

UNIVERSITATEA TEHNICĂ "GHEORGHE ASACHI" DIN IAȘI
FACULTATEA DE AUTOMATICĂ ȘI CALCULATOARE
DEPARTAMENTUL DE AUTOMATICĂ ȘI INFORMATICĂ APLICATĂ
 Concurs pentru ocuparea postului de **profesor universitar**, poz. 7

Disciplinele postului: **Transmisia datelor – Controlul la distanță al proceselor**
Ingineria reglării automate
Controlul sistemelor auto

FIȘA DE VERIFICARE
a îndeplinirii standardelor minimale naționale de prezentare la concurs pentru postul de
profesor universitar

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Universitatea Tehnică "Gheorghe Asachi" din Iași, Facultatea de Automatică și Calculatoare, Departamentul de Automatică și Informatică Aplicată.

Se preia tabelul și definițiile corespunzătoare domeniului științific aferent, conform Anexei TUIASI.POB.08-A1.3.

(Modul de îndeplinire a standardelor minimale naționale va fi prezentat în mod explicit și va trebui însoțit de dovezi)

1. Structura activității

Nr. crt.	Domeniul activităților			Subcategorii		Indicatori (k _{pi})	Punctaj candidat	Punctaj candidat pe activități
0	1	2	3	4		5	6	7
1	Activitatea didactică și profesională (A1)	Cărți de autor sau capitole [1] de specialitate la edituri cu ISBN	Cărți/monografii	A1.1.1	internationale	50 / nr. de autori sau 100 / nr. de autori cu condiția [2]	12.5	117.5
				A1.1.2	naționale	50 / nr. de autori	91.66	
		Material didactic / Lucrări didactice publicate la edituri cu ISBN	Manuale didactice	A1.2.1		40 / nr. de autori	13.33	
2	Activitatea de cercetare (A2)	Articole în reviste cotate ISI și lucrări în volumele unor manifestări științifice indexate ISI		A2.1		(25+30 * factor impact [3]) / nr. de autori	894.58	1120.42
		Articole în reviste și în		A2.2		20/ nr. de autori	171	

		volumele unor manifestări științifice indexate în alte baze de date internaționale recunoscut (BDI) [4]						
		Proprietate intelectuală, brevete de invenție, certificate ORDA		A2.3.1	internaționale [5]	35/ nr. de autori	0	
				A2.3.2	naționale (OSIM)	25/ nr. de autori	0	
		Granturi/ proiecte de cercetare câștigate prin competiție [6] sau Contracte cu agenți economici, în valoare de minimum 10.000 dolari USA echivalent încasați [6]	Director/ responsabil	A2.4.1.1	internaționale	20*ani de desfășurare	14	
				A2.4.1.2	naționale	10*ani de desfășurare	32.5	
			Membru în echipa	A2.4.2.1	internaționale	4*ani de desfășurare	0	
				A2.4.2.2	naționale	2*ani de desfășurare	8.34	
3	Recunoaștere a și impactul activității (A3)	Citări [7] în cărți, reviste și volume ale unor manifestări științifice		A3.1.1	cărți, ISI [8]	8/ nr. aut. art. citat	616.93	757.07
				A3.1.2	BDI [4]	4/ nr. aut. art. citat	84.13	
		Membru în colectivele de redacție sau comitetele științifice ale revistelor indexate ISI, chair, co-chair sau membru în comitetele de organizare ale manifestărilor științifice internaționale indexate ISI [9]	Punctaj unic pentru fiecare activitate	A3.2		10	50	
		Membru în colectivele de redacție sau comitetele științifice ale revistelor indexate BDI, chair, co-chair sau membru în comitetele de organizare ale manifestărilor științifice internaționale indexate BDI [9]	Punctaj unic pentru fiecare activitate	A3.3		6	6	
		Premii în domeniu conferite de Academia Română, ASTR, AOSR sau premii internaționale de prestigiu		A3.4.1		15	0	

2. Formula de calcul a indicatorului de merit ($A = A1 + A2 + A3$)

$$A = 117.5 + 1120.42 + 757.07 = 1994.99$$

3. Condiții minimale (A_i)

Nr. crt.	Domeniul de activitate	Profesor	Punctaj candidat
A1	Activitatea didactică și profesională (A1)	100	117.5
A2	Activitatea de cercetare (A2)	600	1120.42
A3	Recunoașterea și impactul activității (A3)	150	757.07
TOTAL (A)		850	1994.99

Condiții minimale obligatorii pe subcategorii		Profesor	Punctaj candidat
A1.1.1 – A1.1.2	Cărți și capitole în cărți de specialitate	1 carte	4
A2.1	Articole în reviste cotate ISI și în volumele unor manifestări științifice indexate ISI proceedings	15 din care minimum 3 în reviste cotate ISI Q1 sau Q2 [7]	44 din care 8 în reviste cotate ISI Q1 sau Q2
A2.4.1	Granturi/ proiecte câștigate prin competiție (Director/ Responsabil partener)	2	4
A3.1.1 – A3.1.2	Număr de citări în cărți, reviste cotate ISI și volume ale unor manifestări științifice ISI (WOS) [12]	25	164
	Factor de impact ISI cumulat pentru publicații [13]	10	40.873

A1 – 117.5 puncte

A1.1.1 – 12.5 puncte

1. **Căruntu C.F.**, *Lyapunov-Based Predictive Control Methodologies for Networked Control Systems*, Ch. 5 in *Soft-Computing-Based Nonlinear Control Systems Design*, Eds. U. P. Singh, A. Tiwari and R. K. Singh, A volume in the *Advances in Computer and Electrical Engineering (ACEE) Book Series*, IGI Global, 2018, ISBN 9781522535317, Hershey PA, USA. 50/4 = 12.5p

A1.1.2 – 91.66 puncte

1. **Căruntu C.F.**, A. Maxim și C. Lazăr, *Advanced control strategies for networked/distributed systems – theory and applications*, Ed. MatrixRom, București, 2019, ISBN 978-606-250-504-2, 129 pagini. 50/3 = 16.66p

2. **Căruntu C. F.** and C. Lazăr, *Modelare și Control Predictiv*, Ed. Politehniun, Iași, 2013, ISBN 978-973-621-413-4, 95 pagini. 50/2 = 25p

3. **Căruntu C. F.**, *Networked Predictive Control for Fast Processes*, Ed. Politehniun, Iași, 2011, ISBN 978-973-621-332-8, 189 pagini. 50p

A1.2.1 – 13.33 puncte

1. **Căruntu C. F.**, C. Budaciu and C. Lazăr, *Ingineria reglării automate*, Ed. Politehniun, Iași, 2013, ISBN 978-973-621-414-1, 93 pagini. 40/3 = 13.33p

A2 – 1120.42 puncte

A2.1 – 894.58 puncte

1. Ionescu C.M., **C.F. Căruntu**, R. Cajo, M. Ghiță, G. Crevecoeur, and C. Copoț, *Multi-objective predictive control optimization with varying term objectives: A wind farm case study*, Processes, **7**(11), 2019. (IF = **1.963 – Q2**). <https://www.mdpi.com/2227-9717/7/11/778> $(25+30*1.963)/6 = 13.98p$
2. Hulea M., A. Burlacu, and **C.F. Căruntu**, *Intelligent motion planning and control for robotic joints using bio-inspired spiking neural networks*, International Journal of Humanoid Robotics, pp. 1950012-1-15, 2019. (IF = **1.286**). <https://www.worldscientific.com/doi/abs/10.1142/S0219843619500129> $(25+30*1.286)/3 = 21.19p$
3. Maxim A., J.M. Maestre, **C.F. Căruntu**, and C. Lazăr, *Min-max coalitional model predictive control algorithm*, 22nd International Conference on Control Systems and Computer Science, Bucuresti, Romania, pp.24-29, 2019. <https://ieeexplore.ieee.org/document/8745299> $(25+30*0.25)/4 = 8.13p$
4. **Căruntu C.F.**, *A less conservative condition for flexible control Lyapunov functions used in networked predictive control systems*, 20th International Carpathian Control Conference, Krakow-Wieliczka, Poland, pp. 452-457, 2019. <https://ieeexplore.ieee.org/document/8765957> $(25+30*0.25) = 32.5$
5. Hulea M., A. Burlacu, and **C.F. Căruntu**, *Robotic joint control system based on analogue spiking neural networks and SMA actuators*, IEEE International Conference on Robotics and Automation, Montreal, Canada, pp. 1148-1154, 2019. <https://ieeexplore.ieee.org/document/8794215> $(25+30*0.25)/3 = 10.83p$
6. Vargas A.N., **C.F. Căruntu**, and J.Y. Ishihara, *Stability of switching linear systems with switching signals driven by stochastic processes*, Journal of the Franklin Institute, **356**(1), pp. 31-41, 2019. (IF: **3.653 – Q1**). <https://www.sciencedirect.com/science/article/pii/S0016003218306069> $(25+30*3.653)/3 = 44.86p$
7. **Căruntu C.F.**, C.C. Velandia-Cardenas, X. Liu, and A.N. Vargas, *Model predictive control of stochastic linear systems with probability constraints*, International Journal of Computers, Communications & Control, **13**(6), pp. 927-937, 2018. (IF = **1.585**). <http://univagora.ro/jour/index.php/ijccc/article/view/3383> $(25+30*1.585)/4 = 18.14p$
8. **Căruntu C.F.**, R.C. Rafailă, and A. Maxim, *Multiple-lane vehicle platooning based on a multi-agent distributed model predictive control strategy*, 22nd International Conference on System Theory, Control and Computing, Sinaia, Romania, pp. 759-765, 2018. <https://ieeexplore.ieee.org/document/8540649> $(25+30*0.25)/3 = 10.83p$
9. Maxim A., J.M. Maestre, **C.F. Căruntu**, and C. Lazăr, *Robust coalitional distributed model predictive control algorithm with stability via terminal constraint*, 2nd IEEE Conference on Control Technology and Applications, Copenhagen, Denmark, pp. 964–969, 2018. <https://ieeexplore.ieee.org/document/8511436> $(25+30*0.25)/4 = 8.13p$
10. Lazăr C., A. Țigănașu, and **C.F. Căruntu**, *Arterial intersection improvement by using vehicle platooning and coordinated start*, 15th IFAC Symposium on Control in Transportation Systems, Savona, Italy, 2018. <https://www.sciencedirect.com/science/article/pii/S2405896318307468> $(25+30*0.25)/3 = 10.83p$
11. **Căruntu C.F.**, A.N. Vargas, L. Acho and G. Pujol, *Adaptive-Smith Predictor for Controlling an Automotive Electronic Throttle over Network*, International Journal of Computers, Communications & Control, **13**(2), pp. 151-161, 2018. (IF = **1.585**). <http://univagora.ro/jour/index.php/ijccc/article/view/3109> $(25+30*1.585)/4 = 18.14p$
12. **Căruntu C.F.** and R.C. Rafailă, *Robust MPC for networked control systems with data-packet dropouts modeled as disturbances*, 21st International Conference on System Theory, Control and Computing, Sinaia, Romania, pp. 152-157, 2017. <https://ieeexplore.ieee.org/document/8107026> $(25+30*0.25)/2 = 16.25p$
13. Maxim A., **C.F. Căruntu** and C. Lazăr, *Cruise and headway control for vehicle platooning using a distributed model predictive control algorithm*, 21st International Conference on System Theory, Control and Computing, Sinaia, Romania, pp. 146-151, 2017. <https://ieeexplore.ieee.org/document/8107025> $(25+30*0.25)/3 = 10.83p$
14. **Căruntu C.F.**, C. Copoț and C. Lazăr, *Wireless vehicle-to-infrastructure data gathering for robot platooning*, 25th Mediterranean Conference on Control and Automation, Valletta, Malta, pp. 1083-1088, 2017. <https://ieeexplore.ieee.org/document/7984262> $(25+30*0.25)/3 = 10.83p$
15. **Căruntu C.F.**, C. Lazăr and A. Vargas, *Chance-constrained model predictive control for vehicle drivetrains in a cyber-physical framework*, 23rd ICE/IEEE International Technology Management Conference, Madeira Island, Portugal, pp. 1137-1144, 2017. <https://ieeexplore.ieee.org/document/8280009> $(25+30*0.25)/3 = 10.83p$
16. Țigănașu A., C. Lazăr and **C.F. Căruntu**, *Cyber Physical Systems – oriented design of cooperative control for vehicle platooning*, 21st International Conference on Control Systems and Computer Science, 6th International Workshop on Cyber Physical Systems, Bucuresti, Romania, pp. 465-470, 2017. <https://ieeexplore.ieee.org/document/7968600> $(25+30*0.25)/3 = 10.83p$
17. **Căruntu C.F.** and F.C. Brăescu, *Further analysis on network-induced time-varying delay modeling methods used in GPC design*, International Conference on Optimization of Electrical and Electronic Equipment & International Aegean Conference on Electrical Machines and Power Electronics, Brasov, Romania, pp. 893-898, 2017. <https://ieeexplore.ieee.org/document/7975083> $(25+30*0.25)/2 = 16.25p$

