



Name	Miroslav Marenc
Year of birth	1963
Nationality	Austrian
Present position	Associate Professor in Storage and Hydropower
Years with firm	From 2009 – present

EDUCATION

1989 - 1993	- PhD (Dr. techn.) in Civil Engineering, University of Innsbruck, Austria
1982 - 1987	- Dipl.-Ing. (MSc) in Civil Engineering, University of Zagreb, Croatia

EMPLOYMENT RECORD

2009 - present	- Associate Professor in Storage and Hydropower, Department of Water Engineering, IHE Delft, The Netherlands.
2004 - present	- Head of the tunnelling department, AFRY Austria GmbH, Salzburg, Austria
1997 - present	- Manager Director, Marenc & Co. OG
1995-2004	- Project Manager, Verbundplan GmbH, Salzburg Austria
1994-1995	- Project Manager, Dr. Sauer Company Salzburg, Austria
1993-1994	- Manager Director, Geomechatronic Center Linz, Hagenberg near Linz, Austria
1989-1993	- Doctor student, research stuff, University of Innsbruck, Innsbruck Austria
1987-1989	- Project engineer, Croatian Civil Engineering Institute, Zagreb, Croatia

KEY QUALIFICATIONS

Dr. Marenc is an associate professor at IHE Delft. He has:

- 1) over 30 years experience in design and construction of underground works for infrastructural (traffic tunnels and metro tunnels) and hydro-technical tunnels and caverns
- 2) over 30 years experience in rock mechanics and geotechnics
- 3) over 25 years experience in development, design and construction of hydro-technical works for hydropower plants.
- 4) over 25 years of experience in development of hydropower schemes.
- 5) over 25 years of experience in design and maintenance of dams
- 6) over 10 years of experience in river basin development

MAIN DISCIPLINE / SPECIALISATION

Tunnelling and cavern design, Hydropower plant design, Development of hydropower plant schemes, Due diligence in hydropower, Rock mechanics and geotechnics, Dam engineering, Dam safety management, Reservoir management,

EXPERIENCE RECORD

Professional Experience

2009 - present	Associate Professor in Storage and Hydropower: Curriculum development and lecturing for Master Sciences programme in Water Science and Engineering at IHE Delft. Courses: Storage and Hydropower, Rock mechanics. Small hydropower development. Coordinator for Double Degree Master of Science in Water Science and Engineering with Specialization in Hydropower Development
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2016 - present	Lecturer on Hydropower development on Technical University (TU) Delft, the Netherlands
2009 - present	Research activities: • 2024 – present: BlueCap – Low head small hydropower. Solution development and implementation. Project with industry. • 2020 – 2024: ALPHEUS – Augmenting grid stability through low-head pumped hydro energy utilization and storage. Horizon 2020 project. • 2019 – 2023: HYPOSO – Hydropower solutions for developing and emerging countries, Horizon 2020 project. Work package project leader • 2019 – present: Development of energy storage systems by seawater pump-storage plants for grid regulation of isolated islands • 2018 – 2022: DUPC2 project S-MultiStor, Sustainable Hydropower and Multipurpose Storage to meet Water, Food, and Energy Development Goals: A Program for Collaborative Research and Innovation • 2018 – 2019: Water conservation in arid and semi-arid areas by sand dams • 2017 – 2018 Implementation of hydroelectricity production in existing hydraulic structures, Water-Energy-Food-Ecosystems Nexus • 2018 – 2018 Optimization of run-of-river hydropower plant capacity • 2017. Risk Analysis–assessment of reliability for concrete dams ICOLD Committee on Computational Aspects of Analysis and Design of Dams, Theme D • 2016-2017. Prediction of Arch dam deformations using computational intelligence techniques. • 2016. Tidal barrage power plant study for Kendari bay - Indonesia • 2015 – 2016: Integrated approaches to planning and developing Hydropower and river diversion projects – Operational research for the Dudh Koshi river sub-basin system, Nepal. ADB research project. • 2012 – 2020: Safety of Dams, research for industry • 2011– 2014: Development of very low head turbine for small hydropower, research for industry • 2011– 2013: Hydropower water footprint, research for industry • 2010-2011: Sediment management of Langmann reservoir in Austria, research for industry. • 2010 – 2015: Coupled stress–seepage numerical design of pre-stressed concrete-lined pressure tunnels, research for industry. • 1995 – 1996: Numerical modeling of rock bolts and discontinuities, research for industry. • 1992 – 1994: Simulation of rock excavation by disks (TBM excavation) – Development of the mathematical model, and research for industry. • 1989 – 1993: Numerical modeling of rockbolts. FFF project, Austria
1994 – present	Design of hydropower plant (AFRY Austria GmbH): • 2024 – present SPS Schaufelberg, feasibility and final design of 480 MW pumped storage system using existing upper reservoir and planning new lower reservoir, expert in rock mechanics and underground works • 2023 – present: PSP Ebensee, detailed design of 170 MW pumped storage system using existing lake as lower reservoir, expert for underground works and lining design • 2023 – present: Kaprun 29, Austria, Tendering and detail design of new power waterway for HPP Kaprun - Main stage, Rock mechanic expert and lining design



