

LISTA DE LUCRĂRI PUBLICATE

Lista celor maximum 10 lucrari relevante pentru realizarile profesionale ale candidatului. Pentru ocuparea postului de profesor universitar se vor specifica lucrarile realizate dupa dobandirea atestatului de abilitare.

1. Văcăreanu, R., Radulian, M., Iancovici, M., **Pavel, F.**, Neagu, C. Fore-arc and back-arc ground motion prediction model for Vrancea intermediate depth seismic source. *Journal of Earthquake Engineering*, DOI:10.1080/13632469.2014.990653, 2015.
2. **Pavel, F.**, Văcăreanu, R., Douglas, J., Radulian, M., Cioflan, C.O., Bărbat, A. An updated probabilistic seismic hazard assessment for Romania and comparison with the approach and outcomes of the SHARE project. *Pure and Applied Geophysics*, 173(6): 1881-1905, DOI 10.1007/s00024-015-1223-6, 2016.
3. **Pavel, F.**, Văcăreanu, R. Spatial correlation of ground motions from Vrancea (Romania) intermediate-depth earthquakes. *Bulletin of the Seismological Society of America*, 107(1): 489-494, DOI: 10.1785/0120160095, 2017.
4. **Pavel, F.**, Văcăreanu, R., Calotescu, I., Săndulescu, A.M. Assessment of seismic risk scenarios for Bucharest, Romania. *Natural Hazards*, 93(S1): 25-37, DOI: 10.1007/s11069-017-2991-3, 2018.
5. Văcăreanu, R., **Pavel, F.**, Crăciun, I., Colibă, V., Arion, C., Aldea, A., Neagu, C. Risk-targeted maps for Romania. *Journal of Seismology*, 22(2): 407-417, DOI: 10.1007/s10950-017-9713-x, 2018.
6. **Pavel, F.**, Carale, G. Seismic assessment for typical soft-storey reinforced concrete structures in Bucharest, Romania. *International Journal of Disaster Risk Reduction*, 41, 101332, DOI: 10.1016/j.ijdr.2019.101332, 2019.
7. **Pavel, F.**, Văcăreanu, R., Pitilakis, K., Anastasiadis, A. Investigation on site-specific seismic response analysis for Bucharest (Romania). *Bulletin of Earthquake Engineering*, DOI: 10.1007/s10518-020-00789-0, 2020.
8. **Pavel, F.**, Văcăreanu, R., Scupin, A. Seismic fragility assessment for post-1977 high-rise reinforced concrete structures in Romania. *Bulletin of Earthquake Engineering*, 19:6521-6544, DOI: 10.1007/s10518-020-01014-8, 2021.
9. **Pavel, F.**, Văcăreanu, R., Arion, C., Aldea, A., Scupin, A. Seismic risk assessment of lifelines in Bucharest. *International Journal of Disaster Risk Reduction*, 66, 102629, DOI: 10.1016/j.ijdr.2021.102629, 2021.
10. **Pavel, F.**, Crowley, H., Romão, X. et al. Evolution of national codes for the design of RC structures in Romania. *Bulletin of Earthquake Engineering*, 22, 911-949 DOI: 10.1007/s10518-023-01791-y, 2024.

A. Teza sau tezele de doctorat

A1 Teza de doctorat "Efectele intensității și conținutului de frecvențe ale mișcărilor

seismice asupra răspunsului dinamic neliniar al structurilor", UTCB, 2012.

B. Brevete de invenție și alte titluri de proprietate intelectuală ;

C. Carti și capitole din carti

- C1 Văcăreanu, R., **Pavel, F.**, Aldea, A. *Îndrumător pentru evaluarea acțiunii vântului asupra construcțiilor conform CR 1-1-4/2012*. Conspress, București, 2013.
- C2 Văcăreanu, R., **Pavel, F.**, Aldea, A., Arion, C., Neagu, C. *Elemente de analiză a hazardului seismic*. Conspress, București, 2015.
- C3 Văcăreanu, R., Aldea, A., Lungu, D., **Pavel, F.**, Neagu, C., Arion, C., Demetriu, S., Iancovici, M. *Probabilistic seismic hazard assessment for Romania*. În: D'Amico, S. (ed.) *Earthquakes and their impact on modern society*. Springer, pp. 137-169, 2016.
- C4 **Pavel, F.**, Văcăreanu, R. *Elemente generale de hazard și risc seismic*. MatrixRom, București, 2017.
- C5 **Pavel, F.**, Popa, V., Văcăreanu, R. *Impact of long-period ground motions on structural design: a case study for Bucharest, Romania*. Springer International Publishing, 2018, DOI: 10.1007/978-3-319-73402-6.
- C6 **Pavel, F.**, Văcăreanu, R. *Applications of probabilistic methods in structural reliability and risk assessment*. Conspress, București, 2018.
- C7 Pricopie, A., **Pavel, F.**, Noroozinejad Farsangi, E. *Probabilistic performance analysis of modern RC frame structures subjected to earthquake loading*. În: Noroozinejad Farsangi, E. et al. (eds.) *Reliability-Based Analysis and Design of Structures and Infrastructure*. CRC Press, pp. 227-244, 2021.
- C8 **Pavel, F.**, Savu, A. (2022) *Handbook of design examples for reinforced concrete and prestressed concrete elements according to Eurocode 2 and FIB Model Code 2010 (2nd edition)*. MatrixRom, București, ISBN 978-606-25-0723-7
- C9 **Pavel, F.**, Ioan, P. (2024) *Evaluarea riscului seismic pentru clădirile rezidențiale din București construite înainte de 1990*. Ed. Noua, ISBN: 978-606-596-171-5,

D. Articole / studii în extenso, publicate în reviste din fluxul științific internațional principal

- D1 **Pavel, F.** Strength and displacement demands of seismic ground motions. *Mathematical Modelling in Civil Engineering*, 1-2: 249 – 258, 2011.
- D2 **Pavel, F.** Effects of masonry infills on seismic response of RC frames. *Mathematical Modelling in Civil Engineering*, 4: 198 – 207, 2011.
- D3 **Pavel, F.** Influența parametrilor de intensitate și conținut de frecvență ai mișcărilor seismice asupra răspunsului structurilor de beton armat. *Buletinul Științific al UTCB*, 2: 41 – 47, 2012.
- D4 **Pavel, F.** Scaling of strong ground motions. *Mathematical Modelling in Civil Engineering*, 3: 47 – 55, 2012.

