Alain YZIQUEL

Manager

Water & Environment | Energy, Dams and Hydraulic Works Business Unit

Date of birth: April 12th 1951
Nationality: French
Education:

- Engineering degree from the "Ecole Centrale des Arts et Manufactures", specialising in civil engineering and soil mechanics, 1974 (equivalent to M.Sc.).
- Doctorate in numerical analysis from the University of Paris VI, 1975-1976

Course on claim settlement:

- "Pricing construction claims" (1984) by Roy B. Mitchell,
- "Resolving international constructions claims" (1984) by Roy B. Mitchell.
- FIDIC adjudicator training for FIDIC president's List (2011-2012)

Languages: French, English (excellent), Spanish (reading knowledge)
Date of employment in Artelia: 1981

CAREER SUMMARY | SKILLS

Mr. Yziquel began his professional career by specialising in the numerical calculations of civil engineering, soils mechanics and hydrogeological problems.

He then became involved in the design, preparation of tender documents and supervision on construction works for dams and hydropower schemes, and in particular for the Kouris dam (Cyprus), Bagre dam (Burkina Faso), Turkwel arch dam (Kenya), Katse dam (Lesotho) and Yali dam (Vietnam). He has been assigned as Project Manager or Dam Designer in those different projects.

In addition, he acts as expert advisor on geotechnical problems and specialised design calculation involved in this field of activity.

He then extended his field to the management of large projects including water supply and sewerage projects.

He currently acts as Project Director in the Energy, Dams and Hydropower Development business unit.

PROFESSIONAL EXPERIENCE

EXPERT ASSIGNMENTS

2009 — **Wadi Samail Al Khawd dam**
OMAN — RCC dam height 57 m, length 1 600 m.
Expert for the detailed design.
Client: Ministry of Regional Municipalities and Water Resources

Expert RCC dam

2009
PAKISTAN

Detailed design of the Bunji dam
In charge of the 3D calculations of the curved gravity RCC dam. Height: 200 m; volume: 2,400,000 m^3.
Expert for the detailed design.
Client: Water and Power Development Authority (WAPDA)

Expert

2009
OMAN

Detailed design of the Wadi Aday dam
RCC dam, height 37 m. Spillway 6,000 m^3/s.
Internal dam expert review.
Client: Ministry of Regional Municipalities and Water Resources (MRW&WR)

Expert

2006-2009
LEBANON

Janneh dam project on the Nhar Ibrahim
100 m high concrete-faced rockfill dam.
Dam design.
Client: Khatib & Alami

Expert

2007
CYPRUS

Ha Potami dam
Geomembrane Face Rockfill Dam.
Dam design review.
Client: civil contractor

Member of the Aristo Developers Panel of Experts

2006-2007
ISRAEL

Ashkelon Desalination plant
300,000 m^3/day.
Expert on corrosion reinforcement.
Client: Veolia Waters

Expert

1996-2007
CYPRUS

Ezousa-Dhiarizos and Kariotis projects
Member of the Water Development Department Panel of Experts.
Client: Water Development Department

Expert

1994
VIETNAM

Hoa Binh dam
Rockfill dam with central clay core: height 128 m, volume 23,000,000 m^3; gated spillway, 2 level of 6 radial gates, maximum discharge 30,000 m^3/s.
Audit of the watertightness problems of the core and grout curtain and of the spillway.
Client: Civil contractor: Power Company no 1

Dam Expert

1994 **Banja dam**
ALBANIA Rockfill dam with central clay core: height 96 m, volume 17,000,000 m^3; gated spillway, 2 radial gates, maximum discharge 2,000 m^3/s.
Audit of the dam in view of the continuation of the construction.
Client: SOFREMI

Dam Expert

DAMS AND HYDROELECTRIC SCHEMES

2010-2012 **Janneh dam**
LEBANON Preliminary design, detailed design and tender documents of the Janneh dam. RCC dam heigth 165 m, RCC volume de BCR 1,4 Mm^3.
Hydropower intake 32m^3/s , 8 m diameter diversion tunnel.
Client: Khatib & Alami

Project Director

2003-2007 **Kebir and Moula dams**
TUNISIA Main project features:
- Detailed design and works supervision of the Kébir dam (rockfill dam with a central core, height 80 m, volume of fill 3.5 Mm^3).
- Detailed design and works supervision works supervision of the Moula dam (height 80 m, volume of fill 1.5 Mm^3).
- Detailed design and Works supervision of the 20 km long conveyor, 2 pumping stations, and 8.0 m diameter tunnel).

