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Professor Slobodan Djordjević, Curriculum Vitae, March 2021**Career outline**

Slobodan Djordjević has 35 years of research, teaching and industrial experience in a broad range of areas in water and environmental engineering. He joined the University of Exeter in 2002, where he is Professor of Hydraulic Engineering in the College of Engineering, Mathematics and Physical Sciences, Programme Director for MSc in Water Engineering and Co-director of the Centre for Water Systems. At Exeter he served in various leadership roles, most recently as the inaugural Associate Dean (International & Development) in CEMPS, working on fostering global partnerships. He received degrees in Civil Engineering (including PhD in 2001) from the University of Belgrade, where he worked 1991-2002. Slobodan held visiting positions at the Florida State University, The University of West Indies and the Technical University of Munich. He has been engaged as external expert on World Bank projects and for consultancies and government agencies around the world.

Expertise overview

Slobodan has worked on the development and application of advanced methodologies and physically-based and machine learning-based tools for water management, simulation of drainage networks, pipe blockages and sewer ventilation, flood modelling, assessment of impacts of flooding (direct damage on buildings, effects on human health and impacts on transportation, resilience to diverse extreme weather events in the context of climate change), tidal energy extraction, impacts of dams, water-food-energy nexus, scour around bridge piers, water quality modelling, river and coastal engineering, cascading effects between water, waste, energy, transportation and other infrastructure systems, nature-based solutions, and drought risk management. While at Exeter he has been awarded research grants worth over £10m, mostly as the principal investigator.

Teaching and education management

Professor Djordjević has lectured on twenty modules on a range of water and environment related subjects, including as visiting lecturer on various post-graduate and specialist courses in Barbados, Estonia, Germany, Greece, Hungary, Iran, Japan, Serbia, S. Korea, the Netherlands and USA. At Exeter he acted as the Director of Postgraduate Studies and Director of Education for Engineering.

Experience in supervision and examination of postgraduate students

Professor Djordjević has supervised about twenty-five PhD or EngD (Engineering Doctorate) dissertations. He examined a similar number of doctoral students at Exeter, six other UK universities and elsewhere including in Australia, Denmark, France, India and the Netherlands. He also supervised numerous MSc theses and acted as External Examiner for MSc in Water Resources and MSc in Water & Environmental Management at the Heriot-Watt University.

Publication record, conferences and editorial activities

Slobodan co-authored over eighty journal papers and ten book chapters (full list and citation record can be seen on: [Google Scholar](https://scholar.google.com/citations?user=s.djordjevic)). He organised and co-chaired the International Conference on Flood Resilience: Experiences in Asia and Europe ([ICFR2013](#)) held in Exeter with over two hundred participants from thirty-three countries. He also co-chaired the 19th International Computing & Control for Water Industry Conference ([CCWI2019](#)). Slobodan is Editor-in-Chief of [Water Supply](#) and Editor of [Journal of Flood Risk Management](#).

Current research

With his team, Slobodan works on six EU-funded consortia ([RESCCUE](#), [NEXTGEN](#), [RECONNECT](#), [Fiware4Water](#), [aqua3s](#) and [ULTIMATE](#)), bilateral projects between UK and Asian countries ([ESPRIT](#) with China and [ENRICH](#) with Thailand) and [OVERCOME](#) project with Africa.

