Academic curriculum vitae

Personalne information

Name and surname	**Besim Demirović**
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E-mail/Web	besim.demirovic@untz.ba
Nationality	BiH
Date of birth	23.01.1980.
Gender	Male

Present workplace position/occupation

Full professor

Professional experience

Date	January 2004.
Position/occupation	Junior engineer
Main responsibilities	Tehnical work
Name of employer	Tuzlaputevi d.d. Tuzla
Type of business activity	Production

Date	September 2004.
Position/occupation	Asistant
Main responsibilities	Teaching assistant
Name of employer	University of Tuzla
Type of business activity	Education

Date	Septembrr 2008.
Position/occupation	Senior Assistant
Main responsibilities	Teaching assistant
Name of employer	University of Tuzla
Type of business activity	Education

Date	September 2012.

Position/occupation	Asistant professor
Main responsibilities	Teacher in teaching
Name of employer	University of Tuzla
Type of business activity	Education

Date	Septembar 2017. godine
Position/occupation	Asociate professor
Main responsibilities	Teacher in teaching
Name of employer	University of Tuzla
Type of business activity	Education

Date	September 2023.
Position/occupation	Full professor
Main responsibilities	Teacher in teaching
Name of employer	University of Tuzla
Type of business activity	Education

Education and training

Date	December 2003.
Qualification/degree	VII/1 degree (5A)
Branch of profession and acquirements	Civil engineer
Name and type of organization	University of Tuzla

Date	April 2008.
Qualification/degree	VII/2 degree (5)
Branch of profession and acquirements	Master of Civil Engineering
Name and type of organization	University of Tuzla

Date	April 2012.
Qualification/degree	VIII degree (6)
Branch of profession and acquirements	PhD, Dr. sci. of Civil Engineering
Name and type of organization	University of Tuzla

Scientific works within formal education

Name of work/paper	Analysis of Frame Structures With Yielding Connections in Nodes
Institution	University of Tuzla
Year and place	2008. Tuzla
Summary	The paper considers members with bending moment transfer connections that are not rigid at the ends so that they allow relative rotation of the members at the node. With the known moment-rotation relationship of the connection, the static effects in the structure are determined by the modified stiffness matrix of the members. The stiffness of the connections can be determined by appropriate numerical analysis or experiment for a specific type of connection. This procedure can be applied to both frame and other member structures.
Comment	

Name of work/paper	Modeling of Castellated Beams Using the Finite Element Method
Institution	University of Tuzla
Year and place	2008. Tuzla
Summary	This paper presents a contemporary and modern method for calculating honeycomb steel girders using FEM (finite element method). The honeycomb girder was modeled using finite elements in the SAP10 software program, and the obtained results were compared with the experimental model, i.e. the results of laboratory testing of a girder that had the same nominal dimensions as the girder modeled using FEM.
Comment	

Name of work/paper	Protection of Construction Excavation Using the Cantilever Reinforced Concrete Diaphragm Method With Analysis of Geostatic Parameters
Institution	Scientific – Professional Journal of Faculty of Mining, Geology and Civil Engineering, no. XXXIV, pp. 175-181
Year and place	2010/2011, Tuzla
Summary	This paper provides a brief overview of methods for protecting construction pits, with an emphasis on the method of protection using the so-called embedded supporting structures-diaphragms. The basic characteristics, advantages and disadvantages of such a method of protecting construction pits are given. The theoretical foundations are presented and an example of the calculation of one such structure is given. Bearing in mind that in modern construction practice it is very often necessary to make quick estimates and calculations for the construction of this type of geotechnical structure, an analysis of static influences (bending moments) was performed based on the change in the depth of the construction pit for given soil parameters - angle of internal friction (φ), cohesion (c) and soil bulk density (γ). Computer technology has allowed the use of completely new calculation methods, enabled the research of alternative solutions, accelerated calculations and illustrated the results. A calculation model was created using the "Mathematica 6" software package, which shows us in a very simple and illustrative way the mutual dependence and influence between the parameters of soil strength and depth of the construction pit and static influences (maximum bending moments). Numerical analysis was carried out on the example of a frequently used method of protecting construction pits. A static calculation was performed using classical calculation methods, and the obtained results were interpolated using an interpolation polynomial, and functions were formed from which geotechnical and static parameters can be read for any value of the variable depth of the construction pit. A graphical representation of the obtained solutions is given in the form of a diagram of a two-dimensional and three-dimensional model. Based on the analysis carried out, the final chapter provides guidelines and recommendations for engineering practice regarding the adequate selection of geometric parameters for the method of protecting construction pits - a cantilever diaphragm, in different field conditions.
Comment	