18. Brăescu F.C. and **C.F. Căruntu**, *Prototype model car design for vehicle platooning*, International Conference on Optimization of Electrical and Electronic Equipment & International Aegean Conference on Electrical Machines and Power Electronics, Brasov, Romania, pp. 953-958, 2017. <https://ieeexplore.ieee.org/document/7975093> $(25+30 \cdot 0.25)/2 = 16.25p$
19. **Căruntu C.F.**, F.C. Brăescu, A. Maxim, R.C. Rafailă and A. Țigănașu, *Distributed model predictive control for vehicle platooning: a brief survey*, 20th International Conference on System Theory, Control and Computing, Sinaia, Romania, pp. 644-650, 2016. <https://ieeexplore.ieee.org/document/7790739> $(25+30 \cdot 0.25)/5 = 6.5p$
20. Maxim A., **C.F. Căruntu** and C. Lazăr, *Distributed model predictive control algorithm for vehicle platooning*, 20th International Conference on System Theory, Control and Computing, Sinaia, Romania, pp. 657-662, 2016. <https://ieeexplore.ieee.org/document/7790741> $(25+30 \cdot 0.25)/3 = 10.83p$
21. Rafailă R.C., **C.F. Căruntu** and G. Livinț, *Centralized model predictive control of autonomous driving vehicles with Lyapunov stability*, 20th International Conference on System Theory, Control and Computing, Sinaia, Romania, pp. 663-668, 2016. <https://ieeexplore.ieee.org/document/7790742> $(25+30 \cdot 0.25)/3 = 10.83p$
22. Țigănașu A., C. Lazăr and **C.F. Căruntu**, *Design and simulation evaluation of cooperative adaptive cruise control for a platoon of vehicles*, 20th International Conference on System Theory, Control and Computing, Sinaia, Romania, pp. 669-674, 2016. <https://ieeexplore.ieee.org/document/7790743> $(25+30 \cdot 0.25)/3 = 10.83p$
23. Copoț C., **C.F. Căruntu** and R. De Keyser, *Advanced control techniques to mitigate the stop-and-go waves on a highway traffic with different vehicles*, 21st International Conference on Methods and Models in Automation and Robotics, Miedzyzdroje, Poland, pp. 948-953, 2016. <https://ieeexplore.ieee.org/document/7575265> $(25+30 \cdot 0.25)/3 = 10.83p$
24. Maxim A., C.M. Ionescu, **C.F. Căruntu**, C. Lazăr and R. De Keyser, *Reference tracking using a non-cooperative distributed model predictive control algorithm*, 11th IFAC Symposium on Dynamics and Control of Process Systems, including Biosystems, Trondheim, Norway, pp. 1079-1084, 2016. <https://www.sciencedirect.com/science/article/pii/S2405896316305535> $(25+30 \cdot 0.25)/5 = 6.5p$
25. Rafailă R.C., **C.F. Căruntu** and G. Livinț, *Nonlinear model predictive control using Lyapunov functions for vehicle lateral dynamics*, 14th IFAC Symposium on Control in Transportation Systems, Istanbul, Turkey, pp. 135-140, 2016. <https://www.sciencedirect.com/science/article/pii/S2405896316302191> $(25+30 \cdot 0.25)/3 = 10.83p$
26. **Căruntu C.F.**, A.E. Bălău, M. Lazăr, P.P.J. van den Bosch and S. di Cairano, *Driveline oscillations damping: A tractable predictive control solution based on a piecewise affine model*, Nonlinear Analysis: Hybrid Systems, **19**, pp. 168-185, 2016. (IF: **5.266** – **Q1**) <http://www.sciencedirect.com/science/article/pii/S1751570X15000576> $(25+30 \cdot 5.266)/5 = 36.6p$
27. Copoț C., **C.F. Căruntu**, J.P.S. De Azevedo and R. De Keyser, *Networked communications over a lab-scale test bench for autonomous highway systems*, 19th International Conference on System Theory, Control and Computing, Cheile Grădiștei - Fundata, Romania, pp. 454-459, 2015. <http://ieeexplore.ieee.org/document/7321335/> $(25+30 \cdot 0.25)/4 = 8.13p$
28. **Căruntu C.F.**, *Predictive control based on piecewise nonlinear models for vehicle drivetrains*, 20th IEEE International Conference on Emerging Technologies and Factory Automation, Luxembourg, 2015. <http://ieeexplore.ieee.org/document/7301442/> $(25+30 \cdot 0.25)/1 = 32.5p$
29. Maxim A., C. Lazăr and **C.F. Căruntu**, *A computationally efficient non-cooperative distributed model predictive control algorithm for two agent systems*, 20th International Conference on Control Systems and Computer Science, 4th International Symposium on Cyber Physical Systems, Bucharest, Romania, pp. 673–678, 2015. <http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=7168499> $(25+30 \cdot 0.25)/3 = 10.83p$
30. **Căruntu C.F.**, *Observer-based predictive controller design with network-enhanced time-delay compensation*, International Journal of General Systems, Special Issue: General Systems with Network-Enhanced Complexities, **44**(2), pp. 182–197, 2015. (IF: **2.259** – **Q2**) <http://www.tandfonline.com/doi/abs/10.1080/03081079.2014.973731> $(25+30 \cdot 2.259)/1 = 92.77p$
31. **Căruntu C.F.** and C. Lazăr, *Network delay predictive compensation based on time-delay modeling as disturbance*, International Journal of Control, **87**(10), pp. 2012–2026, 2014. (IF: **2.93** – **Q2**) <http://www.tandfonline.com/doi/abs/10.1080/00207179.2014.897372> $(25+30 \cdot 2.93)/2 = 56.45p$
32. **Căruntu C.F.**, *Performance evaluation of GPC algorithms based on different network-induced delay modeling methods*, 23rd IEEE Symposium on Industrial Electronics, Istanbul, Turkey, pp. 207–212, 2014. <http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6864612> $(25+30 \cdot 0.25)/1 = 32.5p$
33. **Căruntu C.F.**, M. Lazăr, R.H. Gielen, P.P.J. van den Bosch and S. di Cairano, *Lyapunov based predictive control of vehicle drivetrains over CAN*, Control Engineering Practice, Special Issue Section: Automotive Control WC 2011 & AAC 2010. Guest Editors: Yann Chamailard, Lars Eriksson & Gianfranco Rizzo, **21**(12), pp. 1881-1898, 2013. (IF: **3.232** – **Q2**) <http://www.sciencedirect.com/science/article/pii/S0967066112001232> $(25+30 \cdot 3.232)/5 = 24.39p$