Journal papers published 2011-2021

- Rufino I., Djordjević S., de Brito H.C. and Alves P.B.R. (2021) [Multi-temporal built-up grids of Brazilian cities: how trends and dynamic modelling could help on resilience challenges?](#), *Sustainability*, 13(2), 748.
- Alves P.B.R., Cordão M.J.S., Djordjević S. and Javadi A.A. (2021) [Place-based citizen science for assessing risk perception and coping capacity of households affected by multiple hazards](#), *Sustainability*, 13(1), 302.
- Velasco M., Russo B., Monjo R., Paradinas C., Djordjević S., Evans B., Martínez-Gomariz E., Guerrero-Hidalga M., Cardoso M.A., Brito R.S. and Pacheco D. (2020) [Increased urban resilience to climate change – key outputs from the RESCCUE project](#), *Sustainability*, 12(23), 9881.
- Elsayed H., Djordjević S., Savić D., Tsoukalas I. and Makropoulos C. (2020) [The Nile water-food-energy nexus under uncertainty: impacts of the Grand Ethiopian Renaissance Dam](#), *Journal of Water Resources Planning and Management*, 146(11), 04020085.
- Kahraman R., Riella M., Tabor G., Ebrahimi M., Djordjević S. and Kripakaran P. (2020) [Prediction of flow around a sharp-nosed bridge pier: influence of the Froude number and free-surface variation on the flow field](#), *Journal of Hydraulic Research*, 58(4), 582-593.
- Ebrahimi M., Djordjević S., Panici D., Tabor G. and Kripakaran P. (2020) [A method for evaluating local scour depth at bridge piers due to debris accumulation](#), *Proceedings of the Institution of Civil Engineers – Bridge Engineering*, 173(2), 86-99.
- Ebrahimi M., Duncan S., Belmont M.R., Kripakaran P., Tabor G., Moon I. and Djordjević S. (2020) [Flume experiments on the impact of a cross-flow turbine on an erodible bed](#), *Renewable Energy*, 153, 1219-1225.
- Panici D., Kripakaran P., Djordjević S. and Dentith K. (2020) [A practical method to assess risks from large woody debris accumulations at piers](#), *Science of The Total Environment*, 728.
- Stevens J., Henderson R., Webber J., Evans B., Chen A., Djordjević S., Sánchez-Muñoz D. and Domínguez-García J.L. (2020) [Interlinking Bristol based models to build resilience to climate change](#), *Sustainability*, 12(8), 3233.
- Evans B., Chen A.S., Djordjević S., Webber J., Gomez A. and Stevens J. (2020) [Investigating the effects of pluvial flooding and climate change on traffic flows in Barcelona and Bristol](#), *Sustainability*, 12(6), 2330.
- Alves P.B.R., Rufino I.A.A., Feitosa P.H.C., Djordjević S. and Javadi A. (2020) [Land-use and legislation-based methodology for the implementation of sustainable drainage systems in the semi-arid region of Brazil](#), *Sustainability*, 12(2), 661.
- Vamvakeridou-Lyroudia L., Chen A.S., Khoury M., Gibson M., Kostaridis A., Stewart D., Wood M., Djordjević S. and Savić D.A. (2020) [Assessing and visualising hazard impacts to enhance the resilience of Critical Infrastructures to urban flooding](#), *Science of The Total Environment*, 707.
- Gibson M., Chen A.S., Khoury M., Vamvakeridou-Lyroudia L., Gibson M., Stewart D., Wood M., Savić D.A. and Djordjević S. (2020) [Case study of the cascading effects on critical infrastructure in Torbay coastal/pluvial flooding with climate change and 3D visualisation](#), *Journal of Hydroinformatics*, 22(1), 77-92.
- Pyatkova K., Chen A.S., Butler D., Vojinović Z. and Djordjević S. (2019) [Assessing the knock-on effects of flooding on road transportation](#), *Journal of Environmental Management*, 244, 48-60.
- Velasco M., Russo B., Martínez M., Malgrat P., Monjo R., Djordjević S., Fontanals I., Vela S., Cardoso M.A. and Buskute A. (2018) [Resilience to cope with climate change in urban areas – a multisectorial approach focusing on water – the RESCCUE project](#), *Water*, 10, 1-11.
- Ebrahimi M., Kripakaran P., Prodanović D., Kahraman R., Riella M., Tabor G., Arthur S. and Djordjević S. (2018) [Experimental study on scour at a sharp-nose bridge pier with debris blockage](#), *Journal of Hydraulic Engineering*, 144(12), 04018071.
- Hammond M., Chen A.S., Batica J., Butler D., Djordjević S., Gourbesville P., Manojlović N., Mark O. and Veerbeek W. (2018) [A new flood risk assessment framework for evaluating the effectiveness of policies to improve urban flood resilience](#), *Urban Water Journal*, 15(5), 427-436.
- Martínez-Gomariz E., Gómez M., Russo B. and Djordjević S. (2018) [Stability criteria for flooded vehicles: a state-of-the-art review](#), *Journal of Flood Risk Management*, 11(S2), S817-S826.
- Martins R., Leandro J. and Djordjević S. (2018) [Wetting and drying numerical treatments for the Roe Riemann scheme](#), *Journal of Hydraulic Research*, 56(2), 256-267.