Name of work/paper	The Influence of the Az/At Ratio on Seismic Forces in Building Structures
Institution	University of Tuzla
Year and place	2008. Tuzla
Summary	This paper reviews the change in dynamic characteristics and magnitude of seismic forces depending on the wall surface ratio (Az) and floor plan surface ratio (At), on a dual system of buildings. Two possibilities arise. The first, that the area of the walls is constant (Az=const.) while the associated floor plan area is variable and the second that the associated area of the floor plan is constant (At=const.) while the area of the walls is variable. In the paper, the first case - with a changing associated floor plan, i.e., was analyzed through a numerical example, for three constructions of the same storey and the same dimensions of beams and columns. Az=const.
Comment	
Name of work/paper	The Influence of Concrete Shrinkage Effects in Frame Constructions
Institution	Proceedings, GTZ 2009, Faculty of Mining, Geology and Civil Engineering, pp. 189-194
Year and place	29.-30. oktober 2009., Tuzla
Summary	To determine the static effects of frames, it is necessary to know the total effects on the structure. In concrete structures, the effect of concrete shrinkage also occurs. Based on the deformations of the beams of frame systems due to concrete shrinkage, these effects are introduced in the nodes of the system via the equivalent load vector, and in this way further calculation of additional static effects is carried out. It is proposed to continue the research and introduce the effect of concrete flow, because these two phenomena occur in parallel and should be taken into account. This paper presents a method for determining the deformations of frames due to concrete shrinkage. This effect occurs immediately after the curing of the concrete, when the material has not yet reached the required physical and mechanical characteristics. Only the effect of beam shrinkage and its reflection on the columns of frame systems with rigid beam-column nodes was considered. It was observed that the effects in some column sections due to beam shrinkage increase by 4-5%.
Comment	
Name of work/paper	Influence of Yielding Soil on Seismic Forces of RC Frame Beams
Institution	Proceedings, GTZ 2009, Faculty of Mining, Geology and Civil Engineering, pp. 169-178
Year and place	29.-30. oktober 2009. Tuzla
Summary	In the seismic analysis of structures, it is customary to assume that the foundation structure is wedged into the ground. This assumption is justified for firm and well-compacted soil. In this case, the structure is analyzed independently of the elasticity of the soil. In the case of softer and loose soil, it is necessary to take into account the elastic pinching of the foundation structure in the soil. In these cases, the foundation soil and the structure are analyzed as a complete system. This paper reviews the change in dynamic characteristics and intensity of seismic forces depending on the degree of embedment of the foundation structure in the ground. A numerical example of the frame was analyzed and a comparison of the calculation results for the case of full and elastic pinching of the foundation structure in the ground was given. An overview of the modeling of the interaction of the foundation soil and the foundation structure by means of springs is given, as well as one of the ways of determining the stiffness of those springs. A comparison of the results showed significant differences between one and the other approach to structural analysis. Since very few structures are built on rigid soil and most are built on soil with a certain degree of compliance that directly affects the longer period of oscillation and movement of the structure, it is very important to take into account the way the foundation-soil interaction is modeled. The aim is to model the structure as close to the real state as possible.
Comment	

