

Academic curriculum vitae



Personal information

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| First and last name | ZVJEZDAN KARADZIN | |
| Addresses | Institution : University in Tuzli , Mining - Geological - Civil Engineering faculty Tuzla (RGGF) Univezetitska 2, 75000 Tuzla , Bosnia and Herzegovina | |
| Phones | Residential address: Maršala Tita no. 60, Tuzla , Bosnia and Herzegovina +387 35 320 554 | Mobile: 061 152 276 |
| Fax | +387 35 320 570 | |
| Email/Web | zvjezdan.karadzin@untz.ba ; zvjezdan.karadzin@gmail.com | |
| Citizenship | Bosnia and Herzegovina | |
| Date of birth | 07.04.1964. | |
| Gender | Male | |

Faculty of Mining, Geology and Civil Engineering, Department: Safety Engineering , Associate Professor , Doctor of Technical Sciences

Current workplace/position/title Work experience

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| Dates | Feb. 2022 – present |
| Position / occupation / title | Associate Professor, Head of the Narrow scientific field "General Security" |
| Basic responsibilities and duties | Conduct teaching, work with associates, organize and conduct scientific research work (as needed) |
| Employer name | University of Tuzla, Faculty of Mining, Geology and Civil Engineering |
| Type of business activity of the employer | Education of students of all profiles in subjects in the field of environmental safety and safety in mining and thermal power engineering; Scientific research work in the above areas |
| Date | 27.01.2021-14.02.2022 |
| Position / occupation / title | Minister for Spatial Planning and Environmental Protection of Tuzla Canton |
| Basic responsibilities and duties | Management of activities related to spatial planning and environmental protection that are under the jurisdiction of the Tuzla Canton |
| Employer name | Tuzla Canton |
| Type of business activity of the employer | Management and coordination of work under the jurisdiction of the Tuzla Canton government |
| Dates | Feb. 2016 – present |
| Position / occupation / title | Associate Professor, Head of the narrow scientific field "General Security" |
| Basic responsibilities and duties | Conduct teaching, work with associates, organize and conduct scientific research work (as needed) |
| Employer name | University of Tuzla, Faculty of Mining, Geology and Civil Engineering |
| Type of business activity of the employer | Education of students of all profiles in subjects in the field of environmental safety and safety in mining and thermal power engineering; Scientific research work in the above areas |

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| Dates | March 2014 – to March 2015 |
| Position / occupation / title | <i>Minister for Spatial Planning and Environmental Protection of Tuzla Canton</i> |
| Basic responsibilities and duties | Management of activities related to spatial planning and environmental protection that are under the jurisdiction of the Tuzla Canton |
| Employer name | Tuzla Canton |
| Type of business activity of the employer | Management and coordination of work under the jurisdiction of the Tuzla Canton government |
| Work experience | |
| Dates | 2013 – until March 2014 |
| Position / occupation / title | <i>Head of the Safety Engineering study program</i> |
| Basic responsibilities and duties | Convening and chairing the sessions of the Study Program Council, prepares proposals from the scope of work of the Study Department Council and forwarding them to NNV/UNV. |
| Employer name | University of Tuzla, Faculty of Mining, Geology and Civil Engineering |
| Type of business activity of the employer | Management and coordination of the work of the study program |
| Dates | 2011 – until February 2016. |
| Position / occupation / title | <i>Assistant professor at the Department for geoenvironmental engineering</i> |
| Basic responsibilities and duties | Conduct teaching, work with associates, organize and conduct scientific research work (as needed) |
| Employer name | University of Tuzla, Faculty of Mining, Geology and Civil Engineering |
| Type of business activity of the employer | Education of students of all profiles; Scientific research work |
| Dates | 2008 – 2011 |
| Position / occupation / title | Senior Assistant - External Associate at the Department of Geoenergy, Geothermomechanics and Geoecology |
| Basic responsibilities and duties | Conduct teaching, work with associates, organize and conduct scientific research work (as needed) |
| Employer name | University of Tuzla, Faculty of Mining, Geology and Civil Engineering |
| Type of business activity of the employer | Education of students of all profiles; Scientific research work |
| Dates | 1991 – 2010 |
| Position / occupation / title | <i>Assistant researcher , independent researcher researcher (since 2005 in the title higher professional collaborator , and since 2010 in title scientific collaborators)) in Scientific - research committee center for mining and energy</i> |
| Basic responsibilities and duties | Preparation of project documentation for mines, work on scientific research projects, management of an expert team, cooperation with experts from other countries in the development of various applications and projects, preparation of expert opinions and environmental impact studies |
| Employer name | Mining Institute in Tuzla, dd |
| Type of business activity of the employer | Design; Scientific research work |
| Dates | 1996-2003 |
| Position / occupation / title | Translator – SSA (special service agreement) |
| Basic responsibilities and duties | Translation and interpretation, contacts with witnesses and defendants, scheduling interviews, participation in the arrest of war crimes defendants |
| Employer name | ICTY (International Criminal Tribunal for Former Yugoslavia) – The Hague, The Netherlands |
| Type of business activity of the employer | Prosecution of war crimes committed on the territory of the former Yugoslavia |

Education and training

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| Dates | 1978. |
| Qualification acquired | Primary education |
| Field of science and profession, acquired titles and skills | Primary education |
| Name and type of organization | Elementary school "Vežbaonica" - Pedagogical Academy Tuzla |
| Dates | 1970. |
| Qualification acquired | Primary education |
| Field of science and profession, acquired titles and skills | Music education – violin major |
| Name and type of organization | Elementary School of Music - Tuzla |
| Dates | 1982. |
| Qualification acquired | IV degree |
| Field of science and profession, acquired titles and skills | Medium education |
| Name and type of organization | General Gymnasium, Tuzla |
| Dates | 1990. |
| Qualification acquired | VII degree |
| Field of science and profession, acquired titles and skills | Mining - exploitation major, graduate engineer mining |
| Name and type of organization | Faculty of Mining and Geology, Tuzla |
| Dates | 2005. |
| Qualification acquired | VIII/1 degree |
| Field of science and profession, acquired titles and skills | Mining, Master's degree technical science |
| Name and type of organization | Faculty of Mining, Geology and Civil Engineering, Tuzla |
| Dates | 2010. |
| Qualification acquired | VIII/2 degree |
| Field of science and profession, acquired titles and skills | Mining, Doctor technical science |
| Name and type of organization | Faculty of Mining, Geology and Civil Engineering, Tuzla |
| Dates | 1999 |
| Qualification acquired | ISO 9000 and ISO 9001 certificate |
| Field of science and profession, acquired titles and skills | Internal quality controller |
| Name and type of organization | RWT Ü V Croatia, Tuzla |
| Dates | May, 2006 |
| Qualification acquired | Training to prepare companies that need to obtain an environmental permit |
| Field of science and profession, acquired titles and skills | Environmental protection, Certificate for preparing existing companies for obtaining an environmental permit |
| Name and type of organization | Ceteor Sarajevo, Chamber of Commerce of Sarajevo Canton |

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| Dates | April 2005 |
| Qualification acquired | |
| Field of science and profession, acquired titles and skills | Environmental protection, Reducing the environmental impact of mining in Southeastern Europe |
| Name and type of organization | EnvSec initiative launched by UNEP, UNDP, OSCE and NATO |
| Dates | March, 2007 |
| Qualification acquired | |
| Field of science and profession, acquired titles and skills | Environmental protection, pollution of surface and groundwater due to mining operations |
| Name and type of organization | EnvSec initiative launched by UNEP, UNDP, OSCE and NATO |
| Dates | October, 2009 |
| Qualification acquired | |
| Field of science and profession, acquired titles and skills | Experiences of Slovakia in environmental management and remediation of mine sites with an emphasis on acid effluents and treatment of heavy metals |
| Name and type of organization | UNDP-Western Balkans |
| Dates | December, 2010 |
| Qualification acquired | |
| Field of science and profession, acquired titles and skills | Certified Counselor Certificate |
| Name and type of organization | Professional exam in the field of environmental protection for members of committees that review environmental impact studies and activity plans |
| | Federal Ministry of Environment and Tourism |
| Dates | June, 2012 |
| Qualification acquired | |
| Field of science and profession, acquired titles and skills | Certificate for a passed exam in international standards and legal regulations in the field of safety, occupational health, fire safety and environmental protection |
| Name and type of organization | Safety and health at work, environmental protection |
| | University of Tuzla |
| Dates | June, 2013 |
| Qualification acquired | |
| Field of science and profession, acquired titles and skills | Certificate for active participation and coordination at the seminar "Industry and Environment" |
| Name and type of organization | Safety and environmental protection |
| | Municipality of Lukavac |
| Dates | September, 2013 |
| Qualification acquired | |
| Field of science and profession, acquired titles and skills | Certificate for passing the exam at the workshop "PCB Inventories and Environmental Sound Management of PCB, Mostar," |
| Name and type of organization | Safety and environmental protection |
| | UNEP and Environmental Technology International |
| Dates | September, 2013 |
| Qualification acquired | |
| Field of science and profession, acquired titles and skills | Certificate for the held training "L200 DX Analyzer System Quantitative PCB/Chlorinated organic Testing, Mostar" |
| Name and type of organization | Safety and environmental protection |
| | UNEP and Environmental Technology International |