- Martins R., Rubinato M., Kesserwani G., Leandro J., Djordjević S. and Shucksmith J.D. (2018) [On the characteristics of velocities fields on the vicinity of manhole inlet grates during flood events](#), *Water Resources Research*, 54(9), 6408-6422.
- Wang Y., Chen A.S., Fu G., Djordjević S., Zhanga C. and Savić D.A. (2018) [An integrated framework for high-resolution urban flood modelling considering multiple information sources and urban features](#), *Environmental Modelling & Software*, 107, 85-95.
- Martins R., Leandro J. and Djordjević S. (2018) [Influence of sewer network models on urban flood damage assessment based on coupled 1D/2D models](#), *Journal of Flood Risk Management*, 11(S2), S717-S728.
- Chang T.-J., Wang C.-H., Chen A.S. and Djordjević S. (2018) [The effect of inclusion of inlets in dual drainage modelling](#), *Journal of Hydrology*, 559, 541-555.
- Lu Q., Chang N.-B., Joyce J., Chen A.S., Savić D.A., Djordjević S. and Fu G. (2018) [Exploring the potential climate change impact on urban growth in London by a cellular automata-based Markov chain model](#), *Computers, Environment and Urban Systems*, 68, 121-132.
- Evans B., Chen A.S., Prior A., Djordjević S., Savić D.A., Butler D., Goodey P., Stevens J.R. and Colclough G. (2018) [Mapping urban infrastructure interdependencies and fuzzy risks](#), *Procedia Engineering*, 212, 816-823.
- Chen A.S., Khoury M., Vamvakieridou-Lyroudia L., Stewart D., Wood M., Savić D.A. and Djordjević S. (2018) [3D visualisation tool for improving the resilience to urban and coastal flooding in Torbay, UK](#), *Procedia Engineering*, 212, 809-815.
- René J.-R., Djordjević S., Butler D., Mark O., Henonin J., Eisum N. and Madsen H. (2018) [A real-time pluvial flood forecasting system for Castries, St. Lucia](#), *Journal of Flood Risk Management*, 11(S1), S269-S283.
- Hilly G., Vojinovic Z., Weesakul S., Sanchez A., Hoang D.N., Djordjević S., Chen A.S. and Evans B. (2018) [Methodological framework for analysing cascading effects from flood events: The case of Sukhumvit area, Bangkok, Thailand](#), *Water*, 10(1), 1-26.
- Khan D.M., Veerbeek W., Chen A.S., Hammond M.J., Islam F., Pervin I., Djordjević S. and Butler D. (2018) [Back to the future: assessing the damage of 2004 Dhaka flood in the 2050 urban environment](#), *Journal of Flood Risk Management*, 11(S1), S43-S54.
- García-Oliva M., Djordjević S. and Tabor G.R. (2017) [The influence of channel geometry on tidal energy extraction in estuaries](#), *Renewable Energy*, 101, 514-525.
- García-Oliva M., Hooper T., Djordjević S. and Belmont M. (2017) [Exploring the implications of tidal farms deployment for wetland-birds habitats in a highly protected estuary](#), *Marine Policy*, 81, 359-367.
- Martins R., Kesserwani G., Rubinato M., Leandro J., Lee S., Djordjević S. and Shucksmith J. (2017) [Validation of 2D shock capturing flood models around a surcharging manhole](#), *Urban Water Journal*, 14(9), 892-899.
- Martins R., Leandro J., Chen A.S. and Djordjević S. (2017) [A comparison of three dual drainage models: shallow water vs local inertial vs diffusive wave](#), *Journal of Hydroinformatics*, 19(3), 331-348.
- Rubinato M., Martins R., Kesserwani G., Leandro J., Djordjević S. and Shucksmith J. (2017) [Experimental calibration and validation of sewer/surface flow exchange equations in steady and unsteady flow conditions](#), *Journal of Hydrology*, 552, 421-432.
- Martínez-Gomariz E., Gómez M., Russo B. and Djordjević S. (2017) [A new experiments-based methodology to define the stability threshold for any vehicle exposed to flooding](#), *Urban Water Journal*, 14(9), 930-939.
- García-Oliva M., Djordjević S. and Tabor G.R. (2017) [The impacts of tidal turbines on water levels in a shallow estuary](#), *International Journal of Marine Energy*, 19, 177-179.
- Guidolin M., Chen A.S., Keedwell E.C., Djordjević S. and Savić D.A. (2017) [Analysing the uncertainty of flooding caused by pipe burst at city scale](#), *Vodoprivreda*, 285-287, 83-90.
- Gibson M.J., Savić D.A., Djordjević S., Chen A.S., Fraser S. and Watson T. (2016) [Accuracy and computational efficiency of 2D urban surface flood modelling based on Cellular Automata](#), *Procedia Engineering*, 154, 801-810.
- Guidolin M., Chen A.S., Ghimire B., Keedwell E.C., Djordjević S. and Savić D.A. (2016) [A weighted cellular automata 2D inundation model for rapid flood analysis](#), *Environmental Modelling & Software*, 84, 378-394.

