

CURRICULUM VITAE

Proposed role in the project:

Type of expertise:

Category of expert:

1. **Family name:** Velkovska (Mircevska)
2. **Name:** Violeta
3. **Date of birth:** 30.11.1957
4. **Nationality:** Macedonian
5. **Civil status:** married
6. **Contact details:** Ilindenska 57/1, 1000 Skopje, Macedonia, violeta@iziis.ukim.edu.mk
Mob. Tel. 0038970744480 Mob. Tel. 0038971321563
7. **Education:** **Graduated civil engineer, PhD**



Institution:	Institute of Earthquake Engineering – IZIIS Sts. Cyril and Methodius, Faculty of Civil Engineering
<i>Graduation Year:</i>	2002
Degree(s) or diploma(s):	Doctoral thesis, Civil engineering
Institution:	Institute of Earthquake Engineering – IZIIS Sts. Cyril and Methodius, Faculty of Civil Engineering
<i>Graduation Year:</i>	1993
Degree(s) or diploma(s):	MS/MSc Civil Engineering
Institution:	University Sts. Cyril and Methodius, Faculty of Civil Engineering
<i>Graduation Year:</i>	1983
Degree(s) or diploma(s):	BSc Civil Engineering

8. Language skills: Indicate competence on a scale of 1 to 5 (1 - basic; 5 - excellent)

Language	Reading	Speaking	Writing
English	5	5	5
Serbian	5	5	5

9. Membership of professional bodies:

- Member of Member of DYNET/SEEFORM lecturing committee
- Member of MAAA (Macedonian – American Alumni Association)
- Member of Macedonian Association of Structural Engineers – MASE
- Member of Macedonian Association of Earthquake Engineers – MAEE
- Member of Macedonian Association for Large Dams MCOLD

10. Other skills: (e.g. computer literacy, etc.)

Programming in Fortran, Matlab, and using computer software, as: Corel Draw, AutoCAD, RC Building, SAP2000, Plaxis, etc. Author of the general purpose software package ADAD-IZIIS for linear and nonlinear analysis of arch dams and NONDIN3D-IZIIS for nonlinear analysis of rock-fill dams.

11. Present position:

- Full Professor at the Department for Engineering Structures and Software, Institute of Earthquake Engineering – IZIIS, University St. Cyril and Methodius, Skopje, Macedonia

12. Name of the institution/firm/organisation: Institute of Earthquake Engineering – IZIIS, University St. Cyril and Methodius, Skopje, Macedonia

13. Years within the institution/firm/organisation: 38

14. Key qualifications (relevant to the assignment):

- Excellent knowledge of Seismic Design and Analysis of Dams,
- Developer of the software ADAD-IZIIS for analysis of arch, rock-fill and gravity dams

15. Professional experience:

<i>Date:</i>	2007-2008 Fulbright fellowship
<i>Company</i>	University of Berkeley CA-USA
<i>Position</i>	Project researcher
<i>Description</i>	Development of Analytical Method for Analysis of New Type of Rubber Bearings for Seismic Safety of Structures in the Balkan Region
<i>Date:</i>	01/12/2002 – 31/01/2003 DAAD fellowship
<i>Company</i>	Bochum univ. Germany
<i>Position</i>	Principal researcher
<i>Description</i>	“Dynamic behaviour of construction joints“
<i>Date:</i>	01/10/2010 – 31/01/2011 DAAD fellowship
<i>Company</i>	univ. of Stuttgart - Germany
<i>Position</i>	Principal researcher
<i>Description</i>	Dam-Fluid interaction / development of software
<i>Date:</i>	25/03/2014 – 31/03/2014 ERASMUS programme for Teaching Staff
<i>Company</i>	University of Ljubljana Faculty of Civil Engineering and Geodesy
<i>Position</i>	Teaching staff
<i>Description</i>	Dam-Engineering

16. Other relevant information (publications in International Conferences in last 10 years):

1. **Mircevska V**, Bickovski V., Garevski M. “Computation procedure in Compliance with Mohr-Coulomb Yielding Criterion”, *VEROFFENTLICHUNGEN des Institute fur Geotechnik der Technischen Universitat Bergakademie Freiberg*, vol. 2, (2007), 235-251