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| Dates | September, 2018 |
| Qualification acquired | Certificate for active participation at the 7th International and Scientific Conference in the field of Occupational Safety and Health, Zadar, Croatia |
| Field of science and profession, acquired titles and skills | Occupational safety |
| Name and type of organization | |

Scientific papers within formal education

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| Title of work | Doctoral dissertation " Minimizing post - mining environmental hazard in during life cycle mine " |
| The institution where the paper was prepared | Faculty of Mining, Geology and Civil Engineering |
| Year and place | 2010, Tuzla |
| Summary | Within the framework of the subject dissertation, a model and measures are defined, the basis of which is the goal of reducing the post-operational environmental burden during the operation of the mine. In doing so, technical-technological, economic-financial, environmental-security and social aspects are connected in a meaningful way. The model consists of 21 steps, sub-steps and sub-models, which comprehensively encompass the issue in question. |
| Comment | As part of the comprehensive tendency towards reducing all forms of environmental burden, the defined model and measures for reducing the post-operational impact of mining operations should be one in a series of steps towards establishing an adequate environmental protection system in the mining sector, Mentor: Prof. Dr. Bašić Abdulah |
| Title of work | Master's thesis "Analysis and evaluation of environmental hazards due to mining operations in the Kreka "lignite basin" |
| The institution where the paper was prepared | Faculty of Mining, Geology and Civil Engineering |
| Year and place | 2005, Tuzla |
| Summary | The subject research defined the basic ecological hazards and their causes related to mining operations in the Kreka lignite basin. For the purposes of the research, the operational units of the «Kreka» mine were primarily taken into account. As a basis for the research, all mining operations carried out in the last 120 years, the same period as lignite exploitation in the Kreka basin, were created and outlined on a geographical map. The presentation is provided in GIS format, which allows linking geographic data with a database. As a tool to support the research, a database was created for the area that includes the polygon where the research is being conducted, and in which data on land areas were entered, by municipality and cadastral parcel, and by individual units of the «Kreka» mine. Pedological maps of soil types and forest land represented in the Kreka basin were also added. |
| | The aim of the research is to create a basis for establishing an adequate system for monitoring the state of the environment in mining and determining measures for the possible prevention or mitigation of inevitable negative effects initiated by defined hazards. |
| Comment | The presented research is applicable to the conditions prevailing in the observed research polygon as well as other mines in Bosnia and Herzegovina, Mentor: Prof. Dr. Bašić Abdulah |
| Title of work | Graduation thesis "Stress conditions around underground mining premises" |
| The institution where the paper was prepared | Faculty of Mining and Geology |
| Year and place | 1990, Tuzla |
| Summary | The thesis deals with primary and secondary stress states that prevail before and after the construction of underground mining facilities. |
| Comment | Mentor: Prof. Dr. Milan Stević |

Groupings of works by title:

Period in the title of assistant professor and before:

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| Title of work | Karadžin , Z., Memić, M., Defining the "subgrade-rock massif" system in the working environment of the "Mramor" lignite mine in Mramor |
| The institution where the paper was prepared | Mining Institute Inc. Tuzla |
| Year and place | 1999, Journal "Mining" no. 13-16; pp. 49-59, Tuzla |
| Summary | The goal of the research carried out in this paper is the determination of the numerical value of deformation (U), the radial displacement of a room with a circular cross-section, that is, the determination of the value of the deformation pressure (P), the pressure of the rock mass on the foundation in the underground room. |
| Comment | The paper was categorized as professional by the review of the editorial board. |
| Title of work | Karadžin , Z., Memić, M., Musić, O, Design of a rigid circular metal frame support |
| The institution where the paper was prepared | Mining Institute Inc. Tuzla |
| Year and place | Journal "Rudarstvo" No. 19-20; p.99-109 Tuzla, July-December 2000 |
| Summary | In modern mining theory and practice, there are many classifications, methods of design and selection of the type and type of support. This paper discusses eight classifications of support according to various criteria, the first of which is the criterion according to the method of transferring the reaction to the surrounding rock massif. |
| Comment | By review editorial board work categorized as expert . |
| Title of work | Memić, M., Karadžin , Z., Musić, O., Analytical determination of the geometry of the Krekan chamber excavation method |
| The institution where the paper was prepared | Mining Institute Inc. Tuzla |
| Year and place | Journal "Rudarstvo" no. 19-20; p. 43-55, Tuzla, July-December 2000 |
| Summary | In order to more reliably determine the geometry of the chamber for certain mining and geological conditions of the working environment, formulas for calculating the width of the excavation, the thickness of the roof and floor slabs, as well as the thickness of the side and front protective pillars were analytically derived using the example of the Mramor Mine. |
| Comment | By review editorial board work categorized as expert . |
| Title of work | Hadžić, E., Knežićek, Ž., Karadžin , Z., et al., Research on the possibility of forming an institution for waste management in the Tuzla Canton |
| The institution where the paper was prepared | Mining Institute Inc. Tuzla |
| Year and place | "Rudarstvo" magazine, No. 23-24; Tuzla, July-December 2001 |
| Summary | All local municipal landfills for solid and other waste in the Tuzla region (there are 13 of them) pose a threat to the environment, flora and fauna, air, groundwater and surface water, etc. The existing landfills for solid waste in the Tuzla region are not designed according to the projects nor are they in line with legal regulations, and do not have the appropriate documentation. This paper analyzes the possibilities for establishing a joint institution for solid waste management in the Tuzla Canton. |
| Comment | By review editorial board work categorized as expert . |

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| Title of work | Karadžin , Z., Memić, M., Zolotić, E., Conceptual solution for the method of excavating a thick coal seam in the pit «Đurđevik» RMU «Đurđevik» |
| The institution where the paper was prepared | Mining Institute Inc. Tuzla |
| Year and place | Journal "Rudarstvo", No. 25-28, pp. 69-77, Tuzla |
| Summary | <p>This paper presents a variant of chamber geometry as well as the method and technology of performing drilling and mining operations for coal extraction. The improvements achieved include, among other things, the following:</p> <ul style="list-style-type: none"> - The work is carried out in a supported chamber, with coal being extracted by drilling deep mine shafts, where the roof is controlled using anchor supports, which allows workers to enter the excavation occasionally and thus reduces the working slope angle to 20 degrees. - Better utilization of coal, which in this case amounts to 68%, - The excavated area does not collapse, but the roof fits into the excavated area in waves, reducing the possibility of endogenous fires, etc. |
| Comment | By review editorial board work categorized as expert . |
| Title of work | Bašić, A., Delić, E., Karadžin , Z., Hydraulic Pressure as a Declining Stability Factor of the Flooded Underground Salt Mine «Tušanj» Tuzla |
| The institution where the paper was prepared | Faculty of Mining, Geology and Civil Engineering, Tuzla |
| Year and place | Kaiserslautern - Germany - consultation, August 2003 |
| Summary | <p>The planned submergence of the underground salt mine "Tušanj" will lead to a redistribution of stresses in the rock mass. A number of external and internal factors cause the movement of water of an oscillatory nature. Hydraulic shocks can be expected at contacts with solid rock mass where all movements stop, and the intensity of hydraulic shocks can be estimated depending on the maximum fluid velocity. In order to secure the underground rooms and prevent impacts on the terrain surface in urban areas, it will be necessary to exhaust the injected water, then carry out the separation of the underground rooms and backfill the excavated areas with solid mass.</p> |
| Comment | By review which is did Prof.Dr.-Ing.Meisner.H. work categorized as scientific . |
| Title of work | Memić, M., Musić, O., Karadžin , Z., Investigation of the impact of deposited masses at the «Stupnica» mine on the underground rooms of the «Đurđevik» pit |
| The institution where the paper was prepared | Mining Institute Inc. Tuzla |
| Year and place | Magazine "Mining", no. 29-32, p. 27-37, Tuzla, January-December 2003 |
| Summary | <p>During the excavation of a layer of brown coal with a mechanized wide face in the "Đurđevik" pit, an increase in stress concentration occurs in the rock massif around the underground rooms of the wide faces. The aim of this research is based on the assumption that with a change in the height of the dump at the "Stupnica" mine, there will be a change in the stress state around the underground rooms of the "Đurđevik" pit, where coal exploitation works are being carried out below that dump. In this paper, the pressures that arise due to the dumping of masses at the Stupnica mine were defined.</p> |
| Comment | By review which is did Dr. Esad Hadžić, B.Sc. in Mining Engineering work categorized as scientific |
| Title of work | Knežiček, Ž., Karadžin , Z., Effectiveness of auxiliary machinery complexes in open pit mines lignite |
| The institution where the paper was prepared | Mining Institute Inc. Tuzla |
| Year and place | Magazine «Rudarstvo», No. 25-28, pp. 59 – 67, Tuzla January-December. 2003 |
| Summary | University of Tuzla |

.To determine and monitor the effectiveness of auxiliary machinery in lignite mines, a software model was created in the Visual Studio programming language, under the Windows operating system, and with an Access database.