Name of work/paper	Concept of Programmed Behavior of Reinforced Concrete Frames
Institution	Proceedings, Seismic enineering and engineering seismology, pp. 229-238
Year and place	22.-24. may 2012. Divčibare
Summary	The main task in seismically active areas is to design and construct a structure so that damage occurs at the strongest expected earthquake but that the structure retains a certain degree of load-bearing capacity without collapse. Programmed joints in beams of regular frame structures achieve an acceptable sequence of loss of load-bearing capacity of frame structures in zones of higher seismic intensity. The load-bearing capacity of the programmed joint was determined experimentally and presented via a moment-rotation diagram. The influence of the participating width of the slab and the reinforcement from the slab on the ductility and load-bearing capacity of the programmed joint was analyzed. A comparison of the linear equivalent force method and elasto-plastic analysis in relation to the N2 method is presented, via relative and absolute displacements, as indicators of structural damage. This approach represents a nonlinear analysis of structures under earthquake action, for which there has been a need for a long time. The advantage and safety from collapse and loss of human life compared to the slightly increased required reinforcement (5-10%) and increased total costs of securing the structure against earthquakes (about 1.4% of the total cost of the building) is sufficient proof of the correctness of this design method.
Comment	
Name of work/paper	Influence of Imperfection on the Ultimate and Serviceability limit state of Castellated Beams
Institution	Proceedings, GTZ 2012, Faculty of Mining, Geology and Civil Engineering, pp. 399-406
Year and place	07-09. june 2012. Tuzla
Summary	Geometric imperfection of honeycomb beams is inevitable and is introduced by the manufacturing process itself. Two different types of honeycomb beams (with different opening geometries) were analyzed, modeled in the ADINA software program using solid elements (FEM), with and without imperfection, with the introduction of material and geometric nonlinearity. Accordingly, the influence of the size of the lateral imperfection on the ultimate limit state and the serviceability limit state is shown. The size of the imperfection significantly changes the stress pattern, along the length and height of the honeycomb beam. The introduction of imperfection in honeycomb beams did not significantly affect the serviceability limit state, but it contributed to an increase in the rotation of the cross section around the longitudinal axis of the beam, and due to this effect, significantly affected the load-bearing limit state at the middle of the beam. A comparison of the numerically obtained results is presented, with a correlation with EC3 regulations.
Comment	
Name of work/paper	The Determination of Beam Displacement with Isotropic Material Hardening by Energy Methods
Institution	Technics Technologies Education Management, DRUNPP Sarajevo, page 603-407, Sarajevo, Number 2, 2012. (Impact Factor: 0.351)
Year and place	2012. Sarajevo
Summary	A simple beam made of steel and loaded with two equal concentric forces is presented. The behavior of the beam under load in terms of deflection is described, as a function of the change in stress and dilation of the quality class of the material used to make the beam. The procedure was carried out using energy methods to establish the equilibrium of the beam with a minimum of potential energy. The calculations were performed numerically and in a software package, and the results were controlled by experimental values of deflection measured on a full-size model. The analytical and numerical results of the displacements in the direction and direction of the forces are presented, and they are compared with the displacements obtained by numerical calculation and experiment. The procedure for calculating displacements using energy methods is presented through a numerical example.
Comment	