- Chen A.S., Hammond M.J., Djordjević S., Butler D., Khan D.M. and Veerbeek W. (2016) [From hazard to impact: the flood damage assessment tools for mega cities](#), *Natural Hazards*, 82, 857-890.
- Martins R., Leandro J. and Djordjević S. (2016) [Analytical solution of the classical dam-break problem for the gravity wave-model equations](#), *Journal of Hydraulic Engineering*, 142(5), 06016003.
- Martins R., Leandro J. and Djordjević S. (2016) [Analytical and numerical solutions of the local inertial equations](#), *International Journal of Non-Linear Mechanics*, 81, 222-229.
- Chen A.S., Leandro J. and Djordjević S. (2016) [Modelling sewer discharge via displacement of manhole covers during flood events using 1D/2D SIPSON/P-DWave dual drainage simulations](#), *Urban Water Journal*, 13(8), 830-840.
- Bailey J., Harris E., Keedwell E., Djordjević S. and Kapelan Z. (2016) [The use of telemetry data for the identification of issues at combined sewer overflows](#), *Procedia Engineering*, 154, 1201-1208.
- Bailey J., Harris E., Keedwell E., Djordjević S. and Kapelan Z. (2016) [Developing decision tree models to create a predictive blockage likelihood model for real-world wastewater networks](#), *Procedia Engineering*, 154, 1209-1216.
- Bailey J., Keedwell E., Djordjević S., Kapelan Z., Burton C. and Harris E. (2015) [Predictive risk modelling of real-world wastewater network incidents](#), *Procedia Engineering*, 119, 1288-1298.
- Martins R., Leandro J. and Djordjević S. (2015) [A well balanced Roe scheme for the local inertial equations with an unstructured mesh](#), *Advances in Water Resources*, 83, 351-363.
- Hammond M., Chen A.S., Djordjević S., Butler D. and Mark O. (2015) [Urban flood impact assessment: A state-of-the-art](#), *Urban Water Journal*, 12(1), 14-29.
- Russo B., Sunyer D., Velasco M. and Djordjević S. (2015) [Analysis of extreme flooding events through a calibrated 1D/2D coupled model: the case of Barcelona](#), *Journal of Hydroinformatics*, 17(3), 473-491.
- René J.-R., Djordjević S., Butler D., Madsen H. and Mark O. (2014) [Assessing the potential for real-time urban flood forecasting based on a worldwide survey on data availability](#), *Urban Water Journal*, 11(7), 573-583.
- Austin R.J., Chen A.S., Savić D. A. and Djordjević S. (2014) [Quick and accurate Cellular Automata sewer simulator](#), *Journal of Hydroinformatics*, 16(6), 1359-1374.
- Savić D.A., Bicik J., Morley M.S., Duncan A., Kapelan Z., Djordjević S. and Keedwell E.C. (2013) [Intelligent urban water infrastructure management](#), *Journal of the Indian Institute of Science*, 93(2), 319-336.
- Sun S., Khu S.-T., Djordjević S. (2013) [Sampling rainfall events: a novel approach to generate large correlated samples](#), *Hydrology Research*, 44(2), 351-361.
- Djordjević S., Saul A.J., Tabor G.R., Blanksby J., Galambos I., Sabtu N. and Sailor G. (2013) [Experimental and numerical investigation of interactions between above and below ground drainage systems](#), *Water Science and Technology*, 67(3), 535-542.
- Ghimire B., Chen A.S., Guidolin M., Keedwell E.C., Djordjević S. and Savić D.A. (2013) [Formulation of fast 2D urban pluvial flood model using cellular automata approach](#), *Journal of Hydroinformatics*, 15(3), 676-686.
- Chen Y., Fingleton B., Pryce G., Chen A.S. and Djordjević S. (2013) [Implications of rising flood-risk for employment location: a GMM spatial model with agglomeration and endogenous house price effects](#), *Journal of Property Research*, 30(4), 298-323.
- Chen A.S., Evans B., Djordjević S. and Savić D.A. (2012) [Multi-layered coarse grid modelling in 2D urban flood simulations](#), *Journal of Hydrology*, 470-471, 1-11.
- Chen A.S., Evans B., Djordjević S. and Savić D.A. (2012) [A coarse-grid approach to representing building blockage effects in 2D urban flood modelling](#), *Journal of Hydrology*, 426-427, 1-16.
- Quevauviller P., Barceló D., Beniston M., Djordjević S., Harding R.J., Iglesias A., Ludwig R., Navarra A., Navarro Ortega A. and Mark O. (2012) [Integration of research advances in modelling and monitoring in support of WFD river basin management planning in the context of climate change](#), *Science of The Total Environment*, 440, 167-177.
- Sun S., Fu G., Djordjević S. and Khu S.-T. (2012) [Separating aleatory and epistemic uncertainties: probabilistic sewer flooding evaluation using probability box](#), *Journal of Hydrology*, 420-421, 360-372.