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| Comment | By review which is did M.Sc. Rasim Pirić, Bachelor of Mechanical Engineering work categorized as scientific . |
| Title of work | Karadžin , Z.Zolotić, E. Modern tools – Environmental impact assessment and environmental management system |
| The institution where the paper was prepared | Mining Institute Inc. Tuzla |
| Year and place | Journal "Rudarstvo", no. 33-36, pp. 73-76, January-December 2004, Tuzla |
| Summary | The paper presents the most commonly used tools for environmental assessment, the so-called "Environmental impact assessment" (EIA) and Environmental management systems (EMS). The recommendations provided in the paper are adapted to the needs of the mining sector. In addition, the paper provides basic steps in the process of environmental risk management in the field of mining practice. |
| Comment | By review editorial board work categorized as expert . |
| Title of work | Karadžin , Z., Knežiček, Ž, Todorović, N. , Introduction of recycling yard into waste management process |
| The institution where the paper was prepared | Mining Institute Inc. Tuzla |
| Year and place | Magazine "Mining", no. 33-36, pp. 91-97, Tuzla, January-December 2004 |
| Summary | The paper presents the current situation in the segment of solid waste management in the Tuzla Canton. A proposal for priority steps to improve the waste management system was also given, with particular emphasis on reducing the amount of waste by avoiding and recycling as measures to reduce the amount of waste, with an emphasis on the need to utilize the value of waste, through the establishment of a system of so-called recycling yards. |
| Comment | By review editorial board work categorized as expert . |
| Title of work | Memić, M., Karadžin , Z., Musić, O., Preservation and improvement of rock properties using the expansion anchor «TUZBIH» |
| The institution where the paper was prepared | European Conference on Building Materials and Coal (ECRBM:04): New Perspectives |
| Year and place | Sarajevo, May 2004 |
| Summary | The work is based on scientific principles and presents a new expansion anchor type "TUZBIH" for the preservation and improvement of rock properties. This anchor is similar to the SWELLEX type anchor where the previous expansion is achieved by means of pressurized water. Due to the consequent mechanical processes that occur in the surrounding rock, the steel pipe is elongated and deformed, water leaks out, which causes the wooden wedge to swell, ensuring permanent expansion of the anchor. |
| Comment | The review by Prof. Muris Osmanagić, PhD, categorized the work as scientific |
| Title of work | Karadžin , Z., A new approach to monitoring environmental hazards related to lignite exploitation in the Kreka lignite basin |
| The institution where the paper was prepared | Mining Institute Inc. Tuzla |
| Year and place | International scientific and professional conference "Geotechnics in the function of environmental protection", magazine "Rudarstvo", no. 39-40, pp. 13-24, Tuzla, December, 2005 |
| Summary | The closure of mines in the Kreka lignite basin in the past was generally not accompanied by the implementation of prescribed protection and reclamation measures, so that 2/3 of the land areas that |

were degraded due to surface mining were not recultivated. Such areas, among other things, represent potential sources of major environmental risks. The paper provides information on the methodology for introducing a geographic information system (GIS) with an accompanying database, as well as the conducted preliminary hazard analysis, as the basis for a future system of monitoring and managing environmental risks.

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| Comment | By review organizational board work categorized as original scientific work . |
| Title of work | Knežiček, Ž., Karadžin , Z., World experiences in the production and use of geothermal resources, Journal Technologica Acta, vol. 1, no. 2, Tuzla, July 2005 – presentation in English and Bosnian at the symposium on "Alternative energy sources and clean technologies" |
| The institution where the paper was prepared | University of Tuzla |
| Year and place | Summer University Tuzla (LJUT), July 2005 |
| Summary | With growing awareness of the harmful effects of burning fossil fuels on the environment, there is a growing interest in the use of clean and renewable energy sources worldwide. Geothermal energy, with its proven technology and vast resources, can greatly help to significantly reduce greenhouse gas emissions. This paper provides an overview of the production and consumption of geothermal energy in the world. |
| Comment | Editorial board review paper categorized as scientific review paper . |
| Title of work | Hadžić , E. , Karadžin , Z. , Short review of development of excavation methods in lignite " Kreka " i in function of modernization and work humanization |
| The institution where the paper was prepared | Mining Institute Tuzla |
| Year and place | Round table organized by "Kreka" Mines, November 2005, Tuzla |
| Summary | The paper presents the history of mining methods applied in the Kreka lignite basin, through which one can see the trend of efforts to improve these methods, both from a technical and technological aspect in order to increase productivity, and from the aspect of humanizing work in mines with underground exploitation. |
| Comment | The work was reviewed by the organizational committee. categorized as review paper |
| Title of work | Karadžin , Z., «Introduction of contemporary environmental monitoring system in coal mining industry of Bosnia and Herzegovina» |
| The institution where the paper was prepared | UNEP |
| Year and place | Regional Conference on the Environmental Impact of Mining in Southeast Europe under the auspices of UNDP, OSCE, UNEP, NATO Environment and Security initiative for Southeast Europe (EnvSec), Cluj – Romania, April 2005 |
| Summary | The paper provides an overview of research conducted in the Kreka lignite basin related to the introduction of a modern environmental monitoring system into the operational facilities of the Kreka Mine. The proposed system itself is in accordance with the requirements of the European Union environmental regulations and with the proposals of the so-called EnvSec initiative for improving environmental protection in the mining sector in Southeast Europe. The EnvSec initiative was launched by UNDP, UNEP, OSCE and NATO. |
| Comment | Review of the editorial course work categorized as original scientific work |
| Title of work | PETROVIC , M. Knežiček, Ž. and Karadžin , Z. : Fertilization values of lignite from surface mines of Bosnia and Herzegovina |
| The institution where the paper was prepared | University of Tuzla |
| Year and place | VI European Coal Conference, Belgrade, Serbia and Montenegro, page 25, September 2005 |

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| Summary | The paper defines the possibilities of using lignite from open pit mines in Bosnia and Herzegovina as a mineral fertilizer. |
| Comment | The paper was categorized as an original scientific paper by the editorial board as a scientific.. |
| Title of work | Karadžin , Z., Knežiček, Ž., "Coal and its future" |
| The institution where the paper was prepared | University of Tuzla |
| Year and place | Summer University in Tuzla 2007, June 2007 |
| Summary | The paper presents detailed information on the current state and future prospects of the coal sector, both worldwide and separately for Bosnia and Herzegovina, taking into account coal reserves, its production and consumption, trade and the inevitable environmental aspect. It also provides indications of possible solutions to existing problems related to coal production and use. |
| Comment | The editorial board review categorized the paper as a review article. |
| Title of work | Karadžin , Z., Delić, E. Water management and monitoring in Bosnia and Herzegovina |
| The institution where the paper was prepared | Faculty of Mining, Geology and Civil Engineering |
| Year and place | Brestovačka Banja – Serbia , Regional workshop about influence mining on environment in southeast Europe in organization UNDP , OSCE , UNEP , NATO Environment and Security initiative for Southeast Europe (EnvSec) , March , 2007 |
| Summary | The work covers all aspects of water resource management and monitoring in Bosnia and Herzegovina. |
| Comment | The review of the editorial board classified the paper as a review paper. |
| Title of work | Mičević, S., Marković, J, Adilović, A. Karadžin , Z.: Influence of transport systems servicing surface mines on air pollution and noise to surrounding settlements |
| The institution where the paper was prepared | Faculty of Mining, Geology and Civil Engineering |
| Year and place | TMT 2009, Hammamet, Tunisia, 16-21. October 2009, |
| Summary | Coal exploitation at the «Ćubrić» and «Grivice» mines of the «Banovići» mine in Banovići is carried out by surface mining. Coal is transported from the «Ćubrić» mine by a belt conveyor system to the transfer station, from where the coal is further transported by wagons to the Banovići separation plant. Overburden deposits are transported from the «Grivice» mine to an external landfill located approximately 700 m from the open pit mine by truck. In both cases, the transport routes pass through populated areas, directly touching residential buildings. In this way, they have a direct impact on the environment of these settlements, which is reflected in increased emissions of suspended and sedimentary dust and increased noise levels. Defining the impact of the aforementioned transport on air pollution and noise in the residential area was carried out by measuring emissions of suspended and sedimentary dust and noise levels. |
| Comment | The paper was categorized as scientific by the editorial board. |
| Title of work | Zolotić, E., Pirić, E., Karadžin, Z. , Osmanović, F., Fragmentation Optimization demined masses, |
| The institution where the paper was prepared | Mining Institute Tuzla |
| Publisher, year and place | Mining Institute Tuzla, Journal of Mining, 2010 |
| Summary | Predicting the fragmentation of demined material and its continuous monitoring is of great importance from the point of view of the applied processing technology and the mining process in quarries. Optimal fragmentation in relation to the applied processing technology can significantly reduce the total costs of obtaining, and ensure the passage of the maximum amount of material with minimal energy and plant costs, and have a positive impact on reducing environmental impact. |

