

Name of teacher:	Vedrana Kozulić
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Employed at: Since:	University of Split, Faculty of Civil Engineering, Architecture and Geodesy, Department of Technical Mechanics
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Academic rank: Since: In:	Full Professor permanent 13.07.2016. Engineering Mechanics, Technical Sciences
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e-mail address, web page	<a href="mailto:vedrana.kozulic@gradst.hr">vedrana.kozulic@gradst.hr</a>
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Knowledge of foreign languages:	English
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Qualifications	<ul style="list-style-type: none"> <li>- <b>date of birth, nationality:</b> 13. January 1962., Croatian</li> <li>- <b>First degree obtained at:</b> Faculty of Civil Engineering, University of Split, 1989.</li> <li>- <b>Master degree obtained at:</b> Faculty of Civil Engineering, University of Split, 1993.</li> <li>- <b>Ph.D. degree obtained at:</b> Faculty of Civil Engineering, University of Split, 1999.</li> <li>- <b>additional education:</b></li> <li>- <b>previous employments:</b> Assistant (1990. -1999.), Senior assistant (1999. – 2002.), Assistant Professor (2002.- 2006.), Associate Professor (2006.-2010.), Professor (2010.- present).</li> </ul> <p>1990. - 2002.: Faculty of Civil Engineering, University of Split, 2002. - 2009.: Faculty of Civil Engineering, University of Rijeka, 2009. – present: University of Split, Faculty of Civil Engineering, Architecture and Geodesy.</p>
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List of papers published in scientific journals	<p>1. B. Gotovac, V. Kozulić: Numerical solving of initial-value problems by <math>R_{bf}</math> basis functions, Int. J. Structural Engineering and Mechanics, Vol. 14, No. 3, pp. 263-285, 2002.</p> <p>2. H. Gotovac, R. Andričević, B. Gotovac, V. Kozulić, M. Vranješ: An improved collocation method for solving the Henry problem, Journal of Contaminant Hydrology, <b>64</b> (2003), 1-2, pp. 129-149, 2003.</p> <p>3. V. Kozulić, H. Gotovac, B. Gotovac: An Adaptive Multi-resolution Method for Solving PDE's, CMC: Computers, Materials &amp; Continua, <b>6</b> (2007), 2, pp. 51-70, 2007.</p> <p>4. B. Gotovac, R. Sesartić, V. Kozulić: Točna numerička formulacija zakrivljenog grednog elementa, Građevinar, <b>61</b> (2009) 12, pp. 1129-1141, 2009.</p> <p>5. H. Gotovac, V. Kozulić, B. Gotovac: Space-Time Adaptive Fup Multi-Resolution Approach for Boundary-Initial Value Problems, CMC: Computers, Materials &amp; Continua, <b>15</b> (2010), 3, pp. 173-198, 2010.</p> <p>6. V. Kozulić, B. Gotovac: Elasto-Plastic Analysis of Structural Problems Using Atomic Basis Functions, CMES: Computer Modeling in Engineering &amp; Sciences, <b>80</b> (2011), 4, pp. 251-274, 2011.</p> <p>7. N. Brajčić Kurbaša, B. Gotovac, V. Kozulić: Atomic Exponential Basis Function <math>Eup(x, \omega)</math> - Development and Application, CMES: Computer Modeling in Engineering &amp; Sciences, <b>111</b> (2016), 6, pp. 493-530, 2016.</p> <p>8. V. Kozulić, B. Gotovac: Application of the Solution Structure Method in Numerically Solving Poisson's Equation on the Basis of Atomic Functions, International Journal of Computational Methods, <b>15</b> (2018), 5; 1850033, 25 doi:10.1142/S0219876218500330</p> <p>9. G. Kamber, H. Gotovac, V. Kozulić, L. Malenica, B. Gotovac: Adaptive numerical modeling using the hierarchical Fup basis functions and control volume isogeometric analysis, International Journal for Numerical Methods in Fluids, <b>92</b>(10), pp. 1437-1461, 2020.</p> <p>10. N. Brajčić Kurbaša, B. Gotovac, V. Kozulić, H. Gotovac: Numerical Algorithms for Estimating Probability Density Function Based on the Maximum Entropy Principle and Fup Basis Functions. Entropy <b>2021</b>, 23, 1559. <a href="https://doi.org/10.3390/e23121559">https://doi.org/10.3390/e23121559</a></p>
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	<p>11. G. Kamber, H. Gotovac, V. Kozulić, and B. Gotovac, "2-D local hp adaptive isogeometric analysis based on hierarchical Fup basis functions," Computer Methods in Applied Mechanics and Engineering, vol. 398, p. 115272, 2022. ; <a href="https://doi.org/10.1016/j.cma.2022.115272">https://doi.org/10.1016/j.cma.2022.115272</a></p> <p>12. Nives Brajčić Kurbaša, Blaž Gotovac, Vedrana Kozulić. The Class of Atomic Exponential Basis Functions EFup<sub>n</sub>(x,ω)-Development and Application. Computer Modeling in Engineering &amp; Sciences <b>2023</b>, 135(1), 65-90. <a href="https://doi.org/10.32604/cmes.2022.021940">https://doi.org/10.32604/cmes.2022.021940</a></p>