Dam design review.
Client: Ministère de l'Agriculture, de l'Environnement et des Ressources Hydrauliques

Expert

2003 **Nam Theun II Hydropower Project: Post tensioned tunnel**
LAOS Contractor's alternative in the context of a design and built contract.
Detailed design and tender documents for a 1.1 km long, 8 m diameter post tensioned power tunnel.
Tunnels design.
Client: French Electricity Board (EDF)

Expert

1998-1999 **Pulangi V Hydropower Project**
PHILIPPINES Contractor's alternative in the context of BOT contract:
- hardfill dam 115 m high, 1,700,000 m^3 hardfill, surface spillway 13,500 m^3/s,
- two steel lined tunnels, 6.00 m diameter, 277 m long,
- power plant: output 225 MW, 2 Francis turbines of 112.5 MW each.

Project design.
Client: DUMEZ/GTM (France)

Project Director

1997-1999
MALAWI

Third Lilongwe Water Supply Project
Raising of Kamuzu II Dam by means of 14 labyrinth concrete fusegates, 5.5 m high - Feasibility study, detailed design, tender documents and works supervision.
Dam design.
Client: Lilongwe Water Board

Project Director

1997-1998
PHILIPPINES

Bulanog-Batang Hydropower Project
Contractor's alternative in the context of BOT contract:
- rockfill dam with central clay core, 119 m high, 7,000,000 m^3 rockfill, surface spillway 7,000 m^3/s with 4 radial gates,
- 4.8 m diameter tunnel, 4 km long,
- power plant: output 132 MW, 2 Francis turbines of 66 MW each.

Project design.
Client: DUMEZ/GTM (France)

Project Director

1991-1998
LESOTHO

Lesotho Highlands Transfert Tunnel Project
Double curvature arch dam 190 m high. End of construction in 1998.
Expert during construction.
Client: Lesotho Highlands Development Authority

Chief Design Engineer

1995
MALAYSIA

Bakun Hydropower Project
Contractor's alternative:
- CFRD dam, height 205 m, volume 17,000,000 m^3,
- RCC cofferdam, 65 m high, integrated in the dam,
- underground power plant, 2,400 MW (L = 300 m, H = 54 m, l = 26 m), equipped with 6 Francis turbines (6 x 400 MW),
- 8 tunnels, diameter 8.5 m, 600 m long,
- surface spillway equipped with 4 radial gates (15,000 m^3/s).

Project design.
Client: DUMEZ/GTM (France)

Project Director

1994
VIETNAM

Dai Ninh Hydropower Project
Technical assistance to the Power Investigation and Design Company n° 2 for the review of feasibility study of the Dai Ninh dam and power plant (300 MW):
- power plant, 2 Pelton turbines 150 MW,
- headrace tunnel, 4.5 m diameter, 11 km long,
- 2 main earthfill dams, 50 m high, 1 Mm^3 and 2 Mm^3 together with saddle dams,
- Surface spillway, 3,000 m^3/s with 3 radial gates.

Project design.
Client: Electricity of Vietnam

Project Director

1993
VIETNAM

Yali Hydropower Project

Technical assistance to the Power Company n° 3 for the review of detailed design and construction of the Yali dam and power plant (720 MW):

- power plant, 4 Francis turbines 175 MW,
- 2 feeder tunnels, 8 m diameter, 4 km long,
- rockfill dam, 70 m high, 1,400 m long, volume 8 Mm^3,
- surface spillway, 24,000 m^3/s with 6 radial gates.

