LISTA LUCRĂRILOR DIDACTICE ŞI ŞTIINŢIFICE

I LUCRĂRI DIDACTICE PUBLICATE

1. Comnac, V., **Coman, S.**, Boldişor, C., *Sisteme liniare continue*, Ed. Universităţii Transilvania din Braşov, 2009, 544 pag., ISBN 978-973-598-649-0.

2. Boldişor, C., Comnac, V., **Coman, S.** *Tehnici de inteligenţă artificială – îndrumar de laborator*, Ed. Universităţii Transilvania din Braşov, 2009, 110 pag.

3. **Coman S.**, Comnac V., Boldişor C., *Teoria sistemelor -îndrumar de laborator*, Ed. Universităţii Transilvania din Braşov, 2009, 140 pag.

4. Coman, S., Boldisor, Cr., *Sisteme adaptive şi robuste. Îndrumar de laborator*, Ed. Universităţii *Transilvania* din Braşov, 2017, 61 pag.

II Teză de doctorat

Titlul: Studiul fiabilităţii software a produselor program implementate în conducerea proceselor energetice

III LUCRĂRI ŞTIINŢIFICE PUBLICATE ÎN ANALE, BULETINE ŞI REVISTE DE SPECIALITATE

A. Jurnale cu cotaţie ISI

1. Ogrezeanu, I., Vizitiu, A., Ciuşdel, C., Puiu, A., **Coman, S**., Boldişor, Cr., Itu, A., Demeter, R., Moldoveanu, Fl., Suciu, C-tin and Itu, L., *Privacy-Preserving and Explainable AI in Industrial Applications*, June 2022, Vol. 12, pp. 1-14, ISSN 2076-3417, DOI: 10.3390/app12136395 (ISI Journal , WOS: 000824322700001 FI: 2.838, Journal Rank: Q2)

2. Tsopra, R, Fernandez, X., Luchinat, C., Alberghina, L., Lehrach, H., Vanoni, M., Dreher, F., Sezerman, O., Cuggia, M., Tayrac, M., Miklasevics, E., Itu, L.M., Geanta, M., Ogilvie, L., Godey, F., Boldisor, C.N., Campillo-Gimenez, B., Cioroboiu, C., Ciusdel, C.F., **Coman, S.** et all, *A Framework for Validating AI in Precision Medicine: Considerations from the European ITFoC Cnsortium*, BMC Medical Informatics and Decision Making, October 2021, Vol. 21, Issue: 1, pp. 1-14, ISSN 1472-6947, DOI: 10.1186/s12911-021-01634-3 (ISI Journal, WOS 000702775200001, FI: 3.298 (2022), Journal Rank Q3)

3. **Coman, S.**, Iosif, D., *AnesthesiaGUIDE: A MATLAB Tool to Control the Anesthesia*, SN Applied Sciences, Vol. 4, Issue: 1, January 2022, pp.1-10 , ISSN 2523-3971, DOI: 10.1007/s42452-021-04885-x (ISI Journal, WOS 000726283100003, FI: 0)

4. Ciusdel, C., **Coman, S.**, Boldisor, Cr. et all, *Effect of Linearization in a WNT Signaling Model*, Computational and Mathematical Methods in Medicine, Vol. 2019, June 2019, pp. 1-9, ISSN: 1748-6718, DOI: 10.1155/2019/8461820 (ISI Journal, WOS:000472845300001, FI: 2.809, Journal Rank Q2)

B. Jurnale indexate in BDI, fără cotaţie ISI

1. **Coman, S.,** Boldisor, Cr., *Using the Fractional Order Calculus in the Combination of the MIT and Lyapunov Stability Method*, International Review of Applied Sciences and Engineering, 11(2020), pp. 220-225, ISSN: 2063-4269, DOI: https://doi.org/10.1556/1848.2020.00073

C. Alte buletine şi reviste

1. **Coman, S.**, Boldişor, C., *Fractional Adaptive Control for a Fractional-Order DC Electrical Drive*, Bulletin of Transilvania University of Braşov, Series I: Engineering Sciences, Vol. 9 (58), 2016, pp. 23-28, ISSN 2065-2119.

2. Boldişor, C., **Coman, S.**, *A Takagi-Sugeno Fuzzy Model of the Insulin to Glucose System Based on the Minimal Model*, Bulletin of Transilvania University of Braşov, Series I: Engineering Sciences, Vol. 9 (58), 2016, pp.17-22, ISSN 2065-2119.