- 2023 – PSP Kadina, North Macedonia, Project manager, Feasibility study of multipurpose pumped storage system
- 2022 – PSP Vrdovo, Croatia, Project manager, Due diligence of the pumped storage project
- 2022 – present: PSP Burumba, Australia, Feasibility study and tender design, Expert in excavation, support and final lining of the power waterway for the pumped storage powerplant
- 2022 – PSP Shoahaven, Australia. Support by the tendering process for the bidding company in the field of underground works and power waterway design and optimization
- 2022 – present: PSP Ebensee, Austria. Tender and detail design. Underground design and expert for rock mechanics and underground works
- 2022 – 2023: PSP Äspö, Sweden. Pre-feasibility design of the pumped storage powerplant situated in the underground rock mechanics laboratory (100MW), Project manager and expert for rock mechanics and underground works
- 2021 – 2023: PSP Pyhäsalmi, Finland. Rock mechanics investigation and tender design of the pumped storage powerplant situated in the existing mine (50MW) with the extreme head difference of 1400 m. Expert for rock mechanics and underground works
- 2021- present: PSP Manara, Israel. Owners engineer for pumped storage powerplant. Expert for rock mechanics and underground works.
- 2021 – present Euroalpin Tunnel – Lyon-Turin, Lot 5a, Deep ventilation shafts, Expert for rock mechanics and underground works for the Owners
- 2021 – present: PSP Pinnapuram, India. Pumped storage powerplant detail design, Expert for rock mechanics and underground works.
- 2021 – PSP Estonia 2 MW, Pre-feasibility study of pumped storage powerplant in existing mine. Project manager.
- 2021 – PSPP Hochlindach, Austria. Pumped storage power plant upper reservoir situated in the existing mine, feasibility study
- 2020 – PSPP Estonia, Estonia, Pumped storage power plant with underground lower reservoir situated in the existing mine, feasibility study, 50MW
- 2020 – PSPP Espejo de Tarapaka, Chile, Seawater pumped storage plant, Technical due diligence services,
- 2020 – PSP development study for Azerbaijan, Potential and site selection study with pre-feasibility study
- 2020 – PSP Limberg III, Austria, Tender design documents, Geotechnical design, Expert for tunnelling and underground works
- 2020 – 2022: HPP Reiseck II+, Austria, Feasibility design, Design of excavation and support of the machine cavern. Injection concept of the power waterway
- 2020 – HPP Upper Trishuli 1, Nepal. Tender design optimisation for construction
- 2019 - present: HPP Tauernmosssee, Austria, Detail design of pump storage power plant, Expert for tunnelling and underground works,
- 2019: HPP Lower Spath Gah, Pakistan. Extended final design of the hydropower plant. Designer of power water way and cavern
- 2018 – 2021: Retention reservoir Tollinggraben, Geotechnical expert, Foundation and stability design