Construction completed.
Project design.
Client: Power Company n° 3

Project manager

1990
LAOS

Nam Ngiep Hydropower Scheme

Prefeasibility of a 450 MW hydropower scheme including either a 180 m high arch dam (volume of concrete 2,000,000 m^3) or an upstream concrete face rockfill dam (volume of rockfill 15,000,000 m^3)
Project design.
Client: Nippon Koei Co. Ltd

Project Manager

1989
BURKINA FASO

Bagré Dam and Hydropower: negotiation of the civil works contract and electromechanical contracts

Dam construction completed in 1993.
Multipurpose development scheme comprising: earthfill dam (max height: 30 m, crest length: 4,300 m), volume discharge: 600 m^3/s, volume of reservoir: 1.7 billion m^3/s, power plant equipped with two vertical axis Kaplan units, two irrigation water intakes, transmission line (132 kV – 34 km in length), 1.1 x 55 steel pipe, 4.5 m diameter (30 m head).
Dam design.
Client: Maîtrise d'Ouvrage de Bagré (MOB)

Project Manager

1987-1989
LESOTHO

Lesotho Highlands Water Transfer Project

comprising a concrete arch dam, 180 m high and 700 m long at crest level (volume of concrete: 2,200,000 m^3), and a transfer tunnel, 4.95 m in diameter and 45 km long. The tunnel is divided in two main sections and includes three adits and one intake structure.
In charge of the detailed design and construction drawings.
Client: Lesotho Highlands Development Authority

Project Manager

1986-1989
KENYA

Turkwel Multipurpose Project (Construction completed in 1990)

155 m high, 230 m crest length concrete arch dam, volume of concrete: 165,000 m^3, cofferdam (37 m high), derivation tunnel (600 m long), underground power plant equipped with two 53 MW Francis units, headrace tunnel (2,800 m long, dia. 4.1 m), tailrace tunnel (1,100 m long, dia. 4.1 m) and water intakes.
Responsible for the final design and construction drawings.
Client: Kerio Valley Development Authority

Dam designer

1981-1989
CYPRUS

Kouris dam
Earth dam 120 m high, flood spillway 2,000 m^3/s, volume of fill material 9,500,000 m^3 (Dam construction completed in 1988).
Preliminary design, detailed design, tender documents, prequalification of contractors for the works, assessment of bids, preparation of working design drawings and technical supervision on site.
Field supervision and alteration of the working drawings to suit field conditions.
Monitoring of the impounding and instrumentation.
Project design and works supervision on site.
Client: Ministry of Agriculture and Natural Resources – Water Development Department (WDW)

Project Manager

1983-1984
BURKINA FASO

Bagre Dam
Earth dam 35 m high and 4,300 m long, constructed with 2,500,000 m^3 of fill material; the flood spillway is equipped with four 5 m x 18 m radial gates, able to discharge a maximum of 1,600 m/s; the dam incorporates a 15 MW hydropower plant and supplies water for a 7,800 ha irrigation area.
Detailed design and preparation of tender documents.
Client: Maîtrise d'Ouvrage de Bagré (MOB)

Project Manager

1981-1983
FRANCE, REUNION ISLAND

Le Tampon dam
Preliminary and final design for a hill lake on a volcanic site.
Dam design.
Client: Municipality of Le Tampon

Project Manager

1978-1981
FRANCE

Grand Maison rockfill dam (Dam construction completed in 1986)
Detailed design of the 160 m high structure; volume of fill material 15,000,000 m^3; detailed preliminary design
Dam design.
Client: French Electricity Board (EDF)

Dam designer

1978-1981
FRANCE

Le Verney dam (Dam construction completed in 1984)
41 m high earth dam with asphalt concrete upstream face and a 45 m deep elastic diaphragm wall; volume of fill material 1,300,000 m^3.
Detailed design and works supervision
Dam design.
Client: French Electricity Board (EDF)

Dam designer

1980
FRANCE

Conqueyrac dam (Dam construction completed in 1983)
Preparation of the tender documents and working drawings for this 675 m long, 18 m high overflow dam.
Dam design.
Client: Gard Departmental Directorate of Public Works

