1/ CURRICULUM VITAE

1. Name: Hrvoje
2. Surname: Gotovac
3. Date and place of the birth: 30.01.1975., Zagreb.
4. Address: Makarska 6, 21000, Split; 098-447-527, hrvoje.gotovac@gradst.hr
5. Married and father of two kids: Nora and Karlo.
   Education: 1989 – elementary school Meje – Split, 1993 – III Math Gymnasium, MIOC – Split, 1999 – Batchelor in Civil Engineering, 2005 – Master of Science in Civil Engineering, both at Faculty of Civil Engineering, Architecture and Geodesy, University of Split, 2009 – PhD in Technical Science, Royal Institute of Technology, KTH, Department of Land and Water Resources, KTH, Stockholm, Sweden.
6. Membership in professional associations: Croatian Society of Mechanics, American Geophysical Union, European Geophysical Union.
7. Posiiton: Faculty of Civil Engineering, Architecture and Geodesy, University of Split, Head of the Department of Commercial Hydrotechnics, Full professor, Head of Laboratory for Water Resources and Environmental Engineering in Žrnovnica.
8. Experience: 24 years.
9. Skills: Lectures, work with students, mentorship of all student levels from graduate to Phd, Leadership of scientific and expert projects, publishing scientific papers.

10. Radno iskustvo:

Date: from (01/2000) to (02/2024)	January 2000. - November 2000. – young Researcher August 2001. - June 2009. – PhD student June 2009. - May 2010. - Postdoc May 2010. - September 2013. – Assistant Professor September 2013. - February 2019 – Associate Professor 01.10.2010. - 01.10.2018.– Vice Dean for Science February 2019. until now – Full Professor 01.10.2016. until now – Head of Laboratory for Water Resources and Environmental Engineering in Žrnovnica
Place	Matice hrvatske 15, 2100, Split
Company	Faculty of Civil Engineering, Architecture and Geodesy, University of Split
Position	Full Professor
Description	Teaching, professional and scientific activity Preparation of classes, teaching in the courses "Hydraulic structures" and "Modelling of flow and transport in porous

	media", conducting colloquiums and exams, mentoring in final and diploma theses Management of HRZZ scientific projects Work and management of international scientific competitive projects Preparation of ecological studies, professional studies and expertise Head of the post-graduate university study in Civil Engineering Mentoring in doctoral studies/work with doctoral students and postdoctoral students Management of scientific activities in the capacity of vice dean for science The behavior of the head of the department for Economic Hydrotechnics Head of the Hydrotechnical Laboratory from 2016 until today
Date:	from 01.09.2005. to 18.06.2009. – PhD student
Location:	Royal Institute of Technology, KTH, Brinellvagen 32, 100-44, Stockholm, Sweden
Company	Royal Institute of Technology, KTH, Department of Land and Water Resources
Position	PhD student
Description	Scientific research work of four years, in addition to all other completed obligations of taking exams, defending seminars and presentations, which ended with the defense of a doctoral thesis entitled "A multi-resolution approach for modeling flow and solute transport in heterogeneous porous media" with five published scientific papers in the best journals from the Q1 quartile in the field of groundwater computational hydraulics.

ResearcherID: H-4099-2017

ORCID: http://orcid.org/0000-0002-0262-8921

Scopus: https://www.scopus.com/authid/detail.uri?authorId=22934117200#
Google Scholar: https://scholar.google.com/citations?user=LEFJpI4AAAAJ&hl=en&oi=ao
Web of Science: http://www.researcherid.com/rid/H-4099-2017

Croris: https://www.croris.hr/osobe/profil/2518

Scientific publications in WoSCC-u during the last five years:

1. Kamber, Grgo ; Gotovac, Hrvoje ; Kozulić, Vedrana ; Gotovac, Blaž. 2-D local hp adaptive isogeometric analysis based on hierarchical Fup basis functions // Computer methods in applied mechanics and engineering, 398 (2022), 115272, 32., doi:10.1016/j.cma.2022.115272
2. Đepina, Ivan ; Jain, Saket ; Mar Valsson, Sigurdur ; Gotovac, Hrvoje. Application of physics-informed neural networks to inverse problems in unsaturated groundwater flow // Georisk, 16 (2022), 21-36. doi: 10.1080/17499518.2021.1971251
3. Malenica, Luka ; Gotovac, Hrvoje. Full space-time adaptive method based on collocation strategy and implicit multirate time stepping // International journal for numerical methods in fluids, 93 (2021), 5; 1606-1626. doi: 10.1002/fld.4944
4. Gotovac, Hrvoje ; Malenica, Luka ; Gotovac, Blaž, Control Volume Isogeometric Analysis for groundwater flow modeling in heterogeneous porous media // Advances in water resources, 148 (2021), 103838, 21. doi: 10.1016/j.advwatres.2020.103838
5. Krvavica, Nino ; Gotovac, Hrvoje ; Lončar, Goran. Salt-wedge dynamics in microtidal Neretva River estuary // Regional studies in marine science, 43 (2021), 101713, 15. doi: 10.1016/j.rsma.2021.101713
6. Brajčić Kurbaša, Nives ; Gotovac, Blaž ; Kozulić, Vedrana ; Gotovac, Hrvoje. Numerical Algorithms for Estimating Probability Density Function Based on the Maximum Entropy Principle and Fup Basis Functions // Entropy (Basel. Online), 23 (2021), 12; 1559, 19. doi: 10.3390/e23121559.
7. Lončar, Goran ; Krvavica, Nino ; Gotovac, Hrvoje ; Oskoruš, Dijana ; Kulić, Tin. Numerička analiza djelovanja brane na sprječavanje prodora slane vode duž korita rijeke Neretve // Hrvatske Vode, 28 (2020), 112; 113-124.
8. Ferić, K.; V. Sathish Kumar, A. Romić, H. Gotovac, Effect of aggregate size and compaction on the strength and hydraulic properties of pervious concrete, Sustainability (2023), 15 (2), 1146.
9. Kamber, Grgo ; Gotovac, Hrvoje ; Kozulić, Vedrana ; Malenica, Luka ; Gotovac, Blaž, Adaptive numerical modeling using the hierarchical Fup basis functions and control volume isogeometric analysis // International journal for numerical methods in fluids, 92 (2020), 10; 1437-1461. doi: 10.1002/fld.4830

Scientific publications in scientific conferences during the last five years:

1. Krste Živković, Marin Zelenika, Hrvoje Gotovac. MULTYPHYSICS MODELING OF SALT TRACER TESTS IN KARST AQUIFERS UNDER LABORATORY CONDITIONS, znanstvena konferencija Coupled 2023, Crete, Greece, 2023. **(prezentacija)** https://coupled2023.cimne.com/event/sessions_search
2. Grgo Kamber, Hrvoje Gotovac, Vedrana Kozulić. Hierarchical Fup basis functions within adaptive control volume isogeometric analysis, 11th European Solid Mechanics Conference, Galway, Ireland, 2022.

https://abbey.eventsair.com/AbbeyEventApp/11th-european-solid-mechanics-conference/programme/Agenda