34. **Căruntu C.F.**, *Networked Predictive Cruise Control for Road Vehicles*, The 19th International Conference on Control Systems and Computer Science, București, Romania, pp. 203-209, 2013. <http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=6569266> (25+30*0.25)/1 = 32.5p
35. **Căruntu C.F.** and C. Lazăr, *Robustly stabilising model predictive control design for networked control systems with an application to direct current motors*, IET Control Theory and Applications, **6**(7), pp. 943-952, 2012. (IF: 3.526 – Q1) <http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6221048> (25+30*3.526)/2 = 65.39p
36. **Căruntu C.F.** and C. Lazăr, *Networked predictive control for time-varying delay compensation with an application to automotive mechatronic systems*, Control Engineering and Applied Informatics, **13**(4), pp. 19-25, 2011. (IF: 0.583) <http://www.ceai.srait.ro/index.php/ceai/article/view/1214> (25+30*0.583)/2 = 21.25p
37. **Căruntu C.F.** and C. Lazăr, *Modeling and predictive control for compensating network-induced time-varying delays*, IEEE International Conference on Emerging Technologies and Factory Automation, Toulouse, France, 2011. <http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=6059062> (25+30*0.25)/2 = 16.25p
38. **Căruntu C.F.**, D. Onu, F.C. Brăescu and C. Lazăr, *Model predictive control for real-time simulation of a network-controlled vehicle drivetrain*, 2nd Eastern European Regional Conference on the Engineering of Computer Based Systems, Bratislava, Slovakia, pp. 115-123, 2011. <http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=6085723> (25+30*0.25)/4 = 8.13p
39. Brăescu F.C., L. Ferariu, **C.F. Căruntu** and C. Lazăr, *OSEK based embedded networked controller designed to handle communication delays*, 2nd Eastern European Regional Conference on the Engineering of Computer Based Systems, Bratislava, Slovakia, pp. 71-77, 2011. <http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=6037516> (25+30*0.25)/4 = 8.13p
40. **Căruntu C.F.**, A.E. Bălău, M. Lazăr, P.P.J. v.d. Bosch and S. Di Cairano, *A predictive control solution for driveline oscillations damping*, 14th International Conference on Hybrid Systems: Computation and Control, Chicago, USA, pp. 181–190, 2011. <http://dl.acm.org/citation.cfm?id=1967728> (25+30*0.25)/5 = 6.5p
41. Bălău A.E., **C.F. Căruntu** and C. Lazăr, *Simulation and control of an electro-hydraulic actuated clutch*, Mechanical Systems and Signal Processing, **19**, pp. 845-857, 2011. (IF: 5.005 – Q1) <http://www.sciencedirect.com/science/article/pii/S0888327011000197> (25+30*5.005)/3 = 58.38p
42. Lazăr C., **C.F. Căruntu** and A.E. Bălău, *Modelling and Predictive Control of an Electro-Hydraulic Actuated Wet Clutch for Automatic Transmission*, IEEE Symposium on Industrial Electronics, Bari, Italy, pp. 256-261, 2010. <http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=5637568> (25+30*0.25)/3 = 10.83p
43. **Căruntu C.F.**, A.E. Bălău and C. Lazăr, *Cascade based Control of a Drivetrain with Backlash*, 12th International Conference on Optimization of Electrical and Electronic Equipment, Brasov, Romania, pp. 710-715, 2010. <http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=5510561> (25+30*0.25)/3 = 10.83p
44. Bălău A.E., **C. F. Căruntu**, D.I. Pătrașcu, C. Lazăr, M.H. Matcovschi and O. Păstrăvanu, *Modeling of a Pressure Reducing Valve Actuator for Automotive Applications*, 18th IEEE International Conference on Control Applications, Part of 2009 IEEE Multi-conference on Systems and Control, Saint Petersburg, Russia, pp. 1356-1361, 2009. <http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=5280939> (25+30*0.25)/6 = 5.42p