Dam designer

1980 FRANCE

Le Houlbecq dam (Dam construction completed in 1983)
35 m high: feasibility study, definition of surveys to be carried out, interpretation of results and definition of the structures.
Dam design.
Client: Cherbourg Urban Area

Project Manager

1977 TUNISIA

Bou Heurtma dam
Study of the underwater gate chamber.
Civil structure design.
Client: DEGTH - Direction des Etudes et Grands Travaux Hydrauliques, Ministère de l'Agriculture

Civil structure engineer

1977 BOLIVIA

San Jacinto dam
Study of the 47 m high arch and optimisation of the hydroelectric investments.
Dam design.
Client: Asociacion San Jacinto-Tarija

Dam designer

1976 ALGERIA

Sidi Mohamed Ben Aouda dam
Study of the morning glory spillway.
Spillway design.
Client: ANB

Civil structure engineer

1976 FRANCE

Villerest gravity arch dam
Three-dimensional calculation of the dam.
Dam design.
Client: French Electricity Board (EDF)

Dam designer

DAMS REHABILITATION AND SURELEVATION

2004 FRANCE

La Ville Hatte multiple arch dam
Diagnostic of the stability of the right abutment.
Dam design.
Client: DAE Côtes d'Armor

Project Director

2004
FRANCE

Detailed design of the additional tunnel spillway of le Mervent dam having a discharge capacity of 750 m^3/s
Additional flood spillway comprising a 3 x 15 m gated weir, a tunnel 6.50 m in diameter and 150 m long, together with the civil engineering structures to restore the access road to the dam.
Project design.
Client: Syndicat Intercommunal des Eaux de la Forêt du Mervent

Expert

2003
MALAWI

Rehabilitation of Kamuzu dam I
Feasibility study, detailed design, tender documents and works supervision.
Dam design.
Client: Lilongwe Water Board

Project Director

1997-1999
MALAWI

Third Lilongwe Water Supply Project: Kamuzu II dam
Raising of Kamuzu II Dam by means of 14 labyrinth concrete fusegates, 5.5 m high - Feasibility study, detailed design, tender documents and works supervision.
Dam design.
Client: Lilongwe Water Board

Project Director

1985-1999
FRANCE

La Rive dam
Masonry gravity dam (H = 45 m), Constructed in 1870.
Diagnostic on the foundations and masonry of the dam. Definition and monitoring of geotechnical investigations. Installation of monitoring instruments (design, contract, monitoring). Annual monitoring. Design and supervision of dam consolidation works.
Dam design.
Client: City of Saint-Chamond

Expert

1986-1997
FRANCE

Le Piney dam
Arch dam (H = 45 m), Constructed in 1955.
Finite elements analysis of the structure and statistical analysis of monitoring data in view of evaluation of safety of the dam. Diagnostic on the state of the dam. Definition and assistance in drilling drainage boreholes. Instrumentation: installation of pressure sensors and direct pendulums (design, contract monitoring). Annual monitoring. Review of hydrology and spillway capacity.
Dam design.
Client: City of Saint-Chamond

Expert

TUNNELS AND UNDERGROUND CAVITIES

2002
LAOS

Nam Theun II Hydropower Project
Contractor's alternative in the context of a design and built contract.
Detailed design and tender documents for a 1.1 km long, 8 m diameter post tensioned power tunnel.
Tunnels design.
Client: French Electricity Board (EDF)

Expert

1987-1998
LESOTHO

Lesotho Highlands Project Transfer Tunnel
The Transfer Tunnel project includes a 98 m high multi-intake tower and 45 km of hard rock tunnel plus several kilometers of adit tunnels. The tunnel was excavated in complex basalt formations under a cover of up to 1.2 km of rock. The tunnel was lined with a combination of precast and insitu concrete: diameter of tunnel: 5 m (as excavated) – 4.35 m (after lining), Design discharge: 37 m^3/s.
Tunnel design.
Client: Lesotho Highlands Development Authority

Chief Design Engineer

1990-1992
LESOTHO

Katse dam
Responsible for the working design studies for the transfer tunnels (length 48 km).
Client: Lesotho Highlands Development Authority

