

Curriculum vitae

NAME

DAMIR JUKIĆ

EDUCATION

- Date: 18.01.1991.
Place of education: Split
Name and type of organization providing education: Faculty of Civil Engineering, University of Split
Title awarded: **B.Sc. in civil engineering**
- Date: 28.01.1996.
Place of education: Split
Name and type of organization providing education: Faculty of Civil Engineering, University of Split
Title awarded: **Master's degree**, domain of technical sciences, field of civil engineering, hydro-technical branch
- Date: 15.02.2005.
Place of education: Split
Name and type of organization providing education: Faculty of Civil Engineering and Architecture, University of Split
Title awarded: **Doctor's degree**, domain of technical sciences, field of civil engineering, hydro-technical branch
PhD thesis: The role of transfer functions in the water balance determining and the spring discharge modelling in karst

WORK EXPERIENCE

- Dates (from – to): 1.10.1991 – 30.06.1992
Name of employer: **Institute of Civil Engineering, Department of Split**
Type of business or sector: Hydro-technical sector
Occupation or position held: Designer
- Dates (from – to): 1.07.1992 – 30.06.2000
Name of employer: **Faculty of Civil Engineering, University of Split**
Type of business or sector: Department for Sanitary Engineering
Occupation or position held: Junior Research Assistant
- Dates (from – to): 1.12.2001 – 1.11.2007
Name of employer: **Croatian Waters, Water Management Department of Split**
Type of business or sector: Sector for Development and Land-registries
Occupation or position held: Main engineer
- Dates (from – to): 1.11.2007. – Present
Name of employer: **Faculty of Civil Engineering, Architecture and Geodesy, University of Split**
Type of business or sector: Hydrology Department
Occupation or position held: **Professor with tenure**

TEACHING COMPETENCES

- Faculty of Civil Engineering, University of Split, 1992-2000, **assistant** on the following subjects: Water supply and sewer, Water protection, Hydro technical structures
- Polytechnic school in Split, 2000-2002, **teacher** on the following subjects: Water supply and sewer systems, Water protection, Hydrology
- Faculty of Civil Engineering and Architecture, University of Split, 2007-present, **professor** on the following subjects: Watercourses regulation, Karst hydrology,

Surface water quality modelling, Water protection, Urban environmental management, Engineering hydrology.

SCIENTIFIC COMPETENCES

ARTICLES IN JOURNALS (most relevant):

- Jukić, Damir; Denić-Jukić, Vesna, An alternative approach to investigation of sediment transport through a karst aquifer // *Journal of hydrology*, 625 (2023), Part A; 130037, doi: <https://doi.org/10.1016/j.jhydrol.2023.130037>.
- Kadić, Ana; Denić-Jukić, Vesna; Jukić, Damir, Exceeding Turbidity versus Karst Spring Discharge during Single Rainfall Events: The Case of the Jadro Spring // *Water*, 15/2023 (2023), 14; 2589, 17. doi: <https://doi.org/10.3390/w15142589>.
- Jukić, Damir; Denić-Jukić, Vesna; Kadić, Ana, Temporal and spatial characterization of sediment transport through a karst aquifer by means of time series analysis // *Journal of hydrology*, 609 (2022), 127753, 14. doi: [10.1016/j.jhydrol.2022.127753](https://doi.org/10.1016/j.jhydrol.2022.127753).
- Jukić, Damir; Denić-Jukić, Vesna; Lozić, Ana, An alternative method for groundwater recharge estimation in karst // *Journal of hydrology*, 600 (2021), 126671, 12. doi: [10.1016/j.jhydrol.2021.126671](https://doi.org/10.1016/j.jhydrol.2021.126671).
- Denić-Jukić, Vesna; Lozić, Ana; Jukić, Damir, An Application of Correlation and Spectral Analysis in Hydrological Study of Neighboring Karst Springs // *Water*, 12 (2020), 3570, 19. doi: <https://doi.org/10.3390/w12123570>.
- Kadić, Ana; Denić-Jukić, Vesna; Jukić, Damir, Analiza meteoroloških i hidroloških odnosa u kršu primjenom parcijalne kros-korelacijske funkcije višeg reda // *Hrvatske Vode*, 27 (2019), 109; 201-210.
- Kadić, Ana; Denić-Jukić, Vesna; Jukić, Damir, Revealing hydrological relations of adjacent karst springs by partial correlation analysis // *Hydrology Research*, 49 (2018), 3; 616-633. doi: [10.2166/nh.2017.064](https://doi.org/10.2166/nh.2017.064).
- Jukić, Damir; Denić-Jukić, Vesna, Investigating relationships between rainfall and karst-spring discharge by higher-order partial correlation functions // *Journal of hydrology*, 530 (2015), 24-36. doi: [10.1016/j.jhydrol.2015.09.045](https://doi.org/10.1016/j.jhydrol.2015.09.045).
- Jukić, Damir; Denić-Jukić, Vesna, Partial spectral analysis of hydrological time series // *Journal of hydrology*, 400 (2011), 1/2; 223-233. doi: [10.1016/j.jhydrol.2011.01.044](https://doi.org/10.1016/j.jhydrol.2011.01.044).
- Jukić, Damir; Denić-Jukić, Vesna, Groundwater balance estimation in karst by using a conceptual rainfall-runoff model // *Journal of hydrology*, 373 (2009), 3-4; 302-315. doi: [10.1016/j.jhydrol.2009.04.035](https://doi.org/10.1016/j.jhydrol.2009.04.035).
- Jukić, Damir; Denić-Jukić, Vesna, Estimating parameters of groundwater recharge model in frequency domain: Karst springs Jadro and Žrnovnica Hydrological Processes, 22 (2008), 23; 4532-4542. doi: [10.1002/hyp.7057](https://doi.org/10.1002/hyp.7057).
- Bonacci, Ognjen; Jukić, Damir; Ljubenkov, Igor, Definition of catchment area in karst: case of the rivers Krčić and Krka, Croatia // *Hydrological sciences journal*, 51 (2006), 4; 682-699.
- Jukić, Damir; Denić-Jukić, Vesna, Nonlinear kernel functions for karst aquifers // *Journal of hydrology*, 328 (2006), 360-374.
- Jukić, Damir; Denić-Jukić, Vesna, A frequency domain approach to groundwater recharge estimation in karst // *Journal of hydrology*, 289 (2004), 1-4; 95-110.
- Denić-Jukić, Vesna; Jukić, Damir, Composite transfer functions for karst aquifers // *Journal of hydrology*, 274 (2003), 1-4; 80-94.