- 2018 - 2019: PSP Snowy Mountain, Australia, Expert for rock mechanics and underground works (cavern powerhouse and power waterways)
- 2018 – 2020: HPP Bakhtyari, Iran, Expert for rock mechanics and underground works (cavern powerhouse and power waterways)
- 2018 – 2020: HPP Nam Theun 1, Lao PDR, Expert for rock mechanics and underground works (two deep shaft powerhouses and power waterways)
- 2018: HPP Moglice, Albania, Design review of 11 km long headrace tunnel system
- 2018: HPP Belisama, Philippines, Expert for rock mechanics and underground works (cavern powerhouse and power waterways)
- 2017-2019: HPP Portile de Fier I, Expert opinion on rehabilitation works.
- 2017–2019: HPP Shuakhevi, Georgia, Concept for rehabilitation of the headrace tunnel after collapse.
- 2017 – 2019: HPP Lang Tang, Nepal. Design of high head (1400m) hydropower plant, Power waterway and cavern design.
- 2017: HPP Enguri, Georgia. Concept study for rehabilitation of the headrace tunnel and penstocks.
- 2016 – 2018. HPP Jumisko, Finland. Design of the power plant upgrading and improvement of the power waterway.
- 2016 – 2018: HPP Lower Kalököy, Turkey, Expert for rock mechanics and tunnelling works, Tender and Detail design.
- 2016 – 2017: HPP cascade on Berta river, Turkey. Design concept and development of the cascade scheme, Feasibility study, tunnel expert
- 2016: HPP Dariali, Georgia, expert opinion and solutions for improvement of tunnel lining of pressure tunnel, tunnel expert
- 2016-2017: HPP Tsankov Kamak, Bulgaria, Surveillance and analyses of arch dam during initial period of operation
- 2016: PSP Pyhäsalmi, Finland, Feasibility design, expert services in rock mechanics and tunnelling,
- 2015: HPP Tagoloan. Philippines, Expert services in rock mechanics and tunnelling, Workshops and site visits.
- 2015: HPP Koromkheti, Georgia, Optimisation of the tender design of hydropower plant, tunnel expert
- 2015: HPP Santa Teresa, Chile, expert opinion and solutions for rehabilitation of pressure shaft, tunnel expert
- 2015: Safety of dams, short course and consulting about dam safety for Owner of seven dams in Turkey
- 2015-2018: HPP Babino selo, Bosnia and Herzegovina, feasibility and extended environmental study project manager
- 2015: HPP Nenskra, Georgia, optimisation of the existing tender design for EPC of hydropower plant scheme, tunnel and rock mechanics expert
- 2015: PSP Jumisko, Finland, Feasibility study of a pump-storage power plant as upgrading of the existing hydropower system, tunnel expert
- 2014-2015: HPP Kirchbichl, optimisation study, tender design of run-of-river hydropower plant, geotechnical expert
- 2014-ongoing: PSP Manara, Israel, Feasibility, basic and tender design of pump storage power plant, project manager
- 2014-2015: PSP Nam Thuen 1, DR Lao, Feasibility design of hydro powerplant