2. **Mircevska, V.**, Bickovski, V., "Computer Design of Arch Dams and Preparation of Own Software ARCH", IZIIS, Skopje, September 2005.pp 120-129
3. **Mircevska, V.**, Bickovski, V., " Application of Mohr-Coulomb's Yielding Criterion “, International Symposium “Deformation Characteristics of Geomaterials”, IS ,Lyon 2003, France,pp 240-256
4. **Mircevska, V.**, Bickovski, V., " 3D Nonlinear model for static and dynamic analysis of rock-fill dam”,SE 40 EEE,Ohrid 2003, pp 170-188
5. Mircevska, V., Bickovski,V., “Application of contact elements for assessment of dynamic stability of arch dam”, EE-21C, Earthquake Engineering in 21st Century,Ohrid,Macedonia, August 2005, pp 221-232
6. **Mircevska, V.**, Bickovski,V., “Computer Design of Arch Dams”, EE-21C, Earthquake Engineering in 21st Century, Ohrid ,Macedonia, August 2005, pp 260-270
7. **Mircevska, V.**, Bickovski, V, Garevski M., “A Benchmark test of a software- PROC3DN-IZIIS”, International Conference of Earthquake Engineering, October 2009, Banja Luka , Proceedings pp.379-388
8. **Mircevska, V.**, Bickovski, V, Garevski M. “A Benchmark test of a software- FILT3D”, International Conference of Earthquake Engineering, October 2009, Banja Luka , Proceedings pp. 389-394.
9. **Mircevska V.**, Bickovski V., “Use of BEM in solving Fluid-Structure interaction:, International Conference of Earthquake Engineering, Banja Luka , October 2009 , Proceedings pp. 390-396
10. **Mircevska V.**, Bickovski V., Garevski M.,”Some suggestions for generation of 3D model of dams that is used in the IZIIS-software, European Plaxis Users Meeting, Karlsruhe November 2009 (available on internet)
11. V. Mircevska, I. Gjorgjeska, V. Bickovski. Modeling of structural joints of Arch Dams, II Congress for Dams, 2009 - Struga, R. Macedonia
12. **Mircevska V.**, Bickovski V., Garevski M.,” Some comments about the safety coefficient”, European Plaxis Users Meeting, Karlsruhe November 2009 (available on internet)
13. **Mircevska V.**, Kokona H., Bickovski V., Manova K., “Modification of the HS Model developed in PLAXIS’, III International Scientific Conference GNP, Zabljak, February,2010, Montenegro, pp.117-122
14. **Mircevska V.**, Bickovski V., Manova K., “Advanced Methods for solving of HDP’, III International Scientific Conference GNP, Zabljak February,2010, Montenegro, pp.111-116.
15. **Mircevska V.**, Manova K., Transformation of Laplace Equation for Solving HDP Applying BEM’, *Teoretska i eksperimentalna Istrazivanja Konstrukcija i Njihova Primena u Gradevinarstvu*, March, Nis (Serbia), 2010, Proceedings pp. A-185-A-194.
16. **Mircevska V.** Hokona H., Assessment of Soft –Soil Instability Using Hardening Soil Model, International Symposium of Landslide and Geoenvironment, October 2011, Tirana (Albania), (**Invited lecture**), full paper on CD, Proceedings pp. 241-271.
17. **Mircevska V.**, Bickovski V., Manova K., ARCH-ver3 –IZIIS software, International Symposium SLOCOLD -MACOLD , Dams –recent experiences on research, design, construction and service, Skopje November 2011, vol. 1, pp. 89-96.
18. Bulajić I., **Mirčevska V.**, “Comparison of HDP of arch dams using Westergaard and Zangar solution and with application of BEM in software ADAD-IZIIS”, Conference proceedings of