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| Comment | The review by the editorial board of the RI Tuzla categorized the work as scientific. |
| Title of work | Karadžin, Z. , " Western Balkans Environmental Hot Spots Programme , Bosnia and Herzegovina ", , Regional Expert Meeting |
| The institution where the paper was prepared | Pržno , Monte Negro , November 2009 . |
| Publisher, year and place | Presentation project " Hot spots and Bosnia and Herzegovina " and his/her contributions achieving goals planned in NEAP - in , consents with priority goals on field protection environment in Bosnia and Herzegovina and by defining basic obstacle to faster implementation planned environmental goals . |
| Comment | |
| Title of work | Isabegović, J., Karadžin, Z. .. "Assessment of the impact on the environment on the example of the exploitation of gypsum deposit Orašac - Kulen Vakuf |
| The institution where the paper was prepared | Mining Institute Tuzla |
| Publisher, year and place | Mining Institute Tuzla, Journal of Mining, no . 45-48 , May 2010 |
| Summary | <p>The paper provides an overview of the conducted analysis of the basic environmental impacts for the planned exploitation of the gypsum deposit "Orašac" - Kulen Vakuf, while defining points of particular interest for future environmental impact research. Relief, climatic conditions, soil characteristics, hydrological characteristics, vegetation, landscape values, built assets and archaeological heritage were taken into account.</p> <p>Environmental impacts were observed for the entire life of the open pit mine, from the opening phase to the post-operational period. Special attention was paid to impacts that may arise from accident situations.</p> |
| Comment | The review by the editorial board of the RI Tuzla categorized the work as professional. |
| Title of work | Karadžin , Z. , Zolotić, E. , " Mining and environmental on example of Southeast Europe |
| The institution where the paper was prepared | Mining Institute Tuzla |
| Publisher, year and place | Mining Institute Tuzla, Scientific and Professional Journal Mining, No. 45-48, Tuzla, May 2010 |
| Summary | <p>In work is processed the segment of environmental impacts of mining activities in Southeast Europe . within the Environmental – safety initiative (EnvSec) under the auspices of UNEP , UNDP , OSCE and NATO in goal promotions cooperation on to protect environment in mining sector in the region . A preliminary analysis along with cataloging dangerous mining locations (hot - spots) is prepared for countries in Southeast Europe region and a proposal of primary measure for reduction of respective environmental risks was given .</p> |
| Comment | The review by the editorial board of the RI Tuzla categorized the work as professional. |
| Title of work: | Karadžin, Z. , Basic characteristics and general overview of the impact of the ash and slag disposal process from the Tuzla Thermal Power Plant |
| | Institution where the work was created: Ecological Movement "Eko Zeleni" Tuzla |
| Publisher, year and place: | Proceedings of the round table "Slag and Ash Landfill", Tuzla, 22.04.2011 |
| Short content: | The paper provides an overview of disposal methods and an analysis of all the major environmental impacts of the process. ash and slag disposal from the Tuzla Thermal Power Plant |
| Comment: | Professional paper |
| Title of work | Karadžin , Z. , Delić , E. , Problems of environmental practice in mining in Bosnia and Herzegovina and countries of Southeastern Europe with examples of good practice from around the world |

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| The institution where the paper was prepared | Faculty of Mining, Geology and Civil Engineering, University of Tuzla |
| Publisher, year and place | Mining Institute Tuzla, Scientific and Professional Journal Mining, Tuzla, October 2011 |
| Summary | <p>The paper provides an overview and definition of the current environmental problems in mining in BiH and the region, with an emphasis on the coal mining sector as the leading sector in mining in BiH. For the purpose of comparison, examples of practice from several countries around the world related to this issue are provided.</p> <p>In addition, the basic directions of possible systemic action to reduce environmental impact, especially in the post-operational phase, have been defined, as one of the issues that has been largely neglected in the past.</p> |
| Comment | The paper was categorized as a scientific paper after review by the editorial board of the RI Tuzla. |
| Title of work | <p>Karadžin, Z., Šišić, R., Delić, E., Fejzić, A.</p> <p>Environmental impacts of the disposal of combustion products from Unit 7 of the Tuzla Thermal Power Plant in excavated areas of open pit coal mines</p> |
| The institution where the paper was prepared | Faculty of Mining, Geology and Civil Engineering, University of Tuzla |
| Publisher, year and place | Proceedings, Gazette of the Faculty of Mining, Geology and Civil Engineering, Tuzla , Tuzla, 2012 |
| Summary | <p>The paper deals with the aspect of the possibility of depositing combustion products from the Tuzla Thermal Power Plant into the excavated areas of the Kreka and Djurdjevik surface mines.</p> |
| Comment | The paper was categorized as a scientific paper after review by the editorial board of the RGGF Tuzla. |
| Title of work | <p>Karadžin, Z. , Šišić, R., Delić, E., Osmanović, Z.</p> <p>Possibility of reducing post-mining environmental risks during the mine life cycle</p> |
| Institution where the work was produced | Faculty of Mining, Geology and Civil Engineering, University of Tuzla |
| Publisher, year and place | Proceedings, Gazette of the Faculty of Mining, Geology and Construction Tuzla , Tuzla, 2012. |
| Short content: | <p>The paper analyzes the possibility of reducing environmental risks in the post-operational phase of the mine and the way how to minimize them through activities carried out during the operational phase of the mine</p> |
| Comment: | The paper was categorized as a scientific paper after review by the editorial board of RGGF Tuzla. |
| Title of work | <p>Šišić, R., Hadžimustafić, M., Delić, E., Karadžin, Z.,</p> <p>CFD study of extreme aerological conditions during takeoff and landing maneuvers at Dubrave International Airport</p> |
| The institution where the paper was prepared | Faculty of Mining, Geology and Civil Engineering, University of Tuzla |
| Publisher, year and place | 4th international scientific and professional conference on Occupational protection and health protection, 19.-22. IX. 2012, Borik – Zadar, Croatia |
| Summary | <p>The paper defines the extreme aerological conditions that prevail during takeoff and landing maneuvers at the Dubrave airport near Tuzla.</p> |
| Comment | The paper was categorized as a scientific paper after review by the editorial board |
| Title of work | <p>Šabović A, Isabegović J., , Karadžin Z ., , Delić E.,</p> <p>Potentials of Bosnia and Herzegovina for underground borehole injection of CO₂,</p> |
| The institution where the paper was prepared | <i>Mining Institute Tuzla</i> |
| Publisher, year and place | <i>Technical Institute Bijeljina, Archives for Technical Sciences, 2013.</i> |
| Comment | The paper was categorized as a scientific paper after review by the editorial board |