- 2014: PSP Pantabangan, Philippines, Feasibility design of pump storage powerplant, tunnelling expert
- 2014: HPP Rucatayo, Chile, Due diligence of existing powerplant and additional 3 hydropower projects, civil engineering, dam, geotechnics and hydraulic expert
- 2014: HPP Shuakahevi, Georgia, Review of detail design review and optimization of the headrace tunnels, tunnelling expert
- 2014: HPP Töging, Germany, Study of power capacity increase of power plant with long (20 km) power channel, project manager
- 2013: HPP Nam Bak 1, DR Lao, Tender Design of long (14km) headrace tunnel by double shield tunnel boring machine, project manager
- 2013: Safety of dams in Turkey, Technical consulting services for Enerjisa's Dam Safety Department Establishment. Capacity building program and technical support by safety assessment of several Enerjisa's dams in Turkey.
- 2013: HPP Kandil, Turkey. Design of the contact and consolidation grouting system of the surge shaft. Execution design, tunnelling expert
- 2013: HP system Kaprun, Rock mechanic testing and geotechnical stability report of the winch cavern on the heavy load funicular, Expert opinion.
- 2013: HPP Hirzberg, Austria. Geotechnical and rock mechanic design of the underground power cavern, Execution design.
- 2012 – 2015: HPP Upper Kalököy, Turkey, Expert for rock mechanics and tunnelling works, Final and Tender design.
- 2012 – 2015: HPP Quitarascsa I, Peru. Expert for rock mechanics, underground works, Execution design.
- 2012-2013: HPP Kavsak Bendi, Turkey. Expert for rock mechanics and tunnelling, Execution design
- 2011 – 2012: HPP Köprü, Turkey. Expert by repair of the diversion tunnel and new diversion concept, Execution design.
- 2011 – 2013: HPP Arkun, Turkey. Expert for rock mechanics, 3D modelling of construction and operational static loading of the Concrete Face Gravel and Sand dam, Execution design of concrete plinth and concrete slab of the dam
- 2011 – 2013: HPP Incir -Turkey. Expert for design of the Arch-gravity concrete dam, rock mechanics and underground works, Technical specification and documents for Tender design
- 2011 – 2013: HPP Dogancay, Turkey, Expert for rock mechanics, Excavation and support design of the power cavern, consultancy engineering for grouting system in power tunnel.
- 2010 – 2012: PSPP Ebensee, Austria, Project manager, Alternative study, Feasibility design and Permit design of pump storage power plant
- 2010 – 2011: PSPP Pfrombach, Germany. Project manager. Pre-feasibility study of pump-storage powerplant
- 2010 – 2011: Energetic usage of the natural lakes Walchensee and Kochlsee, Germany, Project manager, Study of possibilities for energetic usage of two natural lakes in Bavaria.
- 2010 – 2013: HPP Arkun, Turkey. Expert for rock mechanics, alternative headrace tunnel tender design, Detail design of power waterway for high head power plant
- 2010 – 2012: HPP Yamanli II, Turkey. Project manager, Tender design and tender documents for TBM excavated part of the headrace tunnel.