Name of work/paper	Contribution to structural analysis of bailey bridgesaccording to contemporary regulations in Bosnia and Herzegovina
Institution	Technics Technologies Education Management, DRUNPP Sarajevo, page 89-98, Sarajevo, Number 1, 2015.
Year and place	2015. Sarajevo
Summary	This paper presents the static calculation of Bailey bridges of the simple beam system of various spans and combinations of trusses from which such bridges are composed. The table describes which combination of structures should be used for the corresponding beam spans loaded according to the current regulations for category II bridges. The procedure was carried out using analytical and numerical methods, and the calculation results were checked on specific examples from practice. The analytical and numerical results are presented in tables and through diagrams. The procedure for calculating a Bailey bridge according to the nonlinear limit load theory is presented through a numerical example.
Comment	
Name of work/paper	Numerical Modeling of Foundation Beam in Interaction With Soil
Institution	Proceedings GEO-EXPO 2015., pp. 27-34
Year and place	18.-19. september 2015., Zenica
Summary	This paper presents the procedure of numerical modeling of the foundation beam taking into account the nonlinear behavior of the soil under the support. The importance of combinations of loads on the entire support that cause differential settlements is emphasized. The settlement calculation procedure was carried out by iterative procedures. The behavior of the foundation beam under load, which causes deformations and settlements when the load increases to its final value, is described. Material behavior diagrams are approximated by a non-linear function. With the adopted approximation of the behavior of the material, the stiffness matrices of the foundation beam and the soil were determined. The calculations were done numerically. Analytical and numerical results of stresses, settlements and forces are presented. Through a numerical example, the calculation procedure was presented and the results were analyzed.
Comment	
Name of work/paper	53 Numerical Modeling of Beam Material Nonlinearity
Institution	10th Internacional Scientific Conference Development And Modernization Of Production RIM 2015., page 415-420
Year and place	4.-7. october 2015., Dubrovnik
Summary	This paper presents a procedure for calculating beams for nonlinear material behavior. The calculation procedure is based on the nonlinear stress-strain relationship known as material nonlinearity. The behavior of steel beams under load is described, which causes deformations and displacements as the load increases to its limit value. The material behavior diagram is approximated by a bilinear elasto-plastic form. With this approximation, the bending moment-curvature dependences for rectangular and rolled I profiles during plasticization are derived. A numerical example presents a frame calculation procedure introducing material nonlinearity along the bars.
Comment	

Name of work/paper	Determining the Influence According to the Second-Order Theory Using the Finite Difference Method
Institution	Conference proceedings
	4th International Conference Contemporary Achievements in Civil Engineering 2016., pp. 341-347.
Year and place	April 2016., Subotica
Summary	This paper presents a procedure for numerical modeling of the geometric nonlinearity of beams using the finite difference method. The calculation of sectional forces and displacements was performed using iterative procedures, taking into account second-order influences. The described procedure establishes the equilibrium of the system on a deformed beam. In this way, sectional forces contribute to bending moments and deformations. The presented calculation methods can be used to model the geometric nonlinearity of beams with constant or variable cross-sections. The calculations were performed numerically, and the results were controlled in the Tower software package. The numerical results of displacements and forces are presented, and compared with the results obtained in the software package. The calculation procedure is presented and the results are analyzed through numerical examples.
Comment	
Name of work/paper	Comparative Analysis of the Stress-Strain State of Triangular Wooden Trusses
Institution	Proceedings, GTZ 2012, Faculty of Mining, Geology and Civil Engineering EGTZ 2016., pp. 393-402.
Year and place	2.-4. june 2016. Tuzla
Summary	The flexibility of the joints in wooden trusses made of nails as fasteners leads to increased deformations of the entire truss. This problem is greater in triangular trusses due to the low height of the supports. Two trusses were numerically modeled, one of rods and the other a combination of rods and board filling of the first and half of the second bay. An experimental test of a truss with a filling of the first and half of the second bay made of wooden boards connected to the chords by nails was also performed. The differences in deformations of the modeled trusses in these two cases differ by approximately 15%, while the stress deviations are negligible. By such modeling and construction of wooden trusses with infill of the supporting bays and a small slope of the upper chord, the serviceability limit state (SLS) criterion according to the provisions of Eurocode 5 regulations can be met.
Comment	
Name of work/paper	Numerical Modeling of the Foundation Plate in the Nonlinear Behavior of Soil
Institution	Conference proceedings GEO-EXPO 2017. 134-143 (ISSN 2303-4262)
Year and place	26.-27. oktober 2017. Sarajevo
Summary	The paper presents the procedure of numerical modeling of the foundation slab using the finite difference method for nonlinear soil behavior. The procedure for calculating the slab settlement was carried out by iterative procedures. The behavior of the base plate due to the load caused by differential settlement is described. Soil behavior diagrams are approximated by a non-linear function. With the adopted approximation of soil behavior, iterative calculations were carried out until the forces in the nodes of the base plate were balanced. Analytical and numerical results of soil stress, soil settlement and shear forces in the slab are presented. Through numerical examples, the calculation procedure was presented and the results were analyzed.
Comment	