- D5 **Pavel, F.**, Lungu, D. Correlations between frequency content indicators of strong ground motions and PGV. *Journal of Earthquake Engineering*, 17(4): 543-559, 2013.
- D6 **Pavel, F.**, Văcăreanu, R., Aldea, A., Arion, C. Source effects on the spectral characteristics of ground motions recorded in Bucharest area during Vrancea earthquakes of 1986 and 1990. *Journal of Earthquake Engineering*, 17(8): 1192-1211, 2013.
- D7 Văcăreanu, R., **Pavel, F.**, Aldea, A. On the selection of GMPEs for Vrancea subcrustal seismic source. *Bulletin of Earthquake Engineering*, 11(6): 1867-1884, 2013.
- D8 **Pavel, F.**, Văcăreanu, R., Lungu, D. Bi-normalized response spectra for various frequency content ground motions. *Journal of Earthquake Engineering*, 18(2): 264-289, 2014.
- D9 **Pavel, F.**, Văcăreanu, R., Arion, C., Neagu, C. On the variability of strong ground motions recorded from Vrancea earthquakes. *Earthquakes and Structures*, 6(1): 1-18, 2014.
- D10 Văcăreanu, R., Demetriu, S., Lungu, D., **Pavel, F.**, Arion, C., Iancovici, M., Aldea, A., Neagu, C. Empirical ground motion model for Vrancea intermediate-depth seismic source. *Earthquakes and Structures*, 6(2): 141-161, 2014.
- D11 **Pavel, F.**, Văcăreanu, R., Neagu, C., Pricopie, A. Bi-normalized response spectra and seismic intensity for Bucharest. *Earthquake Engineering and Engineering Vibration*, 13(1): 125-135, 2014.
- D12 Văcăreanu, R., Mărmureanu, G., **Pavel, F.**, Neagu, C., Ortanza, C.O., Aldea, A. Analysis of soil factor S using strong ground motions from Vrancea subcrustal seismic source. *Romanian Reports in Physics*, 66(3): 893-906, 2014.
- D13 Văcăreanu, R., Iancovici, M., **Pavel, F.** Conditional mean spectrum for Bucharest. *Earthquakes and Structures*, 7(2): 141-157, 2014.
- D14 **Pavel, F.**, Văcăreanu, R., Ionescu, C., Iancovici, M., Șercăianu, M. Investigation of the variability of strong ground motions from Vrancea earthquakes. *Natural Hazards*, 74(3): 1707-1728, 2014.
- D15 **Pavel, F.**, Văcăreanu, R., Cioflan C.O., Iancovici, M. Spectral characteristics of strong ground motions from intermediate-depth Vrancea seismic source. *Bulletin of the Seismological Society of America*, 104(6): 2842-2850, 2014.
- D16 Văcăreanu, R., Radulian, M., Iancovici, M., **Pavel, F.**, Neagu, C. Fore-arc and back-arc ground motion prediction model for Vrancea intermediate depth seismic source. *Journal of Earthquake Engineering*, 19(3): 535-562, 2015.
- D17 **Pavel, F.** Investigation on the stochastic simulation of strong ground motions for Bucharest area. *Soil Dynamics and Earthquake Engineering*, 69: 227-232, 2015
- D18 **Pavel, F.**, Văcăreanu, R. Kappa and regional attenuation for Vrancea (Romania) earthquakes. *Journal of Seismology*, 19(3): 791-799, 2015.
- D19 **Pavel, F.**, Văcăreanu, R. Assessment of the ground motion levels for the Vrancea (Romania) November 1940 earthquake. *Natural Hazards*, 78(2): 1469-1480, 2015.
- D20 **Pavel, F.**, Pricopie, A. Prediction of engineering demand parameters for RC wall structures. *Structural Engineering and Mechanics*, 54(4): 741-754, 2015.

- D21 Văcăreanu, R., Iancovici, M., Neagu, C., **Pavel, F.** Macro seismic intensity prediction equations for Vrancea intermediate-depth seismic source. *Natural Hazards*, 79(3): 2005-2031, 2015.
- D22 **Pavel, F.**, Văcăreanu, R., Radulian, M., Cioflan, C.O. Investigation on directional effects of Vrancea subcrustal earthquakes. *Earthquake Engineering and Engineering Vibration*, 14(3): 399-410, 2015.
- D23 **Pavel, F.**, Văcăreanu, R. Investigation on site conditions for seismic stations in Romania using H/V spectral ratio. *Earthquakes and Structures*, 9(5): 983-997, 2015.
- D24 Văcăreanu, R., **Pavel, F.**, Aldea, A., Arion, C., Neagu, C. Noi perspective si rezultate ale analizei probabilistice de hazard seismic pentru Romania - partea I. *AICPS Review*, 3: 3-19, 2015.
- D25 **Pavel, F.**, Văcăreanu, R., Douglas, J., Radulian, M., Cioflan, C.O., Bărbat, A. An updated probabilistic seismic hazard assessment for Romania and comparison with the approach and outcomes of the SHARE project. *Pure and Applied Geophysics*, 173(6): 1881-1905, 2016.
- D26 Nica, G.B., **Pavel, F.** Numerical analysis on the collapse of a RC frame. *Mathematical Modelling in Civil Engineering*, 12(4): 22 – 35, 2016.
- D27 **Pavel, F.**, Văcăreanu, R. Scaling of ground motions from Vrancea (Romania) earthquakes. *Earthquakes and Structures*, 11(3): 505-516, 2016.
- D28 **Pavel, F.**, Văcăreanu, R. Scenario-based earthquake risk assessment for Bucharest, Romania. *International Journal of Disaster Risk Reduction*, 20: 138-144, 2016.
- D29 **Pavel, F.**, Văcăreanu, R., Calotescu, I., Săndulescu A.M. Noi perspective si rezultate ale analizelor de hazard și risc seismic pentru municipiul București. *AICPS Review*, 4/2016: 40-50, 2016.
- D30 **Pavel, F.** Next future large earthquake in Romania: a disaster waiting to happen? *Seismological Research Letters*, 88(1): 1-3, 2017.
- D31 **Pavel, F.**, Văcăreanu, R. Spatial correlation of ground motions from Vrancea (Romania) intermediate-depth earthquakes. *Bulletin of the Seismological Society of America*, 107(1): 489-494, 2017.
- D32 **Pavel, F.**, Văcăreanu, R. Ground motion simulations for seismic stations in southern and eastern Romania and seismic hazard assessment. *Journal of Seismology*, 21(5): 1023-1037, 2017.
- D33 **Pavel, F.**, Văcăreanu, R., Calotescu, I., Săndulescu, A.M., Arion, C., Neagu, C. Impact of spatial correlation of ground motions on seismic damage for residential buildings in Bucharest, Romania. *Natural Hazards*, 87(2): 1167-1187, 2017.
- D34 **Pavel, F.**, Văcăreanu, R. Evaluation of the seismic hazard for 20 cities in Romania using Monte Carlo based simulations. *Earthquake Engineering and Engineering Vibration*, 16(3): 513-523, 2017.
- D35 Calotescu, I., **Pavel, F.**, Săndulescu, A.M., Sibișteanu, H., Văcăreanu, R. Population perspective on the social impact of a strong earthquake affecting Bucharest. *Mathematical modelling in civil engineering*, 13(3): 1-9, 2017.
- D36 **Pavel, F.**, Nica, G.B. Evaluarea performanței seismice pentru o structură în cadre de beton armat. *AICPS Review*, 3/2017: 11-18, 2017.
- D37 Văcăreanu, R., **Pavel, F.**, Arion, C., Aldea, A., Neagu, C., Popa, V., Iancovici, M. Premise pentru creșterea rezilienței seismice urbane în România. *Revista Academica*, 321-322 (7-8): 41-47, 2017.

