		<b>Speaking</b>				<b>Writing</b>	
	Listening	Reading	Spoken interaction		Spoken production			
<b>English</b>	C2 Proficient User	C2 Proficient User	C2 Proficient User	C2 Proficient User	C2 Proficient User	C2 Proficient User	C2 Proficient User	C2 Proficient User
<b>French</b>	B1 Independent User	B1 Independent User	B1 Independent User	B1 Independent User	B1 Independent User	B1 Independent User	B1 Independent User	B1 Independent User

### **Digital skills**

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Programming: Python, Java

Digital design and simulation: Verilog, Quartus Prime, ModelSim, Vivado

Web design: Wordpress

Matlab

## **Management and leadership skills**

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Coordination of a research team – coordinator of the Center for New Electronic Architectures within the Research Institute for Artificial Intelligence, Romanian Academy

Director and project manager for 15 research projects won through competition

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## **More information**

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Coordinator of doctoral studies in the field of Electronics, Telecommunications and Information Technologies

Author of 5 books and 8 chapters, over 45 scientific articles ranked ISI-WOS and 24 scientific articles in other BDI indexed volumes, cited over 150 times in ISI volumes and journals.

Director/partner leader for 15 projects (of which 2 international)

Member of the research team for 21 other projects (of which 5 international)

Member of the editorial board of an ISI-listed journal

Cumulative impact factor of published works: 35

H-index ISI-WOS: 8, Scopus: 9

# Publications

Prof. Dr. Ing. Monica DASCĂLU

## I. PhD Thesis and Habilitation Thesis

**PhD Thesis:** M. Dascălu, *Cellular automata – a solution for reducing the complexity of VLSI design* (original title: *Automatele celulare – o soluție pentru reducerea complexității VLSI*), Politehnica University of Bucharest, 1998.

**Habilitation Thesis:** M. Dascălu, *Hardware and software advanced applications of new electronic architectures* (original title: *Aplicații avansate hardware și software ale unor noi arhitecturi electronice* (230 pages), 2016

## II Books and chapters published at acknowledged scientific publishing houses

### Scientific books

M. Dascălu, *Self-Organizing Systems*, Editura Politehnica Press (cod CNCISIS 19), 154 pagini, ISBN 978-606-515-726-2, 2016.

M. Dascălu, E. Franți, *Automate celulare. Modelare și aplicații (Cellular automata. Modeling and applications)*, Editura Tehnică, 140 pagini, 2009.

M. Dascălu, “*Automatele celulare – o soluție pentru reducerea complexității VLSI*” (*Cellular automata – a solution for reducing the complexity of VLSI design*), editura Printech, București (162 pagini), 1999, ISBN 973-9402-61-5.

P. Borza, M. Dascălu, C. Gavrilăscu, “*Calculatorul personal – introducere și aplicații*” (*Introduction in Personal Computers*), Editura Tehnică, București, 1999, 193 pagini, ISBN 973-31-1406-5

