



**THE INTERNATIONAL COMMISSION
ON LARGE DAMS**
78th Annual Meeting in Hanoi, 23 – 26 May, 2010

**LA COMMISSION INTERNATIONALE
DES GRANDS BARRAGES**
**78^{ème} Réunion annuelle de la CIGB à Hanoi,
23 – 26 Mai 2010**

INTERNATIONAL SYMPOSIUM
“Dams and Sustainable Water Resources Development”

COLLOQUE INTERNATIONAL
***“Barrages et Développement Soutenable
des Ressources en eau”***

LIST OF ACCEPTED ABSTRACTS
LISTE DE RÉSUMÉS ACCEPTÉS

(up to the November 6st, 2009 / jusqu’au 6^{ème} Novembre 2009)

The list will be updated and completed in December 2009 for abstracts
submitted in November 2009

La liste sera mise à jour et achevée en décembre 2009 pour les résumés
soumis en novembre 2009

- **01. Hydrology, Sustainable Water Resources Planning, River Basin Management**
**Hydrologie, Planification des ressources soutenables en eau , Gestion
des bassins fluviaux**
 - ✓ **01.01.** DO INTERNATIONAL STANDARDS FOR SUSTAINABLE DAM
DEVELOPMENT REACH DOMESTIC DECISION –MAKERS
 - ✓ **01.02.** APPLICATION OF ADAPTIVE NEURO-FUZZY INFERENCE SYSTEMS
FOR RAINFALL- RUNOFF MODELING

- ✓ **01.03.** 20 YEARS OF THE SAIH FLOOD WARNING SYSTEM IN THE JUCAR BASIN (1989-2009). A BRIEF REVIEW.
- ✓ **01.04.** DAMS AND SUSTAINABLE INTEGRATED RIVER BASIN PLANNING AND MANAGEMENT FOR LARGE SCALE RIVER BASIN IN IRAN
- ✓ **01.05.** DEEP OLD BURIED RIVER CHANNELS AND THEIR IMPACT ON THE DEVELOPMENT OF THE MASTER PLAN OF PART OF THE GUAYLLABAMBA RIVER COURSE, IN ECUADOR
- ✓ **01.06.** A HYDROMETEOROLOGICAL FLOOD FORECASTING SYSTEM FOR THE RED RIVER
- ✓ **01.07.** MULTI OBJECTIVE MANAGEMENT OF RIVER BASINS WITH APPLICATION OF FUZZY COMPROMISE PROGRAMMING METHOD
- ✓ **01.08.** CRITERIA FOR SUSTAINABILITY OF INTER BASIN WATER TRANSFER
- ✓ **01.09.** * WATER RESOURCES DEVELOPMENT – KEY TO HUMAN WELFARE

- **02. Coastal Areas & Climate Change Impacts**

- Régions côtières et Impacts du changement climatique**

- ✓ **02.01.** IMPACT OF CLIMATE CHANGE ON ENERGY DEVELOPMENT IN NIGERIA
- ✓ **02.02.** * GLOBAL CLIMATE CHANGE AND DAMS, RESERVOIRS AND THE ASSOCIATED WATER RESOURCES
- ✓ **02.03.** CLIMATE CHANGE AND IT EFFECTS ON PLANTS WATER DEMAND

- **03. Environmental & Social Aspects**

- Les aspects environnementaux et sociaux**

- ✓ **03.01.** ENVIRONMENTAL IMPACT OF THE UPCOMING LARGE TEHRI DAM IN NORTH INDIA
- ✓ **03.02.** A MONITORING METHOD OF MOUNTAIN HAWK EAGLE IN DAM CONSTRUCTION PERIOD
- ✓ **03.03.** DEVELOPMENT OF THE DAM AIR-ENERGY SYSTEM FOR THE ECONOMICAL AND CLEAN-ENERGY MANAGEMENT

- ✓ **03.04.** ABOUT THE ENVIRONMENT IMPROVEMENT EFFECT OF DOWNSTREAM CHANNEL DUE TO THE BED LOAD TEST
- ✓ **03.05.** CH₄ FLUXES AT EASTMAIN 1 RESERVOIR (QUEBEC, CANADA)
- ✓ **03.06.** SUPRADISCIPLINARY CONVERSATIONS ON SECURITY, RISK AND RESILIENCE AROUND DAMS IN SUB ARCTICA
- ✓ **03.07.** INFLUENCE OF GACHSARAN FORMATION SALT LAYERS ON RESERVOIR QUALITY OF UPPER GOTVAND DAM

- **04. Flood & Drought Mitigation / Mitigation de crues et de sécheresses**

- ✓ **04.01.** REGIONAL MODELS TO BUILD FLOOD CONTROL CONSTRUCTIONS (CASE STUDY: UPSTREAM OF KARKHEK WATERSHED, IRAN)
- ✓ **04.02.** REDEVELOPMENT OF THE HONGOUCHI-TEIBU DAM AS PART OF THE NAGASAKI EMERGENCY FLOOD DAM PROJECT
- ✓ **04.03.** UNSTEADY FLOW MODEL INCLUDING A DAM OPERATION RULE AS AN INTERNAL BOUNDARY CONDITION
- ✓ **04.04.** ASTRONOMICAL FEATURES NOW LEADING TO A GLOBAL DROUGHT 2009/10
- ✓ **04.05.** THE AKOSOMBO AND KPONG DAMS – ARRIVING AT A ROBUST EMERGENCY PREPAREDNESS PLAN

- **05. