dr. VASS Balázs

Fișa de verificare

Verificare standarde minimale CNATDCU (cf. anexelor la OM 6129/20.12.2016)			
Perspectiva a) : Etica cercetării Am respectat normele de etica cercetării. **Perspectiva b) : Producția științifică**			
Perspectiva b)		**Realizat**	**Necesar Abilitare/Profesor**
Punctaj		90.25	56
Praguri	A*+A	67.25	24
	A*+A+B	85.25	40
Perspectiva c) : Impactul rezultatelor			
Perspectiva c)		**Realizat**	**Necesar Abilitare/Profesor**
Punctaj		333.58	120
Praguri	A*+A+B	293.66	40
Perspectiva d) : Performanța academică			
Perspectiva d)		**Realizat**	**Necesar Abilitare/Profesor**
Punctaj		78.4	60
Praguri		Minim un proiect, cu echipa de cel putin 2 membri, obținut de candidat prin competiție la nivel național sau internațional	Director al proiectului “SMR-A-DRT” de tip TE, UEFISCDI, având, în afara directorului, 5 membri, dintre care 2 sunt cercetători postdoctorali.

Fișa de verificare

Nume, prenume: VASS Balázs

Perspectiva b) Producția științifică

Punctaj total lucrări categoriile A*+A+B+C: 90.25
Punctaj lucrări categoriile A*+A+B: 85.25

LISTA PUBLICAȚII					
Nr.	**Publicație**	**Categorie**		**Nr. autori**	**Punctaj**
1	T. Lévai, **B. Vass**, G. Rétvári, “Programmable Real-Time Scheduling of Disaggregated Network Functions: A Theoretical Model”, IEEE TNSM, 2025	B	4	3	4
2	E.R. Bérczi-Kovács, P. Gyimesi, **B. Vass**, J. Tapolcai, “DateLine: Efficient Algorithm for Region-Disjoint Survivable Routing in Backbone Networks”, IEEE JSAC, 2025	A*	12	4	6
3	A. Gran Alcoz, **B. Vass**, P. Namyar, B. Arzani, G. Rétvári, L. Vanbever, “Everything Matters in Programmable Packet Scheduling”, USENIX NSDI, 2025	A	8	6	2
4	**B. Vass**, P Revisnyei, A Pašíć, “Computing Safest st-paths in Backbone Networks: Efficiently Solvable Cases and Fast Heuristics”, IEEE RNDM, 2024	D	1	3	
5	**B. Vass**, ER Bérczi-Kovács, Á Fraknói, C Raiciu, G Rétvári, “Charting the Complexity Landscape of Compiling Packet Programs to Reconfigurable Switches”, IEEE/ACM ToN, 2024	A	8	5	2.66
6	T. Lévai, **B. Vass**, G. Rétvári, “Programmable Real-time Scheduling of Disaggregated Network Functions”, IFIP Networking, 2024	B	4	3	4
7	**B. Vass**, E.R. Bérczi-Kovács, P. Gyimesi, J. Tapolcai, “Efficient Computing of Disaster-Disjoint Paths: Greedy and Beyond”, IEEE INFOCOM WKSHP, 2024	A	6	4	3
8	E.R. Bérczi-Kovács, P. Gyimesi, **B. Vass**, J. Tapolcai, “Efficient Algorithm for Region-Disjoint Survivable Routing in Backbone Networks”, IEEE INFOCOM, 2024	A*	12	4	6
9	**B. Vass**, B.É. Nagy, B. Bányi, J. Tapolcai, “The Complexity Landscape of Disaster-Aware Network	A	8	4	4

	Extension Problems", Wiley Networks, 2023				
10	**B. Vass**, E.R. Bérczi-Kovács, Á. Barabás, Zs. L. Hajdú, J. Tapolcai, "A Whirling Dervish: Polynomial-Time Algorithm for the Regional SRLG-disjoint Paths Problem", IEEE/ACM Transactions on Networking, 2023	A	8	5	2.66
12	**B. Vass**, Á. Fraknói, E. Bérczi-Kovács, G. Rétvári, "Compiling packet programs to dRMT switches: theory and algorithms", P4 Workshop in Europe (EuroP4 '22, in conjunction with CoNEXT), Rome, Italy, 2022	B	4	4	2
13	**B. Vass**, B. Brányi, B. É. Nagy, and J. Tappolcai, "On the Complexity of Disaster-Aware Network Extension Problems", in Int. Workshop on Resilient Networks Design and Modeling (RNDM), Compiégne, France, 2022.	D	1	4	
14	**B. Vass**, Cs. Sarkadi, G. Rétvári, "Programmable Packet Scheduling With SP-PIFO: Theory, Algorithms and Evaluation", in Proc. IEEE INFOCOM Workshops, London, UK, 2022	A	6	3	6
15	**B. Vass**, E. Bérczi-Kovács, Á. Barabás, Zs. L. Hajdú, J. Tapolcai, "Polynomial-Time Algorithm for the Regional SRLG-disjoint Paths Problem", in Proc. IEEE INFOCOM, London, UK, 2022	A*	12	5	4
16	**B. Vass**, J. Tapolcai, "Essence of Geographically Correlated Failure Events in Communication Networks", IEEE Symposium on Network Operations and Management, Budapest, Hungary, 2022	C	2	2	2
17	**B. Vass**, E. Bérczi-Kovács, and J. Tapolcai, "Enumerating Maximal Shared Risk Link Groups of Circular Disk Failures Hitting k Nodes", IEEE-ACM Transactions on Networking, 2021	A	8	3	8
18	A. Pašić, R. Girão-Silva, F. Mogyorósi, **B. Vass**, T. Gomes, P. Babarczi, P. Revisnyei, J. Tapolcai, J. Rak "eFRADIR: An Enhanced FRAmework for DIsaster Resilience", IEEE Access, 2021	A	8	9	1.14
19	**B. Vass**, J. Tapolcai, Z. Heszberger, J. Bíró, D. Hay, F. A. Kuipers, J. Oostenbrink, A. Valentini, L. Rónyai, "Probabilistic Shared Risk Link Groups Modelling Correlated Resource Failures Caused by Disasters", IEEE Journal on Selected Areas in Communications, 2021	A*	12	9	1.71
20	**B. Vass**, E. Bérczi-Kovács, C. Raiciu, G. Rétvári, "Compiling Packet Programs to Reconfigurable Switches: Theory and Algorithms", P4 Workshop in Europe (EuroP4 '20, in conjunction with CoNEXT),	B	4	4	2

	Barcelona, Spain, 2020				
21	J. Tapolcai, L. Rónyai, **B. Vass**, and L. Gyimóthi, “Fast Enumeration of Regional Link Failures Caused by Disasters with Limited Size”, IEEE-ACM Transactions on Networking, 2020	A	8	4	4
22	B. Németh, Y.-A. Pignolet, M. Rost, S. Schmid, **B. Vass**, “Cost-Efficient Embedding of Virtual Networks With and Without Routing Flexibility”, IEEE IFIP Networking, Paris, France, 2020	A	8	5	2.66
23	**B. Vass**, L. Németh, J. Tapolcai, “The Earth is Nearly Flat: Precise and Approximate Algorithms for Detecting Vulnerable Regions of Networks in Plane and on Sphere”, Networks, Wiley, 2020	B	4	3	4
24	D. Haja, **B. Vass**, L. Toka, “Improving Big Data Application Performance in Edge-Cloud Systems”, IEEE 12th International Conference on Cloud Computing (CLOUD), Milan, Italy, 2019	B	4	3	4
25	D. Haja, **B. Vass**, L. Toka, “Towards making big data applications network-aware in edge-cloud systems”, IEEE 8th International Conference on Cloud Networking (CloudNet), Coimbra, Portugal, 2019	D	1	3	
26	A. Pašić, R. Girao-Silva, **B. Vass**, T. Gomes, F. Mogyorósi, P. Babarczi, J. Tapolcai, “FRADIR-II: An Improved Framework for Disaster Resilience”, IEEE Int. Workshop on Resilient Networks Design and Modeling (RNDM), Nicosia, Cyprus, 2019	D	1	7	
27	A. Valentini, **B. Vass**, J. Oostenbrink, L. Csák, F. A. Kuipers, B. Pace, D. Hay and J. Tapolcai, “Network Resiliency Against Earthquakes”, IEEE Int. Workshop on Resilient Networks Design and Modeling (RNDM), Nicosia, Cyprus, 2019	D	1	8	
28	A. Pašić, R. Girão-Silva, **B. Vass**, T. Gomes, and P. Babarczi, “FRADIR: A Novel Framework for Disaster Resilience”, IEEE Int. Workshop on Resilient Networks Design and Modeling (RNDM), Longyearbyen (Svalbard), Norway, 2018.	D	1	5	
29	**B. Vass**, L. Németh, A. de Sousa, M. Zachariasen and J. Tapolcai, “Vulnerable Regions of Networks on Sphere”, IEEE Int. Workshop on Resilient Networks Design and Modeling (RNDM), Longyearbyen (Svalbard), Norway, 2018.	D	1	5	
30	J. Tapolcai, **B. Vass**, Z. Heszberger, J. Biró, D. Hay, F. A. Kuipers, and L. Rónyai, “A Tractable Stochastic Model of Correlated Link Failures Caused by Disasters”, in Proc. IEEE INFOCOM, Honolulu, HI,	A*	12	7	2.4

	USA, 2018.				
31	**B. Vass**, E. Bérczi-Kovács, and J. Tapolcai, “Enumerating Shared Risk Link Groups of Circular Disk Failures Hitting *k* nodes”, in Proc. International Workshop on Design Of Reliable Communication Networks (DRCN), Munich, Germany, 2017.	D	1	3	
32	J. Tapolcai, L. Rónyai, **B. Vass**, and L. Gyimóthi, “List of Shared Risk Link Groups Representing Regional Failures with Limited Size”, in Proc. IEEE INFOCOM, Atlanta, GA, USA, 2017	A*	12	4	6
33	**B. Vass**, E. Bérczi-Kovács, and J. Tapolcai, “Enumerating Circular Disk Failures Covering a Single Node”, in Int. Workshop on Resilient Networks Design and Modeling (RNDM), Halmstad, Sweden, 2016.	D	1	3	
34	**B. Vass**, E. Bérczi-Kovács, and J. Tapolcai, “Shared Risk Link Group Enumeration of Node Excluding Disaster Failures”, in Int. Conference on Networking and Network Applications (NaNA), Hakodate (Hokkaido), Japan, 2016. Winner of Best Paper Award.	D	1	3	
35	**B. Vass**, “Shared Risk Link Groups of Disaster Failures”, in IEEE Conference on Computer Communications Workshop, 2016.	A	6	1	6
TOTAL PUNCTAJ ARTICOLE CATEGORIE A*, A, B sau C					90.25
	TOTAL PERSPECTIVA b)				90.25
	A*+A				67.25
	A*+A+B				85.25

Fișa de verificare

Nume, prenume: VASS Balázs
Perspectiva c) Impactul rezultatelor
Punctaj total citări : 333.58
Punctaj citări din forumuri de tip A*+A+B: 293.66

T. Lévai, B. Vass, G. Rétvári, "Programmable Real-Time Scheduling of Disaggregated Network Functions: A Theoretical Model", IEEE TNSM, 2025				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
-				

E.R. Bérczi-Kovács, P. Gyimesi, B. Vass, J. Tapolcai, "DateLine: Efficient Algorithm for Region-Disjoint Survivable Routing in Backbone Networks", IEEE JSAC, 2025				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
-				

A. Gran Alcoz, B. Vass, P. Namyar, B. Arzani, G. Rétvári, L. Vanbever, "Everything Matters in Programmable Packet Scheduling", USENIX NSDI, 2025				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
-				

B. Vass, P Revisnyei, A Pašíć, "Computing Safest st-paths in Backbone Networks: Efficiently Solvable Cases and Fast Heuristics", IEEE RNDM, 2024				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
-				

B. Vass, ER Bérczi-Kovács, Á Fraknói, C Raiciu, G Rétvári, "Charting the Complexity Landscape of Compiling Packet Programs to Reconfigurable Switches", IEEE/ACM ToN, 2024				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
-				

T. Lévai, B. Vass, G. Rétvári, “Programmable Real-time Scheduling of Disaggregated Network Functions”, IFIP Networking, 2024				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
-				

B. Vass, E.R. Bérczi-Kovács, P. Gyimesi, J. Tapolcai, “Efficient Computing of Disaster-Disjoint Paths: Greedy and Beyond”, IEEE INFOCOM WKSHP, 2024				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
-				

E.R. Bérczi-Kovács, P. Gyimesi, B. Vass, J. Tapolcai, “Efficient Algorithm for Region-Disjoint Survivable Routing in Backbone Networks”, IEEE INFOCOM, 2024				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
-				

B. Vass, B.É. Nagy, B. Bányi, J. Tapolcai, “The Complexity Landscape of Disaster-Aware Network Extension Problems”, Wiley Networks, 2023				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
Westcott A, Ras C. An exact algorithm for disaster-resilience augmentation of planar straight-line graphs. Journal of Global Optimization. 2025 Jan 24:1-26.	B	4	4	2
				Punctaj sum articol: 2
				Punctaj articol A*+A+B: 2

B. Vass, E.R. Bérczi-Kovács, Á. Barabás, Zs. L. Hajdú, J. Tapolcai, “A Whirling Dervish: Polynomial-Time Algorithm for the Regional SRLG-disjoint Paths Problem”, IEEE/ACM Transactions on Networking, 2023				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
Li Y, Zhang D, Wang Z, Yang H, Yu T, Yao Q, Liu S, Wang D, Zhao Y, Li H, Deng C. Field trial of concurrent	A	8	5	2.66

co-cable and co-trench optical fiber online identification based on ensemble learning. Optics Express. 2023 Dec 18;31(26):42850-65.				
			Punctaj sum articol: 2.66	
			Punctaj articol A*+A+B: 2.66	

B. Vass, Á. Fraknói, E. Bérczi-Kovács, G. Rétvári, ”Compiling packet programs to dRMT switches: theory and algorithms”, P4 Workshop in Europe (EuroP4 ’22, in conjunction with CoNEXT), Rome, Italy, 2022				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
-				

B. Vass, B. Brányi, B. É. Nagy, and J. Tappolcai, “On the Complexity of Disaster-Aware Network Extension Problems”, in Int. Workshop on Resilient Networks Design and Modeling (RNDM), Compiégne, France, 2022.				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
-				

B. Vass, B. Brányi, B. É. Nagy, and J. Tappolcai, “On the Complexity of Disaster-Aware Network Extension Problems”, in Int. Workshop on Resilient Networks Design and Modeling (RNDM), Compiégne, France, 2022.				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
-				

B. Vass, Cs. Sarkadi, G. Rétvári, “Programmable Packet Scheduling With SP-PIFO: Theory, Algorithms and Evaluation”, in Proc. IEEE INFOCOM Workshops, London, UK, 2022				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
Elbediwy M, Pontikakis B, Ghaffari A, David JP, Savaria Y. DR-PIFO: A Dynamic Ranking Packet Scheduler Using a Push-In-First-Out Queue. IEEE Transactions on Network and Service Management. 2023 Aug 14.	B	4	3	4

Mohan A, Liu Y, Foster N, Kappé T, Kozen D. Formal abstractions for packet scheduling. Proceedings of the ACM on Programming Languages. 2023 Oct 16;7(OOPSLA2):1338-62.	D	1	3	1
Elbediwy M, Pontikakis B, David JP, Savaria Y. A Hardware Architecture of a Dynamic Ranking Packet Scheduler for Programmable Network Devices. IEEE Access. 2023 Jun 15;11:61422-36.	B	4	3	4
Wang X, Wang X, Jia J, Lu X, Huang M. A Scheduling optimization Mechanism Combining Q-learning and Genetic Algorithm. In2023 19th International Conference on Mobility, Sensing and Networking (MSN) 2023 Dec 14 (pp. 620-627). IEEE.	D	1	3	1
Elbediwy M, Pontikakis B, David JP, Savaria Y. Enabling Rank-Based P4 Programmable Schedulers: Requirements, Implementation, and Evaluation on BMv2 Switches. IEEE/ACM Transactions on Networking. 2024 Oct 29.	A	8	3	8
Liu Y, Yao X, Yang Z, Li W. A multi-queue-based ECN marking strategy for multi-class QoS guarantee in programmable networks. PeerJ Computer Science. 2024 Oct 31;10:e2382.	A	8	3	8
				Punctaj sum articol: 22
				Punctaj articol A*+A+B: 20

B. Vass, E. Bérczi-Kovács, Á. Barabás, Zs. L. Hajdú, J. Tapolcai, “Polynomial-Time Algorithm for the Regional SRLG-disjoint Paths Problem”, in Proc. IEEE INFOCOM, London, UK, 2022				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
Matsuura H, Koshiji K, Yokoi H, Matsukawa T, Fujii T. Finding SRLG-Disjoint Primary and Backup Route Pairs using k-SPF algorithm in Optical Networks. InGLOBECOM 2023-2023 IEEE Global Communications Conference 2023 Dec 4 (pp. 2141-2147). IEEE.	B	4	5	1.33
Wan Y, Feng C, Wu K, Wang J. RZDD: Risk Zone-Diversified Network Design for Disaster Resilience. IEEE Transactions on Dependable and Secure Computing. 2024 May 29.	A	8	5	2.66
Matsuura H, Koshiji K, Yokoi H, Matsukawa T, Fujii T. Extension of the k-SPF algorithm for finding SRLG-disjoint primary and backup route pairs in optical networks. Journal of Optical Communications and Networking. 2024 Sep 1;16(9):E23-35.	A	8	5	2.66

Liu T, Wang W, Ouyang F, Hao Y, Li Y, Zhao Y, Zhang J. Eavesdropping-aware survivable routing in physical-layer secured optical networks. Journal of Optical Communications and Networking. 2025 Jan 24;17(2):127-38.	A	8	5	2.66
				Punctaj sum articol: 9.33
				Punctaj articol A*+A+B: 9.33

B. Vass, J. Tapolcai, ”Essence of Geographically Correlated Failure Events in Communication Networks”, IEEE Symposium on Network Operations and Management, Budapest, Hungary, 2022				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
-				

A. Pašić, R. Girão-Silva, F. Mogyorósi, B. Vass, T. Gomes, P. Babarczi, P. Revisnyei, J. Tapolcai, J. Rak “eFRADIR: An Enhanced FRAmework for DIsaster Resilience”, IEEE Access, 2021				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
Chiesa M, Kamisiński A, Rak J, Retvari G, Schmid S. A survey of fast-recovery mechanisms in packet-switched networks. IEEE Communications Surveys & Tutorials. 2021 Mar 11;23(2):1253-301.	A*	12	9	1.71
Rak J, Girao-Silva R, Gomes T, Ellinas G, Kantarci B, Tornatore M. Disaster resilience of optical networks: State of the art, challenges, and opportunities. Optical Switching and Networking. 2021 Nov 1;42:100619.	D	1	9	0.14
Esmat HH, Lorenzo B, Shi W. Towards Resilient Network Slicing for Satellite-Terrestrial Edge Computing IoT. IEEE Internet of Things Journal. 2023 May 18.	A*	12	9	1.71
Ma M, Men Z, Rossi A, Zhou Y, Xiao M. A vertex-separator-based integer linear programming formulation for the partitioned Steiner tree problem. Computers & Operations Research. 2023 May 1;153:106151.	A	8	9	1.14
Babarczi P. Resilient control plane design for virtual software defined networks. IEEE Transactions on Network and Service Management. 2021 Mar 2;18(3):2557-69.	A	8	9	1.14
Mogyorósi F, Pašić A. Disaster-Resilient Network Upgrade. In2022 International Conference on Optical Network Design and Modeling (ONDM) 2022 May 16	D	1	9	0.14

(pp. 1-6). IEEE.				
Pašić A, Revisnyei P, Mogyorósi F. Disaster-Resilient Upgrade of Interdependent Networks. In2023 13th International Workshop on Resilient Networks Design and Modeling (RNDM) 2023 Sep 20 (pp. 1-8). IEEE.	D	1	9	0.14
Alenazi MJ. ENRN: A System for Evaluating Network Resilience against Natural Disasters. Mathematics. 2023 Oct 11;11(20):4250.	A	8	9	1.14
Inoue T, Ito A, Nakamura K, Matsukawa T. Impact of facility factors on robustness of communication networks under natural disasters. IEEE Communications Magazine. 2024 Jul 15.	A*	12	9	1.71
Wan Y, Feng C, Wu K, Wang J. RZDD: Risk Zone-Diversified Network Design for Disaster Resilience. IEEE Transactions on Dependable and Secure Computing. 2024 May 29.	A	8	9	1.14
Mogyorósi F, Revisnyei P, Pašić A. Modeling and upgrade of disaster-resilient interdependent networks using machine learning. Optical Switching and Networking. 2025 Jan 1;55:100791.	C	2	9	0.28
Mogyorósi F, Babarczi P, Pašić A. Self-adjusting resilient control plane for virtual software-defined optical networks. Optical Switching and Networking. 2025 Jan 1;55:100792.	C	2	9	0.28
				Punctaj sum articol: 10.71
				Punctaj articol A*+A+B: 9.85

B. Vass, J. Tapolcai, Z. Heszberger, J. Bíró, D. Hay, F. A. Kuipers, J. Oostenbrink, A. Valentini, L. Rónyai, "Probabilistic Shared Risk Link Groups Modelling Correlated Resource Failures Caused by Disasters", IEEE Journal on Selected Areas in Communications, 2021

Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
Ghasemi M, Kazemi A, Gilani MA, Shafie-Khah M. A stochastic planning model for improving resilience of distribution system considering master-slave distributed generators and network reconfiguration. IEEE Access. 2021 May 25;9:78859-72.	A	8	9	1.14
Yi Z, Huang N, Yang Q, Zheng X. A rule-based modeling approach for network application availability assessment under dynamic network restoration scheme. Measurement. 2023 May 19:113040.	A	8	9	1.14
Tornatore M, Wong E, Zhu Z, Casellas R, Bathula BG, Wosinska L. Guest Editorial Latest Advances in Optical Networks for 5G Communications and Beyond. IEEE	A*	12	9	1.71

Journal on Selected Areas in Communications. 2021 Aug 18;39(9):2667-71.				
Onaka R, Nakamura K, Inoue T, Nishino M, Yasuda N, Sakaue S. Exact and Scalable Network Reliability Evaluation for Probabilistic Correlated Failures. InGLOBECOM 2022-2022 IEEE Global Communications Conference 2022 Dec 4 (pp. 5547-5552). IEEE.	B	4	9	0.57
Mogyorósi F, Pašić A. Disaster-Resilient Network Upgrade. In2022 International Conference on Optical Network Design and Modeling (ONDM) 2022 May 16 (pp. 1-6). IEEE.	D	1	9	0.14
Li Y, Zhang D, Wang Z, Yang H, Yu T, Yao Q, Liu S, Wang D, Zhao Y, Li H, Deng C. Field trial of concurrent co-cable and co-trench optical fiber online identification based on ensemble learning. Optics Express. 2023 Dec 18;31(26):42850-65.	A	8	9	1.14
Yi Z, Huang N, Yang Q, Zheng X. A rule-based modeling approach for network application availability assessment under dynamic network restoration scheme. Measurement. 2023 Aug 1;217:113040.	A	8	9	1.14
Pašić A, Revisnyei P, Mogyorósi F. Disaster-Resilient Upgrade of Interdependent Networks. In2023 13th International Workshop on Resilient Networks Design and Modeling (RNDM) 2023 Sep 20 (pp. 1-8). IEEE.	D	1	9	0.14
Wang Y, Liu J, Cui M, Wu W, Huang T, Liu Y. Maximizing Optical Inter-DC Emergency Backup Reliability in Unpredictable Disasters. In2023 IEEE 97th Vehicular Technology Conference (VTC2023-Spring) 2023 Jun 20 (pp. 1-6). IEEE.	B	4	9	0.57
Weedage L, Magalhães SR, Stegehuis C, Bayhan S. On the resilience of cellular networks: how can national roaming help?. IEEE Transactions on Network and Service Management. 2024 Jan 10.	B	4	9	0.57
Wan Y, Feng C, Wu K, Wang J. RZDD: Risk Zone-Diversified Network Design for Disaster Resilience. IEEE Transactions on Dependable and Secure Computing. 2024 May 29.	A	8	9	1.14
Mogyorósi F, Revisnyei P, Pašić A. Modeling and upgrade of disaster-resilient interdependent networks using machine learning. Optical Switching and Networking. 2025 Jan 1;55:100791.	C	2	9	0.28
Liu T, Wang W, Ouyang F, Hao Y, Li Y, Zhao Y, Zhang J. Eavesdropping-aware survivable routing in physical-layer secured optical networks. Journal of Optical Communications and Networking. 2025 Jan 24;17(2):127-38.	A	8	9	1.14
				Punctaj sum articol: 10.85

Punctaj articol A*+A+B: 10.28

B. Vass, E. Bérczi-Kovács, C. Raiciu, G. Rétvári, ”Compiling Packet Programs to Reconfigurable Switches: Theory and Algorithms”, P4 Workshop in Europe (EuroP4 ’20, in conjunction with CoNEXT), Barcelona, Spain, 2020				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
Hauser F, Häberle M, Merling D, Lindner S, Gurevich V, Zeiger F, Frank R, Menth M. A survey on data plane programming with p4: Fundamentals, advances, and applied research. Journal of Network and Computer Applications. 2023 Mar 1;212:103561.	A	8	4	4
Sonchack J, Loehr D, Rexford J, Walker D. Lucid: A language for control in the data plane. InProceedings of the 2021 ACM SIGCOMM 2021 Conference 2021 Aug 9 (pp. 731-747).	A*	12	4	6
Cohen R, Kadosh M, Lo A, Sayah Q. Lb scalability: Achieving the right balance between being stateful and stateless. IEEE/ACM Transactions on Networking. 2021 Sep 20;30(1):382-93.	A	8	4	4
Li G, Zhang M, Wang S, Liu C, Xu M, Chen A, Hu H, Gu G, Li Q, Wu J. Enabling performant, flexible and cost-efficient DDoS defense with programmable switches. IEEE/ACM Transactions on Networking. 2021 Mar 26;29(4):1509-26.	A	8	4	4
Chen X, Liu H, Zhang D, Huang Q, Zhou H, Wu C, Yang Q. Eliminating Control Plane Overload via Measurement Task Placement. IEEE/ACM Transactions on Networking. 2022 Nov 23.	A	8	4	4
Gao X, Raghunathan D, Fang R, Wang T, Zhu X, Sivaraman A, Narayana S, Gupta A. CaT: A Solver-Aided Compiler for Packet-Processing Pipelines. In Proceedings of the 28th ACM International Conference on Architectural Support for Programming Languages and Operating Systems, Volume 3 2023 Mar 25 (pp. 72-88).	D	1	4	0.5
Robin DD, Khan JI. Open Source Compiling for V1Model RMT Switch: Making Data Center Networking Innovation Accessible. In2022 IEEE/ACM 15th International Conference on Utility and Cloud Computing (UCC) 2022 Dec 6 (pp. 133-138). IEEE.	D	1	4	0.5
Chen J, Wu X, Roy D, Chen H, Xiang P, Zhang W, Feng Y, Chang W. Latency-driven Optimization of Switching Pipeline Design in Network Chips. In2022 IEEE Real-Time Systems Symposium (RTSS) 2022 Dec 5 (pp. 344-355). IEEE.	A*	12	4	6
Xing J, Qiu Y, Hsu KF, Sui S, Manaa K, Shabtai O, Piasetzky Y, Kadosh M, Krishnamurthy A, Ng TE, Chen	A*	12	4	6

A. Unleashing SmartNIC packet processing performance in P4. InProceedings of the ACM SIGCOMM 2023 Conference 2023 Sep 10 (pp. 1028-1042).				
Xiao J, Zuo X, Li Q, Zhao D, Zhao H, Jiang Y, Sun J, Chen B, Liang Y, Li J. FlexNF: Flexible Network Function Orchestration for Scalable On-Path Service Chain Serving. IEEE/ACM Transactions on Networking. 2023 Nov 27.	A	8	4	4
Qiao X, Liu X, Lai K, Cao K, Xiu Y, Chan WK. An Efficient Exact Algorithm for Chip Resource Allocation Problem. In2023 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM) 2023 Dec 18 (pp. 617-621). IEEE.	D	1	4	0.5
Robin DD, Khan JI. An open-source P416 compiler backend for reconfigurable match-action table switches: Making networking innovation accessible. Computer Networks. 2024 Apr 1;242:110246.	A	8	4	4
Song X, Guo Z. An Implementation of Reconfigurable Match Table for FPGA-Based Programmable Switches. IEEE Transactions on Very Large Scale Integration (VLSI) Systems. 2024 Aug 7.	B	4	4	2
Hogan M. *Language Expressiveness Under Extreme Scarcity in Programmable Data Planes* (Doctoral dissertation, Princeton University).	D	1	4	0.5
Ng TE. *TS Eugene Ng* (Doctoral dissertation, University of Washington).	D	1	4	0.5
Cui Z, Hu Y, Tian L, Yi P, Hou S, Chen H. Altair: Resource-efficient optimization and deployment for data plane programs. Computer Networks. 2025 Feb 1;257:110917.	A	8	4	4
				Punctaj sum articol: 50.5
				Punctaj articol A*+A+B: 48

J. Tapolcai, L. Rónyai, B. Vass, and L. Gyimóthi, “Fast Enumeration of Regional Link Failures Caused by Disasters with Limited Size”, IEEE-ACM Transactions on Networking, 2020

Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
Vaisman R, Sun Y. Reliability and importance measure analysis of networks with shared risk link groups. Reliability Engineering & System Safety. 2021 Jul 1;211:107578.	A	8	4	4
Tapolcai J, Hajdú ZL, Pašić A, Ho PH, Rónyai L. On network topology augmentation for global connectivity under regional failures. InIEEE INFOCOM 2021-IEEE	A*	12	4	6

Conference on Computer Communications 2021 May 10 (pp. 1-10). IEEE.				
Liu J, Dong S, Morris T, Fang Y. Social Equality-Aware Resource Allocation for Post-Disaster Communication Restoration. In2023 32nd International Conference on Computer Communications and Networks (ICCCN) 2023 Jul 24 (pp. 1-10). IEEE.	B	4	4	2
Oostenbrink J. A Data-Driven Approach to Disaster Resilience in Communication Networks. 2023	D	1	3	0.5
				Punctaj sum articol: 12.5
				Punctaj articol A*+A+B: 12

B. Vass, J. Tapolcai, D. Hay, J. Oostenbrink, F. A. Kuipers, "How to Model and Enumerate Geographically Correlated Failure Events in Communication Networks", in Guide to Disaster-Resilient Communication Networks, Springer, 2020				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
Tomassilli A, Di Lena G, Giroire F, Tahiri I, Saucez D, Pérennes S, Turletti T, Sadykov R, Vanderbeck F, Lac C. Design of robust programmable networks with bandwidth-optimal failure recovery scheme. Computer Networks. 2021 Jun 19;192:108043.	A	8	5	2.66
Brahneborg D, Duvignau R, Afzal W, Mubeen S. GeoRep—Resilient Storage for Wide Area Networks. IEEE Access. 2022 Jul 18;10:75772-88.	A	8	5	2.66
Jiménez D, Barrera J, Cancela H. Communication network reliability under geographically correlated failures using probabilistic seismic hazard analysis. IEEE Access. 2023 Mar 10;11:31341-54.	A	8	5	2.66
Brahneborg D, Afzal W, Mubeen S. Resilient Conflict-free Replicated Data Types without Atomic Broadcast. In17th International Conference on Software Technologies 2022.	D	1	5	0.33
Di Lena G. *Distributed and trustable SDN-NFV-enabled network emulation on testbeds and cloud infrastructures* (Doctoral dissertation, Université Côte d'Azur).	D	1	5	0.33
Higashimori K, Tanaka T, Inoue T. Efficient Routing Method for Reducing Significant Outages in Optical Networks. InGLOBECOM 2023-2023 IEEE Global Communications Conference 2023 Dec 4 (pp. 2135-2140). IEEE.	B	4	5	1.33
Higashimori K, Tanaka T, Inoue T. Routing problem for reducing significant outages in optical networks and its	A	8	5	2.66

system analysis. Journal of Optical Communications and Networking. 2024 Sep 1;16(9):E1-0.				
Higashimori K, Tanaka T, Inoue T. Routing problem for reducing significant outages in optical networks and its system analysis. Journal of Optical Communications and Networking. 2024 Sep 1;16(9):E1-0.	B	4	5	1.33
				Punctaj sum articol: 14.0
				Punctaj articol A*+A+B: 13.33

B. Németh, Y.-A. Pignolet, M. Rost, S. Schmid, B. Vass, "Cost-Efficient Embedding of Virtual Networks With and Without Routing Flexibility", IEEE IFIP Networking, Paris, France, 2020				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
Sonkoly B, Czentye J, Szalay M, Németh B, Toka L. Survey on placement methods in the edge and beyond. IEEE Communications Surveys & Tutorials. 2021 Jul 30;23(4):2590-629.	A*	12	5	4
TG KK, Addya SK, Satpathy A, Koolagudi SG. NORD: NOde Ranking-based efficient virtual network embedding over single Domain substrate networks. Computer Networks. 2023 Apr 1;225:109661.	B	4	5	1.33
Sallam G, Ji B. Joint placement and allocation of VNF nodes with budget and capacity constraints. IEEE/ACM Transactions on Networking. 2021 Feb 23;29(3):1238-51.	A	8	5	2.66
TG KK, Srivastava A, Satpathy A, Addya SK, Koolagudi SG. MatchVNE: A Stable Virtual Network Embedding Strategy Based on Matching Theory. In2023 15th International Conference on COMmunication Systems & NETworkS (COMSNETS) 2023 Jan 3 (pp. 355-359). IEEE.	D	1	5	0.33
Münk R, Rost M, Räcke H, Schmid S. It's Good to Relax: Fast Profit Approximation for Virtual Networks with Latency Constraints. In2021 IFIP Networking Conference (IFIP Networking) 2021 Jun 21 (pp. 1-3). IEEE.	B	4	5	1.33
Figiel A, Kellerhals L, Niedermeier R, Rost M, Schmid S, Zschoche P. Optimal Virtual Network Embeddings for Tree Topologies. InProceedings of the 33rd ACM Symposium on Parallelism in Algorithms and Architectures 2021 Jul 6 (pp. 221-231).	A	8	5	2.66
Satpathy A, Sahoo MN, Swain C, Bellavista P, Guizani M, Muhammad K, Bakshi S. Virtual Network Embedding: Literature Assessment, Recent Advancements, Opportunities, and Challenges. IEEE Communications Surveys & Tutorials. 2025 Jan 20.	A*	12	5	4

Punctaj sum articol: 16.33	
Punctaj articol A*+A+B: 16	

B. Vass, L. Németh, J. Tapolcai, “The Earth is Nearly Flat: Precise and Approximate Algorithms for Detecting Vulnerable Regions of Networks in Plane and on Sphere”, Networks, Wiley, 2020				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
Tsokov T, Kostadinov H. Dynamic network-aware container allocation in Cloud/Fog computing with mobile nodes. Internet of Things. 2024 Jul 1;26:101211.	C	2	3	2
Tomassilli A, Di Lena G, Giroire F, Tahiri I, Saucez D, Pérennes S, Turletti T, Sadykov R, Vanderbeck F, Lac C. Design of robust programmable networks with bandwidth-optimal failure recovery scheme. Computer Networks. 2021 Jun 19;192:108043.	A	8	3	8
Ermagun A, Tajik N. Recovery patterns and physics of the network. PloS one. 2021 Jan 19;16(1):e0245396.	B	4	3	4
Ermagun A, Tajik N. Recovery patterns and physics of the network. PloS one. 2021 Jan 19;16(1):e0245396.	D	1	3	1
Oostenbrink J. A Data-Driven Approach to Disaster Resilience in Communication Networks. 2023	D	1	3	1
Punctaj sum articol: 16				
Punctaj articol A*+A+B: 12				

D. Haja, B. Vass, L. Toka, “Improving Big Data Application Performance in Edge-Cloud Systems”, IEEE 12th International Conference on Cloud Computing (CLOUD), Milan, Italy, 2019				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
Sonkoly B, Czentye J, Szalay M, Németh B, Toka L. Survey on placement methods in the edge and beyond. IEEE Communications Surveys & Tutorials. 2021 Jul 30;23(4):2590-629.	A*	12	3	12
Nie Q, Tang D, Liu C, Wang L, Song J. A multi-agent and cloud-edge orchestration framework of digital twin for distributed production control. Robotics and Computer-Integrated Manufacturing. 2023 Aug 1;82:102543.	A	8	3	8
Kotturu PK, Kumar A. Data mining visualization with the impact of nature inspired algorithms in big data. In2020 4th international conference on trends in electronics and informatics (ICOEI)(48184) 2020 Jun 15 (pp.	D	1	3	1

664-668). IEEE.				
Singh R, Kumar N. Optimizing Edge-Cloud Synergy for Big Data Analytics. In2023 IEEE 13th Annual Computing and Communication Workshop and Conference (CCWC) 2023 Mar 8 (pp. 0123-0128). IEEE.	D	1	3	1
Singh R, Kiss T. Edge-Cloud Synergy: Unleashing the Potential of Parallel Processing for Big Data Analytics. In2022 IEEE 13th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON) 2022 Oct 12 (pp. 0001-0006). IEEE.	D	1	3	1
Zahoransky R, Mühlbauer W, König H. Towards mobility support in edge clouds. In2020 IEEE Cloud Summit 2020 Oct 21 (pp. 52-57). IEEE.	D	1	3	1
				Punctaj sum articol: 24
				Punctaj articol A*+A+B: 20

D. Haja, B. Vass, L. Toka, "Towards making big data applications network-aware in edge-cloud systems", IEEE 8th International Conference on Cloud Networking (CloudNet), Coimbra, Portugal, 2019

Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
Wang B, Wang C, Huang W, Song Y, Qin X. A survey and taxonomy on task offloading for edge-cloud computing. IEEE Access. 2020 Oct 8;8:186080-101.	A	8	3	8
Sonkoly B, Czentye J, Szalay M, Németh B, Toka L. Survey on placement methods in the edge and beyond. IEEE Communications Surveys & Tutorials. 2021 Jul 30;23(4):2590-629.	A*	12	3	12
Santos J, Wang C, Wauters T, De Turck F. Diktyo: Network-Aware Scheduling in Container-based Clouds. IEEE Transactions on Network and Service Management. 2023 Apr 28.	A	8	3	8
Yumeng TI, Zhibo LI, Kai ZH, Zhongbo LI, Yongqiang XI. Survey of Task Offloading Technology in Cloud-Edge Resource Collaboration. Journal of Frontiers of Computer Science & Technology. 2023 Oct 1;17(10).	D	1	3	1
Alsadie D. Advancements in heuristic task scheduling for IoT applications in fog-cloud computing: challenges and prospects. PeerJ Computer Science. 2024 Jun 17;10:e2128.	A	8	3	8
Farahabady MR, Zomaya AY. Geo-distributed analytical streaming architecture for iot platforms. In2024 IEEE International Conference on Cluster Computing (CLUSTER) 2024 Sep 24 (pp. 263-274). IEEE.	B	4	3	4

Tsokov T, Kostadinov H. Dynamic network-aware container allocation in Cloud/Fog computing with mobile nodes. Internet of Things. 2024 Jul 1;26:101211.	A*	12	3	12
				Punctaj sum articol: 53
				Punctaj articol A*+A+B: 52

A. Pašić, R. Girao-Silva, B. Vass, T. Gomes, F. Mogyorósi, P. Babarczi, J. Tapolcai, "FRADIR-II: An Improved Framework for Disaster Resilience", IEEE Int. Workshop on Resilient Networks Design and Modeling (RNDM), Nicosia, Cyprus, 2019				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
Rak J, Girao-Silva R, Gomes T, Ellinas G, Kantarci B, Tornatore M. Disaster resilience of optical networks: State of the art, challenges, and opportunities. Optical Switching and Networking. 2021 Nov 1;42:100619.	B	4	7	0.8
Ayoub O, De Sousa A, Mendieta S, Musumeci F, Tornatore M. Online virtual machine evacuation for disaster resilience in inter-data center networks. IEEE Transactions on Network and Service Management. 2021 Feb 3;18(2):1990-2001.	A	8	7	1.6
Tapolcai J, Hajdú ZL, Pašić A, Ho PH, Rónyai L. On network topology augmentation for global connectivity under regional failures. InIEEE INFOCOM 2021-IEEE Conference on Computer Communications 2021 May 10 (pp. 1-10). IEEE.	A*	12	7	2.4
Goścień R. On the efficient design of network resilient to electro-magnetic pulse attack—elastic optical network case study. Computer Communications. 2021 Nov 1;179:272-84.	B	4	7	0.8
Girão-Silva R, Gomes T, Martins L, Tipper D, Alashaikh A. A centrality-based heuristic for network design to support availability differentiation. In2020 16th International Conference on the Design of Reliable Communication Networks DRCN 2020 2020 Mar 25 (pp. 1-7). IEEE.	D	1	7	0.2
Mogyorósi F, Pašić A. Disaster-Resilient Network Upgrade. In2022 International Conference on Optical Network Design and Modeling (ONDM) 2022 May 16 (pp. 1-6). IEEE.	D	1	7	0.2
Liu Y. *Enhancing survivability for elastic optical inter-DataCenter networks* (Doctoral dissertation, Université d'Avignon).	D	1	7	0.2
Haim RB, Rottenstreich O. Low-Latency and Reliable Virtual Network Function Placement in Edge Clouds. IEEE Transactions on Network and Service Management. 2023 Jul 24.	B	4	7	0.8

