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

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## 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

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## EMPLOYMENT RECORD

2009 - present	- Associate Professor in Storage and Hydropower, Department of Water Engineering, UNESCO-IHE Delft, The Netherlands.
2004 - present	- Head of tunnelling department, Pöyry Energy GmbH (former Verbundplan), 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

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## KEY QUALIFICATIONS

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

- 1) over 25 years experience in design and construction of underground works for infrastructural (traffic tunnels and metro tunnels) and hydro-technical tunnels and caverns
- 2) over 25 years experience in rock mechanics and geotechnics
- 3) over 20 years experience in development, design and construction of hydro-technical works for hydropower plants.
- 4) over 20 years of experience in development of hydropower schemes.

## 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,

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## EXPERIENCE RECORD

### Professional Experience

2016 - present	Lecturer on Hydropower development on Technical University (TU) Delft, the Netherlands
2009 - present	Associate Professor in Storage and Hydropower: Curriculum development and lecturing for Master Sciences programme in Water Science and Engineering at UNESCO-IHE. 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

2009 - present

Research activities:

- 2017 – 2018 Implementation of hydroelectricity production in existing hydraulic structures
- 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 computer 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 – present: 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 Langman 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 modelling of rock bolts and discontinuities, research for industry.
- 1992 – 1994: Simulation of rock excavation by disks (TBM excavation) – Development of the mathematical model, research for industry.
- 1989 – 1993: Numerical modelling of rockbolts. FFF project, Austria

1994 – present

Design of hydropower plant (Poyry Energy GmbH):

- 2018 - present: PSP Snowy Mountain, Australia, Expert for rock mechanics and underground works (cavern powerhouse and power waterways)
- 2018 – present: HPP Bakhtyari, Iran, Expert for rock mechanics and underground works (cavern powerhouse and power waterways)
- 2018 – present: HPP Belisama, Philippines, Expert for rock mechanics and underground works (cavern powerhouse and power waterways)
- 2017-2018: HPP Portile de Fier I, Expert opinion on rehabilitation works.
- 2017–2018: HPP Shuakhevi, Georgia, Concept for rehabilitation of the headrace tunnel after collapse.
- 2017 – present: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 – present. HPP Jumisko, Finland. Design of the power plant uprating and improvement of the power waterway.
- 2016 – present: 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-ongoing: 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.

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## 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

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## PUBLICATIONS

### BOOKS

M. Marenc, S. L. Tesgera, M.J. Franca: Towards the circularization of the energy cycle by implementation of hydroelectricity production in existing hydraulic systems. JRC Technical Report: Validation workshop on framing the context for operationalising the Water-Energy-Food (WEF) Nexus, Brussels, 2018. pp 125-138

M. Marenc, 2016: The Netherlands – Small hydropower status 2016. The World Small Hydropower Development Report 2016: United Nations Industrial Development Organization, Vienna and International Center on Small Hydro Power, Hangzhou, pp 599-601, [www.smallhydropower.org](http://www.smallhydropower.org)

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 Center on Small Hydro Power, Hangzhou, pp 29. [www.smallhydropower.org](http://www.smallhydropower.org)

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: 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

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, June 2018 (in press)

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.
- M. Marenc, G. Swoboda, 1995, Numerical model of rock bolts under consideration of rock joint movements. *Rock Mechanic 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.
- G. Jung, M. Marenc, B. Mayer, H. Nowotny, K. Öhlböck, P. Pausz, M. Smesnik, M. Verdianz, 2018. Foundation conditions and dam type selection at Behan-Kaleköy cascade. 26<sup>th</sup> ICOLD World Congress on Large Dams, Vienna, ISBN: 978-1-138-61228-0, Part III, 73-74
- M. Marenc, P. Evangeliou, 2018: Reliability assessment of gravity dam block by coupled a Directional Adaptive Response Surface full probabilistic method and 3D coupled flow –stress finite element analysis. *Proceedings of 14<sup>th</sup> ICOLD International Benchmark Workshop on Numerical Analysis of Dams*, TRITA-ABE-1802001, Stockholm, Sweden.