Name of work/paper	Calculation and Construction of Reinforced Concrete Slabs With Tension Members
Institution	11th International Scientific Conference on Production Engineering RIM 2017.; 04.-07. oktober 2017., Sarajevo: Conference proceedings RIM 2017. 435-440 (ISSN 2566-3275)
Year and place	04.-07. oktober 2017. Sarajevo
Summary	This paper presents the procedure for numerical modeling of simply supported plates with braces using the finite element method. Surface elements are discretized with rectangular finite elements, and line elements are modeled as bar elements. The calculation of cross-sectional forces and displacements is carried out using numerical methods taking into account first-order influences. Various prestressing forces are applied to the braces. With the described procedure, the plate and braces participate in the equilibrium of the system, which exert a concentric force on the plate through vertical rods. In this way, a plate reinforced with braces has less static and deformation influences compared to a plate without braces. The presented calculation methods model the material in a linear stress range. The numerical results of displacements and cross-sectional forces are presented, and compared with the results for individual prestressing forces of the braces. The calculation procedure is presented and the results are analyzed through numerical examples.
Comment	

Name of work/paper	Analysis of plates by the second order theory numerical metods
Institution	6th International Conference Contemporary Achievements in Civil Engineering 2018.; 20th April 2018., Subotica: Conference Proceedings. 153-162, DOI: 10.14415/konferencijaGFS2018.013 (ISBN 978-86-80297-73-6)
Year and place	20. april 2018. Subotica
Summary	The paper presents an analysis of the bending of plates loaded vertically and in the direction of the middle plane. The procedure was done numerically using the final difference method. The calculation of the displacement of the panel at the points of discretization was carried out by iterative methods taking into account the second-order effects. By analyzing the plate element in a deformed position, the differential bending equation of the plate was implemented, in which the contribution of the transient forces to the bending and deformation moments is introduced. The methods of calculation shown are modeled by the geometric nonlinearity of the panels. Through numerical examples, the calculation procedure was presented and the results analysis was performed.
Comment	

Name of work/paper	Numerical analysis of reinforced concrete beam in two-dimensional form
Institution	Electronic Journal of the Faculty of Civil Engineering Osijek-e-GFOS. 2019; 10(18):36-47
Year and place	Juni 2019.
Summary	This paper presents a numerical analysis of a reinforced concrete beam in which the concrete and reinforcement are above the yield strength of the material. Further, the procedure for determining the relationship between the cross-sectional forces and the deformations of the layered cross-section of a rod is described. For a short rod with reduced stiffness of the EI and EA cross-sections, a stiffness matrix with variable members is formed. The applicability of the proposed analysis method for the material nonlinearity in a beam calculation is demonstrated through a numerical example. The aim of the present paper is to show the flow of plastification and the load-deformation of the system nodes. Finally, the results of the manual deformation calculation system are compared with the results from SCIA software.
Comment	

Name of work/paper	The Impact of Soil Deformation on the Calculate of the System According to the Second Order Theory
Institution	Conference proceedings GEO-EXPO 2020. 79-88 (ISSN 2303-4262)
Year and place	November 2020.
Summary	The paper shows the calculate of the system by second order theory on elastic supports. At the calculate it adopted a linear relationship of stress-displacement soil. The method of calculating the beams based on rigid and deformed supports was presented by introducing geometric nonlinearity into the calculate. Expressions were performed for the rigidity of the supports in the vertical direction and on the rotation of the foundation, due to the elastic deformation of the soil. Numerical examples show the application of the procedure described. Through diagrams and charts of static and deformation, a comparison of calculate results was made.
Comment	