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| Title of work | Delić E., Osmanović, Z., Karadžin Z. , Ahmetbegović, S., The importance of mountain biking for environmental protection and tourism development in Bosnia and Herzegovina <i>Faculty of Technology in Tuzla</i> |
| The institution where the paper was prepared | |
| Publisher, year and place | <i>3rd International Symposium "Environmental Potentials, Sustainable Development and Food Production, Tuzla, November 2013</i> |
| Comment | The paper was categorized as a professional paper after review by the editorial board |
| Title of work | Marković, J., Mičević, S., Karadžin Z. <i>Impacts of slag and ash deposition on surrounding agricultural soil</i> |
| Institution where it was created | 19 th International Research/Expert Conference "Trends in the Development of Machinery and Associated Technology", 22-23 July, 2015, Barcelona, Spain |
| Publisher, year and place | Barcelona, 2015 |
| Summary | The paper analyzes the impact of deposited material, ash and slag on the surrounding agricultural land. |
| Comment | |
| Publication name | The book "Ecology - a new way of thinking - a new ecological consciousness" |
| Authors | Banović, R., Karadžin, Z. |
| Publisher, year and place | Ecological movement Eko Zeleni, 2012. Tuzla |
| Summary | The book primarily addresses the issues of a new form of environmental education and the development of environmental awareness. In addition, the book contains information on important environmental concepts and environmental protection, covering all components of the environment, from the aspect of their origin, pollution, measures for protection against pollution and relevant legal regulations in this domain. |
| Comment potential | The presentation of the book took place in March 2012 |
| Title of work | Husić, A., Šišić, R., Karadžin, Z. <i>Possibilities of utilizing ventilation air methane from FBiH coal mines</i> |
| Institution where it was created | 5 th International symposium Mining and Environmental Protection, 10-13 June 2015. Vrdnik, Serbia |
| Publisher, year and place | University of Belgrade, 2015 |
| Summary | The paper provides an overview of different ways of using methane from the exhaust air stream of coal mines, as well as ways of exploiting methane as an energy resource. |
| Title of work | Delić, E., Nukić, E., Karadžin, Z. , Fejzić, S. <i>Mining-forensic characteristics of coal mining impact assessment</i> |
| Institution where it was created | Scientific and professional symposium "Geo-Expo 2015", landslides, mines, infrastructure, 18-129-September 2015, Zenica |
| Publisher, year and place | University of Zenica, 2015 |
| Summary | The paper discusses experiences in conducting investigative procedures and provides a methodological basis for the application of risk management principles in conducting forensic investigative procedures in coal mining. |
| Title of work | Okić, A., Šišić, R., Karadžin, Z. , Delić, E. <i>Energy management and energy efficiency</i> |
| Institution where it was created | "Mining" - Scientific and professional journal, 2016 |
| Publisher, year and place | Mining Institute Tuzla, 2016 |

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| Summary | The paper defines guidelines for improving energy efficiency through a regulated market. It also defines models for increasing the supply of electricity on the market, analysis and assessment of energy efficiency and the effectiveness of investments in technological development, as well as methods for evaluating investment projects. |
| Title of work | Osmanović, Z., Karadžin , Z., Šišić, R. Analysis of the risk of depositing industrial waste in populated areas |
| Institution where it was created | E-GTZ 2016 Tuzla |
| Publisher, year and place | Faculty of Mining, Geology and Civil Engineering, Tuzla, 2016 |
| Summary | The paper analyzes the risks of industrial waste disposal in populated areas, with a focus on by-products from the Sisecam Lukavac Soda Factory. |
| Title of work | Karadžin , Z., Ajanović, E.. Risk management in all phases of a mine's life cycle (as a legal obligation) in the mining industry |
| Institution where it was created | E-GTZ 2016 Tuzla |
| Publisher, year and place | Faculty of Mining, Geology and Civil Engineering, Tuzla, 2016 |
| Title of work | Karadžin , Z., Šišić, R., Velić, A. Environmental impacts of abandoned mining operations in Vareš area |
| Institution where it was created | I st Symposium K-Force, Erasmus +, Novi Sad |
| Publisher, year and place | Erasmus +, K-Force - collection of works, Novi Sad |
| Title of work | Marković, J., Šišić, R., Karadžin , Z. Determining the circumstances and causes of methane ignition in a chamber excavation using CFD simulation of gas ventilation parameters |
| Institution where it was created | Proceedings of the RGGF Journal, Tuzla, |
| Publisher, year and place | RGGF Tuzla, July 2019. |
| Title of work | Karadžin , Z., Vajkić, M. Vulnerability assessment as a basis for forest fire protection in Bosnia and Herzegovina |
| Institution where it was created | 15th International Conference Risk and Safety Engineering, Kopaonik, Serbia, 2020 |
| Title of work | Karadžin , Z. Šišić, R. <i>Introduction to geoenvironmental engineering</i> |
| Institution where it was created | RGGF |
| Publisher, year and place | Belim, March 2020. |
| Summary | This university textbook for RGGF students covers topics related to the environmental impact and geoenvironmental engineering of the industries they will serve. |
| Title of work | Karadžin , Z. , Mostarlić, A., Nukić, E., Marković, J. Proposal of a Feasible Energy Mix in Bosnia and Herzegovina |
| Institution where it was created | 8th International Scientific Safety Engineering Conference, Bečići, Montenegro, |
| Publisher, year and place | University of Novi Sad, The Faculty of Technical Sciences The Department of Civil Engineering and Geodesy Novi Sad, Republic of Serbia, September 2022 |
| Title of work | Marković, J., Karadžin , Z. , Nukić, E., Assessing the possibility of using Inner Dust for Explosion Protection in Brown Coal Mines |
| Institution where it was created | 8th International Scientific Safety Engineering Conference, Bečići, Montenegro, |

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| Publisher, year and place | University of Novi Sad, The Faculty of Technical Sciences The Department of Civil Engineering and Geodesy Novi Sad, Republic of Serbia, September 2022 |
| Title of work | Nukić, E., Karadžin, Z. , Marković, J. |
| | Comparative Analysis of Numerical Methods for Public Buildings Fire Risk Assessment |
| Institution where it was created | 8th International Scientific Safety Engineering Conference, Bečići, Montenegro, |
| Publisher, year and place | University of Novi Sad, The Faculty of Technical Sciences The Department of Civil Engineering and Geodesy Novi Sad, Republic of Serbia, September 2022 |
| Title of work | Karadžin, Z. , Burek, J., Nukić, E., Marković, J. |
| | Improving technical measures for dealing with accident situations in the gas system |
| Institution where it was created | 8th International Scientific Safety Engineering Conference, Bečići, Montenegro, |
| Publisher, year and place | University of Novi Sad, The Faculty of Technical Sciences The Department of Civil Engineering and Geodesy Novi Sad, Republic of Serbia , September 2022. |
| Title of work | Karadžin, Z., Isabegović J, Nukić, E., Marković, J. |
| | Assessment on the contamination of soil and groundwater with mercury at the chemical industrial complex, HAK1, Tuzla. |
| Institution where it was created | International Engineering Conference, Bečići, Montenegro, |
| Publisher, year and place | University of Novi Sad, The Faculty of Technical Sciences The Department of Civil Engineering and Geodesy Novi Sad, Republic of Serbia , September 2023. |
| Title of work | Karadžin, Z., Velić.A, |
| | Environmental risk assessment at an old mining site |
| Institution where it was created | Engineering Conference, Novi Sad, Serbia, |
| Publisher, year and place | University of Novi Sad, The Faculty of Technical Sciences The Department of Civil Engineering and Geodesy Novi Sad, Republic of Serbia , September 2024 |
| Title of work | Environmental risks posed by mercury presence in soil and ground water – case study former chemical complex HAK1, Tuzla |
| Institution where it was created | Conference: Disaster Risk Reduction – Models and Practices at the International and National Levels |
| Publisher, year and place | Faculty of Security, University of Belgrade, UNDP, April 2025. |
| Title of work | Karadžin, Z., Velić.A, |
| | Analysis and remediation of endogenous fire during wide-faced excavation of the total thickness of the main coal seam in the Rastopočje pit, RMU Zenica |
| Institution where it was created | Bulletin of the Faculty of Mining, Geology and Civil Engineering, Tuzla, Bosnia and Herzegovina |
| Publisher, year and place | Faculty of Mining, Geology and Civil Engineering, University of Tuzla, 2024 |
| Title of work | Velić.A., Karadžin. Z. |
| | Proposal of measures to mitigate environmental impacts in the area of abandoned Vareš mine facilities |
| Institution where it was created | Journal of the Faculty of Mining, Geology and Civil Engineering, Tuzla, Bosnia and Herzegovina |
| Publisher, year and place | Faculty of Mining, Geology and Civil Engineering, University of Tuzla, 2025 |