A2.2 – 171 puncte

1. **Căruntu C.F.**, L. Ferariu, C.M. Pascal, N. Cleju, and C.R. Comșa, *Connected cooperative control for multiple-lane automated vehicle flocking on highway scenarios*, 23rd International Conference on System Theory, Control and Computing, Sinaia, Romania, pp. 791-796, 2019. <https://ieeexplore.ieee.org/document/8885496> 20/5 = 4p
2. Păucă O., **C.F. Căruntu**, and C. Lazăr, *Predictive control for the lateral and longitudinal dynamics in automated vehicles*, 23rd International Conference on System Theory, Control and Computing, Sinaia, Romania, pp. 797-802, 2019. <https://ieeexplore.ieee.org/document/8885839> 20/3 = 6.67p
3. Maxim A., **C.F. Căruntu**, C. Lazăr, R. De Keyser, and C.M. Ionescu, *Comparative analysis of distributed model predictive control strategies*, 23rd International Conference on System Theory, Control and Computing, Sinaia, Romania, pp. 468-473, 2019. <https://ieeexplore.ieee.org/document/8885475> 20/5 = 4p
4. **Căruntu C.F.**, L. Ferariu, C.M. Pascal, N. Cleju, and C.R. Comșa, *A concept of multiple-lane vehicle grouping by swarm intelligence*, 24th IEEE Conference on Emerging Technologies and Factory Automation, Zaragoza, Spain, pp. 1183-1188, 2019. <https://ieeexplore.ieee.org/document/8868955> 20/5 = 4p
5. **Căruntu C.F.**, C. Copot, C. Lazăr, and R. De Keyser, *Decentralized predictive formation control for mobile robots without communication*, 15th IEEE International Conference on Control and Automation, Edinburgh, Scotland, pp. 555-560, 2019. <https://ieeexplore.ieee.org/document/8899610> 20/4 = 5p
6. Abunei A., C.R. Comșa, **C.F. Căruntu**, and I. Bogdan, *Redundancy based V2V communication platform for vehicle platooning*, International Symposium on Signals, Circuits and Systems, Iasi, Romania, 2019. <https://ieeexplore.ieee.org/abstract/document/8801781> 20/4 = 5p
7. **Căruntu C.F.**, *Distributed model predictive control for wind farms efficiency maximization: challenges and opportunities*, 6th International Conference on Control, Decision and Information Technologies, Paris, France, pp. 452-457, 2019. <https://ieeexplore.ieee.org/document/8820490> 20/1 = 20p