- 2010 – 2013: HPP Behani 1 & 2, Turkey, Expert for rock mechanics and tunnelling works, Final and Tender design.
- 2010: SHPP Karljuscica 1, 2 and 3, Bosnia and Herzegovina, Project manager, Due diligence of three small hydro power plants
- 2010 – 2011: HPP System Devol, Albania. Expert for rock mechanics, tunnelling and hydropower system. Quality assurance for Feasibility design.
- 2010: PSPP Riedl, Austria/Germany, Expert for rock mechanics and tunnelling, Final Design of the pump storage powerplant
- 2010: PSPP Seekar, Austria, Project manager, Study of the pump – storage power plant
- 2009 – 2012: PSPP Pfaffenboden, Austria, Project manager, Alternative study and Permit design of pump storage power plant with underground upper reservoir.
- 2009 – 2010: Flood water diversion tunnel Schönheidehammer, Germany. Project manager, Tender design.
- 2008 – 2010: HPP Kravica and HPP Stubica, Bosnia and Herzegovina, Expert for Rock mechanics and tunneling works, Feasibility study and Tender design
- 2008 – 2009: HPP Nam Bak, Lao. Project manager for underground works, Feasibility design, Tender design and tender documents.
- 2008 – 2010: HPP Rudbar-e-Lorestan, Iran. Project manager for underground works, Detail design.
- 2008 – 2011: PSPP Limberg III, Austria. Expert for tunneling and underground works. Feasibility and Tender design
- 2008 – 2009: Connection tunnel Märzenbach for HPP Gerlos, Austria. Project manager. Feasibility and Final design.
- 2008 – 2013: PSPP Reiseck II, Austria. Expert for tunneling and underground works. Feasibility, Tender and Detail design.
- 2007 – 2009: HPP Spullersee, Austria. Rebuilt of power water way. Project manager, Study of alternatives, Feasibility Study, Tender Design
- 2007 – 2013: PSPP Tauernmoos, Austria, Expert for tunneling and underground works, Study of alternatives, Feasibility study and Tender design.
- 2006 – 2009: HPP Klokun and HPP Kocusa, Bosnia and Herzegovina. Project manager, Feasibility study and Tender design
- 2005 – 2008: PSPP Limberg II, Austria. Expert for tunneling and underground works. Feasibility study, Tender and Detail design.
- 2005 – 2008: Shahryar retention dam, Iran. Expert for rock mechanics works. Detail design.
- 2005 – 2008: Khourang dam, Iran. Expert for rock mechanics, Detail design
- 2005 – 2010: HPP Nam Ngum II, Lao. Project manager for underground works, Owners engineer and site supervision
- 2004 – 2007: PSPP Siah Bishe, Iran. Project manager for underground works. Tender design review, Detail design.
- 2004 – 2008: HPP Tsankov Kamak, Bulgaria. Expert for underground works. Detail design.
- 2004: Aposselemis retention dam, Greece. Project manager. Alternative study for water diversion system and power plant.
- 2001 – 2002: HPP Basochhu, Bhutan. Project manager for underground works. Detail design
- 2001 – 2007: HPP Ermenek, Turkey. Project manager for underground works and rock mechanics. Detail design.



- 2000 – 2001: HPP Mostarsko blato, Bosnia and Herzegovina. Project manager. Study of alternatives, Feasibility and Tender design.
- 1999: HPP Muratli, Turkey. Expert for underground works. Detail design.
- 1999: HPP Borcka, Turkey. Expert for underground works. Detail design.
- 1999: HPP Moste, Slovenia. Project manager. Review of Feasibility design.
- 1997: Stierwaschboden dam, Austria. Stability design under static and dynamic loading of gravity dam and embankments
- 1996: HPP Lesce, Croatia. Stability and stress analysis of the concrete gravity dam.
- 1996: Drossensperre dam, Austria. Structural analysis and stability analysis of arch dam.
- 1995-1997: HPP Biricik, Turkey. Structural design of concrete gravity dam section, structural design of powerhouse.

LANGUAGE PROFICIENCY

<i>Language</i>	<i>Reading</i>	<i>Speaking</i>	<i>Writing</i>
Croatian	Mother tongue	Mother tongue	Mother tongue
English	Very good	Very good	Very good
German	Very good	Very good	Very good

PUBLICATIONS

BOOKS

N. Ulibarri, M. McClain, M. Marenc: Hydropower: Case Studies in Sustainability. Reference Module in Earth Systems and Environmental Sciences. Elsevier, 2021. ISBN 9780124095489 <https://doi.org/10.1016/B978-0-12-819166-8.00107-9>

M. Marenc: Seawater Pumped Storage System. In Innovative Pumped Storage Hydropower Configurations and Uses. Pumped Storage Hydropower, International Forum, International hydropower Association (IHA) 2021. pp 23 – 25. <https://www.hydropower.org/publications/innovative-pumped-storage-hydropower-configurations-and-uses>

J. Payne, C. Susan, O. Delargy, S. Hülsmann, E. Guenther, M. Franca, M. Marenc, N. Dhot: Chapter 7: Energy and Industry. In UNESCO, UN-Water, 2020: United Nations World Water Development Report 2020: Water and Climate Change, Paris, UNESCO, pp. 96-109. 2020. <https://en.unesco.org/themes/water-security/wwap/wwdr/2020#download>



