

LISTA DE LUCRARI

I. Teza de doctora (T)

- [T1]. Anton DUCA, Probleme electromagnetice inverse, Universitatea Politehnica Bucuresti, Facultatea de Inginerie Electrica, 2006. Coordonator Prof. dr. ing. FMG Tomescu.

II. Carti cu ISBN / capitole ca autor didactice sau monografii (C)

Internationale:

- [Ci1]. A. Duca, L. Duca, G. Ciuprina, D Ioan, capitolul "SPSO parallelization strategies for electromagnetic applications", capitol 5, in Studies in Computational Intelligence, editura Springer, vol. 669, pp. 75-95, 2016. ISBN 978-3-319-48504-1.

Nationale :

- [Cn1]. A. Duca, Sisteme Neurale si Tehnici Stocastice pentru Probleme Electromagnetice Inverse, editura Andvertising, Bucuresti, 2006. ISBN 978-973-86927-3-2.
- [Cn2]. A. Duca, Tehnici de Dezvoltare Software, Printech, Bucuresti 2016. ISBN 978-606-23-0673-1.
- [Cn3]. L. Duca, A. Duca, D Ioan, Algoritmi PSO si tehnici HPC pentru optimizarea dispozitivelor electromagnetice, Printech, Bucuresti 2019. ISBN 978-606-23-1003-5.

III. ALTE MATERIALE PUBLICATE

Support de curs in format electronic (Sce):

- [See1]. Anton Duca, L. Duca, G. Ciuprina, D Ioan, capitolul "SPSO parallelization strategies for electromagnetic applications", capitol 5, in Studies in Computational Intelligence, editura Springer, vol. 669, pp. 75-95, 2016. ISBN 978-3-319-48504-1.

Indrumare de laborator (I):

- [I1]. Anton Duca, Sisteme Neurale si Tehnici Stocastice pentru Probleme Electromagnetice Inverse, editura Andvertising, Bucuresti, 2006. ISBN 978-973-86927-3-2.
- [I2]. A. Duca, Tehnici de Dezvoltare Software, Printech, Bucuresti 2016. ISBN 978-606-23-0673-1.
- [I3]. L. Duca, A. Duca, D Ioan, Algoritmi PSO si tehnici HPC pentru optimizarea dispozitivelor electromagnetice, Printech, Bucuresti 2019. ISBN 978-606-23-1003-5.

IV. ARTICOLE / STUDII IN EXTENSO PUBLICATE

Ris - Reviste de specialitate de circulatie internationala recunoscute, cotate / indexate ISI Thomson Reuters:

- [Ris1] Simplification by pruning as a model order reduction approach for RF-MEMS switches By: Ciuprina, G (Ciuprina, Gabriela)[1] ; Ioan, D (Ioan, Daniel)[1] ; Lup, AS (Lup, Aurel-Sorin)[1] ; Silveira, LM (Silveira, Luis Miguel)[2] ; Duca, A (Duca, Anton)[1] ; Kraft, M (Kraft, Michael)[3] COMPEL-THE INTERNATIONAL JOURNAL FOR COMPUTATION AND MATHEMATICS IN ELECTRICAL AND ELECTRONIC ENGINEERING Volume: 39 Issue: 2 Pages: 511-523 DOI: 10.1108/COMPEL-06-2019-0266 Published: NOV 29 2019 Accession Number: WOS:000534314100002