8. Maxim A., **C.F. Căruntu** and C. Lazăr, *Implementation issues for distributed model predictive control of a two agent system*, Buletinul Institutului Politehnic Iași, **LX(LXIV)**, pp. 69–85, pg. 17, 2014. (indexată ZMATH). http://www12.tuiasi.ro/users/103/2014_3_4_069-085_06_Maxim_AC%203-4_2014_corectat.pdf 20/3 = 6.66p
9. M. Hulea and **C.F. Căruntu**, *Spiking neural network for controlling the artificial muscles of a humanoid robotic arm*, 18th International Conference on System Theory, Control and Computing, Sinaia, Romania, pp. 163–168, 2014. <http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6982409> 20/2 = 10p
10. **Căruntu C.F.**, C. Copot, C. Lazăr and R. De Keyser, *Longitudinal control of vehicle platoons for stop-and-go waves mitigation*, 18th International Conference on System Theory, Control and Computing, Sinaia, Romania, pp. 670–675, 2014. <http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=6982493> 20/4 = 5p
11. **Căruntu C.F.** and C. Lazăr, *Observer-based controller design for networked predictive control of an automotive drivetrain with backlash*, 19th IFAC World Congress, Cape Town, South Africa, pp. 10 337–10 342, 2014. <https://www.sciencedirect.com/science/article/pii/S1474667016432544> 20/2 = 10p
12. **Căruntu C.F.**, *Real-time simulation of a network-controlled vehicle drivetrain based on model predictive control*, Buletinul Institutului Politehnic Iași, **LIX(LXIII)**, pp. 43-58, pg. 16, 2013. (indexată ZMATH). www12.tuiasi.ro/users/103/043-058_004_Caruntu_.pdf 20/1 = 20p
13. **Căruntu C.F.** and C. Lazăr, *Network-induced time-varying delay modeling for predictive compensation*, Buletinul Institutului Politehnic Iași, **LVIII(LXII)**, pp. 63-82, pg. 20, 2012. (indexată ZMATH). http://www12.tuiasi.ro/users/103/f1_2012_4_Caruntu.pdf 20/2 = 10p
14. **Căruntu C.F.** and C. Lazăr, *Predictive Compensation for Network-induced Time-varying Delays*, 16th International Conference on System Theory, Control and Computing, Sinaia, Romania, 2012. <http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=6379243> 20/2 = 10p
15. **Căruntu C.F.** and C. Lazăr, *Real-time Networked Predictive Control of a Vehicle Drivetrain with Backlash*, IFAC Conference on Nonlinear Model Predictive Control (NMPC), Noordwijkerhout, The Netherlands, pp.484-489, 2012. <http://www.ifac-papersonline.net/Detailed/55189.html> 20/2 = 10p
16. **Căruntu C.F.**, D. Onu and C. Lazăr, *Real-time Simulation of a Vehicle Drivetrain Controlled through CAN using a Robust MPC Strategy*, 15th International Conference on System Theory, Control and Computing, Sinaia, Romania, 2011. <http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=6085723> 20/3 = 6.67p
17. **Căruntu C.F.**, M. Lazăr, S. Di Cairano, R.H. Gielen, and P.P.J. v.d. Bosch, *Horizon-1 predictive control of networked controlled vehicle drivetrains*, IFAC World Congress, Milano, Italy, pp. 3824-3830, 2011. <http://www.ifac-papersonline.net/Detailed/48739.html> 20/5 = 4p
18. **Căruntu C.F.** and C. Lazăr, *Stabilizing MPC for network-controlled systems with an application to DC motors*, IEEE International Conference on Mechatronics, Istanbul, Turkey, pp. 973–978, 2011. <http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=5971257> 20/2 = 10p
19. **Căruntu C.F.**, A.E. Bălău and C. Lazăr, *Networked Predictive Control Strategy for an Electro-Hydraulic Actuated Wet Clutch*, IFAC Symposium Advances in Automotive Control, Munchen, Germany, pp. 419–424, 2010. <http://www.ifac-papersonline.net/Detailed/44357.html> 20/3 = 6.67p
20. **Căruntu C.F.** and C. Lazăr, *Predictive Control for Time-Varying Delay in Networked Control Systems*, 8th IFAC Workshop on Time Delay Systems, Sinaia, Romania, pp. 49–54, 2009. <http://www.ifac-papersonline.net/Detailed/43518.html> 20/2 = 10p
21. **Căruntu C.F.**, M.H. Matcovschi, A.E. Bălău D.I. Pătrașcu, C. Lazăr and O. Păstrăvanu, *Modeling of an electromagnetic valve actuator*, Buletinul Institutului Politehnic Iași, **LV(LIX)**, pp. 9-29, pg. 21, 2009. (indexată ZMATH). <http://www12.tuiasi.ro/users/103/Bind1.pdf> 20/6 = 3.33p

A2.4.1.1 – 14 puncte

1. **Director proiect de cercetare** câștigat prin competiție internațională cu titlul *Model predictive control for networked nonlinear systems*, având codul PNP20132352, acordat de Agenția Națională Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) Brazilia, desfășurat la Universidade Tecnológica Federal do Paraná (UTFPR), Campus Conelio Procopio, Parana, Brazilia, perioada desfășurare: 01.11.2015-31.05.2016, valoare: 28700 BRL = 8610 EUR = 38800 RON. $20 \times 0.7 = 14p$