Chief Design Engineer

1984-1985
CYPRUS

Supervision of excavation of the 700 m long, 5 m dia. Kouris tunnel and gate chamber
The dam of zoned construction with clay core and gravel outer zones has a maximum eight of 110 m. The lateral spillway is designed for a maximum discharge of 1,900 m^3/s.
Tunnel design.
Client: Ministry of Agriculture and Natural Resources – Water Development Department

Project Manager

1975
FRANCE

Baix and Mont d'Or tunnels
Study carried out for the French National Railways.
Client: the French National Railways (SNCF)

Specialist engineer

1974
FRANCE

St. Quentin new town, Yvelines
Study of the stability of underground cavities using a finite elements method.
Client: City of St Quentin

Specialist engineer

WATER TRANSFERS

2001-2005
ALGERIA

The Beni Haroun transfer pumping station
Technical assistance and supervision of works for the Beni Haroun transfer pumping station: 2 pumps of 90 MW each for a nominal head of 800 m installed in a shaft and tower structure 25 m diameter 95 m high.
Structures design.
Client: Agence Nationale des Barrages

Project Director

2001-2003
ALGERIA

Drinking water supplies to the centres of Batna, Barika, Arris and Kenchela
Detailed design study of drinking water supplies to the centres of Batna, Barika, Arris and Kenchela from Koudiat Medaouar dam from Beni Haroun pumping station.
Cumulated length of water transfer 500 km.
Structures design.
Client: Agence Nationale des Barrages

Project Director

2001-2003
ALGERIA

Water supply to the towns of Mila and Constantine and the surrounding regions
Water supply to the towns of Mila and Constantine and the surrounding regions through transfer from Beni-Haroun.
Client: Agence Nationale des Barrages

Project Director

WATER SUPPLY AND SEWERAGE SCHEMES

2000-2011
CYPRUS

Greater Nicosia Sanitary Sewerage Project (200,000 inhabitants)
Design, tender documents and supervision of works for the sewerage system which includes 2 wastewater treatment plant, 7 pumping stations and 800 km of sewers.
Project design.
Client: Sewerage Board of Nicosia

Project Director

2008-2009
CYPRUS

Secret Valley golf course
Master plan and detailed design study for the construction of the drinking water, sewerage, drainage and irrigation networks.
Project design.
Client: Aristo developers

Project Director

2004-2009
CYPRUS

Pafos Sewerage and Drainage Project
Detailed design Tender Documents and works supervision for 300 km of sewers, 50 km of storm drains, one pumping station, 20 lifting stations, extension of the waste water treatment plant.
Project design.
Client: Sewerage Board of Pafos

Project director

2001-2007
ALGERIA

Beni Haroun pumping station
Construction of pumping station (Q = 23 m^3/s, TDH = 700 m) taking water from the Beni Haroun dam reservoir. Station in a shaft 80 m deep and 25 m in diameter located on the reservoir shore. Pump power: 180 MW.
Technical assistance and supervision of works.
Project design.
Client: Agence Nationale des Barrages

Project Director

2003-2004
CYPRUS

Development of Technical Documentation for the Collection and Treatment of Urban Waste Waters
Development of Technical Documentation for the Collection and Treatment of Urban Waste Waters (28 villages).
Client: Water Development Department - Cyprus

Project Director

1997-2001
MALAWI

Third Lilongwe Water Supply Project
Works supervision of the Kamuzu dam II raising, doubling the treatment capacity of the existing water treatment plant, procurement and installation of 12 km of 800 mm distribution system.
Client: Lilongwe Water Board

Project Director

MINES REHABILITATION

2008-2011
CYPRUS

Rehabilitation of the Limni copper mine (Construction to be completed in 2011)
Backfilling of the mine with 4,000,000 m^3 of tailings and 9,000,000 m^3 of pillow lavas in view of the creation of a golf course.
Project design.
Client: Limni Golf resort

Project Director

MARINE WORKS

2008-2009
CYPRUS

The Limassol marina
Detailed design and works supervision of the Limassol marina.
1,000 boats and 40,000 m^2 of land development.
Client: Limassol Joint-Venture