3. **Coman, S.**, Boldişor, C., *Simulation of an Adaptive Closed Loop System for Blood Glucose Concentration Control*, Bulletin of Transilvania University of Braşov, Series I: Engineering Sciences, Vol. 8 (57),2015, pp. 107-112, ISSN 2065-2119.

4. Boldişor, C., **Coman, S.**, *Simulations of a Model-Based Fuzzy Control System for Glycemic Control in Diabets*, Bulletin of Transilvania University of Braşov, Series I: Engineering Sciences, Vol. 6 (55), 2015, pp.79-86, ISSN 2065-2119.

5. Boldişor, C., **Coman, S.**, *H-Inf Controller Design to Control the Mean Arterial Pressure and Cardiac Output*, Bulletin of the Transilvania University of Braşov, Series I: Engineering Sciences, Vol. 7 (56), 2014, pp. 61-68, ISSN 2065-2119.

6. **Coman, S.**, Boldişor, C, *Adaptive PI Controller Design to Control a Mass - Damper - Spring Process*, Bulletin of the Transilvania University of Braşov, Series I: Engineering Sciences, Vol. 7 (56), 2014, pp. 69-74, ISSN 2065-2119.

7. **Coman, S.**, Boldişor, C., *Model Reference Adaptive Control for a DC Electrical Drive*, Bulletin of the Transilvania University of Braşov, Series I: Engineering Sciences, Vol. 6 (55), 2013, pp. 33-38, ISSN 2065-2119.

8. Boldişor, C., Comnac, V., **Coman, S.**, *A Practical Review of a Design Method for Fuzzy Controllers Based on Self-Learning Algorithm*, Bulletin of the Transilvania University of Braşov, Series I: Engineering Sciences, Vol. 4 (53), 2011, pp. 93-98, ISSN 2065-2119.

9. Boldişor, C., Comnac, V., Ţopa, I., **Coman, S.**, *A Self-Learning Based Fuzzy Controller for DC Drive Control*, Bulletin of the Transilvania University of Braşov, Series I: Engineering Sciences, Vol. 3 (52), 2010, pp. 221 – 226, ISSN 2065-2119.

10. Boldişor, C., Comnac, V., **Coman, S.**, *A Knowledge-Based Approach in Fuzzy Controller Design*, in Annals of the University of Craiova, Electrical Engineering series, no. 33, 2009, pp. 23 – 26, ISSN 1842-4805 (cod CNCSIS 174).

IV LUCRĂRI ŞTIINŢIFICE PUBLICATE LA CONFERINŢE

A. Conferinţe desfăşurate în străinătate

1. Boldişor, C.N., Comnac V., **Coman, S.,** Grigorescu, S., *A Combined Experience and Model Based Design Methodology of a Fuzzy Control System for Mean Arterial Pressure and Cardiac Output*, Proceedings of the 18th World Congress of the International Federation of Automatic Control (IFAC), August 28 – September 2, 2011, Milano, Italia, pp. 2889 – 2894, ISBN 978-3-902661-93-7 (Elsevier).

2. Comnac, V., Boldişor, C., Cernat, M., **Coman, S.**, Ioannides, M., *A New Control System For 42 V Automotive Supply Based On Conventional 14 V Alternator*, Proceedings of the The 6th

International Conference on Interdisciplinarity in Education ICIE'11, April 14 – 16, 2011, Karabuk/Safranbolu, Turkey, pp. 325 – 334, ISBN 978-960-9556-00-2.

3. Boldişor, C., Comnac, V., Cernat, M., **Coman, S.**, Ioanidou, F., *On Pharmacodynamics Modeling for Fuzzy Control of Hemodynamic Variables Through Non-Square Drug Infusion*, Proceedings of the 5th International Conference on Interdisciplinarity in Education ICIE'10, May 6 – 8, 2010, Tallin, Estonia, pp. 351-357 , ISBN 978-960-89028-9-3, ISSN 1790-661X.

4. Comnac, V., **Coman, S.**, Boldişor, C., Cernat, M., Ioannides, M., *Sensorless State-Space Control of Elastic Two-Inertia Drive System Using a Minimum State Order Observer*, Proceedings of the 5th International Conference on Interdisciplinarity in Education ICIE'10, May 6 – 8, 2010, Tallin, Estonia, pp. 311-318, ISBN 978-960-89028-9-3, ISSN 1790-661X.

