

# Lista lucrări

Balázs Vass

## Cele maximum 10 cele mai relevante lucrări

- [J6] **B. Vass**, E. 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
- [B4] **B. Vass**, “Regional Failure Events in Communication Networks: Models, Algorithms and Applications”, Springer, 2022
- [C16] **B. Vass**, Cs. Sarkadi, G. Rétvári, “Programmable Packet Scheduling With SP-PIFO: Theory, Algorithms and Evaluation”, in *Proc. IEEE INFOCOM Workshops*, London, UK, 2022
- [J3] **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
- [J4] A. Pašić, R. Girão-Silva, F. Mogyorósi, **B. Vass**, T. Gomes, P. Babarçzi, P. Revisnyei, J. Tapolcai, J. Rak “eFRADIR: An Enhanced FRAMework for DISaster Resilience”, *IEEE Access*, 2021
- [J2] 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
- [C13] **B. Vass**, E. Bérczi-Kovács, C. Raiciu, G. Rétvári, “Compiling Packet Programs to Reconfigurable Switches: Theory and Algorithms”, *P4 Workshop in Europe (EuroP4 '20)*, Barcelona, Spain, 2020
- [C12] 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
- [J1] **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

- [C1] **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.

#### **Teza de doctorat**

- [T1] **B. Vass**, “Modeling and Enumerating Geographically Correlated Failure Events in Communication Networks”, BME, Budapest, Hungary

#### **Brevete de invenție și alte titluri de proprietate industrială**

#### **Cărți și capitole de cărți**

- [B4] **B. Vass**, “Regional Failure Events in Communication Networks: Models, Algorithms and Applications”, Springer, 2022
- [B3] **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
- [B2] T. Gomes, L. Martins, R. Girao-Silva, D. Tipper, A. Pašić, **B. Vass**, L. Garrote, U. Nunes, M. Zachariassen, J. Rak, “Enhancing Availability for Critical Services”, in Guide to Disaster-Resilient Communication Networks, Springer, 2020
- [B1] 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

#### **Articole/studii, publicate în reviste din fluxul științific internațional principal**

- [J6] **B. Vass**, E. 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
- [J5] **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
- [J4] 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

- [J3] **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
- [J2] 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
- [J1] **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

**Publicații in extenso, apărute în lucrări ale principalelor conferințe internaționale de specialitate**

- [C19] **B. Vass**, Á. Fraknoi, E. Bérczi-Kovács, G. Rétvári, ”Compiling packet programs to dRMT switches: theory and algorithms”, P4 Workshop in Europe (EuroP4 '22), Rome, Italy, 2022
- [C18] **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)*, Compiègne, France, 2022.
- [C17] **B. Vass**, Cs. Sarkadi, G. Rétvári, “Programmable Packet Scheduling With SP-PIFO: Theory, Algorithms and Evaluation”, in *Proc. IEEE INFOCOM Workshops*, London, UK, 2022
- [C16] **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
- [C15] **B. Vass**, J. Tapolcai, ”Essence of Geographically Correlated Failure Events in Communication Networks”, *IEEE Symposium on Network Operations and Management*, Budapest, Hungary, 2022
- [C14] **B. Vass**, E. Bérczi-Kovács, C. Raiciu, G. Rétvári, ”Compiling Packet Programs to Reconfigurable Switches: Theory and Algorithms”, P4 Workshop in Europe (EuroP4 '20), Barcelona, Spain, 2020
- [C13] 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
- [C12] 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

- [C11] 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
- [C10] A. Pašić, R. Girao-Silva, **B. Vass**, T. Gomes, F. Mogyorósi, P. Babarczy, J. Tapolcai, “FRADIR-II: An Improved Framework for Disaster Resilience”, IEEE Int. Workshop on Resilient Networks Design and Modeling (RNDM), Nicosia, Cyprus, 2019
- [C9] 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
- [C8] **B. Vass**, L. Németh, A. de Sousa, M. Zachariassen and J. Tapolcai, “Vulnerable Regions of Networks on Sphere”, IEEE Int. Workshop on Resilient Networks Design and Modeling (RNDM), Longyearbyen (Svalbard), Norway, 2018.
- [C7] A. Pašić, R. Girão-Silva, **B. Vass**, T. Gomes, and P. Babarczy, “FRADIR: A Novel Framework for Disaster Resilience”, IEEE Int. Workshop on Resilient Networks Design and Modeling (RNDM), Longyearbyen (Svalbard), Norway, 2018.
- [C6] 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.
- [C5] 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
- [C4] **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.
- [C3] **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.
- [C2] **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.
- [C1] **B. Vass**, “Shared Risk Link Groups of Disaster Failures”, in IEEE Conference on Computer Communications Workshop, 2016.

**Alte lucrări și contribuții științifice sau, după caz, din domeniul creației artistice**