Selected projects, programs, studies, reports and presentations

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| Name | Joint program for restructuring mines in BiH, Underground mines in the Kreka basin |
| Authors | Hadžić, E., Tanović, K, Karadžin Z., et. al |
| Publisher, year and place | Mining Institute dd Tuzla, 1995 |
| Summary | As part of the process of necessary restructuring of coal capacities in BiH, a program has been developed for all mines in the Federation of BiH. In this specific case, work has been done on the aspect of restructuring of mines with underground exploitation in the Kreka lignite basin. |
| Comment | Drives processed RL Bukinje, RL Mramor, RL Dobrnja-jug. |
| Name | Feasibility Study for Coal Mines Tuzla and Central Bosnia, Federation of Bosnia and Herzegovina |
| Authors | Marston & Marston, Inc. USA |
| Publisher, year and place | Tuzla and Sarajevo; 1999-2000 year |
| Summary | Member of the support team for the preparation of the subject study, which defined the current situation and provided a proposal for the future status of each of the mines included in the study. |
| Name | Feasibility study "Considering the possibility of forming an institution for inter-municipal solid waste management in the Tuzla region" |
| Authors | Knežićek , Ž . , Hadžić , E. , Karadžin , Z. , et.al. |
| Publisher, year and place | Tuzla Mining Institute in 2001 |
| Summary | In studies are defined necessary basics for formation intermunicipal institutions for management rigid waste on region Tuzla |
| Comment | Study investor: World Bank, USA |
| Name | Study on the research and monitoring of the possible impact of underground coal exploitation in the pit, II roof layer, III horizon, West District, Bukinje Mine on the stability and safety of buildings in the settlement of Rapače near Tuzla |
| Authors | Karadžin Z., et.al. |
| Publisher, year and place | Tuzla Mining Institute in 2003 |
| Summary | Determination of the final possible range of the impact of the mining works in question from the aspect of the subsidence bed and the seismic effects of blasting on residential buildings in the Rapače settlement |
| Comment | |
| Name | Supplementary mining project for the closure of the "Stara jama" plant, the "Kakanj" mine in Kakanj |
| Authors | Memić, M., Karadžin , Z., et.al. |
| Publisher, year and place | Tuzla Mining Institute in 2003 |
| Summary | The project that defines all aspects of the closure of the "Stara jama" mine in Kakanj |
| Comment | |
| Name | Supplementary mining project measure security at complete and permanent suspension exploitation works in " Lipnica " mine coal " Kreka " d . o . o . |
| Authors | Karadžin , Z., et.al. |
| Publisher, year and place | Tuzla Mining Institute in 2003 |
| Summary | The Lipnica mine is located in a densely populated suburban area of Tuzla. The project addressed all activities necessary for the permanent and safe closure of the underground mine, with an emphasis on the resulting environmental hazards and risks. |

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| Comment | Based on this project, an application was submitted for funding for a pilot project within the EnvSec initiative for Southeast Europe under the auspices of UNEP, UNDP, OSCE and NATO. |
| Name | Study on the situation at the "Škulje" open-pit mine after the activation of a landslide within the mine's exploitation field as a result of a natural disaster |
| Authors | Knežiček, Ž, Ibršimović, A., Karadžin , Z., et.al. |
| Publisher, year and place | Tuzla Mining Institute in 2005 |
| Summary | After heavy rains accompanied by storms, a large-scale landslide was activated in the area of the exploitation field of the "Škulje" Mine, especially in the "Prline" settlement, endangering the property and safety of the local population. The study defines the causes and extent of the landslide itself, with a proposal for measures necessary for its prompt rehabilitation. |
| Comment | |
| Name | Elaborate about prepared professional opinions on claims for mining damages addressed to "Kreka" mine in Tuzla |
| Authors | Karadžin , Z., et.al. |
| Publisher, year and place | Mining institute Tuzla, 2005 |
| Summary | A large number of claims for mining damages were received by the Kreka Mine, so there was a need for their systematic and independent processing by experts outside the "Kreka" Mine, which is why a contract was signed with the Tuzla Mining Authority in 2004. After two years, a summary study was prepared in which all individual cases in the period 2004-2005 were processed, 70 of them, with findings related to observed damages and possible impacts of mining operations. |
| Comment | In total, over 180 individual expert opinions were processed in the period 2004-2008. |
| Name | Environmental Impact Study and Soil Remediation (Decontamination) Study after the End of Operation of the HAK II Complex |
| Authors | Karadžin , Z., Zolotić, E., et.al. |
| Publisher, year and place | Mining institute Tuzla, 2008 |
| Summary | The company Austroproject, as the owner of the land on which the HAK II complex once stood, was obliged to submit an Impact Study and a study on the decontamination of the soil of the subject area due to the need to build shopping centers on that area. The Study/Study defines the current state of the soil/water/air of the subject area and addresses all aspects and defines safety measures that must be implemented during the construction of the shopping center and the removal of existing underground installations. |
| Comment | |
| Name | Study of the energy sector in Bosnia and Herzegovina, Module 8 and Module 13 |
| Authors | Moranjkić, I., Karadžin , Z, Ibršimović, A., Hadžić, S., Zolotić, E., et.al. |
| Publisher, year and place | Mining institute Tuzla, 2008 |
| Summary | Study of the energy sector in BiH, which was done in 2008 contains a review and synthesis of previous studies on the energy sector of BiH and new research on the energy sector. The study reports on the results of the conducted analyses and provides recommendations for the reform and strengthening of the energy sector, all with the ultimate goal of providing support to BiH in defining a national energy strategy. Given the above objectives, a series of specific tasks have been defined with regard to energy balances, the electricity sector, the coal sector, the district heating sector, the natural gas sector, the oil and oil derivatives sector, consumption management options and energy savings, and the environmental impact of all forms of energy. Special attention is paid to the investment aspects of these sectors and financing options. |
| | The Mining Institute was responsible for Module 8 - Coal, and in addition, I was engaged by the Hrvoje Požar Institute from Zagreb to develop Module 13 - Environmental Protection. |
| Comment | |
| Name | Preliminary design for the development of mining infrastructure after the cessation of coal exploitation at the Bokinje Mine |
| Authors | Karadžin , Z., et.al. |

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| Publisher, year and place | Tuzla Mining Institute , November 2008, Tuzla |
| Summary | <p>The following segments were analyzed and processed in the project:</p> <ul style="list-style-type: none"> - Analysis of the current situation in the "Bukinje" mine. - The state of property owned by the "Bukinje" mine - Proposals for possible ways of arranging the space after the cessation of coal exploitation in the "Bukinje" mine. - Proposals for possible directions for spatial development of the Bukinje Mine, based on consultations with representatives of the competent authorities of the Tuzla municipality and representatives of the local community, - List of activities that will have priority when granting concessions/transferring parts of the space, - Defining the possibilities and needs for opening a business incubator center for small and medium-sized entrepreneurs within the Mine Circle with the possibility of employing workers who will be redundant after the closure of the Mine, - Possible sources of financing for individual projects to redevelop parts of the Mine area, - Defining possibilities opening Mine worker museum in circle " Bukinje" mine . |
| Comment | The findings from the project serve as one of the practical foundations for the preparation of my doctoral dissertation. |
| Name | Study on the impact of underground mining operations in the exploitation area of the Mine "Underground Mining" RMU Banovići on the terrain surface and surrounding facilities in the exploitation field zone |
| Authors | Karadžin , Z, Zećo, S., Džinić, I., et.al. |
| Publisher, year and place | Mining Institute dd Tuzla, 2009 |
| Summary | Mining operations have been taking place in the area of the exploitation field of the "Underground Mining" Mine, formerly the "Omazići" Mine, for many years. The study defined the current state of the terrain and residential buildings above and in the zone of old and current mining operations. The theoretical and possible ultimate line of the impact range of mining operations for all mining operations carried out within the subject exploitation field was defined. |
| Comment | |
| Name | Environmental Impact Study of Unit 7 at Tuzla Thermal Power Plant |
| Authors | Karadžin , Z, Zolotić.E., Sufi-Mičić. S., firm ERICO-Slovenija, et.al.. |
| Publisher, year and place | Mining Institute dd Tuzla, 2009 |
| Summary | Environmental impact study of the new Unit 7 of the Tuzla thermal power plant that is planned to be built, for which one of the prerequisites is defined environmental impacts related to each segment of coal delivery, storage, incineration, planned methods of desulfurization and reduction of NOx content and other harmful pollutants, slag and ash transport and storage system, etc. Responsible for the preparation of the subject study. |
| Comment | |
| Name | Project: Report on the State of the Environment in BiH, Chapter: Mining and production, mineral resources |
| Authors | Karadžin , Z, |
| Publisher, year and place | Austrian Environmental Agency, Enova Sarajevo, 2011 |
| Summary | Under the auspices of the United Nations Environment Programme (UNEP), the Austrian Environmental Agency and the Sarajevo-based company Enova were engaged in a project to produce the first environmental report in BiH. Among other things, a report on the state of the environment in the mining sector of BiH was to be produced according to a predefined methodology. |
| Comment | Responsible researcher for the Mining and Production, Mineral Resources chapter |
| Name | Project: "Strengthening of Bosnia and Herzegovina's Environmental Institutions and preparation for Pre-accession Funds", segment "Industrial Pollution" |
| Authors | Karadžin , Z, |
| Publisher, year and place | UNEP, Enova Sarajevo, 2013 |
| Summary | Under the auspices of the United Nations Environment Programme (UNEP), the project was developed to prepare BiH for receiving IPA funds. The author was responsible for the part concerning Industrial Pollution in BiH, defining the current situation and providing guidelines for possible pollution reduction. |
| Comment | Responsible researcher for the Industrial pollution chapter |