M. Marenc, 2020: The Netherlands – Small hydropower status 2019. The World Small Hydropower Development Report 2019: United Nations Industrial Development Organization, Vienna and International Center on Small Hydro Power, 185-188. <https://www.unido.org/our-focus-safeguarding-environment-clean-energy-access-productive-use-renewable-energy-focus-areas-small-hydro-power/world-small-hydropower-development-report>

M. Marenc, 2020: Western Europe – Small hydropower status of the region 2019. The World Small Hydropower Development Report 2019: United Nations Industrial Development Organization, Vienna and International Centre on Small Hydro Power, 161-165, <https://www.unido.org/our-focus-safeguarding-environment-clean-energy-access-productive-use-renewable-energy-focus-areas-small-hydro-power/world-small-hydropower-development-report>

M. Marenc, S. L. Tesgera, M.J. Franca, 2018: Towards the circularization of the energy cycle by implementation of hydroelectricity production in existing hydraulic systems. Proceedings of the Workshop on Water-Energy-Food-Ecosystems (WEFE) and Sustainable Development Goals (SDGs), 25-26, January 2018. Editors: S. Barchiesi, C. Carmona-Moreno, C. Dondeynaz, M. Biedler. Publications Office of the European Union, Luxembourg, 2018, ISBN 978-92-79-99562-0, doi 10.2760/867467, JRC109346. pp 25-31

M. Marenc, 2016: The Netherlands – Small hydropower status 2016. The World Small Hydropower Development Report 2016: United Nations Industrial Development Organization, Vienna and International Centre on Small Hydro Power, Hangzhou, China, pp 599-601, <http://www.icshp.org/inshp/list.asp?RID=5&BID=203>

M. Marenc, 2016: West Europe – Small hydropower status of the region 2016. The World Small Hydropower Development Report 2016: United Nations Industrial Development Organization, Vienna and International Centre on Small Hydro Power, Hangzhou, China pp 29. <http://www.icshp.org/inshp/list.asp?RID=5&BID=203>

M. Marenc, J.S. Ingabire, B. Taks, 2016: Integration of hydropower plant within an existing weir – “A hidden treasure”. Sustainable Hydraulics in the Era of Global Change, Taylor & Francis Group, pp 974-978, 2016. ISBN 978-1-138-02977-4

M. Marenc, 2012: Numerical simulation and excavation of caverns for PSP Limberg II. In "50 Years of NATM – Experience Report" ITA-Austria, ISBN 978-3-200-02801-2, pp 213-216. 2012.

M. Marenc. Numerical Model of Rock Bolts under Consideration on Rock Joint Movements. PhD theses, University of Innsbruck, Austria, 1993.

**JOURNAL PAPERS**

S.A. Legasse, A. Shrestha, M. Marenc, M.J. Franca: Unlocking low head hydro potential from existing water infrastructure in The Netherlands. The International Journal on Hydropower & Dams, Volume 31, Issue 5, 2024, p100-109.

J-L. Brown, M. Marenc, D.J.A. Roevink, J.E.Jara Alvear: Study on a seawater pumped-storage concept for the Galapagos Islands. The International Journal on Hydropower & Dams, Volume 30, Issue 6, 2023, p37-42.

S.A. Legasse, M. Marenc, M.J. Franca: A decision support framework for the selection of low-head turbines for retrofit schemes. The International Journal on Hydropower & Dams, Volume 30, Issue 5, 2023, p56-71.

J.W. Lambach, J.D. Bricker, M. Marenc: Feasibility of Pumped Hydro Energy Storage in a River Cascade: Case Study of the Meuse. Journal of Coastal and Hydraulic Structures, Vol 2, 20 p1-18, TU Delft, Netherlands.
<https://journals.open.tudelft.nl/jchs/article/view/6063/5507>,
<https://doi.org/10.48438/jchs.2022.0020>

J.P. Hoffstaedt, D.P.K. Truijen, J. Fahlbeck, L.H.A. Gans, M. Qudaih, A.J. Laguna, J.D.M. De Kooning, K. Stockman, H. Nilsson, P.-T. Storli, B. Engel, M. Marenc, J.D. Bricker: Low-head pumped hydro storage: A review of applicable technologies for design, grid integration, control and modelling. Renewable and Sustainable Energy Review, Vol 158, 112119 2022. Elsevier
<https://doi.org/10.1016/j.rser.2022.112119>