Project Director

SEISMIC STUDIES

2011
LEBANON

Janneh dam
Dynamic design; RCC Curved gravity dam; height 165 m.
Client: Etablissement des eaux du Mont Liban

Expert

2010 **Bunji dam**
PAKISTAN Dynamic design; RCC Curved gravity dam; height 200 m.
Client: WAPDA

Expert

1991 **Katse intake**
LESOTHO Hydrodynamic analysis of the intake tower of Katse dam (Height 90 m). 90 m high intake tower surrounded by water.
Time history analysis including hydrodynamic interaction.
Client: Lesotho Highlands Development Authority

Designer

1988 **Katse dam**
LESOTHO Study of the response of the dam to seismic activity (maximum credible earthquake: 0.3 g).
Project design.
Client: Lesotho Highlands Development Authority

Dam design engineer

1986 **Turkwel dam**
KENYA Study of dam stability against seismic activity (maximum credible earthquake: 0.45 g).
Project design.
Client: Kerio Valley Development Authority

Dam designer

1986 **Kouris dam**
CYPRUS Re-evaluation of dam stability on its foundations.
Client: Water Development Department

Specialist engineer

1981 **Kouris dam**
CYPRUS Study of the stability of the dam subjected to seismic activity.
3D stability analysis for MCE 0,55 g.
Client: Ministry of Agriculture and Natural Resources – Water Development Department

Dam designer

1977 **Verney dam**
FRANCE Study of the stability of the dam subjected to seismic activity.
Client: EDF

Specialist engineer

1977 **Marcoule nuclear power station**
FRANCE Study of the stability of the shield subjected to seismic activity.
Client: CEA

Specialist engineer

1976 **Nogent nuclear power station**
FRANCE Study of the deep foundations (piles) subjected to seismic activity.
Client: EDF

Specialist engineer

HYDROGEOLOGY

1995 **Installation of a hydrological data base at PLN**
INDONESIA Installation of a hydrological data base at PLN.
Client: PLN Djakarta

Project Manager

1976 **Origny Ste Benoite reservoir**
FRANCE Formulation of a method for calculating permeability values using a finite element method linked with an optimum control method.

Project Manager

NUCLEAR REACTOR SHIELDS

1975-1977 **PWR 900 MW and PWR 1,300 MW nuclear reactor vessels**
FRANCE Three-dimensional calculations for the shields of 900 and 1300 PWR reactors: study carried out for the French Electricity Board.
Client: EDF

Specialist engineer

PUBLICATIONS

"Barrage de la Rive : Confortement par géomembrane d'un barrage ancien"
P. AGRESTI, A. YZIQUEL
CFBR 2009

"Remedial Grouting on Right Abutment of Kouris Dam"
K. KYROU, C. KRIDIOTIS, A. YZIQUEL
Commission Internationale des Grands Barrages, 22ème Congrès des Grands Barrages, Barcelone, 2006

"Transferts d'eau et énergie" (Water transfers and energy)
D. COCHET, P. HOLVECK, T. ULRICH, A. YZIQUEL
Revue de l'Energie, Numéro spécial "L'hydroélectricité pour un développement durable" - No 546, May 2003

"Réhabilitation de barrages-poids anciens par géomembranes"
M. HOONAKKER, M. SALEMBIER, M. OURMENT, A. YZIQUEL, P. AGRESTI
International Commission on Large Dams, 21 Congress on Large Dams, Montréal, 2003

"Comportement de voûtes implantées en vallée large"
M. HOONAKKER, E. BOURDAROT, B. GOGUEL, A. YZIQUEL, P. LIGNIER
International Commission on Large Dams, 21°Congress on Large Dams, Montréal, 2003

"Ageing and decommissioning of the Piney arch dam "
A. YZIQUEL, P. LIGNIER, P. AGRESTI
ICOLD European Symposium, Geiranger, Norway, June 2001