### Chapters:

1. Dascalu, M., Dragomir, D., Besnea, D., Dobrescu, L., Pascalau, A.M., Dobrescu, D, Franti, E., Moraru, E, Plavitu, A, Mechatronic Structure for Forearm Prosthesis with Artificial Skin. In: Yadav S., Singh D., Arora P., Kumar H. (eds) Smart Innovation, Systems and Technologies, vol 174 (2020). Springer, Singapore. [https://doi.org/10.1007/978-981-15-2647-3\\_42](https://doi.org/10.1007/978-981-15-2647-3_42), Print ISBN: 978-981-15-2646-6
2. M. Dascălu, Communication ethics issues related to the „Volkswagen Scandal”, in „Culturi și comunicarea lor”(Cultures and their communication), Editura Universității din București (cod CNCISIS 78), pag. 33-54, ISBN 978-606-16-1095-2, 2019.
3. M. Dascălu, “*Cellular Automata and Randomization: A Structural Overview*”, capitol în volumul "From Natural to Artificial Intelligence - Algorithms and Applications," Ed. IntechOpen, London, UK, ISBN 978-1-78984-703-1, pp.165-183, 2018
4. L. Milea, A. Zafiu, O. Oltu, M. Dascălu, “*Theory, algorithms and applications for solar panel MPP tracking*” – capitol în volumul "Solar Collectors and Panels, Theory and Applications" ISBN 978-953-7619-X-X, SCIYO Publishing, pp 234 – 257, 2010
5. Ioniță, A. Zafiu, M. Dascălu, E. Franți, M. Vișan, “*An Approach for Intelligent Decision Support System for Urban Traffic Monitoring*”, capitol în volumul „Urban Data Management Society”, editura CRC Press Taylor & Francis Group – A BALKEMA BOOK, ISBN: 978-0-415-55642-2, pp. 455 – 464, 2009
6. Franți, E; Dascalu, M *More security and autonomy for users: encryption system with evolutive key*, chapter in the book “Data, Text and Web Mining and their Business Applications”, Book Series: WIT Transactions On Information And Communication Technologies, Volume: 38, Pages: 335-344, DOI: 10.2495/DATA070331, Published: 2007 Publisher: WIT Press/Computational Mechanics Publications, Ashurst Lodge, Ashurst, Southampton SO40 7AA, England, ISBN:978-1-84564-081-1, ISSN: 1746-4463, Accession Number: WOS:000248253500033 (republicarea unei lucrări prezentate la o conferință ISI, în Fișa de calcul este listată ca lucrare ISI)
7. M. Dascălu, E. Franți, Stefan, G., Modeling production with artificial societies: The emergence of social structure, 3rd Conference on Cellular Automata for Research and Industry (ACRI 98), pp. 218-229, Published: 1998, Springer-Verlag London Ltd, Sweetapple House Cateshall Rd Farncombe, Godalming Gu7 1nh, Surrey, England, ISBN:1-85233-048-1, WOS:000084809700020
8. M. Dascălu, E. Franți, Stefan, G., Artificial societies: A new paradigm for complex systems' modelling, Supplemental Ways For Improving International Stability 1998 (SWIS'98), pp. 63-68, Published: 1998,

### Academic educational publications

- M. Dascălu, *Circuite Integrate Digitale - teorie și aplicații* (Digital Circuits – Theory and applications), Editura MemoBooks, București, ISBN: 978-606-95428-8-0, 340 pagini, 2022
- M. Dascălu, G. Ștefan, *VeriLab. Proiectarea circuitelor digitale în Verilog (Digital Circuits Design in Verilog)*, Editura Politehnica Press, 2016, (cod CNCSIS 19), ISBN 978-606-515-737-8, **2016**
- M. Dascălu, D. Ștefan, D. Davidescu, E. Franti, Z. Hascși, B. Mițu, “*Circuite integrate digitale – aplicații*”( Digital Circuits –applications), Editura Printech, București, **1998**, (115 pagini), ISBN 973-9402-27-5.