Pašić A, Revisnyei P, Mogyorósi F. Disaster-Resilient Upgrade of Interdependent Networks. In2023 13th International Workshop on Resilient Networks Design and Modeling (RNDM) 2023 Sep 20 (pp. 1-8). IEEE.	D	1	7	0.2
Mogyorósi F, Revisnyei P, Pašić A. Modeling and upgrade of disaster-resilient interdependent networks using machine learning. Optical Switching and Networking. 2025 Jan 1;55:100791.	C	2	7	0.4
				Punctaj sum articol: 7.6
				Punctaj articol A*+A+B: 6.4

A. Valentini, B. Vass, J. Oostenbrink, L. Csák, F. A. Kuipers, B. Pace, D. Hay and J. Tapolcai, "Network Resiliency Against Earthquakes", IEEE Int. Workshop on Resilient Networks Design and Modeling (RNDM), Nicosia, Cyprus, 2019

Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
Oostenbrink J, Kuipers F. Going the extra mile with disaster-aware network augmentation. In IEEE INFOCOM 2021-IEEE Conference on Computer Communications 2021 May 10 (pp. 1-10). IEEE.	A*	12	8	2
Pašić A, Girão-Silva R, Mogyorósi F, Vass B, Gomes T, Babarczi P, Revisnyei P, Tapolcai J, Rak J. eFRADIR: An enhanced framework for disaster resilience. IEEE Access. 2021 Jan 11;9:13125-48.	A	8	8	1.33
Jiménez D, Barrera J, Cancela H. Communication network reliability under geographically correlated failures using probabilistic seismic hazard analysis. IEEE Access. 2023 Mar 10;11:31341-54.	A*	12	8	2
Mogyorósi F, Babarczi P, Zerwas J, Blenk A, Pašić A. Resilient Control Plane Design for Virtualized 6G Core Networks. IEEE Transactions on Network and Service Management. 2022 Jul 22;19(3):2453-67.	A	8	8	1.33
Goścień R. On the efficient design of network resilient to electro-magnetic pulse attack—elastic optical network case study. Computer Communications. 2021 Nov 1;179:272-84.	B	4	8	0.66
Oostenbrink J, Kuipers F. A Global Study of the Risk of Earthquakes to IXPs. In2022 IFIP Networking Conference (IFIP Networking) 2022 Jun 13 (pp. 1-9). IEEE.	B	4	8	0.66
Mogyorósi F, Pašić A. Disaster-Resilient Network Upgrade. In2022 International Conference on Optical Network Design and Modeling (ONDM) 2022 May 16 (pp. 1-6). IEEE.	D	1	8	0.16
Atta AF, Cousin B, Adépo JC, Oumtanaga S. Light-tree reconfiguration without flow interruption in sparse	D	1	8	0.16

wavelength converter network. International journal of communication networks and distributed systems. 2022;28(1):1-26.				
Atta AF. *Reconfiguration du Routage Multicast dans les Réseaux Optiques WDM ayant la Propriété de Conversion Partielle de Longueur d'onde* (Doctoral dissertation, Institut National Polytechnique Félix Houphouët Boigny de Yamoussoukro (Côte d'Ivoire)).	D	1	8	0.16
Oostenbrink J. A Data-Driven Approach to Disaster Resilience in Communication Networks. 2023	D	1	8	0.16
Mogyorósi F, Revisnyei P, Pašić A. Modeling and upgrade of disaster-resilient interdependent networks using machine learning. Optical Switching and Networking. 2025 Jan 1;55:100791.	C	2	8	0.33
				Punctaj sum articol: 9.0
				Punctaj articol A*+A+B: 8

A. Pašić, R. Girão-Silva, B. Vass, T. Gomes, and P. Babarczi, "FRADIR: A Novel Framework for Disaster Resilience", IEEE Int. Workshop on Resilient Networks Design and Modeling (RNDM), Longyearbyen (Svalbard), Norway, 2018.				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
Rak J, Girao-Silva R, Gomes T, Ellinas G, Kantarci B, Tornatore M. Disaster resilience of optical networks: State of the art, challenges, and opportunities. Optical Switching and Networking. 2021 Nov 1;42:100619.	B	4	5	1.33
Liu Y, Zhou F, Chen C, Zhu Z, Shang T, Torres-Moreno JM. Disaster protection in inter-datacenter networks leveraging cooperative storage. IEEE Transactions on Network and Service Management. 2021 Jun 17;18(3):2598-611.	A	8	5	2.66
Sun P, He Z, Kooij RE, Van Mieghem P. Topological approach to measure the recoverability of optical networks. Optical Switching and Networking. 2021 Sep 1;41:100617.	D	1	5	0.33
He Z, Sun P, Van Mieghem P. Topological approach to measure network recoverability. In2019 11th international workshop on resilient networks design and modeling (RNDM) 2019 Oct 14 (pp. 1-7). IEEE.	D	1	5	0.33
Goścień R. On the efficient design of network resilient to electro-magnetic pulse attack—elastic optical network case study. Computer Communications. 2021 Nov 1;179:272-84.	B	4	5	1.33
Pašić L, Pašić A, Mogyorósi F, Pašić A. FRADIR meets availability. In2020 16th International Conference on the Design of Reliable Communication Networks DRCN	D	1	5	0.33

2020 2020 Mar 25 (pp. 1-6). IEEE.				
Mogyorósi F, Pašić A. Disaster-Resilient Network Upgrade. In2022 International Conference on Optical Network Design and Modeling (ONDM) 2022 May 16 (pp. 1-6). IEEE.	D	1	5	0.33
Girão-Silva R, Martins L, Gomes T, Tipper D, Alashaikh A. Heuristic approach for the design of a high availability structure. In2019 15th International Conference on the Design of Reliable Communication Networks (DRCN) 2019 Mar 19 (pp. 29-36). IEEE.	D	1	5	0.33
Liu Y. *Enhancing survivability for elastic optical inter-DataCenter networks* (Doctoral dissertation, Université d'Avignon).	D	1	5	0.33
Boettcher NA, Prieto Y, Pezoa JE. Micro Failure Region Models Inducing Massive Correlated Failures on Networks Topologies. InInformation Technology in Disaster Risk Reduction: Third IFIP TC 5 DCITDRR International Conference, ITDRR 2018, Held at the 24th IFIP World Computer Congress, WCC 2018, Poznan, Poland, September 20–21, 2018, Revised Selected Papers 3 2019 (pp. 130-141). Springer International Publishing.	D	1	5	0.33
Haim RB, Rottenstreich O. Low-Latency and Reliable Virtual Network Function Placement in Edge Clouds. IEEE Transactions on Network and Service Management. 2023 Jul 24.	B	4	5	1.33
Mogyorósi F, Revisnyei P, Pašić A. Modeling and upgrade of disaster-resilient interdependent networks using machine learning. Optical Switching and Networking. 2025 Jan 1;55:100791.	C	2	5	0.66
				Punctaj sum articol: 9.66
				Punctaj articol A*+A+B: 6.66

B. Vass, L. Németh, A. de Sousa, M. Zachariasen and J. Tapolcai, “Vulnerable Regions of Networks on Sphere”, IEEE Int. Workshop on Resilient Networks Design and Modeling (RNDM), Longyearbyen (Svalbard), Norway, 2018.				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
Tomassilli A, Di Lena G, Giroire F, Tahiri I, Saucez D, Pérennes S, Turletti T, Sadykov R, Vanderbeck F, Lac C. Design of robust programmable networks with bandwidth-optimal failure recovery scheme. Computer Networks. 2021 Jun 19;192:108043.	A	8	5	2.66
Di Lena G. *Distributed and trustable SDN-NFV-enabled network emulation on testbeds and cloud infrastructures* (Doctoral dissertation, Université Côte d'Azur).	D	1	5	0.33