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| | Name | Mined out areas within the Kreka lignite basin as a potential source of major environmental hazards |
| | Authors | Karadžin , Z. , Bašić, A, Delić, E. |
| Publisher, year and place | | VI European Coal Conference, Belgrade, September 2005 |
| | Summary | In the Kreka Basin, lignite exploitation was carried out in 13 open pits and 12 underground mines, most of which were not adequately closed or rehabilitated and as such represent potentially large environmental hazards that need to be monitored. The paper discusses the introduction of GIS methods with accompanying databases as a modern basis for monitoring the above environmental problems. |
| | Comment | Presentation held in English in front of around 100 experts from all over Europe |
| | Name | Water management and monitoring in Bosnia and Herzegovina |
| | Authors | Karadžin Z. , Delić, E. |
| Publisher, year and place | | UNEP, Brestovačka Banja – Serbia, March 2007 |
| | Summary | The paper presents all aspects related to the monitoring and management of water resources in Bosnia and Herzegovina. |
| | Comment | Presentation held in English in front of 30 experts from the Southeast Europe region, England, Norway, Sweden, Germany and Austria |
| | Name | Basic characteristics and general overview of the impact of the ash and slag disposal process from the Tuzla Thermal Power Plant |
| | Authors | Karadžin Z. , |
| Publisher, year and place | | Expert round table "Ash and Slag Landfill", Tuzla, April 2011 |
| | Summary | An overview of the disposal methods and the results of the analysis of all major environmental impacts of the ash and slag disposal process from the Tuzla Thermal Power Plant were presented. |
| | Comment | International standards and legislation in the field of environmental protection |
| | Name | Karadžin Z. – seminar coordinator |
| Publisher, year and place | | International scientific and professional seminar within the framework of the Summer University in Tuzla "International standards and legal regulations in the field of occupational safety and health, fire safety and environmental protection", June 2012. |
| | Summary | The lecture referred to international standards and local environmental legislation from the aspect of the need for their harmonisation. |
| | Comment | EU environmental regulations in the field of renewable energy sources |
| | Name | Karadžin Z. – seminar leader |
| Publisher, year and place | | Professional seminar: " Environmental technologies and renewable energy sources in the Balkans." Tuzla, March 2013 |
| | Summary | EU legislation was presented with a special emphasis on legislation related to renewable energy sources, with an overview of the steps that BiH needs to take to adopt the relevant legislation. |
| | Comment | |
| | Name | Environmental impacts of mining |
| | Authors | Karadžin, Z. – seminar coordinator |
| Publisher, year and place | | International scientific and professional conference : "Industry and Environment", Lukavac, June 2013 and June 2014 |
| | Summary | Within the framework of two seminars, the issue of the impact of all branches of industry represented in the municipality of Lukavac was addressed, and the author presented papers related to the impact of mining operations on the environment. |
| | Comment | |

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| Project name: | Science and research camps for youth |
| Authors | Delić, E., Karadžin Z , et al. – coordinator of the working group within the project |
| Publisher, year and place | US Embassy, Sarajevo, 2016 |
| Summary | The project involved a large number of participants from different countries and institutions. The aim of the project was to strengthen ties between young people through the work of this project. The project contained several research topics that the young people addressed through field, laboratory and professional work. |
| Comment | |
| Project name: | ERASMUS + K-FORCE "Disaster risk management and fire safety engineering" |
| Authors | Universities from Bosnia and Herzegovina, Serbia, Albania, Macedonia, Denmark, Sweden, Slovakia |
| Publisher, year and place | EU fund, project duration 2016-2019 |
| Summary | Within the project, a postgraduate study and later a doctoral study in the above-mentioned field should be established, with a harmonized program at all faculties participating in the project from BiH, Serbia, Albania, Macedonia, coordinated by universities from Denmark, Sweden and Slovakia. In November 2019, he took over the position of project manager for the University of Tuzla |
| Comment | |

Membership in professional associations

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| Name of the association | Working Group BAS/TC 7/WG 4, Soil Quality - Institute for Standards, Metrology and Intellectual Property of Bosnia and Herzegovina |
| Brief description of the association | The working group deals with issues of standards in the field of soil quality |
| Association address / web reference | |
| Position in the association | Member |

Participation in the teaching process

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| Senior Assistant | Subjects: Geotechnical Ecology (BEMS IV year), Geoenergy (BEMS, IV year), Hazards and Environmental Protection (Safety engineering Studies IV year), Environmental Protection (Mining, IV year), Energy Resources I (Mining and BEMS II year), Environment and Urban Environment (Civil Engineering Department – IV year) |
| Assistant professor | Starting from the summer semester of the 2010/2011 school year in the following subjects: Geotechnical Ecology (BEMS IV year), Hazards and Environmental Protection, Safety engineering Study IV year), Energy Resources II (Mining and BEMS II year), Fundamentals of Energy (1 year Mining and BEMS), Environmental Protection (Mining I year), Geoenvironmental Engineering (Mining I year), Environmental Safety (Safety engineering, II year), Environment and Geocology (Geology IV year), Aerology of Surface Mines (Mining IV year) |
| Associate Professor | Occupational Safety and Environmental Protection (BEMS IV year), Hazards and Environmental Protection, Safety engineering Study IV year), Energy Resources (Mining and BEMS II year), Environmental Protection (Mining I year), Geoenvironmental Engineering (Mining I year), Environmental Safety (Safety engineering II year), Safety in Mining (IV year of Mining), Safety in Mining and Energy (IV year of Safety engineering Study), Geoenvironmental Risk Management (Mining-postgraduate study), Analysis and Evaluation of Mine Life Cycle (Mining, post-graduate study), Modern Safety Systems in Mining and Geology, Risk Management in Mining and Thermal Power, Community Resilience to Hazards (Safety engineering, post-graduate study) |

Mentoring in the preparation of master's and doctoral theses

Master's theses

1. Master's thesis of candidate Nedim Fajić entitled "Managing occupational health and safety risks in the electricity distribution sector", defended on April 24, 2015 (decision number 02/8-2421/15) at the Faculty of Electrical Engineering, University of Tuzla. Study program - Safety engineering.
2. Master's thesis of candidate Enes Ajanović entitled "Possibilities for improving environmental protection practices in coal mining operations in the Federation of Bosnia and Herzegovina", defended on 08.05.2015. (decision number – 02/8-2628/15) at the Faculty of Mining and Geology, University of Tuzla. Study program – Mining.
3. Master's thesis of candidate Suad Ćosić entitled "Model for assessing environmental risks from errors in defining soil deformations caused by underground coal mining using the example of the "Kamenice" pit, Doca village site", defended on December 7, 2017 at the RGGF, University of Tuzla. Study program - Mining.
4. Master's thesis of candidate Enes Požegić entitled, " Master's thesis of candidate Rusmir Jahić entitled, "Model for identification and assessment of injury risk in the continuous coal exploitation process using the example of PK Dubrava", defended in July 2017, ", at the RGGF of the University of Tuzla, Study program - Safety engineering
5. Master's thesis of candidate Rusmir Jahić entitled, "Environmentally acceptable and energetically sustainable use of poultry manure", defended in September 2017 at the Faculty of Food Science and Technology of the University of Tuzla, Study program - Safety engineering
6. Master's thesis of candidate Kristian Grgić entitled "The Impact of the Reconstruction and Subsequent Use of the Jajce II Hydropower Plant on the Environment" , defended on December 15, 2017 at the Faculty of Environmental Science and Technology, University of Tuzla, Study program - Safety engineering
7. Master's thesis of candidate Edisa Aljić entitled "Modern model of risk assessment on construction sites using the example of the company Baupartner doo Lukavac", defended in March 2019, ", at the Faculty of Engineering and Construction of the University of Tuzla.
8. Master's thesis by candidate Naida Alić, entitled "Analysis of fire protection measures based on the example of the fire protection plan of the Gikil Lukavac combine", defended on July 23, 2021, at the Faculty of Fire Protection, University of Tuzla, Study program - Safety engineering
9. Master's thesis of candidate Haris Burek entitled "Improvement of technical measures when dealing with accident situations in the gas system of the Sarajevo Canton" , defended on May 26, 2023 at the RGGF, University of Tuzla., Study program - Safety engineering
10. Master's Thesis of Candidate: Maja Kin, B.Sc. in Civil Engineering **Title:** "Assessment of the pollution load from coal mines on the multi-purpose Modrac reservoir" **Defended:** September 5, 2025, Study program - Safety engineering
11. Master's Thesis of Candidate: Ismet Alešević, B.Sc. in Mining Engineering **Title:** "Specifics of environmental risk management in stone exploitation in environments with special natural and cultural values" **Defended:** September 29, 2025, Study program - Mining

Research projects and studies

Completed projects

Selected projects, programs, studies, reports and presentations listed in the section

Ongoing projects

Planned projects
(expected, in preparation)