Name of work/paper	Influence of the Lateral Stiffness of Piles for Analysis of Framework Systems According to Second Order Theory
Institution	Conference proceedings GEO-EXPO 2021. 38-48 (ISSN 2303-4262)
Year and place	Oktober 2021.
Summary	The paper presents a calculation of a system supported on piles according to the second order theory. The influence of piles as supports on the structure is replaced by elastic supports. In the numerical model, the supports are modeled as elastic springs. To compare the calculation results, a system based on rigid and deformable supports was analyzed. The analysis of the system was performed according to the first order theory and the second order theory, which introduces geometric nonlinearity into the calculation. The process of soil modeling around a pile with replacement springs is presented. The applicability of the described procedure is shown in a numerical example. The comparison of the calculation results was done on numerical models of systems with rigid and elastic supports.
Comment	

Name of work/paper	Analysis of Geometric and Material Nonlinearity of Reinforced Concrete Rod by Finite Difference Method
Institution	15th International Scientific Conference INDIS 2021 „Planning, Design, Construction and Building Renewal“; 24-26 November 2021, Novi Sad, Serbia: Proceedings. 127-136 (ISBN 978-86-6022-253-6)
Year and place	24-26 November 2021. Novi Sad, Serbia
Summary	In the paper is presented a procedure of numerical modeling of geometric and material nonlinearity of a reinforced concrete rod. Incremental-iterative methods for solving systems of algebraic equations were used in the paper. Algebraic equations are formed using the finite difference method. The calculation of cross-sectional forces and deformations was carried out for linear analysis, analysis of geometric nonlinearity and simultaneous analysis of geometric and material nonlinearity of the rod. A described procedure observes the equilibrium of forces on a deformed rod during nonlinear behavior of the material. The paper describes a mutual influence of geometric and material nonlinearity. The numerical example shows applicability of the described calculation procedure using input data, numerical calculation and analysis of results.
Comment	

Name of work/paper	Numerical Modelling of Bearing Capacity of a Beam Cross Section
Institution	13th International Conference on Development and Modernization of the Manufacturing (RIM 2021); 29th September – 01st October 2021., Sarajevo
Year and place	29.09.-01. november 2021. Sarajevo
Summary	The paper presents a procedure for numerical modeling of the rod cross-section bearing capacity. Equilibrium between cross sectional forces and cross-sectional stresses is determined by iterative procedures. According to the described procedure, the load-bearing capacity of the cross-section is determined according to the isotropic linear and nonlinear behavior of the material, for homogeneous and inhomogeneous cross-sections. The nonlinear behavior of the material reduces the stiffness of the cross section of the rod EA and EI, with a significant increase in the deformation values ε i . The applicability of the calculation and analysis of obtained results is presented using numerical examples.
Comment	

Name of work/paper	Numerical Analysis of Rod According to the Large Displacement Theory
Institution	8th International Conference Contemporary Achievements in Civil Engineering 2021.; 22-23 April 2021., Subotica: Conference Proceedings. 285-295, DOI: 10.14415/konferencijaGFS2021.027 (ISBN 978-86-80297-85-9)
Year and place	22.-23. april 2021. Subotica, Serbia
Summary	The paper presents a procedure for numerical modelling of the geometric nonlinearity of a rod. The calculation of cross-sectional forces, displacements and rotations of nodes was done by iterative methods on a deformed system. By the described procedure, the equilibrium state is established in the finite position of the rod. In the process of deformation, there is an increase in cross-sectional forces and deformation of the rod. The presented calculation methods are used to model geometric nonlinearity with constant and variable stiffness of the cross section of the rod. The calculations were done numerically, and the results were controlled using the SCIA software package. Through numerical examples, the calculation procedure was presented and the analysis of the results was performed.
Comment	

Name of work/paper	Numerical Analysis of Geometric and Material Nonlinearity of Beams in the Plane
Institution	Advances in Civil and Architectural Engineering. 2022; 13(25):32-45.
Year and place	December 2022.
Summary	The paper presents a simultaneous numerical analysis of the geometric and material nonlinearity of the beams. It describes a process of determining the bearing capacity of a stratified cross-section of a beam made of homogeneous and isotropic material in linear and nonlinear domains of material behaviour. Material nonlinearity is analysed by the variation of the cross-sectional stiffness of the beam on bending EI in the stiffness matrix of the system obtained according to the first-order theory. Geometric nonlinearity is introduced into the calculation using the geometric stiffness matrix of the system. Numerical examples present an application of the procedure for solving problems of nonlinear structure analysis. The calculation results obtained in accordance with the procedure described in the paper are compared with the results of the SCIA software package.
Comment	