CONFERENCE PAPERS (most relevant):

- Kadić, Ana; Denić-Jukić, Vesna; Jukić, Damir, Higher-order Partial Cross-correlation Analysis of Adjacent Karst Springs // 8th World Multidisciplinary Civil Engineering-Architecture-Urban Planning Symposium: Abstract Book. Prag: World Multidisciplinary Civil Engineering-Architecture-Urban Planning Symposium (WMCAUS), 2023, 41-41.
- Kadić, Ana; Dadić, Ana; Slatina, Ivona; Duplančić-Leder, Tea; Jukić, Damir; Denić-Jukić, Vesna, Hydrological functioning of three karst springs located in the Cetina River catchment in Croatia // Geophysical Research Abstracts, EGU General Assembly, Vienna, 2019.
- Jukić, Damir; Slatina, Ivona; Denić-Jukić, Vesna, EFFECTS OF HYDROPOWER RESERVOIRS ON HYDROLOGY OF TWO ADJACENT KARST SPRINGS // 18th International Multidisciplinary Scientific GeoConference SGEM, Vienna, 2018, Conference Proceedings, Volume 18, Science and Technologies in Geology, Oil and Gas Exploration, Water Resources, Forest Ecosystems, Issue:1.5, Oil and Gas Exploration, Hydrology and Water Resources, Forest Ecosystems. Sofija: SGEM, 2018, 267-274, doi: 10.5593/SGEM2018V/1.5/S02.033.
- Carić, Ana; Denić-Jukić, Vesna; Jukić, Damir, Analyses of time variabilities of runoff coefficients at two neighbouring karst catchments // Geophysical Research Abstracts, EGU General Assembly, Vienna, 2018.
- Jukić, Damir; Denić-Jukić, Vesna, Investigation of spatial and temporal variability of groundwater flow process by using higher-order partial correlation functions: theoretical considerations // Geophysical Research Abstracts, EGU General Assembly, Vienna, 2018.
- Denić-Jukić, Vesna; Kadić, Ana; Jukić, Damir, HIGHER-ORDER PARTIAL CROSS-CORRELATION FUNCTION AS A TOOL FOR INVESTIGATING HYDROLOGICAL RELATIONS IN KARST // 17th International Multidisciplinary Scientific GeoConference SGEM, Vienna, 2017, Conference Proceedings, Volume 17, Water Resources. Forest, Marine and Ocean Ecosystems, Issue 33, Hydrology and Water Resources, Forest Ecosystems. Sofija: SGEM, 2017, 187-194 doi: 10.5593/SGEM2017H/33/S12.023.
- Jukić, Damir; Denić-Jukić, Vesna, A THEORETICAL BASIS FOR APPLICATION OF PARTIAL CORRELATION FUNCTIONS IN HYDROLOGICAL SYSTEM ANALYSIS WITH REFERENCE TO KARST // 17th International Multidisciplinary Scientific GeoConference SGEM, Vienna, 2017, Conference Proceedings, Volume 17, Water Resources. Forest, Marine and Ocean Ecosystems, Issue 33, Hydrology and Water Resources, Forest Ecosystems. Sofija: SGEM, 2017, 11-18 doi: 10.5593/sgem2017H/33/S12.002.
- Kadić, Ana; Jukić, Damir; Denić-Jukić, Vesna, Study of hydrological relations between two adjacent karst springs by means of time series analysis // Aqua 2015, Hydrogeology: Back to the Future! Roma, The International Association of Hydrogeologists, 2015.
- Andrić, Ivo; Bonacci, Ognjen; Denić-Jukić, Vesna; Jukić, Damir, Hydrologic budget of the intermittent karst lake Modro jezero // Geophysical Research Abstracts Vol. 15. EGU2013-6048, 2013 EGU General Assembly, Vienna, 2013.
- Kapelj, Sanja; Kapelj, Janislav; Jukić, Damir; Denić-Jukić, Jasna; Švonja, Mirjana; Tepeš, Predrag; Loborec, Jelena; Dogančić, Dragana; Biondić, Božidar; Leis, Albrecht, Integral approach for the protection of the Jadro and Žrnovnica springs catchment - Dalmatia, Croatia // Sustainability of the Karst environment - Dinaric Karst and other Karst regions / Ognjen Bonacci (ur.). Gospić: Plitvička jezera: Sveučilišna tiskara, 2009, 79-80.
- Jukić, Damir; Denić-Jukić, Vesna; Teskera, Ivan, Groundwater recharge estimation in karst by combining soilmoisture and groundwater balance approaches: example of the Jadro Spring, Croatia // International Interdisciplinary Conference on Predictions for Hydrology, Ecology and Water Resources Management: Using Data and Models to Benefit Society / Jyri Bruthans, Karel