- the Third International Conference on Earthquake Engineering and Engineering Seismology, Association of Civil Engineers of Serbia, Divčibare May 2012 , pp. 125-132.
19. Mirakovski. G., **Mircevska V.**, Gorgjeska I., Seismic microzonation of Skopje Urban Area“ ”, 2nd International Scientific Meeting GTZ 2012, Tuzla June 2012 , vol. 1, pp.861-869.
 20. **Mircevska V.**, Bickovski V., Manova K.,” ADAD-IZIIS Software Options and some application”, 2nd International Scientific Meeting GTZ 2012, Tuzla June 2012, vol. 1, pp.365-373
 21. **Mircevska V.**, Bulajic I.,Manova K., “Comparison of added mass method with sophisticated analytical BEM-FEM approach using ADAD-IZIIS software”, 15 World Conference of Earthquake Engineering, Lisabon 2012- (full paper on CD, Proceedings paper number 5655.pdf)
 22. **Mircevska V.**, Bickovski V.,Manova K., Computation of HDP In Arch Dams using ARCH-IZIIS Software,14 European Conference of Earthquake Engineering, 30-September 2010, Ohrid (full paper on CD, Proceedings paper number 1879.pdf)
 23. **Mirčevska V.** , Bulajić I., Significant factors influencing dam – fluid interaction effects, SCIENTIFIC CONFERENCE PLANNING, DESIGN, CONSTRUCTION AND BUILDING RENEWAL, INDIS 2012, Novi Sad 28-30 November 2012
 24. **Mirčevska V.** , Dam- Fluid interaction effects induced , MACOLD 2013, Struga 13-15 Juni, 2013,pp 120-130
 25. **Mircevska V.**, Garevski M, Bulajic I., Schnabl S. Dam-fluid interaction using ADAD-IZIIS Software, 12th INTERNATIONAL BENCHMARK WORKSHOP ON NUMERICAL ANALYSIS OF DAMS, ATCOLC 2-4 OCTOMBER 2013
 26. I.Gjorgjeska, **V.Mircevska** – MASW Seismic Method for Near-Surface Characterization. Extraction of Dispersion Curve – IZIIS 50 International conference on Earthquake Engineering and Seismology, 12-16 May, 2015
 - 27.I.Gjorgjeska, **V.Mircevska**, M, Nastev, M.Cvetkovska – Geophysical Investigations at Characteristic Location in Mostar Urban Area. MASW Method for Near-Surface Characterization – 1st International Symposium K-FORCE 2017, Novi Sad 1-4 September, 2017
 - 28.**V.Mircevska**, A. Abo-El-Ezz, I.Gjorgjeska, A.SMIRNOFF, M.Nastev - Preliminary Seismic Risk Assessment for the City of Skopje, R.M.- MASE 17th International Symposium October 14th-17th 2017, Ohrid, R.Macedonia
 29. Gjorgjeska I., **Mircevska, V.**, Nastev, M. (2018). Optimization of Masw Field Acquisition Parameters – A Case Study in the Skopje Urban Area, 16th European Conference on Earthquake Engineering, 18-21 June 2018, Thessaloniki, Greece.
 30. **Mircevska, V.**, Nastev, M., Gjorgjeska, I. (2018). Application of HDI Matrix Method for Solution of Dam-fluid, 16th European Conference on Earthquake Engineering, 18-21 June 2018, Thessaloniki, Greece.
 - 31.**Mircevska, V.**, Durgevic, S., Nanevska, A., Gjorgeska, I. (2018). Dynamic response of arch-dams using ADAD- IZIIS software, Proceedings of 14th International Scientific Conference INDIS 2018, 21-23 November 2018, Novi Sad, Serbia
 - 32.Nanevska, A., **Mircevska, V** and Nastev, M., “Hydraulic instability of tailings dams”, 4th