"Réhabilitation du barrage de la Rive et mise en sécurité du barrage du Piney"
A. YZIQUEL, P. AGRESTI
Colloque technique du Comité Français des Grands Barrages, Aix-en-Provence, May 2001

“Expérience française récente dans le domaine des déversoirs“
J.L. AUTHIER, G. BECUE, J.P. BRENAC, A. CARRERE, A. YZIQUEL
International Commission on Large Dams, 20° Congress on Large Dams, Beijing, 2000

“Raising of Kamuzu II dam - Implementation of giant concrete fusegates”
A. YZIQUEL, J.M. MONCLAR
Travaux no 765, Special Beijing Congress, June 2000

"Heightening of Malawi’s Kamuzu II dam"
A. YZIQUEL, J.M. MONCLAR, M.J. CHIRWA
Hydropower & Dams Issue Six, 1999

"A new cofferdam concept for constructing a large concrete-faced rockfill dam"
A. YZIQUEL, J. LAUNAY, P. LONDE
Dam Engineering, Volume X, Issue 1, 1999

"Ageing of a thin arch dam in a wide valley: The Piney dam in France"
International symposium on new trends and guidelines on Dam Safety, Barcelona 1998; Berga (ed), 1998, Balkema, Rotterdam

"Design of arch dams to be impounded during construction"
A. CARRERE, B. MAHIOU, A. YZIQUEL
International Commission of Large Dams, 18° Congress on Large Dams, Durban, 1994

"Turkwel concrete arch dam (Kenya). Design and construction of dam abutments, grout curtain and drainage with very steep cliffs"
International Commission of Large Dams, 17° Congress on Large Dams, Vienna, 1991

“Le barrage de Kouris” (Kouris dam)
Numéro spécial de la Revue Travaux for the International Congress on Large Dams, Vienna, June 1991

“Comment modéliser en 3 D”. (How to build 3 D models)
Forum IPSI for information and training, Paris, December 1989

“Couplage CAO-Structure : application au calcul des barrages voûtes” (Computer aided design of arch dams)
Forum IPSI for information and training, Paris, December 1989

"Stabilité dynamique d'un grand barrage sur fondations contenant des bancs de montmorillonite" (Stability of a large dam on foundations containing beds of montmorillonite)
Technical conference organised by the French Electricity Board, Aix-les-Bains, France, June 1987

"Design of the grout curtain of the Kouris dam"
International Congress on Large Dams, Lausanne, Switzerland, June 1985

"Seismic analysis as a tool in the design of two earth dams"
International Conference on Advances in Earthquake Engineering and Soil Dynamics, St. Louis, Missouri, USA, May 1981

"Automatic computing of a transmissivity distribution using only piezometric heads"
2nd International Conference on Finite Elements in Water Resources, London, July 1978

"The development of dam design methods"
3rd Symposium, Moscow, June 1977, Hydroprojekt Coyne et Bellier

"Application of optimum monitoring to the preparation of a permeability chart using piezometric measurements"
11th International Congress on Soil Mechanics, Tokyo, Special Session no. 12 Soil mechanics calculations on computers

"Experimental checking of calculations by the finite element method" (in French)
Conference on soil mechanics at the Ecole Centrale des Arts et Manufactures, February 1977

PROFESSIONAL MEMBERSHIP

Member of the French Committee on Large Dams.

Member of the French National Project on RCC dams (Project BACARA), 1989-1992.

Vice Chairman of the ad hoc international technical committee on dam rehabilitation for International Commission on Large Dams, 2000-2012.

Chairman of International Technical Committee “M” for ICOLD: Operation, Maintenance and Rehabilitation of Dams since June 2012.

FIDIC adjudicator: Member of the French list of FIDIC adjudicators.

EMPLOYMENT RECORD

1999-2001	Head of the Major Projects Division in Sogreah's International Branch
1989-1999	Deputy Technical Manager SOGREAH's Energy and Dams Department
1986-1989	Civil Works Expert SOGREAH's Dams, Water Power and River Engineering Department
1981-1986	Principal Engineer in SOGREAH's Civil Engineering Department
1974-1981	Specialist Engineer with the Large Structures Department of Coyne et Bellier