R. Ansorrena Ruiz, L.H. de Vilder, E.B. Prasasti, M. Aouad, A. de Luca, B. Geisseler, K. Terheiden, S. Scanu, A. Miccoli, V. Roeber, M. Marenc, R. Moll, J.D. Bricker, N. Goseberg: Low-head pumped hydro storage: A review of civil structure design, legal and environmental aspects to make its realization feasible in seawater. Renewable and Sustainable Energy Review, Vol 160, 112281 2022. Elsevier <https://doi.org/10.1016/j.rser.2022.112281>

Anish Pradhan, Miroslav Marenc, Mario Franca: The adoption of Seawater Pump Storage Hydropower Systems increases the share of renewable energy production in Small Island Developing States. Renewable Energy, vol 177, p 448-460, 2021. Elsevier <https://doi.org/10.1016/j.renene.2021.05.151>

Tandin Tshering, Angeles Mendoza_Sammet, Miroslav Marenc: Assessment of sediment sources in Wangchhu river basin using GIS based RUSLE and Remote Sensing, International Soil and Water Conservation Research Journal. (in preparation)

Ziyang Li, Wei Ye, Miroslav Marenc, Jeremy D. Bricker: Unsteady Seepage Behaviour of an Earthfill Dam during Drought-Flood Cycles. Geosciences 2019, 9, 17, <http://dx.doi.org/10.3390/geosciences9010017>



- M. Getachew, M. Marenc, H.C.C. Hurtado, M. Franca: Optimization of Run-of-River hydropower Plant Capacity. *Journal of International Water Power & Dam Construction*, October 2018, 41-44
- Y. Zeng, H. Houba, A. Dinar, M. Marenc: Damming Trans-Boundary Rivers: A Welfare Analysis of Conflict and Cooperation (October 24, 2016). Tinbergen Institute Discussion Paper 2016-090/II. Available at SSRN: <https://ssrn.com/abstract=2858182>
- T.D.Y.F. Simanjuntak, M. Marenc, M., A.J. Schleiss, A.E. Mynett: The Interplay of In Situ Stress Ratio and Transverse Isotropy in the Rock Mass on Prestressed Concrete-Lined Pressure Tunnels. *Rock Mechanics and Rock engineering*, Springer Verlag, June 2016. <http://dx.doi.org/10.1007/s00603-016-1035-8>
- T.D.Y.F. Simanjuntak, M. Marenc, A.E. Mynett, A.J. Schleiss, 2014: Pressure tunnels in non-uniform in situ stress conditions. *Tunnelling and Underground Space Technology*. Vol.42:227-236. ISSN 0886-7798. <http://dx.doi.org/10.1016/j.tust.2014.03.006>.
- M. Marenc, 2014: *Book Review* - Hydraulics in Civil and Environmental Engineering, 5th edition. *Proceedings of Institution of Civil Engineers Water Management Journal*, Vol 167, issue WM7:432, ISSN 1741-7589 <http://dx.doi.org/10.1680/wama.13.00140>, 2014
- T.D.Y.F. Simanjuntak, M. Marenc, A.J. Schleiss, A.E. Mynett, 2013: Mechanical-hydraulic interaction in cracking process of pressure tunnel linings. *Hydropower & Dams*. Vol.20(5):112-119. ISSN 1352-2523.
- M. Marenc, 2013: *Editorial*, ICE – Water Management Vol 166, issue WM3, March 2013, ISSN 1741-7589
- T.D.Y.F. Simanjuntak, M. Marenc, A.J. Schleiss, A.E. Mynett, 2012: Design of pressure tunnels using a finite element model. *Hydropower & Dams*. Vol.19(5):98-105. ISSN 1352-2523.
- B.A. Olumide, M. Marenc, 2012: A finite element model for optimum design of plain concrete pressure tunnels under high internal pressure. *Int. Journal of Engineering and Technology (IJET)*, ISSN 2049-3444. Vol 2. No. 4, April 2012.
- P. Salk, S. Yuca, M. Marenc, H. Kazanc, W. Hofmann, W. Berger, F. Ibetsberger, 2007, Ermenek Dam and Hydroelectric Power Plant: a Model of bilateral Cooperation, *Tunnel*, No. 3, 2007, 31-39.
- G. Edlmair, G. Jung, M. Marenc, 1996, Bewertung von geotechnischen Risiken beim Eisenbahntunnelprojekt in FYRO Mazedonien, *Geomechanik-Kolloquium 1996*, Felsbau 6/96, 332-336.
- M. Marenc, 1995, Finite element modelling of bolted rock slopes. *Engineering Modelling*, Split, Croatia, Vol. 7, No. 1, 11-19.