- D38 Văcăreanu, R., **Pavel, F.**, Craciun, I., Coliba, V., Arion, C., Aldea, A., Neagu, C. Risk-targeted maps for Romania. *Journal of Seismology*, 22(2): 407-417, 2018.
- D39 **Pavel, F.**, Calotescu, I., Stănescu, D., Badiu, A. Life-cycle and seismic fragility assessment of code-conforming reinforced concrete and steel structures in Bucharest, Romania. *International Journal of Disaster Risk Science*, 9(2):263-274, 2018.
- D40 **Pavel, F.**, Văcăreanu, R. Investigation on regional attenuation of Vrancea (Romania) intermediate-depth earthquakes. *Earthquake Engineering and Engineering Vibration*, 17(3): 501-509, 2018.
- D41 Nica, G.B., Lupoae, M., **Pavel, F.**, Baci, C. Numerical analysis of RC column failure due to blast and collapse scenarios for an irregular RC-framed structure. *International Journal of Civil Engineering*, 16(9): 1125-1136, 2018.
- D42 **Pavel, F.**, Văcăreanu, R., Calotescu, I., Săndulescu, A.M. Assessment of seismic risk scenarios for Bucharest, Romania. *Natural Hazards*, 93(S1): 25-37, 2018.
- D43 **Pavel, F.** Investigation on the variability of simulated and observed ground motions for Bucharest area. *Journal of Earthquake Engineering*, 22(10): 1737-1757, 2018.
- D44 **Pavel, F.** (2018). Collapse assessment for code-conforming reinforced concrete frame structures in Romania. *Frontiers in Built Environment Earthquake Engineering*, DOI: 10.3389/fbuil.2018.00050.
- D45 **Pavel, F.** Simplified seismic collapse evaluation of code-conforming reinforced concrete structures in Bucharest, Romania. *Iranian Journal of Science and Technology, Transactions of Civil Engineering*, 43: 859-864, 2019.
- D46 **Pavel, F.**, Pricopie, A., Nica, G. Collapse assessment for a RC frame structure in Bucharest (Romania). *International Journal of Civil Engineering*, 17: 1373-1381, 2019.
- D47 **Pavel, F.**, Văcăreanu, R., Pitilakis, K. Intensity-dependent site amplification factors for Vrancea intermediate-depth earthquakes. *Bulletin of Earthquake Engineering*, 17(5): 2363-2380, 2019.
- D48 **Pavel, F.**, Nica, G. Influence of rotating strong ground motions on the response of doubly symmetrical RC wall structures in Romania and its implication on code provisions. *International Journal of Civil Engineering*, 17(7): 969-979, 2019.
- D49 **Pavel, F.**, Văcăreanu, R. Analysis of exceedance probabilities for design spectral accelerations from crustal earthquakes in Romania. *Journal of Seismology*, 23: 1327-1345, 2019.
- D50 **Pavel, F.**, Carale, G. Seismic assessment for typical soft-storey reinforced concrete structures in Bucharest, Romania. *International Journal of Disaster Risk Reduction*, 41, 101332, 2019.
- D51 **Pavel, F.**, Văcăreanu, R., Scupin, A., Arion, C. Noi perspective ale impactului cutremurelor vrâncene din 1977, 1986 și 1990 asupra fondului construit. *AICPS Review*, 3-4, 10-21, 2019.
- D52 **Pavel, F.** Investigation on the seismic fragility of in-plane loaded low- and medium-rise rectangular RC structural walls. *Asian Journal of Civil Engineering*, 21: 775-783, 2020.