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<b>List of publications which serve as a proof of teaching qualifications</b>	<p>1. B. Gotovac, V. Kozulić: Numerical solving of initial-value problems by R<sub>bf</sub> basis functions, Int. J. Structural Engineering and Mechanics, Vol. 14, No. 3, pp. 263-285, 2002.</p> <p>2. B. Gotovac, V. Kozulić: On a selection of basis functions in numerical analyses of engineering problems, International Journal for Engineering Modelling, Vol. 12, No. 1-4, pp. 25-41, 1999.</p> <p>3. V. Kozulić, B. Gotovac: Numerical analyses of 2D problems using Fup<sub>n</sub>(x,y) basis functions, International Journal for Engineering Modelling, Vol. 13, No. 1-2, pp. 7-18, 2000.</p> <p>4. H. Gotovac, R. Andričević, B. Gotovac, V. Kozulić, M. Vranješ: An improved collocation method for solving the Henry problem, Journal of Contaminant Hydrology, <b>64</b> (2003), 1-2, pp. 129-149, 2003.</p> <p>5. V. Kozulić, H. Gotovac, B. Gotovac: An Adaptive Multi-resolution Method for Solving PDE's, CMC: Computers, Materials &amp; Continua, <b>6</b> (2007), 2, pp. 51-70, 2007.</p> <p>6. V. Kozulić, B. Gotovac: Computational Modeling of Structural Problems using Atomic Basis Functions, Advanced Structured Materials, Vol. 70: Mechanical and Materials Engineering of Modern Structure and Component Design / Öchsner, A.; Altenbach, H. (Eds.), Springer, Chapter 17, pp. 207-230, 2015.</p> <p>7. H. Gotovac, V. Kozulić, B. Gotovac: Space-Time Adaptive Fup Multi-Resolution Approach for Boundary-Initial Value Problems, CMC: Computers, Materials &amp; Continua, <b>15</b> (2010), 3, pp. 173-198, 2010.</p> <p>8. V. Kozulić, B. Gotovac: Elasto-Plastic Analysis of Structural Problems Using Atomic Basis Functions, CMES: Computer Modeling in Engineering &amp; Sciences, <b>80</b> (2011), 4, pp. 251-274, 2011.</p> <p>9. V. Kozulić, B. Gotovac: Application of the Solution Structure Method in Numerically Solving Poisson's Equation on the Basis of Atomic Functions, International Journal of Computational Methods, <b>15</b> (2018), 5; 1850033, 25 doi:10.1142/S0219876218500330</p> <p>10. G. Kamber, H. Gotovac, V. Kozulić, L. Malenica, B. Gotovac: Adaptive numerical modeling using the hierarchical Fup basis functions and control volume isogeometric analysis, International Journal for Numerical Methods in Fluids, <b>92</b>(10), pp. 1437-1461, 2020.</p> <p>11. G. Kamber, H. Gotovac, V. Kozulić, and B. Gotovac, "2-D local hp adaptive isogeometric analysis based on hierarchical Fup basis functions," Computer Methods in Applied Mechanics and Engineering, vol. 398, p. 115272, 2022. ; <a href="https://doi.org/10.1016/j.cma.2022.115272">doi.org/10.1016/j.cma.2022.115272</a></p> <p>12. Vedrana Kozulić, Blaž Gotovac, Nives Brajčić Kurbaša. "A new approach to solving boundary value problems in arbitrarily bounded domains". Proceedings of the 10th ICCSM International Congress of Croatian Society of Mechanics, Pula, 2022.; ISSN 2584-7716.</p>
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<b>Leader of the following research projects</b>	Research project: "Adaptive meshless modeling in design of engineering structures", Croatian ministry of Science, Education and Sports (083-0831541-1534), 2007.-2013.
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<b>Participant in the following research projects</b>	<p>1. Nonlinear numerical modelling of civil engineering structures, projekt Ministarstva znanosti i tehnologije RH (2-11-054), 1991.-1996.</p> <p>2. Numerical modelling of engineering structures, projekt Ministarstva znanosti i tehnologije RH (083133), 1997.-2000.</p>
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	<p>3. Numerical modelling of spatial engineering structures, projekt Ministarstva znanosti i tehnologije RH (083132), 2000.-2002.</p> <p>4. Modern numerical modelling of tunnels and underground structures, projekt Ministarstva znanosti i tehnologije RH (083041), 2002-2005.</p> <p>5. Numerical modelling of quasi-brittle materials, projekt Ministarstva znanosti i tehnologije RH (0114002), 2002.-2005.</p> <p>6. Groundwater flow modeling in karst aquifers, (HRZZ-UIP-2013-11-8103), 2014. – 2018.</p> <p>7. Preventing, Managing and Overcoming Natural-Hazards Risks to mitiGATE economic and social impact (PMO-GATE), Programme 2014 - 2020 INTERREG V-A Italy – Croatia, 2019.-2022.</p> <p>8. Multiphysics modelling of surface-subsurface water systems, IP-2020-02-2298 HRZZ, 2020.-2025.</p>
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<b>Supervision of PhD theses</b>	3
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<b>Examination of PhD theses</b>	8
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