### III. Scientific articles and papers

#### Articles in ISI-rated journals and in the volumes of scientific events indexed by ISI

1. Ionescu, O.N.; Franti, E.; Carbutaru, V.; Moldovan, C.; Dinulescu, S.; Ion, M.; Dragomir, D.C.; Mihailescu, C.M.; Lascar, I.; Oproiu, A.M.; T. P. Neagu, R. Costea, **M. Dascalu**, M. D. Teleanu, G. Ionescu, R. Teleanu, *System of Implantable Electrodes for Neural Signal Acquisition and Stimulation for Wirelessly Connected Forearm Prosthesis*. Biosensors 2024, 14, 31. <https://doi.org/10.3390/bios14010031>, WOS:001149201300001 – **ISI Q1**
2. Bratan, Costin Andrei; Tebeanu, Ana Voichita; Bobes, Gabriela; Popescu, Ionut; Iorgulescu, Gabriela; Neagu, Liliana; Apostol, Adriana; Goian, Razvan; **Dascalu, Monica**; Franti, Eduard; Oproiu, Ana Maria; *Using Swear Words Increases the Irritability – a Study Using AI Algorithms*, pp. 365–374, DOI: 10.59277/ROMJIST.2023.3-4.09, WOS:001083522800009– **ISI Q2**
3. Pogarasteanu, M., Moga, M., Barbilian, A., Avram, G., **Dascalu, M.**, Franti, E. Orban, C. (2023). *The Role of Fascial Tissue Layer in Electric Signal Transmission from the Forearm Musculature to the Cutaneous Layer as a Possibility for Increased Signal Strength in Myoelectric Forearm Exoprosthesis Development*. Bioengineering (Basel, Switzerland), 10(3). 10.3390/bioengineering10030319 WOS:000954289300001– **ISI Q2**
4. Dragomir, D.C.; Carbutaru, V.; Moldovan, C.A.; Lascar, I.; Dontu, O.; Ristoiu, V.; Gheorghe, R.; Oproiu, A.M.; Firtat, B.; Franti, E.; **Dascalu, M.**; Neagu, T.P.; Enescu, D.M.; Ionescu, O.; Ion, M.; Mihailescu, C.; Costea, R.; Gonciarov, M.; Ionescu, G.; Dumitru, A.; Minca, A.; Niculae, C.; Raita, S.; Rosca, I.; Lazarescu, S.; Stoica, C.; Teleanu, R.I.; Teleanu, D.M. *Biocompatibility Analysis of GelMa Hydrogel and Silastic RTV 9161 Elastomer for Encapsulation of Electronic Devices for Subdermal Implantable Devices*. Coatings 2023, 13, 19. <https://doi.org/10.3390/coatings13010019> WOS: 000917487200001– **ISI Q2**
5. Moldovan, C.A.; Ion, M.; Dragomir, D.C.; Dinulescu, S.; Mihailescu, C.; Franti, E.; **Dascalu, M.**; Dobrescu, L.; Dobrescu, D.; Gheorghe, M.-I.; Blystad, L.-C.; Ohlckers, P.A.; Marchetti, L.; Imenes, K.; Hønsvall, B.K.; Ramirez-Sarabia, J.; Lascar, I.; Neagu, T.P.; Raita, S.; Costea, R.; Barbilian, A.; Gherghiceanu, F.; Stoica, C.; Niculae, C.; Predoi, G.; Carbutaru, V.; Ionescu, O.; Oproiu, A.M. *Remote Sensing System for Motor Nerve Impulse*. Sensors 2022, 22, 2823. <https://doi.org/10.3390/s22082823>, WOS:000786926600001– **ISI Q2**
6. S. Mihalache, D. Burileanu, E. Franti, M. Dascalu, C.A. Bratan, Lasting emotions – An investigation of short- and long-term affective content remanence in speech, ROMJIST Volume 25, Number 1, 2022, pp. 20–35, WOS:000775912300002
7. Mirela-Iuliana GHEORGHE, Monica DASCALU, Cristian Ovidiu OPRIS, Florin-Cristian VASILIU, David Catalin DRAGOMIR, Eduard FRANTI, Motion Algorithms for a Neuroprosthesis Equipped with Velostat Sensors, ROMJIST Volume 25, No. 2, 2022, pp. 246-259, Paper no. 720/2022
8. Moldovan, C.A.; Ion, M.; Dragomir, D.C.; Dinulescu, S.; Mihailescu, C.; Franti, E.; Dascalu, M.; Dobrescu, L.; Dobrescu, D.; Gheorghe, M.-I.; Blystad, L.-C.; Ohlckers, P.A.; Marchetti, L.; Imenes, K.; Hønsvall, B.K.; Ramirez-Sarabia, J.; Lascar, I.; Neagu, T.P.; Raita, S.; Costea, R.; Barbilian, A.; Gherghiceanu, F.; Stoica, C.; Niculae, C.; Predoi, G.; Carbutaru, V.; Ionescu, O.; Oproiu, A.M. Remote Sensing System for Motor Nerve Impulse. Sensors 2022, 22, 2823. <https://doi.org/10.3390/s22082823>, WOS:000786926600001
9. C.A. Bratan, M.I. Gheorghe, I. Ispas, E. Franti, M. Dascalu, S.M. Stoicescu, I. Rosca, F. Gherghiceanu, D. Dumitrache, L. Năstase, Dunstan Baby Language Classification with CNN, 2021 International Conference on Speech Technology and Human-Computer Dialogue (SpED), IEEE Catalog Number: CFP2155H-ARTISBN: 978-1-6654-2786-9, pp.167-171, WOS:000786794700030