- D53 **Pavel, F.**, Văcăreanu, R., Pitilakis, K., Anastasiadis, A. Investigation on site-specific seismic response analysis for Bucharest (Romania). *Bulletin of Earthquake Engineering*, 18, DOI: 10.1007/s10518-020-00789-0, 2020.
- D54 Calofir, V., Nica, G.B., **Pavel, F.** (2020) A nonlinear model to analyze the structures pounding forces during earthquakes. *Arabian Journal for Science and Engineering*, DOI: <https://doi.org/10.1007/s13369-020-04633-0>, 2020.
- D55 **Pavel, F.**, Văcăreanu, R. Assessment of the seismic performance for a low-code RC shear walls structure in Bucharest (Romania). *The Open Construction and Building Technology Journal*, 14: 111-123, 2020.
- D56 Pavel, F., Panfilii, P., Noroozinejad Farsangi, E. Estimation of displacement capacity of rectangular RC shear walls using experimental and analytical database. *The Civil Engineering Journal*, 3(2020): 399-413. DOI: 10.14311/CEJ.2020.03.0035, 2020.
- D57 **Pavel, F.** Variability of ground motion amplitudes recorded in Bucharest area during Vrancea intermediate-depth earthquakes. *Shock and Vibration*, 5189966. DOI: 10.1155/2021/5189966, 2021.
- D58 **Pavel, F.**, Văcăreanu, R. Aspecte referitoare la acțiunea seismică de proiectare în viitoarea generație de coduri. *AICPS Review*, 1: 6-20, 2021.
- D59 **Pavel, F.**, Văcăreanu, R., Arion, C., Aldea, A., Scupin, A. Seismic risk assessment of lifelines in Bucharest. *International Journal of Disaster Risk Reduction*, 66, 102629, DOI: 10.1016/j.ijdr.2021.102629, 2021.
- D60 **Pavel, F.**, Văcăreanu, R., Marcu, D. (2021) Seismic performance assessment and rating for a flat-slab RC core wall structure in Bucharest, Romania. *Structures*, 31: 1006-1016. DOI: 10.1016/j.istruc.2021.02.036, 2021.
- D61 **Pavel, F.** Collapse rates of reinforced concrete structures during large magnitude earthquakes: case study for Romania. *SN Applied Sciences*, 3, article number 525, DOI: 10.1007/s42452-021-04520-9, 2021.
- D62 **Pavel, F.** Evaluation of key PSHA assumptions-case-study for Romania. *Geosciences*, 11(2): 70. DOI: 10.3390/geosciences11020070, 2021.
- D63 **Pavel, F.**, Noroozinejad Farsangi, E. Risk-based evaluation of economic feasibility for strengthening of low-code RC structures. *Practice Periodical on Structural Design and Construction*, 26(1). DOI: 10.1061/(ASCE)SC.1943-5576.0000543, 2021.
- D64 **Pavel, F.** Analysis of pulse-like ground motion recordings from Vrancea intermediate-depth earthquakes. *Journal of Seismology*, 25: 733-745, DOI: 10.1007/s10950-021-09988-x, 2021.
- D65 **Pavel, F.**, Văcăreanu, R., Scupin, A. Seismic fragility assessment for post-1977 high-rise reinforced concrete structures in Romania. *Bulletin of Earthquake Engineering*, 19:6521-6544, DOI: 10.1007/s10518-020-01014-8, 2021.
- D66 **Pavel, F.** Seismic risk assessment of on-ground circular reinforced concrete and prestressed concrete water tanks using stochastic ground motion simulations. *Bulletin of Earthquake Engineering*, 19: 161-178, DOI: 10.1007/s10518-020-00982-1, 2021.
- D67 **Pavel, F.**, Scupin, A., Văcăreanu, R. Analysis of the seismic risk of low-code masonry and large panels structures in Romania. *Iranian Journal of Science and Technology, Transactions of Civil Engineering*, 46(3), 1915-1928, DOI: 10.1007/s40996-021-00736-2, 2022.

- D68 **Pavel, F.**, Noroozinejad Farsangi, E., Bizon, F. Development of empirical models for reinforced concrete flat-slab structures using experimental results. *Journal of Building Pathology and Rehabilitation*, 7(6), DOI: 10.1007/s41024-021-00144-z, 2022.
- D69 **Pavel, F.**, Duțu, A., Noroozinejad Farsangi, E. Seismic loss estimation using experimental fragility and vulnerability functions: case study of Buzau county, Romania. *Natural Hazards Review*, 23(1), DOI: 10.1061/(ASCE)NH.1527-6996.0000521, 2022.
- D70 Yaghmaei-Sabegh, S., **Pavel, F.**, Shahvar, M., Qadri Talha, S.M. Empirical frequency content models based on intermediate-depth earthquake ground-motions. *Soil Dynamics and Earthquake Engineering*, 155, 107173, DOI: 10.1016/j.soildyn.2022.107173, 2022.
- D71 **Pavel, F.**, Văcăreanu, R., Pitilakis, K. Preliminary Evaluation of the Impact of Eurocode 8 Draft Revision on the Seismic Zonation of Romania. *Applied Sciences*, 12(2), 649, DOI: 10.3390/app12020649, 2022.
- D72 Iancovici, M., Ionică, G., **Pavel, F.**, Moța, F., Nica, G. Nonlinear dynamic response analysis of buildings for wind loads. A new frontier in the structural wind engineering. *Journal of Building Engineering*, 47, 103708, DOI: 10.1016/j.jobe.2021.103708, 2022.
- D73 **Pavel, F.**, Văcăreanu, R. Seismic risk assessment for elements of the electric network in Romania. *Buildings*, 12(2), 244, DOI: /10.3390/buildings12020244, 2022
- D74 **Pavel, F.**, Nica, G., Noroozinejad Farsangi, E. Seismic reliability assessment of existing RC chimneys in Romania. *Journal of Building Pathology and Rehabilitation*, 8, 88, DOI: 10.1007/s41024-023-00333-y, 2023.
- D75 **Pavel, F.** Seismic Design Codes—Key Elements for Seismic Risk Perception and Reduction in Europe. *Buildings*, 13(1), 158, DOI: 10.3390/buildings13010158, 2023.
- D76 Nica, G., **Pavel, F.**, Hojda, G. A fast nonlinear dynamic analysis automated approach to produce fragility curves for 3D RC frames. *Engineering Structures*, 281, 115695, DOI: 10.1016/j.engstruct.2023.115695, 2023.
- D77 **Pavel, F.**, Vacareanu, R. Review of methodologies for displacement checks in modern seismic design codes. *Buildings*, 13(4), 940 DOI: 10.3390/buildings13040940, 2023.
- D78 **Pavel, F.**, Yaghmaei-Sabegh, S. Empirical evaluation of the control period T_C for intermediate-depth earthquakes: application for Romania. *Natural Hazards*, 118(3), 2609-2628, DOI: 10.1007/s11069-023-06110-x, 2023.
- D79 **Pavel, F.**, Vlăduț, R. Assessment of liquefaction hazard for sites in Romania using empirical models. *Infrastructures*, 8(9), 133, DOI: 10.3390/infrastructures8090133, 2023.
- D80 **Pavel, F.**, Nica, G. Ground motion duration patterns for Vrancea (Romania) intermediate-depth earthquakes. *Geosciences*, 13(10), 288, DOI: 10.3390/geosciences13100288, 2023.
- D81 **Pavel, F.**, Crowley, H., Romão, X. et al. Evolution of national codes for the design of RC structures in Romania. *Bulletin of Earthquake Engineering*, 22, 911-949 DOI: 10.1007/s10518-023-01791-y, 2024.
- D82 **Pavel, F.**, Vacareanu, R., Aldea, A., Arion, C. Vertical elastic acceleration response spectra for Vrancea intermediate-depth earthquakes. *Buildings*, 14(4), 906, DOI: 10.3390/buildings14040906, 2024.