Name of work/paper	Analysis of Material Nonlinearity of Thin Plates According to Finite Difference Method
Institution	GNP 2024 – Kolašin, Montenegro, 5-9 March 2024
Year and place	Mart 2024.
Summary	The paper presents an analysis of the material nonlinearity of thin plates loaded vertically to the middle plane of the plate. The problem related to plate bending was solved numerically, by applying the finite difference method. The displacements of the plate at the discretization points are determined using a system of algebraic equations by iterative procedures, and by applying simple iteration methods. The bearing capacity of the cross-section of the plate in the elastoplastic region of the material behavior is carried out using the conditions of force equilibrium and cross-section stress. A described procedure models the material nonlinearity of the plates by changing the rigidity of the plate through iterations, thereby establishing a balance between external and internal forces. Using the numerical example has been presented the calculation procedure, and also an analysis has been carried out and comparison of the results obtained in the SCIA Engineer Software Package.
Comment	

Books an presentation

Name of book	Theory of Structures I - Beams
Autors	Besim Demirović
Publisher, year and place	Printing house Fojnica, „Fojnica“, 2016.
Summary	The university textbook by Besim Demirović is written in B5 format on 258 pages with the font Book Antiqua, font style regular, font size 12 pt. The book contains 177 pictures, illustrations or drawings, 9 tables and 448 algebraic expressions (formulas). The book cites 26 literary units. The content of the book consists of 7 chapters, a list of literature after each chapter, a preface and an index of terms. The graphic processing of the images is done to scale and in accordance with the technical script.
Comment	

Name of book	Theory of Structures I – Truss
Autors	Besim Demirović
Publisher, year and place	OFF-SET d.o.o. Tuzla, 2022.
Summary	The university textbook by Besim Demirović is written in B5 format on 158 pages with the font Book Antiqua, font style regular, font size 12 pt. The book contains 118 pictures, illustrations or drawings, 10 tables and 108 algebraic expressions (formulas). The book cites 27 literary units. The content of the book consists of 5 chapters, a list of literature after each chapter, a preface and an index of terms. The graphic processing of the images is done to scale and in accordance with the technical script.
Comment	

Name of book	Numerical Analysis of Structures – Line Structures in the Plane
Autors	Besim Demirović, Rašid Hadžović
Publisher, year and place	OFF-SET d.o.o. Tuzla, 2022.
Summary	The university textbook by Besim Demirović and Rašid Hadžović is made in B5 format on 174 pages with the font Book Antiqua, font style regular, font size 12 pt. The book contains 89 pictures, illustrations or drawings, 12 tables and 337 algebraic expressions (formulas). The book cites 36 literary units. The content of the book consists of 6 chapters, a list of literature after each chapter, a preface and an index of terms. The graphic processing of the pictures is done to scale and in accordance with the technical script.
Comment	

Awards

Name: Silver award
Institution: University of Tuzla
Reason: University Day
Kratak opis:

Comment:

Research projects and studies

Completed projects:

NATO SfP project „Seismic Upgrading of Bridges in South-East Europe by Inventive Technologies. Project participant.

Analysis of Bems According to the Theory of Finite Deformations Using Interpolation Polynomials. Project leader.

Analysis of Material Nonlinearity of Thin Plates Using Numerical Methods. Program for financing projects in the field of science of importance for the Federation of BiH, decision number: 01-3840-VI-1/23 of October 23, 2023. Project leader.

Personal competencies and skills

Native language: Bosnian

Additional languages:

	Understanding		Speach		Writing
	Listening	Reading	Speach interaction	Speach	
English	B2	B2	B2	B2	B2