10. M. Dascalu, M. Malita, A. Barbilian, E. Franti and G. Stefan, Enhanced Cellular Automata with Autonomous Agents for Covid-19 Pandemic Modeling, ROMJIST Volume 23, pp. S15–S27, Number S, 2020, WOS:000537095200003
11. Blystad L.-C., Ohlckers P., Marchetti L., Franti E., Dascalu M., Ionescu O., Dobrescu D., Dobrescu L., Niculae C., Dragomir D.C., Honsvall B.L., Opris C.O., Imenes K., Ion M., Oproiu A.M., Pascalau A.-M., Moldovan C., Firtat B., Ristoiu V., Gheorghe R., Barbilian A., Bidirectional neuroprosthesis system integration, published in Proceedings of ESTC 2020, pp. 1-7, 15-18 September 2020, USN, Norway, DOI: 10.1109/ESTC48849.2020.9229697, WOS: 000631824100027
12. Răzvan Mihai, Tom Einar Nyberg, Einar Michaelsen, Ioana Rizea-Popp, Monica Dascălu, Gheorghe M. Ștefan, *IT-Based Financial Confirmation & Diagnosis Mechanisms*, pp. 284–299, ROMJIST Volume 22, Number 3-4, **2019**
13. M. E. Bundaru, D. Dobrescu, E. Franți, M. Enăchescu, M. Dascălu, L.Dobrescu, 2019, Enhanced Ripple Blocker, in CAS 2019 Proceedings, pp. 203 - 206, ISBN: 978-1-7281-1886-4, **2019**
14. C. Vasilache, D. Dobrescu, E.Franți, O.G.Profirescu, M. Dascălu, L.Dobrescu, Signal Processing Circuit for Spirometry, CAS 2019 Proceedings, pp. 255 - 259, ISBN: 978-1-7281-1886-4, **2019**
15. Eduard Franti, Ioan Ispas and Monica Dascalu, "Testing the Universal Baby Language Hypothesis - Automatic Infant Speech Recognition with CNNs", in Proceedings of 41st International Conference on Telecommunications and Signal Processing (TSP – IEEE), **2018**, Athens, Greece, 4-6 july 2018, pp.424 -428, WOS:000454845100095
16. Stefan Mogos M.D., George Viscopoleanu M.D., Monica Dascalu, Radu Orfanu M.D., "Reconstruction of severe acetabular bone defects in revision hip arthroplasty: management options and clinical outcomes", Revista de chimie, Vol. 69, no. 8, August, **2018**, pp.2222 – 2225, factor impact 1,4
17. Eduard Franți, Monica Dascălu, Ioan Ispas, Ana Voichita Tebeanu, Zoltan Elteto, Silvia Branea, Voichita Dragomir, Decoding communication: a deep learning approach to voice-based intention detection, in ROMJIST, Volume 21, Number 4, **2018**, 199–205
18. P. L. Milea, M. Dascălu, E. D. Franți, A. Barbilian, I. C. Stoica, Tactile Feedback Experiments for Forearm Prosthesis with Myoelectric Control, pp. 101–114, Romanian Journal for Information Science and Technology, Volume 20, Number 2, **2017** WOS:000416213300002
19. E. D. Franți, M. Dascalu, I Ispas, V. Dragomir, Z. Elteto, C.I.Stoica, M. Lupusoru, Voice Based Emotion Recognition with Convolutional Neural Networks for Companion Robots, in Romanian Journal for Information Science and Technology, Volume 20, Number 3, **2017**, pp. 222–240, WOS:000418495500006
20. M. Dascălu, Silvia Branea, Applying Communication Sciences in Artificial Societies, Romanian Journal for Information Science and Technology, Volume 20, Number 3, **2017**, pp. 198–209, WOS:000418495500004
21. P.L. Milea, M. Dascălu, C.O. Opris, E. Franți, M. Dumitrache, "Using pressure sensors for motion detection and actuation of remote manipulation devices", Romanian Journal of Information Science and Technology, vol. 19, No.4, **2016**, pp. 315-320
22. M. Dascălu, "Cellular Automata Hardware Implementations - an Overview", Romanian Journal of Information Science and Technology, vol. 19, No.4, **2016**, pp. 354-362, factor de impact 0,295
23. Eduard Franti, Lucian Milea, Monica Dascalu, Marius Moga, Catalin Florea, Adrian Barbilian, Mihail Teodorescu, Paul Schiopu, Florin Lazo, Mark Edward Pogarasteanu, „Personalized support system for patients with forearm amputations”, in ROMJIST (ISI), Vol 15, nr.4, december **2012**, pag 368-376, ISSN 1453-8245, WOS:000323706200006, factor impact 0,295
24. L.Milea, M.Dascalu, O.Oltu, A.Zafiu, „Two axes detector for photovoltaic panels' automatic full angle orientation”, CAS 2010 Proceedings, pp 125-128, October 11-13, **2010**, Publisher IEEE, 345 E 47TH ST, NEW YORK, NY 10017 USA, ISBN:978-1-4244-5781-6, ISSN: 1545-827X, WOS:000371396100023, factor impact 0,25
25. Zafiu A, V. Ionescu, M. Dascălu, G. Ștefan, „Concepts for society meta-modelling”, Annals of DAAAM for 2009 & Proceedings of the 20th International DAAAM Symposium, Volume 20, No. 1, ISSN 1726-9679 ISBN 978-3-901509-70-4, Editor B. Katalinic, Published by DAAAM International, Vienna, Austria, EU, **2009**, WOS:000282335600956, factor impact 0,25