B. Conferinţe internaţionale desfăşurate în ţară

1. Constantin, I., Dinu, A., **Coman, S.**, *Automatic Light Intensity Control for a POV Technology Based Display*, 16th International Conference on Engineering of Modern Electric Systems (ICEMES 2021), 10-11 June 2021, Oradea, Romania, pp. 1-4, ISBN: 978-1-6654-4995-3, DOI: 10.1109/EMES52337.2021.9484113 (ISI Proceedings, IEEE Xplore).

2. **Coman, S.**, Boldisor, Cr., Floroian, L., *Fractional Adaptive Control for a Fractional - Order Insuline - Glucose Dynamic Model*, Proceedings of the 2017 International Conference on Optimization of Electrical and Electronic Equipment (OPTIM) & 2017 Intl Aegean Conference on Electrical Machines and Power Electronics (ACEMP), May 25 – 27 2017, Braşov, România, pp. 594-599, ISBN 978-1-4673-1652-1, DOI: 10.1109/OPTIM.2017.7975082 (ISI Proceedings, IEEE Xplore).

3. **Coman, S.**, Comnac, V., Boldişor, C., *Robust Control of a Permanent Magnet Synchronous Machine*, Proceedings of the 13th International Conference on Optimization of Electrical and Electronic Equipments – OPTIM 2012, 24 – 26 May 2012, Braşov, România, pp. 594-599, ISBN 978-1-4673-1652-1, DOI: 10.1109/OPTIM.2012.6231909 (ISI Proceedings, IEEE Xplore).

4. Boldişor, C., Comnac, V., **Coman, S.**, *Using the Iterative Learning Algorithm as Data Source for ANFIS Training*, Proceedings of the 2010 IEEE International Conference on Automation, Quality and Testing, Robotics – AQTR 2010, 28 – 30 May 2010, Cluj-Napoca, România, pp. 354-359, ISBN 978-1-4244-6722-8, DOI: 10.1109/AQTR.2010.5520759 (ISI Proceedings, IEEE Xplore).

5. **Coman, S.**, Comnac, V., Boldişor, C., Dumitrache, D*., Fractional Order Control for DC Electrical Drives in Networked Control Systems*, Proceedings of the 12th International Conference on Optimization of Electrical and Electronic Equipments – OPTIM 2010, 20 – 22 May 2010, Braşov, România, pp. 858 – 863, ISBN 978-1-4244-7019-8, DOI: 10.1109/OPTIM.2010.5510503 (ISI Proceedings, IEEE Xplore).

6. Boldişor, C., Comnac, V., Ţopa, I., **Coman, S.**, *A Comparative Analisys of Two Self-Learning Based Strategies for Fuzzy Controller Design*, Proceedings of the 12th International Conference on Optimization of Electrical and Electronic Equipments – OPTIM 2010, 20 – 22 May 2010, Braşov, România, pp. 837 – 842, ISBN 978-1-4244-7019-8, DOI: 10.1109/OPTIM.2010.5510432 (ISI Proceedings, IEEE Xplore).

7. Boldişor, C., Comnac, V., **Coman, S.**, Acreală, A., *Rule-Bases Construction Through Self-Learning for a Table-Based Sugeno-Takagi Fuzzy Logic Control System*, Proceedings of the 4th Interdisciplinary in Engineering International Conference – InterEng2009, Tg. Mureş, România, November 12 – 13, 2009, pp. 167 – 172, ISSN 1843-780X.

8. Comnac, V., **Coman, S.**, Boldişor, C., Acreală, A., *Sensorless State-Space Control of Elastic Two-Inertia Drive System Using a Minimum State Order Observer*, Proceedings of the 4th Interdisciplinary in Engineering International Conference – InterEng2009, Tg. Mureş, România, November 12 – 13, 2009, pp. 159 – 166, ISSN 1843-780X.

9. **Coman, S.**, Comnac, V., Boldişor, C., Demeter, R., *Networked Control Systems for DC Electrical Drives*", Proceedings of the 4th Interdisciplinary in Engineering International Conference – InterEng2009, Tg. Mureş, România, November 12 – 13, 2009, pp. 138 – 141, ISSN 1843-780X.

10. **Coman, S.**, *Software Reliability Estimation in the Power Process Management*, Proceedings of the 11th International Conference on Optimization of Electrical and Electronic Equipment – OPTIM 2008, 22 – 23 May 2008, Braşov, România, Vol. III, pp. 243 – 248, ISBN 978-973-131-031-2, ISSN 1842-0133, DOI: 10.1109/OPTIM.2008.4602487 (ISI Proceedings, IEEE Xplore).