3. Kamber, Grgo ; Gotovac, Hrvoje ; Kozulić, Vedrana. Adaptive modeling with hierarchical Fup basis functions and control volume within isogeometric analysis // Book of Abstracts of the 10th ICCSM International Congress of Croatian Society of Mechanics / Skozrit, Ivica ; Sorić, Jurica ; Tonković, Zdenko (ur.). 2022. str. 155-156
4. Krste Živković, Hrvoje Gotovac, Marin Zelenika. MULTYPHYSICS MODELING OF TRACER TRANSPORT IN SURFACE SUBSURFACE WATER SYSTEM; IX International Conference on Coupled Problems in Science and Engineering, Coupled 2021, Italy. **(online prezentacija)** https://congress.cimne.com/coupled2021/frontal/Programa_intran.asp
5. Kamber, Grgo ; Gotovac, Hrvoje ; Kozulić, Vedrana. Adaptive numerical modeling using hierarchical Fup basis functions and control volume isogeometric analysis // 5th International Conference on Multi-scale Computational Methods for Solids and Fluids / A. Ibrahimbegovic, M. Nikolić (ur.). 2021. str. 144-147. https://gf.unsa.ba/eccomas-msf-2021/
6. Gotovac, Blaž ; Brajčić Kurbaša, Nives ; Kozulić, Vedrana ; Gotovac, Hrvoje, ALGORITHM FOR SOLVING MAXIMUM ENTROPY PROBLEM BASED ON FINITE BASIS FUNCTIONS // ECCOMAS MSF 2021 - 5th International Conference on Multi-scale Computational Methods for Solids and Fluids / Ibrahimbegović, Adnan ; Nikolić, Mijo (ur.). Sarajevo, 2021. str. 117-120. https://gf.unsa.ba/eccomas-msf-2021/
7. Hrvoje Gotovac, Grgo Kamber, Vedrana Kozulić. Adaptive Control Volume Isogeometric Analysis for numerical modelling of engineering problems**,** Eccomas Congress, oslo, Norway, 2022. **(prezentacija)** http://www.eccomas2022.org/frontal/ProgAuthSrch.asp
8. H. Gotovac, L. Malenica, G. Kamber. Coupling Strategies for the Karst Groundwater Flow Models, znanstvena konferencija Coupled 2019, Barcelona, Spain, 2019. **(prezentacija),** https://congress.cimne.com/coupled2019/frontal/ProgAuthSrch.asp
9. Krste Živković, Marin Zelenika, Hrvoje Gotovac. Multiphysics Modelling of Coupled Surface-Subsurface Flow and Solute Transport, Computational Methods in Water Resources, CMWR 2022, Gdansk, Poland, 2022. **(poster)** **https://cmwrconference.org/wp-content/uploads/2022/06/CMWR2022_BookOfAbstracts.pdf**
10. Gotovac, Hrvoje; CONTROL VOLUME ISOGEOMETRIC ANALYSIS IN GROUNDWATER HYDRAULICS - 5th International Conference on Multi-scale Computational Methods for Solids and Fluids / Ibrahimbegović, Adnan ; Nikolić, Mijo (ur.). Sarajevo, 2021. str. 117-120. **(prezentacija),** https://gf.unsa.ba/eccomas-msf-2021/
11. H.Gotovac, K. Ferić, A.Romic, S.K. Veerappan, K.Zivkovic. Hydrological analysis of horizontal structures with pervious concrete, Computational Methods in Water Resources, CMWR 2022, Gdansk, Poland, 2022. **(prezentacija),** **https://cmwrconference.org/wp-content/uploads/2022/06/CMWR2022_BookOfAbstracts.pdf**

University books:

Andričević, Roko ; Gotovac, Hrvoje ; Ljubenkov, Igor; Geostatistika: umijeće prostorne analize. Split: Građevinsko-arhitektonski fakultet Sveučilišta u Splitu, 2007.

List of international scientific projects:

1. **MOST - MOnitoring Sea-water intrusion in coastal aquifers and Testing pilot projects for its mitigation**, Researcher/Team member, (600 000 Euro): 2019-2022, Interreg IPA project, Leader: Veljko Srzić.

2. **AdSWiM – Management and treatment of urban wastewater to preserve the quality of the Adriatic coastal area**, Hr/Upravljanje i pročišćavanje otpadnih voda urbanih sredina za očuvanje kvalitete obalnog područja Jadranskog mora, Interreg CBC Hrvatska-Italija:, Researcher/Team member, (total 400 000 Euro); 2019-2021., Leader: Roko Andričević.

3. **NET4mPLASTIC – NEw Technologies for detection micro and macro PLASTIC on costal region of Adriatic sea**, Hr/ Nove tehnologije za detekciju makro i mikro plastike na obalnom području Jadranskog mora, Interreg CBC Hrvatska-Italija, Researcher/Team member, 400 000 Euro; 2019-2021, Leader: Roko Andričević.

4. **Perm-Beton – Development of drainage system in horizontal structures with permeable concrete**, Hr/ Razvoj sustava odvodnje u konstrukcijama s propusnim betonom, EU IRI-2 project, 400 000 Euro; 2019-2022, Leader: Hrvoje Gotovac.

5. **Flow in single fractures**, founded by Swedish nuclear waste company SKB, Researcher (300 000 SEK /yr): Researcher/Team member, 2010-2013; Leader: Vladimir Cvetkovic, KTH, Stockholm.