- Regional Symposium on Landslides in the Adriatic-Balkan Region - ReSyLAB & 9th scientific and expert conference GEO-EXPO, Sarajevo, Bosnia and Herzegovina, 23-25 October 2019, ISSN 2303-4262, pp. 19-26;
- 33 **Mircevska, V.**, Nastev, M., Nanevska, A. and Jekic, G., “Stability of Tailings Dams – Part 1: Evaluation of Eigenvalues”, 4th Regional Symposium on Landslides in the Adriatic-Balkan Region - ReSyLAB & 9th scientific and expert conference GEO-EXPO, Sarajevo, Bosnia and Herzegovina, 23-25 October 2019, ISSN 2303-4262, pp. 27-34;
34. **Mircevska, V.**, Nanevska, A., Nastev, M. and Zafirov, T., “Stability of Tailings Dams – Part 2: Dynamic Response”, 4th Regional Symposium on Landslides in the Adriatic-Balkan Region – ReSyLAB & 9th scientific and expert conference GEO-EXPO, Sarajevo, Bosnia and Herzegovina, 23-25 October 2019, ISSN 2303-4262, pp. 35-43;
- 35, Nanevska, A., **Mircevska, V.** and Nastev, M., “Hydraulic instability of tailings dams”, Conference Proceedings of the 18th MASE Symposium for Monitoring, Assessment and Rehabilitation of Structures, Ohrid, North Macedonia, 02-05 October 2019.
36. Nanevska, A., **Mircevska, V.** (2022). Aspects for evaluating the seismic stability of tailings dams, In: Conference Proceedings of the 3rd European Conference On Earthquake Engineering & Seismology, 04-10 September 2022, Bucharest, Romania.
37. **Mircevska, V.**, Nastev, M., Nanevska, A. (2021). Seismic slope stability in tailings dam: discrepancy between the improved FE-Newmark method and Mohr Coulomb material model, Introductory Presentation in Conference „Zemljotresno Inženjerstvo i Geotehnički Aspekti Građevinarstva“, 03-05 November 2021, Vrnjacka Banja, Serbia.
- 38 Nanevska, A., **Mircevska, V.**, Nastev, M. (2021). Discrete Finite Element Model for Safety Evaluation of Arch-dams, In: Proceedings of ECCOMAS MSF 5th International Conference on Multi-scale Computational Methods for Solids and Fluids, 30 June-02 July 2021, Split, Croatia, ISBN 978-9958-638-66-4, pp. 86-88.
39. **Mircevska, V.**, Nastev, M., Nanevska, A., Zafirov, T. (2021). Quantification of Hydrodynamic Effects in Complex Dam-Fluid Domain Using the Hydrodynamic Influence Matrix, In: Proceedings of ECCOMAS MSF 5th International Conference on Multi-scale Computational Methods for Solids and Fluids, 30 June-02 July 2021, Split, Croatia, ISBN 978-9958-638-66-4, pp. 278-281.

17. Other relevant information –Scientific-Research projects

1. **Mircevska V.**, Garevski M , Collaboration between Albania and Macedonia in the field of seismic safety of dams, Bilateral research project, IZIIS 2008-23
2. Garevski M, Kelly J. Gorgevski I, **Mircevska V.**, NATO Science for Peace, ”Development of low-cost rubber bearings for seismic safety of structures in Macedonia and Balkan”, SFP-978028
3. **Mircevska V.**, Garevski M, V. Hristovski “ Development of constitutive model for vertical construction joints at arch dams” Institute of Earthquake Engineering- Skopje, Macedonia, Report, IZIIS 2013-38

18. Other relevant information (publications in International Journals with impact factor:

1. **Mircevska V.**, Bickovski V., Garevski M." A 3D Nonlinear Analysis of a Rock-Fill Dam based on IZIIS Software", **ACTA GEOTECHICA SLOVENICA** 2007/2 vol. 4,pp 17-32
2. **Violeta Mircevska**, MiroslavNastev, Viktor Hristovski and Ivana Bulajic, "Arch Dam-Fluid Interaction Considering Reservoir Topology", Publisher: Taylor and Francis , Journal of Earthquake Engineering, vol.18: issue 7,(2014), pp: 1083–1101.
3. Hristovski V., Dujic, B., Stojmanovska M., **Mircevska V.**, "Full-Scale Shaking-Table Tests of XLam Panel Systems and Numerical Verification: Specimen 1", Publisher: American Society of Civil Engineers, ASCE Journal of Structural Engineering 139(11), pp. 2010-2018 (2013); [http://dx.doi.org/10.1061/\(ASCE\)ST.1943-541X.0000754](http://dx.doi.org/10.1061/(ASCE)ST.1943-541X.0000754). Online Publication Date: 13 ct 2012
4. **Mircevska V.**, Bickovski V., Aleksov I., Hristovski V. ., Influence of irregular canyon shape on location of truncation surface", Engineering Analysis with Boundary Elements 37, 2013, pp. 624–636
5. **Violeta Mircevska**, MiroslavNastev, Viktor Hristovski, Sujan Malla and Mihali Garveski, "Development and Validation of HDI Matrix Method for Fluid Dam Interaction", Publisher: American Society of Civil Engineering, ASCE: , Journal of Computing in Civil Engineering, DOI:10.1061/(ASCE)CP.1943-5487.0000684, ASCE ISSN 0887-3801.
6. Viktor Hristovski, **Violeta Mircevska**, Bruno Dujic and Mihail Garevski, Comparative dynamic investigation of cross-laminated wooden panel systems: Shaking-table tests and analysis, Advances in Structural Engineering, DOI link: <https://doi.org/10.1177/1369433217749766>,
7. **Violeta Mircevska**, Miroslav Nastev, Viktor Hristovski, Ivana Bulajic, "Eigenvalue Solution of Arch Dams: ADAD-IZIIS Software", Publisher: Croatian Association of Civil Engineers, , *Gradevinar*, vol.10,2018
8. **Violeta Mircevska**, Ahmad Abo-El-Ezz, Irena Gjorgjeska, Alex Smirnoff,and Miroslav Nastev, "First-Order Seismic Loss Assessment at Urban Scale: A Case Study of Skopje, North Macedonia", Publisher: Taylor and Francis , Journal of Earthquake Engineering, <https://doi.org/10.1080/13632469.2019.1662342>
9. **Violeta Mircevska**,M. Nastev, M., Hristovski, V., Harapin, A., Nanevska, A. (2019). Interactive algorithm for geometric modeling double-curvature arch dams, Journal for research of materials and structures, Building Materials and Structures, Volume 2, 2019, ISSN 2334-0229, pp. 33-45.
10. **Violeta Mircevska**, M.Nastev, and A. Nanevska,, "Seismic Slope Displacement of Tailings Dam: A Comparative Study between Modified Newmark and Mohr-Coulomb Models", Journal of Earthquake Engineering, <https://doi.org/10.1080/13632469.2021.1965053>, DOI: 10.1080/13632469.2021.1965053,
11. **Violeta Mircevska**, A. Nanevska, M. Nastev, T. Zafirov (2022), Containment lining solutions and hydrodynamic stability of tailings dam, International Journal for Engineering Modelling, 36 (1), pp. 49-65. <https://doi.org/10.31534/engmod.2023.1.ri.04a>