Personal skills and competencies

Native language

Bosnian

Other languages

| Understanding | Speech | Writing |
|---------------|--------|---------|
|---------------|--------|---------|

| | Listening | Reading | Voice interaction | Speech |
|-------------------|-----------|-----------|-------------------|-----------|
| Language: English | Excellent | Excellent | Excellent | Excellent |
| | | | | |

Scientific, professional and social competencies

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|--|--|
| Competencies for conducting scientific research and teaching in higher education | Experience, professional exam in the field of mining, professional exam for authorized environmental protection consultant, publications |
| Competencies for participation in scientific research projects | A large number of applied and development studies and projects, cooperation with economic and scientific research institutions |
| Scientific and research interest (occupation) and current training | Doctor of Mining Specialist in the field of defining and reducing the impact of mining operations on the environment Specialist in the field of underground coal mining Impact assessment and remediation of old and abandoned mining sites |
| Planned training | |

Social skills and competences

Member of the Senate of the University of Tuzla from April 2017 to February 2021, President of the Quality Management Committee at the University of Tuzla from October 2019 to January 2021, Head of the Laboratory for Natural Hazards and Ecology at the RGGF from 2015 to present, Member of the Managing board of the University of Tuzla (2006-2009), Member of the Scientific Council of the Mining Institute dd Tuzla, Consulting Editor of the magazine "Contemporary Who is Who" published by the American Biographical Institute, Representative of BiH in the EnvSec initiative (UNEP, UNDP, OSCE, NATO) for reducing the impact of mining in Southeast Europe. Representative of BiH in the Western Balkan Environment Program (UNDP) for the Western Balkans, Senior Representative of Bosnia and Herzegovina for the coal sector in the former PHARE project "Harmonized Approach to Oil, Gas and Coal Exploitation in the Black Sea Region,

Organizational skills and competencies

During his working experience, he held the positions of head of the ecology and underground exploitation teams at the Mining Institute Tuzla, head of the Safety engineering study department, and Minister in the Ministry of Spatial Planning and Environmental Protection in the Government of the Canton of Tuzla for two terms.

Technical skills and competencies

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Computer skills and competencies

Microsoft Word, Excel, Power Point

Artistic skills and competencies

Completed junior music school - majoring in violin

Other skills and competencies

Long-time athlete – handball player (17 years), captain of the RK "Zrinski" team which was the national champion in 1995,
Served as president of the assembly of handball club "Jedinstvo" from Tuzla from 2016-2019.
Excellent knowledge of the English language with extensive experience in translation, gained through work with many foreign and domestic organizations.

Other information

- Passed exper exam for technical management in mining. (Certificate number - UP/I Number: 07-34-541/03, Mostar December 2003).
- Professional exam in the field of environmental protection for members of committees that review environmental impact studies and activity plans (Neum, November 2010)
- In practice so far, worked on elaborations and programs and studies in the area of the underground coal exploitation and environmental protection related mainly to mining operations and the energy sector, 180 expert opinions related to the field of mining damages, mining projects and in preparation proposals as well as projects for the European Union Framework Programme for Research Support activities – cycle 6 (FP-6), Interreg III, Phare, EnvSec initiatives for South-East Europe, Erasmus + projects, UNEP
- Extensive experience in working with foreign organizations: military, political, judicial, humanitarian, microfinance. From May 1996 to 2005, employed as a translator for the International Criminal Tribunal for the Former Yugoslavia (ICTY) - SSA contract.

Expertise and expertise

1. 180 experts opinions concerning damages inflicted by mining operations of Kreka lignite Mines.
2. Expertise on to court on law suits concerning damages inflicted by mining operations of Kreka and Zenica coal Mines and by deposition of slag and ash from Thermal power plant Tuzla.

Revisions of Activity Plans as an authorized consultant

1. Bauxite Mine Jajce
2. Gradina-Prozor-Rama Quarry
3. RMU "Đurđevik"
4. Surface mine "Moščanica"
5. Environmental Impact Study for the Orašje (Sava River) - Tuzla (Šiški Brod) motorway: for the LOT section Majevica - Čanići (stations from 43 + 320 to 55 + 860).
6. Studies on the environmental impact of the closure of the ash and slag landfill "Plane i Divkovići I and II"
7. Rehabilitation plan for the ash and slag landfill "Plane i Divkovići I and II"

LIST OF PROJECT DOCUMENTATION COMPLETED IN THE FIELD OF ENVIRONMENTAL PROTECTION

- Research report and monitoring eventual influence underground exploitation coal in pit II roof layer , district West , III horizon , on stability and security objects in settlement Rapače , municipality Tuzla, September , 2003
- Study on professional opinions prepared in 2004, on mining damages inflicted by " Kreka " lignite mine Tuzla, April 2005.
- Study on condition on surface mine " Šikulje " after activation of landslide inside the mine exploitation fields as consequence of natural disasters , July , 2005.
- Study on determining the impact and monitoring the extent of consequences due to underground coal exploitation in the "Dobrnja" district, II horizon, "Main layer" pit of the "Mramor" Mine in Mramor, January 2007
- "Soil remediation (decontamination) Study due to the cessation of exploitation of the HAK II complex, which is being removed", July 2008

STUDIES

- Study on the possibility and justification of excavating off-balance reserves in the safety pillar of the village of Živčići using the new chamber method, Tuzla; March 1998
- Feasibility study - examining the possibilities for establishing an inter-municipal institution for solid waste management in the Tuzla region; November 2001
- Feasibility Study for Coal Mines Tuzla and Central Bosnia, Federation of Bosnia and Herzegovina (Marston & Marston, Inc.), Tuzla and Sarajevo; 1999-2000.
- Study of the energy sector in Bosnia and Herzegovina, Module 13 - Environmental aspect, May 2008
- Study on the environmental impact due to the cessation of exploitation of the HAK II complex, which is being removed, July 2008
- Study on the impact of underground mining operations in the exploitation area of the Mine "Underground Mining" RMU Banovići on the surface of the terrain and surrounding facilities in the exploitation field zone, January 2009.
- Feasibility Study of the R&TTE Bugojno project - point 8. Analysis of the environment and occupational safety, August 2009
- Energy Study as a basis for the development of the spatial plan of the municipality of Tuzla, Sections 11 and 12 – Environmental protection and renewable energy sources, October 2009
- Environmental impact study for deposits plaster Orašac – Kulen Vakuf , October 2009
- Environmental Impact Study for the Sirge Limestone Deposit near Mostar, November 2009.
- Environmental Impact Study of Block 7 of the Tuzla Thermal Power Plant, December 2009
- Strategic environmental impact assessment of Kongora mine and thermal power plant, February 2011.
- Study - Reclamation and rehabilitation of degraded terrain by depositing sediment as a by-product of soda production from the "Bijelo more" solid industrial waste depot, June 2020.

EXPERT OPINIONS AND ANALYSES

- Expertise on technical, technological and safety hazards that arise in the lignite mines "Dobrnja", "Bukinje" and "Mramor" due to the impact of slag and ash disposal in the landfill "Divkovići II" of the Thermal Power Plant "Tuzla" in Tuzla, May 2000
- Expert opinions on damage caused to residential buildings and land plots due to mining operations carried out in pits and open pits of the "Kreka" Mine in Tuzla, (180 individual expert opinions), 2004-2008.
- Techno-economic analysis of the claim of the Mine "Kreka" doo in Tuzla based on damages incurred to the mining facilities of the Mine "Bukinje" due to the dumping of slag and ash in the landfills of the Thermal Power Plant "Tuzla" in Tuzla, March 2004.
- Environmental impacts of the ash and slag disposal process from the Tuzla Thermal Power Plant, round table on the occasion of Earth Day, April 2011.

PROJECTS

- Mining project for the closure of the Stara Jama plant, Kakanj Mine in Kakanj, September 2003.
- Mining project of safety measures during the complete and permanent suspension of exploitation works in the "Lipnica" mine of the "Kreka" Coal Mine Ltd., December 2003.
- Preliminary project for the development of the mine infrastructure after the cessation of coal exploitation in the "Bukinje" Mine, October 2008.
- Preliminary inventory of old mining operations in the Federation of Bosnia and Herzegovina, Enova Sarajevo, April 2010
- FBiH Waste Management Plan, segment – Waste from the extractive industry, Enova Sarajevo, December 2012.
- Preliminary design for optimal transport and disposal of combustion products from Unit 7 at Tuzla Thermal Power Plant In as part of the rehabilitation of the "Kreka" and "Đurđevik" mining pits - environmental aspect, March 2011.
- Erasmus +, Joined for Sustainability - Building Climate Resilient Communities in WB and EU (1Future), researcher, 2023.2026
- Erasmus +, Skill to Sustain , external evaluator, 2025-2028