26. M. Dascălu, G. Stefan, A. Zafiu, „*Multilevel Simulator for Artificial Societies*”, revista ROMJIST, vol.12, nr.4/2009 Pages: 466-484, Published: **2009**, Editura Acad Romane, Calea 13 Septembrie Nr 13, Sector 5, Bucuresti 050711, Romania, ISSN: 1453-8245, WOS:000277059600004, factor impact 0,295
27. S. Osiceanu, M. Dascalu, E. Franti, A. Barbilian, „*Intelligent Interfaces for Locomotory Prosthesis*”, in Proceedings of IEEE International Joint Conference on Neural Networks, Atlanta, June 14-June 19, USA, ISBN: 978-1-4244-3548-7, WOS:000280591601024, pp 1933-1938, **2009**, factor impact 0,25
28. Monica Dascalu, Eduard Franti, Gheorghe Stefan, Lucian Milea, Marius Stoian, „*Artificial societies simulator*”, AIKED'08 Proceedings of the 7th WSEAS International Conference on Artificial intelligence, knowledge engineering and data bases, Pages 276-281, Cambridge, UK — February 20 - 22, **2008**, ISBN: 978-960-6766-41-1, WOS: 000257462700040, factor impact 0,25
29. L. Milea, M. Drăgulinescu, O. Oltu, M. Dascălu, M. Stoian, „*Residential photovoltaic energetic system, optimized with an FPGA based control unit*”, Proceedings of the 3rd IASME / SEAS International Conference on ENERGY & ENVIRONMENT (EE'08), Cambridge, UK, pp 518-522, februarie **2008**, WOS:000254169000080, factor impact 0,25
30. O. Oltu, V. Voiculescu, M. Dascălu, V. Popescu, A. Barbilian, „*Advanced Power Monitoring of an ARM Processor*”, in volume "Computational Engineering in Systems Applications" selected papers from WSEAS Conference in Heraclion, Greece, pp 243-246, iulie **2008**, WOS:000260490500031, factor impact 0,25
31. Franti, E; Dascalu, M More security and autonomy for users: encryption system with evolutive key, JUN 18-20, 2007, Book Series: WIT Transactions On Information And Communication Technologies, Volume: 38, Pages: 335-344, DOI: 10.2495/DATA070331, Published: **2007** Publisher: WIT Press/Computational Mechanics Publications, Ashurst Lodge, Ashurst, Southampton SO40 7AA, England, ISBN:978-1-84564-081-1, ISSN: 1746-4463, Accession Number: WOS:000248253500033, factor impact 0,25
32. S. Goschin, E. Franti, M. Dascalu, S. Osiceanu, „*Combine and Compare Evolutionary Robotics and Reinforcement Learning as Methods of Designing Autonomous Robots*”, Proceedings of CEC'2007 Conference, Singapore (ISI), pp 1511-1516, septembrie **2007**, IEEE, 345 E 47TH ST, NEW YORK, NY 10017 USA, ISBN:978-1-4244-1339-3, WOS:000256053701013, factor impact 0,25
33. Zafiu A., M. Dascălu, E. Franți, M. Zafiu, B. Oancea, A. Ionita, M. Stoian, „*Virtual Environments for Prosthesis Design*”, in WSEAS Conference Proceedings, Tenerife, Spania, pp. 127-131, noiembrie **2007**, IEEE, 345 E 47TH ST, NEW YORK, NY 10017 USA, ISBN:0-7803-9214-0, WOS:000237180300103, factor impact 0,25
34. Milea, PL; Oltu, O ; Dragulinescu, M ; Dascalu, M ; Manea, E., „*Optimizing solar panel energetic efficiency using an automatic tracking microdetector*”, Proceedings of WSEAS International Conference on RENEWABLE ENERGY SOURCES (RES '07), Arcachon, France, 14-16 October **2007**, pp. 42-45, ISSN: 1790-5095, ISBN: 978-960-6766-10-7, USA, WOS:000257308000008, factor impact 0,25
35. S. Goschin, E, Franți, M. Dascalu, „*Autonomous Agents with Control Systems Based on Genetic Algorithms*”, IASTED International Conference on Robotics and Applications (RA 2006) Proceedings, Hawaii, SUA, pp. 156-160, **2006**, ACTA PRESS ANAHEIM, PO BOX 5124, ANAHEIM, CA 92814-5124 USA, ISBN:978-0-88986-595-2, ISSN: 1027-264X, WOS:000244035500009, factor impact 0,25
36. E. Franti, D. Tufis, S. Goschin, M. Dascalu, P.L. Milea, G. Stefan, T. Balan, C. Slav, R. Demco, „*Virtual environment for robots interfaces design and testing*”, CAS-**2005** Proceedings, Vol 2, pp. 463-466, Sinaia, Romania, 2-4 October 2005, ISBN: 0-7803-9214-0, WOS:000237180300103, factor impact 0,25
37. E. Franti, S. Goschin, M. Dascalu, CRIPTOCEL: „*Design of Cellular Automata Based Cipher Schemes*”, ICCCS'04 Proceedings, Chengdu, China, pp. 1103-1107, 26-29 iunie **2004**, IEEE, 345 E 47TH ST, NEW YORK, NY 10017 USA, ISBN:0-7803-8647-7, WOS:000224820400243, factor impact 0,25
38. Franti, E; Slav, C; Balan, T; Dascalu, M., „*Design of cellular automata hardware for cryptographic applications*”, **2004** International Semiconductor Conference, Vols 1and 2, Proceedings, Pages: 463-466, ISBN: 0-7803-8499-7, IEEE, 345 E 47TH ST, NEW YORK, NY 10017 USA, WOS:000228010700096, factor impact 0,25
39. M. Dascălu, E. Franți , „*Computing system processing of GPR sounding profiles*”, **2003** International Semiconductor Conference, Vols 1 And 2, Proceedings, Pages: 387-390 DOI: 10.1109/SMICND.2003.1252460, IEEE, 345 E 47TH ST, NEW YORK, NY 10017 USA, ISBN:0-7803-7821-0, WOS:000189468100085, factor impact 0,25