19 Applications

1. Bickovski, V., **Mircevska V.**, Trajkovski V., "Analysis of Static and Seismic Stability of Earth-Fill Dam 'Kozjak'", IZIIS Report 90-94.

2. Bickovski, V, **Mircevska, V.**, Trajkovski, V., "Analysis of Static and Seismic Stability of Gradec Dam", Volume 2 - Gravity Part, IZIIS Report 90-46, Skopje, 1990.
3. Bickovski, V., **Mircevska, V.**, Trajkovski, V., "Analysis of Static and Seismic Stability of Gradec Dam - Concrete Dam Variant", IZIIS Report 91-23, Skopje, 1991.
4. Kladek, I., Trajkovski, V., **Mircevska, V.**, Hristovski, V., "Report on Repair and Adaptation of the Old Post Office Building - Stip", Volume 3: Static and Dynamic Analysis, IZIIS Report 40-91-85, Skopje, 1991.
5. Bickovski, V., **Mircevska, V.**, Sesov, N., "Static Stability of Lisice Dam", IZIIS Report 40-91-86, Skopje, 1991.
6. Bickovski, V., **Mircevska, V.**, "Analysis of Seismic Stability of Turija Dam", IZIIS Report 92-24, Skopje, 1992.
7. Bickovski, V., **Mircevska, V.**, Hristovski, V., "Analysis of Stability of Slopes of Bucim Mine", IZIIS Report, Skopje, 1993.
8. Bickovski, V., **Mircevska, V.**, Stamatovska, S., Paskalov, A., "Assessment of Seismic Stability of Chaira Dam", IZIIS Report 94-64, Skopje, 1994.
9. Bickovski, V., **Mircevska, V.**, Sesov, N., "Investigation of Seismic Stability of NPP Kozloduy Chimney", IZIIS Report 94-28, SKopje, 1994.
10. Bickovski, V., **Mircevska, V.**, Petrovski, D, Stamatovska, S., Paskalov, A., "Assessment of Seismic Stability of Chaira Dam", IZIIS Report 94-64, Skopje, 1994.
11. Bickovski, V., **Mircevska, V.**, Talaganov, K., "Dynamic Analysis of Knezevo Dam", IZIIS Report 95-82 8/8, Skopje, 1995.
12. Bickovski, V., Zisi, N., Hristovski, V., **Mircevska, V.**, "Analysis of Static and Dynamic Stability of a Crude Oil Reservoir $V = 5000 \text{ m}^3$; Reservoir 2", IZIIS Report 97-21, Skopje, June 1997.
13. Bickovski, V., **Mircevska, V.**, "Dynamic Stability of Earth-Fill Dam Kozjak", IZIIS Report 97-44, Skopje, 1997.
14. Bickovski, V., **Mircevska, V.**, "Analysis of Static and Seismic Stability of Moste III Dam in Slovenia", Volume I, IZIIS Report 98-44, Skopje.
15. Bickovski, V., **Mircevska, V.**, "Analysis of Static and Seismic Stability of Moste III Dam in Slovenia", Volume II, IZIIS Report 98-44/1, Skopje, 1998.
16. **Mircevska, V.**, Bickovski, V., Garevski, M., "Analysis of Stress-Deformation State in the Course of Construction of the Kozjak Dam", IZIIS Report 24-2000, Skopje, 2000.
17. **Mircevska, V.**, Bickovski, V., Garevski, M., "Analysis of Filtration Process for Calyey Core of the Kozjak Dam", IZIIS Report 24/1-2000, Skopje, 2000.
18. **Mircevska, V.**, Bickovski, V., Petrovski, D., Garevski, M., Stamatovska, S., Talaganov, K., "Re-evaluation of Seismic Stability of Globocica Dam", IZIIS Report 28-2000, Skopje, 2000.
19. **Mircevska, V.**, Bickovski, V., " Analysis of Static and Seismic Stability of Moste III Dam (stability of concrete part of the contact with the foundation) ", IZIIS Report 42-2001, Skopje, 2001.
20. **Mircevska, V.**, Bickovski, V, Garevski M., "Analysis of Stress-Strain State of Kozjak Dam during its Construction – 3D Analysis" IZIIS Report 34-2001, Skopje, 2001.
21. **Mircevska, V.**, Bickovski, V, Garevski M., "Analysis of Filtration Processes Through the Dam Body in Different Phases of Filling of the Reservoir: elevation 390, Elevation 430, Elevation 469 – Kozjak Dam", IZIIS Report 24-2000, Skopje, 2000.