Punctaj sum articol: 3	
Punctaj articol A*+A+B: 2.66	

J. Tapolcai, B. Vass, Z. Heszberger, J. Biró, D. Hay, F. A. Kuipers, and L. Rónyai, "A Tractable Stochastic Model of Correlated Link Failures Caused by Disasters", in Proc. IEEE INFOCOM, Honolulu, HI, USA, 2018.				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
Rak J, Girao-Silva R, Gomes T, Ellinas G, Kantarci B, Tornatore M. Disaster resilience of optical networks: State of the art, challenges, and opportunities. Optical Switching and Networking. 2021 Nov 1;42:100619.	B	4	7	0.8
Foerster KT, Pignolet YA, Schmid S, Tredan G. CASA: congestion and stretch aware static fast rerouting. InIEEE INFOCOM 2019-IEEE Conference on Computer Communications 2019 Apr 29 (pp. 469-477). IEEE.	A*	12	7	2.4
Foerster KT, Kamisiński A, Pignolet YA, Schmid S, Tredan G. Improved fast rerouting using postprocessing. IEEE Transactions on Dependable and Secure Computing. 2020 May 27;19(1):537-50.	A*	12	7	2.4
Foerster KT, Kamisinski A, Pignolet YA, Schmid S, Trédan G. Bonsai: Efficient fast failover routing using small arborescences. In2019 49th Annual IEEE/IFIP International Conference on Dependable Systems and Networks (DSN) 2019 Jun 24 (pp. 276-288). IEEE.	D	1	7	0.2
Haque I, Moyeen MA. Revive: A reliable software defined data plane failure recovery scheme. In2018 14th International Conference on Network and Service Management (CNSM) 2018 Nov 5 (pp. 268-274). IEEE.	B	4	7	0.8
Borokhovich M, Pignolet YA, Schmid S, Tredan G. Load-optimal local fast rerouting for dense networks. IEEE/ACM Transactions on Networking. 2018 Sep 28;26(6):2583-97.	A	8	7	1.6
Bankhamer G, Elsässer R, Schmid S. Local fast rerouting with low congestion: A randomized approach. IEEE/ACM Transactions on Networking. 2022 May 25;30(6):2403-18.	A	8	7	1.6
Zhu H, Qiu H, Zhu J, Chen D. SMSEI-SDN: A suppression method of security incident impact for the inter-domain routing system based on software-defined networking. Wireless Communications and Mobile Computing. 2021 May 17;2021:1-6.	D	1	7	0.2
Onaka R, Nakamura K, Inoue T, Nishino M, Yasuda N, Sakaue S. Exact and Scalable Network Reliability Evaluation for Probabilistic Correlated Failures. InGLOBECOM 2022-2022 IEEE Global	B	4	7	0.8

Communications Conference 2022 Dec 4 (pp. 5547-5552). IEEE.				
Oostenbrink J, Kuipers F. A Global Study of the Risk of Earthquakes to IXPs. In2022 IFIP Networking Conference (IFIP Networking) 2022 Jun 13 (pp. 1-9). IEEE.	B	4	7	0.8
Mogyorósi F, Pašić A. Disaster-Resilient Network Upgrade. In2022 International Conference on Optical Network Design and Modeling (ONDM) 2022 May 16 (pp. 1-6). IEEE.	D	1	7	0.2
Oostenbrink J. A Data-Driven Approach to Disaster Resilience in Communication Networks. 2023	D	1	7	0.2
RB Haim, O Rottenstreich. Low-Latency and Reliable Virtual Network Function Placement in Edge Clouds. IEEE TNSM	B	4	7	0.8
Yan C, Sun N, Li T, Qin Z, Hu A. SDN Path Recovery Scheme Using Bionic-Based Self-Healing Mechanism. In2023 8th International Conference on Signal and Image Processing (ICSIP) 2023 Jul 8 (pp. 1045-1049). IEEE.	C	2	7	0.4
Christou F. Availability estimation of optical network links using a Bayesian model. Journal of Optical Communications and Networking. 2024 May 1;16(5):B1-5.	A	8	7	1.6
Netes V, Sharov V. Common Cause Failures in Communication Networks. In2024 Systems of Signals Generating and Processing in the Field of on Board Communications 2024 Mar 12 (pp. 1-7). IEEE.	D	1	7	0.2
				Punctaj sum articol: 15.0
				Punctaj articol A*+A+B: 13.8

B. Vass, E. Bérczi-Kovács, and J. Tapolcai, “Enumerating Shared Risk Link Groups of Circular Disk Failures Hitting *k* nodes”, in Proc. International Workshop on Design Of Reliable Communication Networks (DRCN), Munich, Germany, 2017.			
Articol care citează	**Categorie**	**Nr. autori articol citat**	**Punctaj**
Girão-Silva R, Nedic B, Gunkel M, Gomes T. Shared Risk Link Group disjointness and geodiverse routing: A trade-off between benefit and practical effort. Networks. 2020 Jun;75(4):374-91.	C 2	3	2
Nedic B, Gunkel M, Gomes T, Girão-Silva R. SRLG-disjointness and geodiverse routing–a practical network study and operational conclusions. In2018 10th International Workshop on Resilient Networks Design and Modeling (RNDM) 2018 Aug 27 (pp. 1-8). IEEE.	D 1	3	1

Oostenbrink J. A Data-Driven Approach to Disaster Resilience in Communication Networks. 2023	D	1	3	1
				Punctaj sum articol: 4
				Punctaj articol A*+A+B: 0

J. Tapolcai, L. Rónyai, B. Vass, and L. Gyimóthi, “List of Shared Risk Link Groups Representing Regional Failures with Limited Size”, in Proc. IEEE INFOCOM, Atlanta, GA, USA, 2017				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
Foerster KT, Kamisinski A, Pignolet YA, Schmid S, Trédan G. Bonsai: Efficient fast failover routing using small arborescences. In2019 49th Annual IEEE/IFIP International Conference on Dependable Systems and Networks (DSN) 2019 Jun 24 (pp. 276-288). IEEE.	A	8	4	4
Girão-Silva R, Nedic B, Gunkel M, Gomes T. Shared Risk Link Group disjointness and geodiverse routing: A trade-off between benefit and practical effort. Networks. 2020 Jun;75(4):374-91.	B	4	4	2
Gomes T, Jorge L, Girão-Silva R, Yallouz J, Babarczi P, Rak J. Fundamental schemes to determine disjoint paths for multiple failure scenarios. Guide to Disaster-Resilient Communication Networks. 2020:429-53.	B	4	4	2
Balasubramanian V, Aloqaily M, Reisslein M. Fed-TSN: Joint Failure Probability based Federated Learning for Fault-Tolerant Time-Sensitive Networks. IEEE Transactions on Network and Service Management. 2023 May 5.	A	8	4	4
Schweiger O, Foerster KT, Schmid S. Improving the resilience of fast failover routing: TREE (tree routing to extend edge disjoint paths). InProceedings of the Symposium on Architectures for Networking and Communications Systems 2021 Dec 13 (pp. 1-7).	D	1	4	0.5
Honda H, Saito H. Nation-wide disaster avoidance control against heavy rain. IEEE/ACM Transactions on Networking. 2019 Apr 25;27(3):1084-97.	A	8	4	4
Goścień R. On the efficient design of network resilient to electro-magnetic pulse attack—elastic optical network case study. Computer Communications. 2021 Nov 1;179:272-84.	B	4	4	2
Barbosa F, de Sousa A, Agra A. Provision of maximum connectivity resiliency with minimum cost to telecommunication networks through third-party networks. Networks. 2023.	B	4	4	2

Nedic B, Gunkel M, Gomes T, Girão-Silva R. SRLG-disjointness and geodiverse routing–a practical network study and operational conclusions. In2018 10th International Workshop on Resilient Networks Design and Modeling (RNDM) 2018 Aug 27 (pp. 1-8). IEEE.	D	1	4	0.5
Rui L, Chen X, Gao Z, Qiu X. MLPRA: An MCDS and Link-Priority-Based Network Repair Algorithm for Smart Grid. IEEE Transactions on Industrial Informatics. 2020 Jul 28;17(7):4882-91.	A	8	4	4
de Sousa A. Improving the connectivity resilience of a telecommunications network to multiple link failures through a third-party network. In2020 16th International Conference on the Design of Reliable Communication Networks DRCN 2020 2020 Mar 25 (pp. 1-6). IEEE.	D	1	4	0.5
Almeida L, Gomes T, Antunes CH. Optimization of PMU location and communications in a power grid. In2019 11th International Workshop on Resilient Networks Design and Modeling (RNDM) 2019 Oct 14 (pp. 1-7). IEEE.	D	1	4	0.5
Balasubramanian V. Building Intelligent Network Control Plane. Arizona State University; 2022.	D	1	4	0.5
N Boettcher Palma - 2022 - Universidad de Concepción. Maximizing reliability of data networks to face multiple failures via optimal route selection	D	1	4	0.5
RB Haim, O Rottenstreich. Low-Latency and Reliable Virtual Network Function Placement in Edge Clouds. IEEE TNSM	B	4	4	2
Li Y, Zhang D, Wang Z, Yang H, Yu T, Yao Q, Liu S, Wang D, Zhao Y, Li H, Deng C. Field trial of concurrent co-cable and co-trench optical fiber online identification based on ensemble learning. Optics Express. 2023 Dec 18;31(26):42850-65.	A	8	4	4
Zhang Z. Causal failures and cost-effective edge augmentation in networks. 2022	D	1	4	0.5
Oostenbrink J. A Data-Driven Approach to Disaster Resilience in Communication Networks. 2023	D	1	4	0.5
Wan Y, Feng C, Wu K, Wang J. RZDD: Risk Zone-Diversified Network Design for Disaster Resilience. IEEE Transactions on Dependable and Secure Computing. 2024 May 29.	A	8	4	4
				Punctaj sum articol: 42
				Punctaj articol A*+A+B: 38

B. Vass, E. Bérczi-Kovács, and J. Tapolcai, “Enumerating Circular Disk Failures Covering a Single Node”, in Int. Workshop on Resilient Networks Design and Modeling (RNDM), Halmstad, Sweden, 2016.