40. Bostan I., I. Lita, E. Franți, M. Dascălu, C. Moldovan, S. Goschin, „*Systematic Odometry Errors Compensation for Mobile Robot Positioning*”, CADSM '02 Lviv, Ukraina, pp 574-576, februarie **2003**, Lviv Polytech Natl Univ, 61 V Chomovol Ave, Lvov 79058, Ukraine, ISBN:966-553-278-2, WOS:000188996700189, factor impact 0,25
41. Bostan I., E. Franti, M. Dascalu, S. Goschin, „*Evolutionary computing systems for Obstacle Avoidance*”, CAS 2003 Proceedings, pp. 403-406, Sinaia, Romania, octombrie **2003**, IEEE, 345 E 47TH ST, NEW YORK, NY 10017 USA, ISBN:0-7803-7821-0, WOS:000189468100089, factor impact 0,25
42. M. Dascălu, E. Franți, „*Implementation of Totalistic Cellular Automata*”, în CAS 2000 Proceedings, Sinaia, România, pp. 273-276, octombrie **2000**, IEEE, 345 E 47TH ST, NEW YORK, NY 10017 USA, ISBN:0-7803-5885-6, WOS:000168560900052, factor impact 0,25
43. Franti, E; Dascalu, M; Stefanescu, I, „*Cellular automata hardware for image processing tasks used in traffic control*”, **2000** International Semiconductor Conference, Vols 1 And 2, CAS 2000 Proceedings, Pages: 277-280, Published: 2000, IEEE, 345 E 47TH ST, NEW YORK, NY 10017 USA, ISBN:0-7803-5885-6, WOS:000168560900053, factor impact 0,25
44. M. Dascălu, E. Franți, Stefan, G., „*Modeling production with artificial societies: The emergence of social structure*”, 3rd Conference on Cellular Automata for Research and Industry (ACRI 98), Pages: 218-229, Published: **1998**, Springer-Verlag London Ltd, Sweetapple House Catteshall Rd Farncombe, Godalming Gu7 1nh, Surrey, England, ISBN:1-85233-048-1, WOS:000084809700020, factor impact 0,25
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2. Monica Dascalu, Lucian Milea, Eduard Franti, Florin Lazo, Elteto Zoltan, Ioan Ispas, *Haptic Feedback Experiments for Improved Teleoperation of a Robotic Arm*, American Journal of Aerospace Engineering, Vol. 3, No. 3, **2016**, pp. 36-42. doi: 10.11648/j.ajae.20160303.13
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## **IV RESEARCH PROJECTS**