A2.4.1.2 – 32.5 puncte

1. **Director proiect de cercetare**, cu titlul *Grid platooning by swarm intelligence*, contract nr. 23828/31.10.2018, finanțat de SC CONTINENTAL AUTOMOTIVE ROMANIA SRL și implementat la Universitatea Tehnică Gheorghe Asachi din Iași, perioada desfășurare: 16.10.2018-31.12.2018, valoare 87722 RON. $10 \times 0.25 = 2.5p$
2. **Director grant intern de cercetare** câștigat în urma competiției naționale pentru subprogramul Proiecte de cercetare pentru stimularea tinerelor echipe independente în cadrul programului PN III Resurse Umane, finanțat de Universitatea Tehnică "Gheorghe Asachi" din Iași, cu titlul *Control predictiv distribuit pentru maximizarea eficienței parcurilor eoliene (MAX-EOLIAN)*, având codul TUIASI-GI-2018-1654, perioada desfășurare: 01.06.2018-31.05.2019, valoare 10000 RON. $10 \times 1 = 10p$

3. **Director proiect de cercetare** câștigat prin competiție națională, contract nr. 273/01.10.2015, cu titlul *Control predictiv bazat pe agenți pentru plutoanele de autovehicule* având codul PN-II-RU-TE-2014-4-0970 în cadrul *Programului PN II Resurse Umane*, subprogramul *Proiecte de cercetare pentru stimularea constituirii de tinere echipe de cercetare independente*, finanțat de *Unitatea Executivă pentru Finanțarea Învățământului Superior, a Cercetării, Dezvoltării și Inovării (UEFISCDI)*, contract nr. 273/01.10.2015, perioada desfășurare: 01.10.2015-30.09.2017, valoare 520640 RON. $10 \times 2 = 20p$

A2.4.2.2 – 8.34 puncte

1. **Membru** în echipa de cercetare a proiectului cu titlul *Rețele neuronale electronice de inspirație biologică pentru controlul brațelor robotice antropomorfe (Bio-inspired electronic neural networks for the control of anthropomorphic robotic arms – ReNEIBCoBRA)*, nr. GnaC2018_66, finanțat de *Alianța Română a Universităților Tehnice (ARUT)*, director proiect: Conf dr. ing. Mircea Hulea, perioada desfășurare: 01.03.2019-30.04.2020, valoare 47440 RON. $2 \times 1.17 = 2.34p$

2. **Investigator principal** în cadrul proiectului de cercetare CNMP *Tehnologii informatice de timp real pentru sistemele încorporate care asigură controlul lanțului de transmisie a puterii la autovehicule (SICONA)* în Programul 4 – Parteneriate în domeniile prioritare, Contract nr. 12100/01.10.2008, perioada desfășurare: 10.2008-09.2011, valoare 316105.43 RON, director proiect: Prof. dr. ing. Corneliu Lazăr. $2 \times 3 = 6p$

A3 – 757.07 puncte – conform Tabel citări

A3.1.1 – 616.93 puncte – conform Tabel citări

A3.1.2 – 84.13 puncte – conform Tabel citări

A3.2 – 50 puncte

1. Membru în comitetul de organizare 21st International Conference on System Theory, Control and Computing, 2017, Sinaia, Romania

<http://www.icstcc2017.ac.tuiasi.ro/committees/organizing-committee/> 10p

2. Co-chair 25th Mediterranean Conference on Control and Automation, 2017, Valletta, Malta

https://controls.papercept.net/conferences/conferences/MED17/program/MED17_ContentListWeb_2.html#wect1 10p

3. Chair 20th International Conference on System Theory, Control and Computing, 2016, Sinaia, Romania

https://controls.papercept.net/conferences/conferences/STCC16/program/STCC16_ContentListWeb_2.html#frc1 10p

4. Co-chair 20th IEEE International Conference on Emerging Technologies and Factory Automation, 2015, Luxembourg

http://www.etfa2015.org/index.php?page=program-track-5#session_T5_3 10p

5. Chair 23rd IEEE Symposium on Industrial Electronics, 2014, Istanbul, Turkey

http://www.isie.boun.edu.tr/ISIE%202014_booklet.pdf - page 23 10p

A3.3 – 6 puncte

1. Membru în comitetul de organizare al 18th International Conference on System Theory, Control and Computing, 2014, Sinaia, Romania

<http://www.ace.tuiasi.ro/icstcc2014/organization.html>. 6p

10.01.2020

Conf.dr.ing Constantin - Florin Căruntu