V CONTRACTE/GRANTURI DE CERCETARE ŞTIINŢIFICĂ

A. Contracte de cercetare

B. Granturi

1. POSDRU/160/2.1/S/133020: Creşterea capacităţii de integrare pe piaţa muncii a studenţilor şi absolvenţilor prin consiliere şi plasamente practice (membru în echipă).

2. Contr. nr. 2009-2013, Institut de Cercetare Dezvoltare Inovare Produse HighTech pentru Dezvoltare Durabila PRODD (membru în echipă).

3. Contr. nr. X2C33/2006-2008, grant MCT, program: Cercetare de excelenţă (CEEX), competiţia a 2-a, modul 1 – Proiecte de Cercetare Dezvoltare Complexe – "Tehnologii avansate de actuatoare electrice pentru automobile / Nou sistem de control alternator pentru 42Vcc şi 14Vcc", finanţat de Autoritatea Naţională pentru Cercetare Ştiinţifică. Beneficiar: Universitatea Transilvania din Braşov (contract încheiat prin câştigarea competiţiei naţionale a MCT) – membru (membru în echipă).

4. Contr. nr. 130/2012-2016, PN II, program: Programul PARTENERIATE – Proiecte Colaborative de Cercetare Aplicativă (PCCA) – HEART – High PErformance Computing of PersonAlized CaRdio ComponenT Models, finanţat de UEFISCDI, valoare: 1.131.000 RON, Universitatea Transilvania din Braşov, coordonator (membru în echipă).

5. Contr. nr. /2013-2017, program: EU's Seventh Framework Programme for Research (FP7) – MD PAEDIGREE – Model-Driven European Paediatric Digital Repository, finanţat de EU Commission, valoare: 276.000 EUR, Universitatea Transilvania din Braşov, partener (membru în echipă).

6. Contr. nr. 732907/2016, program FLAG-ERA – EU's Horizon H 2020 – ICT – 18 – 2016, MHMD – My Health My Data, finanţat de EU Commission, valoare: 147.500 EUR, Universitatea Transilvania din Braşov, membru (membru în echipă).

7. Contr. nr. 10/2017, FLAG – ERA JTC 2016, HESN – CONVERGENCE – Frictionless Energy Efficient Convergent Wearables for Healthcare and Lifestyle Applications, finanţat de EU Commission, valoare: 157.500 RON, Universitatea Transilvania din Braşov, membru (membru în echipă).

8. Contr. nr. 8/2017, FLAG – ERA JTC 2016, DMC – ITFoC – Information Technology: The Future of Cancer Treatment, finanţat de EU Commission, valoare: 281.250 RON, Universitatea Transilvania din Braşov, membru (membru în echipă).

9. Contr. nr. 6/2017, FLAG – ERA JTC 2016, CR – RoboCom – Rethinking Robotics for the Robot Companion of the Future, finanțat de EU Commission, valoare: 139.500 RON, Universitatea Transilvania din Brașov, membru (membru în echipă).

10. Contr. nr. 11/2017, FLAG – ERA JTC 2016, ICTSS – FuturICT 2.0 – Large Scale Experiments and Simulations for the Second Generation of FuturICT, finanțat de EU Commission, valoare: 562.500 RON, Universitatea Transilvania din Brașov, membru (membru în echipă).

11. Contr.nr. 141/2020-2023, ERA -PerMeD JTC2019 - PeCaN - Parameterisation of large scale cancer models for personalised therapy of triple negative breast cancer, finanțat de EU Commission/UEFISCDI, valoare 249.400 EUR, Universitatea Transilvania din Brașov, coordonator (responsabil de proiect).

12. Contr. nr. 732907/2021, EU's Horizon H 2020 – SC1-DTH-06-2020, SIMCor – In-Silico Testing and Validation of Cardiovascular IMplantable devices, finanțat de EU Commission, valoare 317.750 Euro, Universitatea Transilvania din Brașov, membru (membru în echipă).

13. Contr.nr. 197/2021-2024, ERA -PerMeD JTC2020 – PROGRESS - PRecisiOn medicine in CAD patients: artificial intelliGence for integRated gEnomic, functional and anatomical aSSessment of the coronary collateral circulation, finanțat de EU Commission, valoare 200.000 Euro, Universitatea Transilvania din Brașov, membru (membru în echipă).

Brașov, 12.09.2022   Șef lucr. dr. ing. Simona COMAN