- D83 Arion, C., Vacareanu, R., Aldea, A., **Pavel, F.** Assessment of frost depth and frost heave in Romania. *Applied Sciences*, 14(7), 3086, DOI: 10.3390/app14073086, 2024.
- D84 **Pavel, F.** An updated perspective of the impact of the 1940 Vrancea earthquake on design and construction practices in Romania. *Buildings*, 14(4), 1152, DOI: 10.3390/buildings14041152, 2024.
- D85 **Pavel, F.**, Nica, G. The seismic evaluation of existing buildings for energy renovation—a case study for the residential building stock in Bucharest (Romania). *Buildings*, 14(6), 1742, DOI: 10.3390/buildings14061742, 2024.
- D86 **Pavel, F.**, Vlăduț, R., Noroozinejad Farsangi, E. Correlation of soil conditions with seismic damage of structures in Craiova, Romania. *Practice Periodical on Structural Design and Construction*, 29(3), 05024003, DOI: 10.1061/PPSCFX.SCENG-1489, 2024.
- D87 **Pavel, F.** Ground Motion Recording-Based Validation of Capacity Curves for High-Rise Reinforced Concrete Structures in Romania Constructed Before 1977. *Buildings*, 15(5), 459, DOI: 10.3390/buildings15040549, 2025.
- D88 **Pavel, F.**, Aldea, A. I_{JMA}-based evaluation of ground motion recordings from Vrancea intermediate-depth earthquakes. *Bulletin of Earthquake Engineering*, 23, 4285-4303, DOI: 10.1007/s10518-025-02220-y, 2025.
- D89 **Pavel, F.** Seismic risk assessment at local scale. Case-study for a neighbourhood from Ploiesti, Romania. *Soil Dynamics and Earthquake Engineering*, 200(B), 109870, DOI: 10.1016/j.soildyn.2025.109870, 2026.
- D90 **Pavel, F.** Identifying soft-ground-story pre-1977 high-rise structures in Bucharest for updated seismic risk analysis. *Applied Sciences*, 16(7), 3360, DOI: 10.3390/app16073360, 2026.
- D91 **Pavel, F.**, Florescu, L.P. Impact of construction material properties variability on the seismic fragility assessment of RC structures in Bucharest. *Buildings*, 16(7), 1344, DOI: 10.3390/buildings16071344, 2026.

E. Publicatii in extenso, aparute in lucrari ale principalelor conferinte internationale de specialitate

- E1 **Pavel, F.**, Lungu, D. Frequency content indicators of strong ground motions. Proceedings of the 15th World Conference on Earthquake Engineering, Lisbon, Portugal. Paper no. 2372, 2012.
- E2 **Pavel, F.**, Aldea, A., Văcăreanu, R. Near-field strong ground motion records from Vrancea earthquakes. Proceedings of the International Conference on Earthquake Engineering SE-50 EEE, Skopje, Macedonia, paper no. 190, 2013.
- E3 Văcăreanu, R., **Pavel, F.**, Lungu, D., Iancovici, M., Demetriu, S., Aldea, A., Arion, C., Neagu, C. Uniform hazard spectra for cities in Romania. Proceedings of the International Conference on Earthquake Engineering SE-50 EEE, Skopje, Macedonia, paper no. 164, 2013.
- E4 Văcăreanu, R., Lungu, D., Mărmureanu, G., Cioflan, C., Aldea, A., Arion, C., Neagu, C., Demetriu, S., **Pavel, F.** Statistics of seismicity for Vrancea subcrustal source. Proceedings of the International Conference on Earthquake Engineering SE-50 EEE, Skopje, Macedonia, paper no. 138, 2013.
- E5 Pricopie, A., **Pavel, F.** Rehabilitation of structures using optimal viscous damper placement. Proceedings of the International Conference on

Earthquake Engineering SE-50 EEE, Skopje, Macedonia, paper no. 296, 2013.