Articol care citează	Categorie		Nr. autori articol citat	Punctaj
-				

B. Vass, E. Bérczi-Kovács, and J. Tapolcai, “Shared Risk Link Group Enumeration of Node Excluding Disaster Failures”, in Int. Conference on Networking and Network Applications (NaNA), Hakodate (Hokkaido), Japan, 2016. Winner of Best Paper Award.				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
-				

B. Vass, “Shared Risk Link Groups of Disaster Failures”, in IEEE Conference on Computer Communications Workshop, 2016.				
Articol care citează	**Categorie**		**Nr. autori articol citat**	**Punctaj**
-				

TOTAL PERSPECTIVA c): 333.58
A*+A+B:293.66

Fișa de verificare

Nume, prenume: Vass Balázs
Perspectiva d) Performanța academică
TOTAL PERSPECTIVA d) 78.4

i) Carti de autor/editate si capitole publicate in edituri (conform clasamentului SENSE)

Titlu	**Categorie**		**Nr. autori**	**Punctaj**
B. Vass, “Regional Failure Events in Communication Networks: Models, Algorithms and Applications”, Springer, 2022	carte B	8	1	8
B. Vass, J. Tapolcai, D. Hay, J. Oostenbrink, F. A. Kuipers, “How to Model and Enumerate Geographically Correlated Failure Events in Communication Networks”, in Guide to Disaster-Resilient Communication Networks, Springer, 2020	capitol B	4	5	1.33
T. Gomes, L. Martins, R. Girao-Silva, D. Tipper, A. Pašić, **B. Vass**, L. Garrote, U. Nunes, M. Zachariasen, J. Rak, “Enhancing Availability for Critical Services”, in Guide to Disaster-Resilient Communication Networks, Springer, 2020	capitol B	4	9	0.57
T. Gomes, D. Santos, R. Girão-Silva, L. Martins, B. Nedic, M. Gunkel, F. Dikbiyik, **B. Vass**, J. Tapolcai, J. Rak, “Disaster-Resilient Routing Schemes for Regional Failures”, in Guide to Disaster-Resilient Communication Networks, Springer, 2020	capitol B	4	10	0.4
				Total i): 10.40

ii) Editor proceedings la conferinte

iii) Publicarea unui curs universitar in format electronic

iv) Director/editor al unei reviste

v) Director (coordonator/responsabil) | membru al unui grant/proiect/contract/program de cercetare national/international

Nr.	Titlu	Valoare	Calitate	Punctaj
1	Proiect de tip Tinere Echipe, cod proiect. PN-IV-P2-2.1-TE-2023-1977, Denumirea proiectului: Algoritmi scalabili de tip multipath routing pentru rețele de comunicații rezistente la catastrofe	RON 500.000, sau echivalent EUR 100.000	director	6
2	Marie Skłodowska-Curie Actions (MSCA) Postdoctoral Fellowship project, Quality of Service enhancement with Resilient routing and Machine learning (QoSeRM), grant agreement No. 101155116, Horizon Europe, 2024-2026	EUR 149.575,68	director	6
3	Beneficiar al Noului Program Național de Excelență (ÚNKP) 2022 bursă națională maghiară dedicată tinerilor cercetători excelenți. Tema: Încorporarea programelor în hardware switch-uri reconfigurabile.	HUF 2.4 milion, sau cca. EUR 6000	director	2
4	Beneficiar al Noului Program Național de Excelență (ÚNKP) 2022 bursă națională maghiară dedicată tinerilor cercetători excelenți. Tema: Rutare rezilientă.	HUF 2.4 milion, sau cca. EUR 6000	director	2
5	Beneficiar al Noului Program Național de Excelență (ÚNKP) 2021. Tema: Programare pachetelor de date.	HUF 2.4 milion, sau cca. EUR 6000	director	2
6	ELKH-BME Information Systems Research Group (finance period 2022-2027, director: Miklós Telek, BME) http://webspn.hit.bme.hu/~telek/kutcsop/index_en.html	pentru 5 ani, anual cca. HUF 35 milion, sau cca. EUR 90000	membru	4
7	OTKA no. ANN135606 (director: Gábor Rétvári, BME) http://nyilvanos.otka-palyazat.hu/index.php?menuid=930&num=135606	HUF 48 million, sau cca. EUR 120000	membru	3
8	OTKA no. K128062 (director: János Tapolcai, BME) http://nyilvanos.otka-palyazat.hu/index.php?menuid=930&num=128062	cca. HUF 48 million, sau cca. EUR 120000	membru	3
9	OTKA no. K108947 (director: András Recski, BME) http://nyilvanos.otka-palyazat.hu/index.php?menuid=930&num=108947	cca. HUF 27 million, sau cca. EUR 77000	membru	2
10	MTA-BME Future Internet Lendület Research Group (director: János	cca. HUF 100 million, sau	membru	4

	Tapolcai, BME) http://lendulet.tmit.bme.hu/	cca. EUR 285000		
				Total v): 34

vi) Membru in comitetul stiintific (de program) al unor conferinte, simpozioane, workshop-uri

Nr.	Titlu	Categorie	Punctaj
1	IEEE International Conference on Computer Communications (INFOCOM) 2023 https://infocom2023.ieee-infocom.org/committees/tpc-members	A*	6
2	IEEE International Conference on Computer Communications (INFOCOM) 2024 https://infocom2024.ieee-infocom.org/committees/technical-program-committee	A*	6
3	IEEE International Conference on Computer Communications (INFOCOM) 2025 https://infocom2025.ieee-infocom.org/committees/technical-program-committee	A*	6
			Total vi): 18

vii) Organizare evenimente stiintifice/ scoli de vara

viii) Keynote/invited speaker/profesor la evenimente/universitati

Nr.	Titlu	Categorie	Punctaj
	Training School on Design of Disaster-resilient Communication Networks în Bruxelles, Belgia (Premises of COST Association), 2019 http://cost-recodis.eu/index.php/training-school Prezentație: How to Model and Enumerate Geographically Correlated Failure Events in Communication Networks http://cost-recodis.eu/images/Files/Training_School/Session-1-course-1---PSRLGs.pdf	D	1
	Training School on Design of Disaster-resilient Communication Networks în Bruxelles, Belgia (Premises of COST Association), 2019 Prezentație: A Framework for Disaster Resilience http://cost-recodis.eu/images/Files/Training_School/Session-2-course-3---FRADIR.pdf	D	1
	Ericsson University Conference 2021	D	1

	https://www.inf.elte.hu/content/ericsson-university-conference.e.1052 Prezentație: Compiling packet programs to reconficurable switches: theory and algorithms		
			Total viii): 3

ix) Profesor/cercetator asociat/visiting

Nr.	**Vizită**	**Categorie univarsitate**	**Punctaj**
1.	EIT Digital geographical mobility, Universitatea Politehnică din București, România, în vizită la Costin Raiciu (donatar ERC), 2019 aprilie-iunie, **3 luni**	în afara top 500	3
2.	EIT Digital geographical mobility, Universitatea Ebraică din Ierusalem (HUJI), Israel, în vizită la David Hay, martie 2019, **1 lună**	top 500	2
3.	EIT Digital geographical mobility, Universitatea din Viena, Austria, în vizită la Stefan Schmid (donatar ERC), ianuarie/februarie 2019, **2 luni**	top 200	8
			Total ix): 13

x) Consolidarea de echipe de cercetare

xi) Membru in comisii de evaluare a tezelor de doctorat

xii) Membru in comisii de indrumare a doctoranzilor

xiii) Brevete si inventii active

xiv) Dezvoltarea de pachete si instrumente software, dezvoltarea de resurse si colectii de date de larga utilitate

xv) Pozitii de conducere in organizatii profesionale

xvi) Premii si alte merite

TOTAL PERSPECTICA d): 78.40