Kovar, Zbynek Hrkal (ur.). Prag, Czech Association of Hydrogeologists, 2008, 175-178.

- Jukić, Damir; Denić-Jukić, Vesna, Study of role of soil cover and epikarst zone in karst springs discharge generation by means of correlation and spectral analysis // Flow and Transport in Heterogeneous Subsurface Formations: Theory, Modelling & Applications. Istanbul: Bogazici University, 2008.
- Jukić, Damir; Denić-Jukić, Vesna, Estimation of parameters of groundwater recharge model in frequency domain International Conference ModelCARE 2007, Calibration and Reliability in Groundwater Modeling, Credibility of Modeling.
- Denić-Jukić, Vesna; Jukić, Damir; Vego, Goran, Karst springs discharge modeling by using the composite transfer functions: example of the Žrnovnica and Jadro Springs // XXXV Congress of the International Association of Hydrogeologists, Groundwater and Ecosystems, Proceedings / L. Ribeiro, A. Chambel & M.T. Condesso de Melo Eds. (ur.). Lisabon: DTP Solutions, Cape Town, South Africa, 2007.

SCIENTIFIC PROJECTS:

- Scientific project financed by Ministry of Science "Decision support systems in costal water management", 1992-1996, **Junior research assistant**, Ref. No.: 2-11-347.
- Scientific project financed by Ministry of Science "Development of models for water resources management in energetic", 1996-2000, **Junior research assistant**, Ref. No.: 083172.
- Scientific project financed by Ministry of Science "Water balance and flow modeling in karst", 2007-2013, **Investigator**, Ref. No.: 083-0831510-1513.
- Scientific project financed by Ministry of Science "Groundwater and surface water monitoring in karst areas", **Principal investigator**, 2007-2013, Ref. No.: 083-0822695-1526.
- International scientific project "Risk Identification and Land-Use Planning for Disaster Mitigation of Landslides and Floods in Croatia", Ministry of Science, Education and Sports of the Republic of Croatia, Japanese Cooperation Agency JICA, preliminary phase 2009-2010, **Investigator**.
- Project KK.01.1.1.02.0027 co-financed by the Croatian Government and the European Union through the European Regional Development Fund - the Competitiveness and Cohesion Operational Program, **Investigator**.

AWARD:

- Annual award of Croatian Waters for the best PhD thesis in 2005

MEMBERSHIPS:

- International Association of Hydrogeologists (IAH)
- International Association of Hydrological Sciences (IAHS)
- European Geophysics Union (EGU)
- American Geophysics Union (AGU)

TECHNICAL SKILLS AND COMPETENCIES

PROJECTS ENGAGEMENTS

- Project manager of international project "Development of a Framework for Formulation of Water Management Plans in the Water Districts of the Coastal Zone of Croatia", 2004-2006. Project was identified under the Memorandum of Understanding between the Nederland and Croatia which was signed 17 November 2000. The Nederland Ministry of Economic Affairs supported this project through the Program for Cooperation with Countries in Central and Eastern Europe (PSO),

- Involved in elaboration of numerous hydro-technical studies and projects (water supply systems, sewer systems, hydrological studies, watercourse regulations, etc) as project manager, consultant, or designer,
- Involved in elaboration of several environmental impact assessment studies of wastewater treatment plants (numerical modelling of dilution and environmental impacts on recipients) as consultant or designer.