- Djordjević S., Butler D., Gourbesville P., Mark O. and Pasche E. (2011) [New policies to deal with climate change and other drivers impacting on resilience to flooding in urban areas: the CORFU approach](#), *Environmental Science & Policy*, 14(7), 864-873.
- Leandro J., Djordjević S., Chen A.S., Savić D.A. and Stanić M. (2011) [Calibration of a 1D/1D urban flood models using 1D/2D model results in the absence of field data](#), *Water Science and Technology*, 64(5), 1016-1024.
- Sun S., Khu S.-T., Kapelan Z. and Djordjević S. (2011) [A fast approach for multiobjective design of water distribution networks under demand uncertainty](#), *Journal of Hydroinformatics*, 13(2), 143-152.
- Sun S., Djordjević S. and Khu S.-T. (2011) [Decision making in flood risk based storm sewer network design](#), *Water Science and Technology*, 64(1), 247-254.

Books and book chapters

- Pyatkova K., Chen A.S., Djordjević S., Butler D., Vojinović Z., Abebe Y. and Hammond M. (2019) Flood impacts on road transportation using microscopic traffic modelling techniques, In: [Simulating Urban Traffic Scenarios](#), Ed. by M. Behrisch and M. Weber, Springer, 115-126.
- Hsu M.-H., Chen C.-H., Liu W.-C., Chang T.-J., Chen A.S., Hammond M.J., Djordjević S. and Butler D. (2015) Evaluation of adaptation strategies for urban flooding in Central Taipei City, In: [Advances in Hydroinformatics](#), Ed. by P. Gourbesville et al., Springer, 97-112.
- Djordjević S., Vojinović Z., Dawson R. and Savić D.A. (2014) Uncertainties in flood modelling in urban areas, In: [Applied Uncertainty Analysis for Flood Risk Management](#), Ed. by K. Beven and J. Hall, Imperial College Press, 297-334.
- Butler D., Chen A.S., Djordjević S. and Hammond M.J., Eds. (2013) [Urban Flood Resilience, Extended Summaries of the International Conference on Flood Resilience: Experiences in Asia and Europe](#), Centre for Water Systems, University of Exeter, Exeter.
- Saul A. J., Djordjević S., Maksimović Č. and Blanksby J. (2011) Integrated urban flood modelling, In: [Flood Risk Science and Management](#), Ed. by G. Pender and H. Faulkner, Wiley, Chichester, 258-288.
- Djordjević S. (2011) Modelling pluvial flooding, In: [Urban Flood Management](#), Ed. by C. Zevenbergen et al., CRC Press, London, 113-117.

Selected conference papers

- Adkins S., Djordjević S. and Savić D.A. (2018) Wastewater system ventilation – a friend or adversary?, *11th Int. Conf. on Urban Drainage Modelling*, Palermo.
- Djordjević S. (2009) 1D, 2D and 3D modelling of urban flooding (keynote lecture), *8th Int. Conf. on Urban Drainage Modelling*, Tokyo.
- Chen A. S., Djordjević S., Leandro J. and Savić D. (2007) The urban inundation model with bidirectional flow interaction between 2D overland surface and 1D sewer networks, *NOVATECH 2007 – 6th Int. Conf. on Sustainable Techniques and Strategies in Urban Water Management*, Lyon.
- Djordjević S., Chen A. S., Leandro J., Savić D., Boonya-aroonnet S., Maksimović Č., Prodanović D., Blanksby J. and Saul A. (2007) Integrated sub-surface/surface 1D/1D and 1D/2D modelling of urban flooding, *Aquaterra World Forum on Delta and Coastal Development*, Amsterdam.
- Mark O. and Djordjević S. (2006) While waiting for the next flood in your city..., *7th Int. Conf. on Hydroinformatics*, Nice.
- Cashman A., Djordjević S., Dorini G., Saul A., Savic D., Shepherd W. and Walters, G. (2006) Whole life costing approach to sewerage, *7th Int. Conf. on Urban Drainage Modelling*, Melbourne.
- Djordjević S., Ivetić M., Maksimović Č. and Rajčević A. (1991) An approach to the simulation of street flooding in the modelling of surcharged flow in storm sewers, *Int. Conf. UDT'91*, Dubrovnik.
- Djordjević S., Petrović J., Maksimović Č. and Radojković M. (1989) Experimental tracer investigations in a compound laboratory channel, *Int. Conf. HYDROCOMP '89*, Dubrovnik.