### **International research projects**

1. “Traffic simulator with cellular automata”, international CNCSIS grant (2000-2001), project director
2. “NerveRepack, Intelligent neural system for bidirectional connection with exoprostheses and exoskeletons”, KDT, Chips-JSU, European Project 2023-2027, partner leader

### **National research projects**

3. “Simulator for intelligent autonomous robots”, CNCSIS Grant, 2005 – 2006, project director
4. “Remote controlled robotic hand with intelligent sensory feedback for outside Earth interventions in hazardous environments – STARHAND”, STAR Contract, 2014-2016, partner leader
5. “Encryption system with parallel computing architecture and evolutionary keys” (SCRIPT), ROSA Security Grant, 2005-2006, project director
6. “Cryptographic system with parallel computing algorithms (CRIPTALL)”, PNII Project, 2008 - 2011, partner leader
7. “Cryographic system with cellular automata”, CNCSIS Grant, 2001-2002, project director
8. “Informatic system for monitoring and personalized assistance of patients with amputated upper limbs” - ARTHAND, PN-II Contract, 2013-2017, partner leader
9. “Smart locomotor prostheses inteligente – INTELPROT”, PNCDI2 project, 2007-2010, partner leader

10. "Information system for design, simulation, testing and configuration of intelligent renewable energy systems" (SINERG), PNCDI2 project, 2008-2011, partner leader
11. "Implementation technology for a microsystem based on biosensors for detecting toxins used in bioterrorism (TOXISISTEM)", ROSA Security Grant, 2005-2006, partner leader
12. "Integrated platform for parallel monitoring of electrophysiological activity and chemical environment of neuronal cells (NEUROSENSE)", PNCDI2 research contract, 2007-2010, partner leader
13. "Research on creating an experimental model of a virtual mobile learning network with real-time access to knowledge and learning using communication technologies and wireless devices (MOBNET)", PNCDI2 project, 2008-2011, partner leader
14. "Family of chips for implementing cellular automata", MCT grant, 1996-1999, project director
15. "Metabolism: Self-organization of complex systems" 1997-1998, MCT grant, project director

### **Patents**

System and method for automatic video monitoring of a remote-controlled robotic arm, Nr.132640RO-BOPI 8/2019, Milea Petru Lucian, Franti Eduard Dan, Dascalu Monica

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