- [Ris2] QPSO with avoidance behaviour to solve electromagnetic optimization problems By:Duca, A ; Duca, L ; Ciuprina, G INTERNATIONAL JOURNAL OF APPLIED ELECTROMAGNETICS AND MECHANICS Volume: 59 Issue: 1 Pages: 63-69 DOI: 10.3233/JAE-171170 WOS:000462267200009 Published: 2019"
- [Ris3] Diagnosis of real cracks from eddy current testing signals using parallel computation By:Janousek, L (Janousek, Ladislav); Rebican, M (Rebican, Mihai) ; Smetana, M (Smetana, Milan) ; Duca, A (Duca, Anton) NONDESTRUCTIVE TESTING AND EVALUATION Volume: 32 Issue: 4 Pages: 435-443 DOI: 10.1080/10589759.2016.1241250 Published: 2017, Impact factor 1.957, WOS:000410800800006
- [Ris4] PSO algorithms and GPGPU technique for electromagnetic problems By:Duca, A (Duca, Anton)[1] ; Duca, L (Duca, Laurentiu)[2] ; Ciuprina, G (Ciuprina, Gabriela)[1] ; Yilmaz, AE (Yilmaz, Asim Egemen)[3] ; Altinoz, T (Altinoz, Tolga)[3] INTERNATIONAL JOURNAL OF APPLIED ELECTROMAGNETICS AND MECHANICS Volume: 53 Pages: S249-S259 Supplement: 2 DOI: 10.3233/JAE-140166 Published: 2017, WOS:000396838100010
- [Ris5] Incorporating the Avoidance Behavior to the Standard Particle Swarm Optimization 2011, Okkes Tolga Altinöz, A. Egemen Yilmaz, Anton Duca, Gabriela Ciuprina, ADVANCES IN ELECTRICAL AND COMPUTER ENGINEERING, vol. 15 (2), pp. 51-58, 2015. ISSN: 1582-7445. WOS:000356808900007 Okkes Tolga Altinöz, A. Egemen Yilmaz, Anton Duca, Gabriela Ciuprina, Incorporating the Avoidance Behavior to the Standard Particle Swarm Optimization 2011, ADVANCES IN ELECTRICAL AND COMPUTER ENGINEERING, vol. 15 (2), pp. 51-58, 2015. ISSN: 1582-7445. WOS:000356808900007

Vis- Volumele unor manifestari stiintifice internationale recunoscute, organizate in tara si strainatate, cotate / indexate ISI Thomson Reuters:

- [Vis1] A. Duca, "Adaptive ACOR to solve the Loney's solenoid electromagnetic problem," 2021 12th International Symposium on Advanced Topics in Electrical Engineering (ATEE), 2021, pp. 1-4, doi: 10.1109/ATEE52255.2021.9425072. WOS:000676164800017
- [Vis2] A. Duca, "Improved QPSO with Selected Random Mean for Electromagnetic Problems," 2021 12th International Symposium on Advanced Topics in Electrical Engineering (ATEE), 2021, pp. 1-4, doi: 10.1109/ATEE52255.2021.9425159. WOS:000676164800062
- [Vis3] ACOR Algorithm's Efficiency for Electromagnetic Optimization Benchmark Problems Anton Duca ; Gabriela Ciuprina ; Sorin Lup ; Ibrahim Hameed 2019 11th International Symposium on Advanced Topics in Electrical Engineering (ATEE) Year: 2019 Pages: 1 - 5 DOI: 10.1109/ATEE.2019.8724735 WOS:000475904500003
- [Vis4] High Performance Computing techniques for fast solving a NDET forward problem, By:Duca, L (Duca, Laurentiu) ; Ioan, D (Ioan, Daniel) ; Duca, A (Duca, Anton), 2017 IEEE MTT-S INTERNATIONAL CONFERENCE ON NUMERICAL ELECTROMAGNETIC AND MULTIPHYSICS MODELING AND OPTIMIZATION FOR RF, MICROWAVE, AND TERAHERTZ APPLICATIONS (NEMO), Pages: 115-118, Location: Seville, SPAIN, Date: MAY 17-19, 2017 (ISBN:978-1-5090-4837-3) DOI: 10.1109/NEMO.2017.7964205 WOS:000424193800039
- [Vis5] Anton Duca, Laurentiu Duca, Gabriela Ciuprina, Daniel Ioan, Neighborhood Strategies for QPSO Algorithms to Solve Benchmark Electromagnetic Problems. IJCCI (ECTA) 2016, pp. 148-155, SCITEPRESS (ISBN: 978-989-758-201-1). DBLP, DOI:10.5220/0006040901480155 WOS:000393153900015
- [Vis6] Daniel Ioan, Mihai Rebican, Anton Duca. Use of Evolutionary Agents to Solve ENDE Inverse Problems. Electromagnetic Nondestructive Evaluation (V), Studies in Applied Electromagnetics and Mechanics, Vol. 21, J. Pavo, G. Vertesy, T. Takagi, S.S. Udpa (Eds), ISSN 1383-7281, ISBN 1 58603 155 4, IOS Press, Amsterdam, pp. 59-66, 2001, ISI Web on Science, WOS: 000170515000009
- [Vis7] D. Ioan, A. Duca, Use of MTANN Systems to Solve Inverse ENDE Problems, in Electromagnetic Nondestructive Evaluation (IV), vol. 17, pp. 159 - 166. S. S. Udpa, T. Takagi, J. Pavo and R. Albanese (Eds.), IOS Press, Amsterdam, 2000. ISSN 1383-7281, ISBN 1-58603-023-X. ISI Web on Science, WOS:000089123600021
- [Vis8] A. Duca, D. Ioan, A Hybrid Transform-Neural Network Approach for the Inverse Problem in NDET, in Non-Linear Electromagnetic Systems, vol. 18, pp. 269 - 272. P. Di Barba and A. Savini (Eds.), IOS Press, Amsterdam, 2000. ISBN 1-58603-024-8. ISI Web on Science, WOS:000089208800066