- E6 **Pavel, F.**, Văcăreanu, R., Arion, C., Neagu, C. Analysis of ground motions recorded in Bucharest during recent Vrancea earthquakes. Vienna Congress on Recent Advances in Earthquake Engineering and Structural Dynamics, Viena, Austria, paper no. 180, 2013.
- E7 Moschen, L. et al. Damage assessment of a commercial building due to the main shock and after shock from the Van-Ercis earthquake 2011. Bauhaus Summer School „Model Validation and Simulation“, pp. 54-79, 2013.
- E8 Demetriu, S., Văcăreanu, R., Lungu, D., **Pavel, F.**, Arion, C., Iancovici, M., Aldea, A., Neagu, C. Ground motion prediction equations for Vrancea intermediate-depth earthquakes. În: Cunha, A., Caetano, E., Ribeiro, P., Müller, G. (eds.) Proceedings of the 9th International Conference on Structural Dynamics EUROLYN 2014, Porto, Portugal, pp. 435-442, 2014
- E9 **Pavel, F.**, Văcăreanu, R., Aldea, A. Evaluation of GMPEs for Vrancea intermediate depth seismic source. Proceedings of the 2nd European Conference on Earthquake Engineering and Seismology, Istanbul, Turcia, paper no. 423, 2014
- E10 **Pavel, F.**, Văcăreanu, R., Cioflan, C.O. Directivity effects of strong ground motions from Vrancea subcrustal earthquakes. Proceedings of the 2nd European Conference on Earthquake Engineering and Seismology, Istanbul, Turcia, paper no. 466, 2014.
- E11 Văcăreanu, R., Radulian, M., Iancovici, M., **Pavel, F.**, Neagu, C. Fore-arc and back-arc ground motion prediction model for Vrancea intermediate depth seismic source. Proceedings of the 2nd European Conference on Earthquake Engineering and Seismology, Istanbul, Turcia, paper no. 484, 2014.
- E12 Văcăreanu, R., Lungu, D., Radulian, M., **Pavel, F.**, Iancovici, M., Arion, C. New developments in probabilistic seismic hazard analysis for Romania. Proceedings of the 2nd European Conference on Earthquake Engineering and Seismology, Istanbul, Turcia, paper no. 545, 2014.
- E13 **Pavel, F.**, Văcăreanu, R., Neagu, C., Arion, C. Probabilistic seismic hazard for Romania. Part I: selection of GMPEs. Proceedings of the 5th National Conference on Earthquake Engineering & 1st National Conference on Earthquake Engineering and Seismology, București, România, pp. 213-220, 2014.
- E14 Aldea, A., Văcăreanu, R., Lungu, D., **Pavel, F.**, Demetriu, S. Probabilistic seismic hazard for Romania. Part II: sensitivity analysis. Proceedings of the 5th National Conference on Earthquake Engineering & 1st National Conference on Earthquake Engineering and Seismology, București, România, pp. 221-228, 2014.
- E15 Văcăreanu, R., Lungu, D., Aldea, A., Demetriu, S., **Pavel, F.**, Arion, C., Iancovici, M., Neagu, C. Probabilistic seismic hazard for Romania. Part III: seismic hazard maps. Proceedings of the 5th National Conference on Earthquake Engineering & 1st National Conference on Earthquake Engineering and Seismology, București, România, pp. 229-236, 2014.
- E16 Pricopie, A., **Pavel, F.** Establishing a median structural response prediction for subcrustal earthquakes from the Vrancea source. Proceedings of the 5th National Conference on Earthquake Engineering & 1st National Conference

on Earthquake Engineering and Seismology, București, România, pp. 269-276, 2014.

- E17 **Pavel, F.**, Văcăreanu, R. Investigation on the seismic risk of Bucharest, Romania. Proceedings of the 35th General Assembly of the European Seismological Commission, Trieste, Italia, paper no. 370, 2016.
- E18 **Pavel, F.**, Calotescu, I., Văcăreanu, R., Sandulescu, A.M., Sibisteanu H. Investigation on community resilience in Bucharest, Romania. Proceedings of the 35th General Assembly of the European Seismological Commission, Trieste, Italia, paper no. 372, 2016.
- E19 Văcăreanu, R., **Pavel, F.**, Colibă, V., Crăciun, I. Uniform risk-targeted maps for Romania. Proceedings of the 35th General Assembly of the European Seismological Commission, Trieste, Italia, paper no. 336, 2016.
- E20 Văcăreanu, R., **Pavel, F.**, Iancovici, M., Aldea, A. Influence of GMPEs on site-specific uniform hazard spectra. Case study for Iasi, Romania. Proceedings of the 35th General Assembly of the European Seismological Commission, Trieste, Italia, paper no. 543, 2016.
- E21 **Pavel, F.**, Calotescu, I., Văcăreanu, R. Evaluation of ground motion variability in Bucharest from Vrancea intermediate-depth earthquakes. Proceedings of the International Conference on Urban Risk, ICUR 2016, Lisabona, Portugalia, paper no. 146, 2016.
- E22 **Pavel, F.**, Calotescu, I., Văcăreanu, R., Sandulescu, A.M. Derivation of scenario earthquakes for Bucharest, Romania. Proceedings of the International Conference on Urban Risk, ICUR 2016, Lisabona, Portugalia, paper no. 145, 2016.
- E23 Calotescu, I., **Pavel, F.**, Sandulescu, A.M., Sibisteanu H., Văcăreanu, R., Preliminary investigation on community resilience of Bucharest, Romania. Proceedings of the International Conference on Urban Risk, ICUR 2016, Lisabona, Portugalia, paper no.142, 2016.
- E24 Popa, M., **Pavel, F.** Overview of Part II: Seismicity of Romania. Seismic Hazard Assessment; Local Soil Conditions Effects. În Văcăreanu, R., Ionescu, C. (ed.): The 1940 Vrancea earthquake. Issues, insights and lessons learnt. Springer Natural Hazards, pp. 131-134, 2016.
- E25 **Pavel, F.**, Ciuiu, D., Văcăreanu, R. Site-dependent seismic hazard assessment for Bucharest based on stochastic simulations. În Văcăreanu, R., Ionescu, C. (ed.): The 1940 Vrancea earthquake. Issues, insights and lessons learnt. Springer Natural Hazards, pp. 221-233, 2016.
- E26 Olteanu, P., Colibă, V., Văcăreanu, R., **Pavel, F.**, Ciuiu, D. Analytical seismic fragility functions for dual RC structures in Bucharest. În Văcăreanu, R., Ionescu, C. (ed.): The 1940 Vrancea earthquake. Issues, insights and lessons learnt. Springer Natural Hazards, pp. 463-479, 2016.
- E27 Văcăreanu, R., Iancovici, M., **Pavel, F.** Selecting and scaling strong ground motion records based on conditional mean spectra. Case study for Iasi city in Romania. În Văcăreanu, R., Ionescu, C. (ed.): The 1940 Vrancea earthquake. Issues, insights and lessons learnt. Springer Natural Hazards, pp. 377-391, 2016.
- E28 Crăciun, I., Văcăreanu, R., **Pavel, F.** Spectral displacement demands for strong ground motions recorded in Vrancea intermediate-depth earthquakes. În Văcăreanu, R., Ionescu, C. (ed.): The 1940 Vrancea earthquake. Issues, insights and lessons learnt. Springer Natural Hazards, pp. 169-188, 2016