- M. Marenc, A. Mihaylova, A. Hristova, J.C. Chacon-Hurtado, 2017: Arch dam deformation prediction using computational intelligence techniques. 85<sup>th</sup> Annual Meeting of International Commission on Large Dams (ICOLD). Prague, Czech Republics, ISBN: 978-80-906662-2-1
- R. Pamuk, M. Eröz, M. Marenc, S. Güven, 2016: Comparison of predicted and application results of pressure tunnels using measurement devices: a case study of Arkun power tunnel. 6<sup>th</sup> International Conference on Water Resources and Hydropower Development in Asia, paper 17.2, Vientiane, Lao.
- B. Mayer, M. Marenc, 2015: Improving the seismic stability of gravity dams by curving the layout. 2<sup>nd</sup> International Dam World Conference, Lisbon, Portugal 2015
- T.D.Y.F. Simanjuntak, M. Marenc, A.E. Mynett, A.J. Schleiss, 2014: Longitudinal cracks in pressure tunnels: Numerical modelling and structural behaviour of passive prestressed concrete linings. Numerical Methods in Geotechnical Engineering - Hicks, Brinkgrave & Rohe (Eds), Taylor & Francis Group London, 978-1-138-00146-6, 2014, 871-875.
- T.D.Y.F. Simanjuntak, M. Marenc, A.E. Mynett, A.J. Schleiss, 2014: Effects of rock mass anisotropy on deformations and stresses around tunnels during excavation. Int. Symposium on Dams in a Global Environmental Challenges (ICOLD), Bali, Indonesia, 2014, II-129 - II-136.
- T. Demeke, M. Marenc, A.E. Mynet, 2013: Evaporation from reservoirs and hydropower water footprint. Hydro Africa, Addis Ababa, Ethiopia, 2013.
- T.D.Y.F. Simanjuntak, M. Marenc, A.E. Mynett, 2012: Towards improved safety and economical design of pressure tunnel. World Tunnel Congress 2012, Bangkok, Thailand, IBSN 978-974-7197-78-5. 2012.
- S.Kaini, L.G. Hayde, M. Marenc, 2011: Seepage analysis underneath the headwork of Chanda Mohana Irrigation Scheme, Sunsari, Nepal. National Irrigation Seminar on Micro to Mega: Irrigation for Prosperous Nepal, 13-14 July, 2011, Department of Irrigation, Lawalakhel, Lalitpur, Nepal
- M. Marenc, 2009: Geotechnical input essential for power waterway design, EUROCK 2009, Dubrovnik, Croatia, 291-296.
- A. Kocbay, M. Marenc, J. Linortner, 2009: Hydropower plant Ermenek/Turkey pressure tunnel – Design and construction, ITA 2009, Budapest, Hungary.
- M. Marenc, 2008, Numerical modelling and design of pressure tunnels, Hydro 2008, Ljubljana, Slovenia.
- M. Marenc, A. Oberladstätter, 2005: Design of pressure tunnels of hydro power plant Ermenek, ITA Conference, Istanbul, Turkey.
- G. Jung, M. Marenc, 2004, Comparison of international and Austrian rock mechanics design procedures, EUROROCK 2004 & 53rd Geomechanics Colloquium. Schubert (ed.).



- G. Jung, M. Marenc, 2004, Examples of geotechnical design and experiences at the Ermenek Hydro Power Plant, EUROROCK 2004 & 53rd Geomechanics Colloquium. Schubert (ed.).
- M. Marenc, D. Milicevic, S. Vucina, 2003, Hydro Power Plant Mostarsko blato—A multi-purpose project in karst. HYDRO 2003, Dubrovnik, Croatia.
- M. Marenc, 2003, Geotechnical design of underground structures. Underground Constructions 2003, London, 563-572.
- M. Marenc, 2002, Tunnel portal construction in difficult geotechnical conditions. 5th European Conference on Numerical Methods in Geotechnical Engineering, NUMGE 2002, 549-554.
- M. Marenc, D. Milicevic, 2002, Design of a hydro power plant with special regard to an environmental friendly solution. 2nd International Symposium on „ Hydroelectric power plants — Regenerative energy for today and tomorrow“, Sibenik, Croatia, 198-203.
- A. Radinger, M. Scheikel, M. Marenc, H. Dölzlmüller, 2002, Innovative, interdisziplinäre Ansätze bei Projekten im Schwerpunktbereich Infrastruktur — Naturmanagement Fallbeispiele für Hohlrumbaue, Felssturz- und Lawinengefahr. 12 Donau-Europäische Konferenz, Passau, 99-102.
- M. Marenc, 1998, Reliability assessment of tunnel design, Geotechnical Hazards, Balkema, Rotterdam, 559-564.
- M. Marenc, 1996, Finite Element Modelling of Pressure Tunnel, Computational Methods in Applied Sciences, ECOMAS Conference 1996, Paris, John Wiley & Sons, 211-217.
- G. Sauer, K. Zeidler, M. Marenc, 1994, New Austrian Tunnelling Method applied in London Clay. Croatian National Symposium on Geotechnical Engineering in Transportation Projects, Novigrad, Croatia, 471-478.
- G. Swoboda, M. Marenc, S. Strohhausl, H. Erten, 1993, Design of rock bolts with numerical models. Impact of Computational Mechanics to Engineering Problems, Pulmano & Murti (eds.), Sydney, 147-155.
- G. Swoboda, M. Marenc, H. Erten, 1992, Rock anchors in jointed rock. Proc. 2nd Czechoslovak Conf. Numerical Methods in Geomechanics. Prag, 116-127.
- G. Swoboda, M. Marenc, 1992, Numerical modelling of rock bolts in intersection with fault system. Proc. 4th Int. Symp. Numerical Models in Geomechanics - NUMOG IV, Pande & Pietruszczak (eds.), Swansea, UK, 729-738.
- G. Swoboda, M. Marenc, 1991, FEM modelling of rock bolts. Computer Methods and Advances in Geomechanics, Beer, Booker & Carter (eds.), Balkema, Rotterdam, 1515-1520.

B. Stojkovic, M. Marenc, 1988, Proracun tunela konvergentno-granicnom metodom (Analyses of support-tunnel convergence relationship). 1. Jugoslavenski simpozij o tunelima, Brioni, Croatia, 213-218.

M. Hudec, I. Jasarevic, M. Plamenac, B. Stojkovic, M. Marenc, R. Simic, L. Frgic, M. Grabashjak, 1988, Some specific notations about design and constructing hydro technical underground structures in flysch. ISRM Symposium Rock Mechanics and Power Plants Romana, ed., Madrid, Balkema, Rotterdam, 325-334.

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## PROFESSIONAL AFFILIATIONS

Membership	International Commission of Large Dams (ICOLD), co-chairman of Capacity Building Committee, Committee Z International Association for Hydro-Environment Engineering and Research (IAHR) 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 RenExpo-InterHydro - Annual Conference, Salzburg - member of Advisory Board
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