Rbd - Reviste de specialitate de circulatie internationala recunoscute, cotate / indexate BDI:

- [Rbd1] Physics-aware macromodels for MEMS switches By:Lup, AS (Lup, Aurel-Sorin)[1] ; Ciuprina, G (Ciuprina, Gabriela)[1] ; Ioan, D (Ioan, Daniel)[1] ; Duca, A (Duca, Anton)[1] ; Nicoloiu, A (Nicoloiu, Alexandra)[2] ; Vasilache, D (Vasilache, Dan)[2] COMPEL-THE INTERNATIONAL JOURNAL FOR COMPUTATION AND MATHEMATICS IN ELECTRICAL AND ELECTRONIC ENGINEERING Volume: 39 Issue: 2 Pages: 497-509

- [Rbd2] Okkes Tolga Altinöz, Eren Akca, A. Egemen Yilmaz, Anton Duca, Gabriela Ciuprina, Parallel Implementation of Desirability Function-Based Scalarization Approach for Multiobjective Optimization Problems. *Informatica (Slovenia)*, vol. 39(2), pp. 115-123, (2015). ISSN: 0350-5596. WOS:000362399800003
- [Rbd3] Ladislav Janousek, Mihai Rebican, Milan Smetana, Anton Duca, Progress in three-dimensional non-destructive assessment of real cracks from eddy current testing signals, (*Komunikacie*), *Scientific Letters of the University of Zilina*, Vol. 17 (1A), ISSN 1335-4205 , pp. 17-22, 2015, Scopus
- [Rbd4] Ladislav Janousek, Mihai Rebican, Milan Smetana, Tatiana Strapacova, Anton Duca, Viera Pernisova. Recent innovative solutions in eddy current non-destructive diagnosis, *Journal Communications (Komunikacie)*, *Scientific Letters of the University of Zilina*, Vol. 15, Nr. 2, ISSN 1335-4205 , pp. 102-108, 2013, Scopus
- [Rbd5] L. Duca, A. Duca, C. Popescu, A. Petrescu, Program Interpreter and Communication Server for an Industrial Robot Controller, *UPB Scientific Bulletin, series C*, vol. 75, nr. 4, ISSN 2286 - 3540, pp. 35-44, 2013. Scopus

Vbd- Volumele unor manifestari stiintifice internationale recunoscute, cotate / indexate BDI:

- [Vbd1] A. Duca, "Adaptive ACOR for solving the TEAM22 benchmark problem," 2021 International Conference on Applied and Theoretical Electricity (ICATE), 2021, pp. 1-4, doi: 10.1109/ICATE49685.2021.9464986. IEEExplore
- [Vbd2] A. Duca, "RSM enhanced ACOR algorithm for electromagnetic optimization," 2021 International Conference on Applied and Theoretical Electricity (ICATE), 2021, pp. 1-5, doi: 10.1109/ICATE49685.2021.9464999. IEEExplore
- [Vbd3] Anton Duca, Ibrahim Hameed, ACO Algorithms to Solve an Electromagnetic Discrete Optimization Problem. *IJCCI 2020*: pp. 115-122. DOI:10.5220/0009980001150122, Scopus.
- [Vbd4] Cristina Mamoc, Anton Duca, Gabriela Ciuprina and Sorin Lup, Multi-objective QPSO algorithms to solve an electromagnetic benchmark problem, 2020 International Symposium on Fundamentals of Electrical Engineering (ISFEE), Location: Bucharest, ROMANIA, pp. 1-4, 2020 DOI: 10.1109/ISFEE.2020.8742418. IEEExplore
- [Vbd5] Laurentiu-Cristian Duca, Anton Duca, Achieving hard real time networking on PREEMPT_RT Linux with Rtnet, 2020 International Symposium on Fundamentals of Electrical Engineering (ISFEE), Location: Bucharest, ROMANIA, pp. 1-4, 2020 DOI: 10.1109/ISFEE.2020.8742418. IEEExplore
- [Vbd6] L. -C. Duca, A. Duca and A. -S. Lup, "Real-time Linux drivers and latency evaluation system for TI OMAP4 mcSPI peripheral," 2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE), Istanbul, Turkey, 2020, pp. 1-4, doi: 10.1109/ICECCE49384.2020.9179286. IEEExplore
- [Vbd7] Parametric macromodels for the RF behaviour of capacitive switches, Aurel-Sorin Lup ; Gabriela Ciuprina ; Daniel Ioan ; Ruxandra Barbulescu ; Anton Duca ; Mihai Popescu, 2018 International Symposium on Fundamentals of Electrical Engineering (ISFEE), Location: Bucharest, ROMANIA, pp. 1-6, 2018 (ISBN:978-1-5386-7212-9) DOI: 10.1109/ISFEE.2018.8742418, WOS:000480396400012
- [Vbd8] Parametric Reduced Order Models in Static Multiphysics Analysis of MEMS Switches By:Lup, AS (Lup, Aurel Sorin)[1] ; Ciuprina, G (Ciuprina, Gabriela)[1] ; Ioan, D (Ioan, Daniel)[1] ; Duca, A (Duca, Anton)[1] ; Stefanescu, A (Stefanescu, Alexandra)[2] ; Vasilache, D (Vasilache, Dan)[2] ; Kraft, M (Kraft, Michael)[3] 2017 10TH INTERNATIONAL SYMPOSIUM ON ADVANCED TOPICS IN ELECTRICAL ENGINEERING (ATEE) Pages: 513-518 Published: 2017 Document Type:Proceedings Paper Location: Bucharest, ROMANIADate: MAR 23-25, 2017 DOI: 10.1109/ATEE.2017.7905052 WOS:000403399400100
- [Vbd9] Anton Duca, Laurentiu Duca, Gabriela Ciuprina, Daniel Ioan, GPGPU Vs Multiprocessor SPSO Implementations to Solve Electromagnetic Optimization Problems. *IJCCI (ECTA) 2015*, pp. 64-73, SCITEPRESS (ISBN: 978-989-758-157-1). DBLP, Scopus, IEEE, DOI: 10.5220/0005596000640073
- [Vbd10] A. Duca, M. Rebican, L. Duca, L. Janousek, T. Altinöz, Advanced PSO Algorithms and Local Search Strategies for NDT-ECT Inverse Problems, in the International Symposium on Fundamentals of Electrical Engineering (ISFEE 2014), Bucharest, Romania, pp. 1-5, 2014. ISBN 978-1-4799-6820-6, DOI: 10.1109/ISFEE.2014.7050538, WOS:000380570500006.
- [Vbd11] Anton Duca, Mihai Rebican, Ladislav Janousek, Milan Smetana, Tatiana Strapacova. PSO based techniques for NDT-ECT inverse problems. *Studies in Applied Electromagnetics and Mechanics*, Vol. 39, IOS Press, pp. 323-330, 2014, ISSN 1383-7281, ISBN 978-161499406-0, Scopus, DOI: 10.3233/978-1-61499-407-7-323 WOS:000426883200037
- [Vbd12] Ladislav Janousek, Mihai Rebican, Milan Smetana, Tatiana Strapacova, Anton Duca. Three-dimensional reconstruction of partially conductive cracks from ECT response signals. *Studies in Applied Electromagnetics and*