6. **Hydrological pathways and transport**, (Swedish Research Council - VR), Researcher (600 000 SEK /yr); 2005-2009, Leader: Georgia Destouni, SU, Stockholm.

7. **ADRICOSM - NERES**, Neretva river delta environmental re-qualification and sustainable development, Task 1. Evaluation of the extension of them saltwater intrusion in the river, Task 2. Monitoring and prevention measures for improving the quality of coastal aquifers and soil in the Neretva Delta“, 2004-2006, Researcher (200 000 Euro /yr): Leader: Roko Andricevic.

8. **WASSER**, project funded by EU-FP5. Responsible for analysis and design of protection measures for salt-water intrusion in coastal aquifers. Three pilot projects where analyzed: Israel coast, Rhodos Island and Cyprus case study, Researcher (300 000 Euro /yr): 1999-2001, Leader: Georgia Destouni, SU, Stockholm.

9. **Jadranska mreža za transfer tehnologije - TT Adria**, IPA project, 6.821.818,92 HRK, Project partner, 2011-2013, Leader: University of Split.

List of domestic scientific projects:

1. **Multi-Waters – Multiphysics modelling of surface-subsurface water systems**, Hr/ Multifizikalno modeliranje sustava površinskih i podzemnih voda, Croatian Foundations of Science - HRZZ, 250 000 Euro; 2021-2025, Leader: Hrvoje Gotovac.

2. **Modeliranje tečenja u krškim vodonosnicima**, Hrvatska zaklada za znanost, HRZZ, 958.000,00 kn; UIP-2013-8103, 2014-2018, Voditelj projekta- Hrvoje Gotovac.

3. **Pronos zagađenja u podzemlju i procjena rizika kao posljedica odlaganja otpada**, MZOS, 90.000,00 kn/god., 083-0831529-1528, Suradnik na projektu - znanstveni novak/postoktorand, 2007-2014, Voditelj: prof.dr.sc. Roko Andričević.

4. **Istraživanje prodora mora u deltu rijeke Neretve**, MZOS, 60.000,00 kn/god., 0083121, Suradnik na projektu – znanstveni novak, 2001-2006, Voditelj: prof.dr.sc. Mijo Vranješ.

Mobility:

2005-2009
PhD student at Royal Institute of Technology, Department of Land and Water Resources, KTH, Stockholm. Kontakt: Vladimir Cvetkovic

1.5-1.6.2016; 15.10. – 15.11. 2017.
"Modeliranje tečenja u krškim vodonosnicima" (Voditelj: Hrvoje Gotovac) two times per one month stay at Oak Ridge National Laboratory, Tennessee, USA. Kontakt: Srđan Šimunović

1.5-8.5.2019 - Erasmus+cooperation: Prof. Ramir Neves Lisabon, institut MARETEC.

23.2.2024-11.3.2024 – Cooperation: prof. Jim McMallum, University of Western Australia, Perth, „Multi-Waters“.

Cooperation:

1. Royal Institute of Technology, Department of Land and Water Resources, KTH, Stockholm, Sweden. (Vladimir Cvetkovic)

2. Stockholm University, Sweden. (Georgia Destouni)

3. Oak Ridge National Laboratory, Tennessee, USA. (Srđan Šimunović)

4. Dipartimento di Ingegneria, Universita' di Roma Tre, Rome, Italy. (Aldo Fiori)

5. Department of Civil, Structural and Environmental Engineering, State University of New York at Buffalo, Buffalo, New York, USA. (Igor Janković)

6. Geotehnički fakultet u Varaždinu, Sveučilište u Zagrebu. (Bojan Đurin)

7. Građevinski fakultet u Zagrebu, Sveučilište u Zagrebu. (Goran Lončar)

8. Građevinski fakultet u Rijeci, Sveučilište u Rijeci. (Vanja Travaš)

9. University of Western Australia. (Jim McCallum)

PhD dissertation

Gotovac, Hrvoje
A multi-resolution approach for modeling flow and solute transport in heterogeneous porous media / Cvetković, Vladimir (mentor); Andričević, Roko (komentor).
Stockholm, 2009. https://www.bib.irb.hr:8443/447015