**Proceedings of
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Conferences**

M. Marenc, G. Swoboda, 1995, Numerical model of rock bolts under consideration of rock joint movements. *Rock Mechanics and Rock Engineering*, Vol. 28, No. 3, 145-165.

M. Marenc, 1994, Numericko modeliranje sidra u stijenskoj masi (Numerical modelling of rock bolts in rock mass). *Gradjevinar*, Vol 46, No. 6, Zagreb, Croatia, 325-332.

G. Swoboda, M. Marenc, I. Mader, 1994, Finite element modelling of tunnel excavation. *Engineering Modelling*, Vol. 6, No. 1, Split, Croatia, 51-63.

I. Vrkljan, B. Stojkovic, M. Marenc, 1989, Kriterij cvrstoce stijenske mase (Rock mass strength criteria). *Gradjevinar*, Vol 41, No. 6, Zagreb, Croatia, 239-301.

I. Jasarevic, M. Hudec, B. Stojkovic, M. Plamenac, I. Vrkljan, M. Marenc, 1988, Osiguranje iskopa za tunele HE Bekhme (Excavation support in Bekhme Hydroelectric plant tunnels). *Gradjevinar*, Vol 40, No. 11, Zagreb, Croatia, 527-533.

A. Szavitz-Nossan, M. Marenc, 1988, Proracun interakcije konstrukcije i temeljnog tla iterativnim postupkom (An iterative procedure for the soil-structure interaction analysis). *Inzinjersko modeliranje*, Vol 1, No 1, Split, Croatia, 25-33.

M. Marenc: Coupled stress-seepage modelling of unlined hydraulic pressure tunnels. *Hydro 2024 – Secure technology for turbulent times*, Session 21.3, Graz, November 2024

L.S. Jayasinghe, M. Marenc: Innovative dam design for low-head seawater pumped hydropower storage in the North Sea. *Hydro 2024 – Secure technology for turbulent times*, Session 16.8, Graz, November 2024

S.A. Legasse, W.J. Buydens, M. Marenc: Revolutionizing low-head hydropower: The promise of turbulent vortex turbines. *Hydro 2024 – Secure technology for turbulent times*, Session 2.7, Graz, November 2024

J.L. Brown, M. Marenc, J.E.J. Alvear, D. Roelvink: A seawater pumped storage solution for the Galápagos Islands. *Hydro 2023 – New ideas for proven resources*, Session 18.5, Edinburgh, October 2023.

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PROFESSIONAL AFFILIATIONS

Membership	International Commission of Large Dams (ICOLD), co-chairman of Capacity Building Committee, Committee Z International Society of Rock Mechanics (ISRM) Croatian Geotechnical Society Hydropower Sustainable Assessment Protocol, member of Council Chamber International Centre on Small Hydropower – member of Coordination Committee IEA Hydro – member of Committee XVI - Hidden Hydro Hydropower & Dams – member of the International Steering Committee
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CERTIFICATION

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Signature:



Date: 28.12.2024