Mechanics, Vol. 39, IOS Press, pp. 331-338, 2014, ISSN 1383-7281, ISBN 978-161499406-0, Scopus, DOI: 10.3233/978-1-61499-407-7-331 WOS:000426883200038

- [Vbd13] Ladislav Janousek, Milan Smetana, Tatiana Strapacova, Mihai Rebican, Anton Duca. Advanced procedure for non-destructive diagnosis of real cracks from eddy current testing signals, 10th International Conference ELEKTRO 2014, Rajecke Teplice, Slovakia, May 19-20, pp. 567-570, ISBN 978-1-4799-3720-2, IEEEExplore (INSPEC Accession Number: 14431364), SCOPUS (Article number 6848961, Category number CFP1448S-ART, Code 106459), DOI: 10.1109/ELEKTRO.2014.6848961. WOS:000361020800112 (ISBN:978-1-4799-3721-9)
- [Vbd14] T. Altinoz, A.E. Yilmaz, A. Duca, G. Ciuprina, Particle Swarm Optimization with social exclusion and its application in electromagnetics, in the International Conference on Optimization of Electrical and Electronic Equipment (OPTIM 2014), Bran, Romania, pp. 105-110, 2014. ISBN 978-1-4799-5183-3, ISI Web on Science WOS:000343551300016
- [Vbd15] Anton Duca, Mihai Rebican. Ladislav Janousek, Asim Egemen Yilmaz. Enhancement of Particle Swarm Optimization algorithms for the 3D crack reconstruction from ECT signals, 8th International Symposium on Advanced Topics in Electrical Engineering, ATEE 2013, pp. 1-4, Bucharest, Romania, May 2013, ISBN 978-1-4673-5979-5, ISI Web on Science WOS:000332928500110

V. BREVETE DE INVENTIE / INOVATII (B,A)

VI. CONTRACTE SI RAPOARTE STIINTIFICE (P,F)

P – Proiecte de cercetare-dezvoltare – inovare obtinute prin competitie, pe baza de contract/grant, in tara/strainatate (**Pn** – nationale, **Pi** - internationale).

Proiecte NATIONALE:

- [Pn1] Membru in echipa proiectului PN-II-PT-PCCA-2011-3- Contract nr. 5/2012 - Instrumente si metodologii avansate pentru modelarea multifizica si simularea microcomutatoarelor de radio frecventa (ToMeMS). Perioada 2013-2016. Coordonator: Prof. dr. ing. Gabriela Ciuprina.
- [Pn2] Membru in echipa proiectului "Tehnici de testare nedistructiva. Faza 1: Metoda de testare nedistructiva cu curenti turbionari. Faza 2: Studiu privind utilizarea agentilor software in defectoscopia nedistructiva.". Contract: ANSTI 836/A65, beneficiar ANSTI, anul 2000. Coordonator: Prof. dr. ing. Daniel IOAN
- [Pn3] Membru in echipa proiectului "Studiu privind rezolvarea problemei inverse de defectoscopie electromagnetica.". Contract: ANSTI 836/A61, beneficiar ANSTI, anul 1999. Coordonator: Prof. dr. ing. Daniel IOAN
- [Pn4] Membru in echipa proiectului "Circuite neurale artificiale pentru rezolvarea problemei inverse de defectoscopie electromagnetica nedistructiva". Contract: ANSTI 836/A9, beneficiar ANSTI, anul 1999. Coordonator: Prof. dr. ing. Daniel IOAN

Proiecte INTERNATIONALE:

- [Pi1] Director proiect, PN III Cooperare Europeană și Internațională, Subprogramul 3.1. Bilateral/multilateral, Contract 98 BM / 2017 - Calcul evolutionist si de inalta performanta pentru optimizarea si proiectarea automata a sistemelor microelectromecanice (EchoMEMS). Durata 2 ani. Valoare 6550 EURO. Operator de program UEFISCDI (<https://uefiscdi.ro/resource-82197?&wtok=e4e1841cd35993b9875a7d7219508a73ad58da37&wtkps=XY3RDoIwDEX/pc+K68ZglH8wJn4BMiSL6ICBQ4z/LszERJ96097TU1BKT0eSwA+XxkFuCFWGsWRx7kgQOKNhSTESiJ517TRPiU+zM9ePeJj43Nb+tMWmqMvCbtH53qpuBZa+WScnSBA+v0odBBmu95RA6/Z2OO5EyrjiikkVgNX03Ww4ohSIAX4KgO1/2OQefwWF62vgnZJV6vHpopsX0jdTau1Ca6m8pHRT+Y0jaQv94=&wchk=32a68dfba36759df7c2181faba96b96adecabd96>)
- [Pi2] Director proiect, EEA grant, Proiect de mobilitati Norvegia Romania. Tematica de cercetare: "Evolutionary Computation, HPC implementations, and their applications in engineering". Valoare 1200 EURO. Perioada 17-23 iunie 2017. Operator de program UEFISCDI. Identificator EEA-MG-RO-NO-2018-0069 (<https://uefiscdi.ro/resource-81973?&wtok=0611c4cbd6b29382de8a91de00659db2b4b20d19&wtkps=XY9RboMwEETvst8J8e5i2VnuEEXKCQC7iSkBhANiXr3GIKpav9GqzczO6UYeUXRAsvjs41QBEFrDSNxEYUFYnCVK4EeFQjNU1V+Zsp0/OK9VR0w3XPV11NTPvj3bWdl15FAjwTtD58UfV712gcSWMgHNDd74c2CiyZJW2K0jJ+3vZEaJmREbecvXmOv3zYHrvL0hpkd96k7r3bmp91o/XbPIfldYuZHPwS1aOj1D3LRRf3w==&wchk=26684ba62b6e1934ec748ad5770f13fa240559c0>)
- [Pi3] Membru in proiectul de cooperare bilaterala Romania-Turcia, capacitati /Modul III, Grant Nr. 605/01.01.2013 - Instrumente Software Avansate pentru Modelare Electromagnetica si Optimizare (ASTEMO). Perioada 2013-2014. Coordonator Prof. dr. ing. Gabriela Ciuprina.

- [Pi4] Membru in proiectul de cooperare bilaterala Romania-Slovia (Universitatea din Zilina), Programul Capacitati, Modul III, competitia 2012, ANCS UEFISCDI, contract de finantare nr. 654/2013, nr. intern I 021302, "Enhancing diagnosis of partially conductive cracks in eddy-current nondestructive evaluation – INNOVATION (Elaborarea unor metode de reconstructie a defectelor partial conductoare utilizând tehnici de testare nedistructivă prin curenti turbionari)", durata 2013-2014, volum finantare UPB: 22700lei, <http://uefiscdi.gov.ro/userfiles/file/CAPACITATI/Bilaterale/ROSK/Lista%20proiecte%20finantate%20-%20Competitia%202012.pdf>. Coordonator Conf. dr. ing. Mihai Rebican
- [Pi5] Membru in echipa UPB-LMN, proiect international INCO-COPERNICUS MANODET Nr. ERBIC15CT969703, Beneficiar: Comisia Europeana, "Novel nondestructive material testing technique based on a new magnetic field measurement principle - MANODET", durata: 1997-2000, <http://alag3.mfa.kfki.hu/ect/manodet/index.htm>.

12 septembrie 2021,

Conf. Dr. Ing. Anton Duca

A handwritten signature in blue ink, appearing to read 'Duca', with a stylized flourish extending to the right.