- E29 **Pavel, F.**, Văcăreanu, R., Calotescu, I., Colibă, V. Design displacement response spectra for southern and eastern Romania. Proceedings of the 16th World Conference on Earthquake Engineering, Santiago, Chile, paper no. 1926, 2017.
- E30 Văcăreanu, R., **Pavel, F.**, Crăciun, I., Aldea, A., Calotescu, I. Correlation models for strong ground motions from Vrancea intermediate-depth seismic source. Proceedings of the 16th World Conference on Earthquake Engineering, Santiago, Chile, paper no. 2026, 2017.
- E31 **Pavel, F.**, Calotescu, I., Văcăreanu, R. Seismic damage and loss estimation for Bucharest, Romania. Proceedings of the 3rd International Conference on Protection of Historical Constructions Prohitech '17, Lisabona, Portugalia, paper no. 115, 2017.
- E32 Calotescu, I., **Pavel, F.**, Săndulescu, A.M., Sibișteanu, H., Văcăreanu, R. Evaluation of seismic damage from questionnaire results. Proceedings of the 3rd International Conference on Protection of Historical Constructions Prohitech '17, Lisabona, Portugalia, paper no. 134, 2017.
- E33 **Pavel, F.**, Văcăreanu, R., Colibă, V., Calotescu, I. Life-cycle seismic loss assessment for RC frame structures in Bucharest, Romania. In: Bucher, C., Ellingwood, B.R., Frangopol, D.M. (ed.) Safety, Reliability, Risk, Resilience and Sustainability of Structures and Infrastructure. Proceedings of the 12th Int. Conf. on Structural Safety and Reliability, Viena, Austria, 6–10 August 2017, pp. 318-327, 2017.
- E34 Calotescu, I., **Pavel, F.**, Văcăreanu, R. Community seismic resilience for Bucharest, Romania: public survey results. Safety, Reliability, Risk, Resilience and Sustainability of Structures and Infrastructure. Proceedings of the 12th Int. Conf. on Structural Safety and Reliability, Viena, Austria, 6–10 August 2017, pp. 2432-2441, 2017.
- E35 Crăciun, I., Văcăreanu, R., **Pavel, F.** On the ground motions spatial correlation for Vrancea intermediate-depth earthquakes. În: Pavel, F., Radulian, M., Arion, C., Popa, M., Aldea, A. (ed.) Proceedings of the 6th National Conference on Earthquake Engineering and 2nd National Conference on Earthquake Engineering and Seismology, București, România, pp. 79-86, 2017.
- E36 Arion, C., Neagu, C., **Pavel, F.** Seismic exposure analysis in RO-RISK project. În: Pavel, F., Radulian, M., Arion, C., Popa, M., Aldea, A. (ed.) Proceedings of the 6th National Conference on Earthquake Engineering and 2nd National Conference on Earthquake Engineering and Seismology, București, România, pp. 185-192, 2017.
- E37 Calotescu, I., **Pavel, F.** Earthquake risk awareness in Bucharest, Romania: public survey. În: Pavel, F., Radulian, M., Arion, C., Popa, M., Aldea, A. (ed.) Proceedings of the 6th National Conference on Earthquake Engineering and 2nd National Conference on Earthquake Engineering and Seismology, București, România, pp. 225-232, 2017.
- E38 Colibă, V., Văcăreanu, R., **Pavel, F.**, Crăciun, I. Uniform risk-targeted seismic design maps for Romania. În: Pavel, F., Radulian, M., Arion, C., Popa, M., Aldea, A. (ed.) Proceedings of the 6th National Conference on Earthquake Engineering and 2nd National Conference on Earthquake Engineering and Seismology, București, România, pp. 249-256, 2017.

- E39 Neagu, C., Arion, C., Aldea, A., Văcăreanu, R., **Pavel, F.** Ground types for seismic design in Romania. În: Pavel, F., Radulian, M., Arion, C., Popa, M., Aldea, A. (ed.) Proceedings of the 6th National Conference on Earthquake Engineering and 2nd National Conference on Earthquake Engineering and Seismology, București, România, pp. 345-352, 2017.
- E40 **Pavel, F.**, Văcăreanu, R., Arion, C., Neagu, C., Calotescu, I. Recent developments regarding seismic risk and resilience assessment for Bucharest, Romania. În: Pavel, F., Radulian, M., Arion, C., Popa, M., Aldea, A. (ed.) Proceedings of the 6th National Conference on Earthquake Engineering and 2nd National Conference on Earthquake Engineering and Seismology, București, România, pp. 367-373, 2017.
- E41 **Pavel, F.**, Văcăreanu, R. Evaluation of feasibility of pre-earthquake strengthening of RC buildings in Bucharest, Romania. În: Pavel, F., Radulian, M., Arion, C., Popa, M., Aldea, A. (ed.) Proceedings of the 6th National Conference on Earthquake Engineering and 2nd National Conference on Earthquake Engineering and Seismology, București, România, pp. 375-382, 2017.
- E42 **Pavel, F.**, Văcăreanu, R., Arion, C., Neagu, C., Iancovici, M., Popa, V. (2017) Seismic risk assessment for residential buildings in Romania. În: Pavel, F., Radulian, M., Arion, C., Popa, M., Aldea, A. (ed.) Proceedings of the 6th National Conference on Earthquake Engineering and 2nd National Conference on Earthquake Engineering and Seismology, București, România, pp. 383-390, 2017.
- E43 Văcăreanu, R., **Pavel, F.**, Colibă, V., Crăciun, I. Risk-targeted seismic design maps for Romania. În: Pavel, F., Radulian, M., Arion, C., Popa, M., Aldea, A. (ed.) Proceedings of the 6th National Conference on Earthquake Engineering and 2nd National Conference on Earthquake Engineering and Seismology, București, România, pp. 453-460, 2017.
- E44 **Pavel, F.**, Văcăreanu, R. Impact on seismic hazard of Bucharest (Romania) of long-period ground motions from Vrancea intermediate-depth earthquakes. Proceedings of the NZSEE Annual Technical Conference, Auckland, Noua Zeelandă, paper no. O48.6, 2018.
- E45 **Pavel, F.**, Stănescu, D., Văcăreanu, R., Colibă, V., Crăciun, I. Life-cycle and resilience analysis of RC buildings in Bucharest, Romania. Proceedings of the 16th European Conference on Earthquake Engineering (16ECEE), Salonic, Grecia, paper no. 309, 2018.
- E46 **Pavel, F.**, Văcăreanu, R., Damian, I., Arion, C., Neagu, C. Updated seismic risk analysis for residential buildings in Bucharest, Romania. Proceedings of the 16th European Conference on Earthquake Engineering (16ECEE), Salonic, Grecia, paper no. 310, 2018.
- E47 Neagu, C., Arion, C., Aldea, A., Călărășu, E.A., Văcăreanu, R., **Pavel, F.** (2018) Ground types for seismic design in Romania. În: Văcăreanu, R., Ionescu, C. (ed.) Seismic Hazard and Risk Assessment - updated overview with emphasis on Romania, Springer Natural Hazards, pp. 157-172, 2018.
- E48 Crăciun, I., Văcăreanu, R., **Pavel, F.**, Colibă, V. On the ground motions spatial correlation for Vrancea intermediated-depth earthquakes. În: Văcăreanu, R., Ionescu, C. (ed.) Seismic Hazard and Risk Assessment - updated overview with emphasis on Romania, Springer Natural Hazards, pp. 191-209, 2018.