22. **Mircevska, V.**, Bickovski.V, Garevski M., “Safety Coefficients Along Potential Sliding Surfaces in the Case of Full and Empty Reservoir – Kozjak Dam”, IZIIS Report 2-2002, Skopje, 2002.
23. **Mircevska, V.**, Bickovski.V, Garevski M., Talaganov K., “Definition of Differential Displacements in the Zones of Different Stiffness by Application of 3D Analysis – Kozjak Dam”, IZIIS Report 22-2002, Skopje, 2002
24. Price.D., **Mircevska V.**,”Report on the Analysis of the Slope Failures on Negotino-Demir Kapija Section of Motorway from Skopje-Greece- Slope Stability Analysis”, Road Found-Skopje 2002.
25. **Mircevska V.**, Garevski M., “ Analysis of the stability of deep excavation for building the hospital “Universal Hospital Group Panorama- Skopje” , Report IZIIS 2005-26, Skopje 2005.
26. **Mircevska V.**, Garveski M., Bickovski V., “Expertise on Stability of Artificial Lake’s Duke-Deep Excavation System in Vicinity of Tirana- Albania, , Report IZIIS 2009-15, February 2009.
27. **Mircevska V.**, Vitanova M., Edip K., Static and dynamic analysis of dam “CRVENI MULJ – ZVORNIK” - Bosna and Hercegovina , Reoprt IZIIS 2016-19
28. Hristovski, V., Micov, V., Gjorgjiev, I., **Mircevska, V.**, Garevski, M. (2016). Diagnostics of the Current Condition of the Reinforced Concrete Chimney with Height of 65 m With the Ambient Vibration Method and With Finite Element Analysis Expertise in Order to Determine the Current Condition of the Chimney and Propose Remedies, Report IZIIS 2016-06 (in Macedonian).
29. **Mircevska, V.**, Jekic, G., Nanevska, A., Naumovski, N., Petreski, B., Zafirov, T. (2019). Experimental and Analytical Evaluation of Eigenvalues and Modes of Tailings Dam TSF4, Report IZIIS 2019-52/1, July 2019 (in Macedonian).
30. **Mircevska, V.**, Nanevska, A., Zafirov, T. (2019). Seismic Stability Analysis of the Tailings Dam TSF4 of the Sasa Mine, Report IZIIS 2019-52/3, July 2019 (in Macedonian).