- E49 Arion, C., **Pavel, F.**, Văcăreanu, R., Neagu, C., Iancovici, M., Popa, V., Damiaon, I. Seismic risk assessment of Romania. În: Văcăreanu, R., Ionescu, C. (ed.) Seismic Hazard and Risk Assessment - updated overview with emphasis on Romania, Springer Natural Hazards, pp. 251-265, 2018.
- E50 **Pavel, F.**, Văcăreanu, R., Calotescu, I. Comparison of seismic risk results for Bucharest, Romania. În: Văcăreanu, R., Ionescu, C. (ed.) Seismic Hazard and Risk Assessment - updated overview with emphasis on Romania, Springer Natural Hazards, pp. 267-279, 2018.
- E51 Calotescu, I., **Pavel, F.**, Văcăreanu, R. Earthquake risk awareness in Bucharest, Romania: public survey. În: Văcăreanu, R., Ionescu, C. (ed.) Seismic Hazard and Risk Assessment - updated overview with emphasis on Romania, Springer Natural Hazards, pp. 297-311, 2018.
- E52 **Pavel, F.**, Văcăreanu, R., Pitilakis, K. Preliminary revision of the seismic zonation from the current Romanian seismic design code. Proceedings of the 7th International Conference on Earthquake Geotechnical Engineering (7ICEGE), Roma, Italia, paper no. 922, 2019.
- E53 Văcăreanu, R., **Pavel, F.**, Scupin, A. Probabilistic seismic risk assessment for reinforced concrete buildings in Romania. Proceedings of 17 WCEE, Sendai, Japan, paper no. C001418, 2020.
- E54 Aldea, A., **Pavel, F.**, Bertrand, E., Lozincă, E. Experimental and numerical analysis of the RC minaret of Carol I royal mosque, Constanța, Romania. Proceedings of 17 WCEE, Sendai, Japan, paper no. C002682, 2020.
- E55 **Pavel, F.**, Văcăreanu, R., Arion, C. (2021) Site-specific seismic hazard analysis for cities in Romania. Lucrările celei de-a XIV-a Conferință Națională de Geotehnică și Fundații, pp. 605-612, Printech, București.
- E56 Scupin, A., Văcăreanu, R., **Pavel, F.** Evaluation of invasive retrofitting interventions on an unreinforced masonry heritage building. Proceedings of the 12th International Conference on Structural Analysis of Historical Constructions (SAHC 2021), 3462-3473.
- E57 Scupin, A., Văcăreanu, R., **Pavel, F.** Seismic performance assessment based on displacement capacity of unreinforced masonry structure. IOP Conference Series, 664 012087, 2021.
- E58 Aldea, A., Văcăreanu, R., Lungu, D., **Pavel, F.**, Arion, C. GMPEs for Romania's Vrancea Intermediate Depth Seismic Source. În: Văcăreanu, R., Ionescu, C. (ed.) Progresses in European Earthquake Engineering and Seismology. ECEES 2022. Springer Proceedings in Earth and Environmental Sciences. Springer, Cham. https://doi.org/10.1007/978-3-031-15104-0_6, pp. 90-108, 2022.
- E59 **Pavel, F.**, Văcăreanu, R., Arion, C., Aldea, A. New Insights on the Seismic Exposure and Vulnerability of Structures in Romania. În: Văcăreanu, R., Ionescu, C. (ed.) Progresses in European Earthquake Engineering and Seismology. ECEES 2022. Springer Proceedings in Earth and Environmental Sciences. Springer, Cham. https://doi.org/10.1007/978-3-031-15104-0_12, pp. 197-211, 2022.
- E60 **Pavel, F.**, Yaghmaei-Sabegh, S. Evaluation of correlation between the mean period T_m and the control period T_c for intermediate-depth earthquakes in Romania and Iran. În: Arion, C., Scupin, A., Țigănescu, A. (ed.) Proceedings of the Third European Conference on Earthquake Engineering and Seismology – 3ECEES, pp. 1-8, 2022.

- E61 Arion, C., Văcăreanu, R., Aldea, A., Arion, A., **Pavel, F.** Assessment of Freeze-Thaw in Romania. E3S Web Conf. 608, (05006), DOI: 10.1051/e3sconf/202560805006, 2025.
- E62 Arion, C., Văcăreanu, R., Aldea, A., Arion, A., **Pavel, F.** Assessment of Frost Depth in Romania. E3S Web Conf. 608, (05005), DOI: 10.1051/e3sconf/202560805005, 2025.
- E63 **Pavel, F.** Historical Evolution of Wind Design for Tall RC Chimneys in Romania. În: Calotescu, I., Coșoiu, C.I. (ed.) Proceedings of the Third National Conference on Wind Engineering. NCWE 2024. Springer Proceedings in Earth and Environmental Sciences. Springer, Cham. https://doi.org/10.1007/978-3-032-09671-5_7, pp. 81-93, 2026.

30.03.2026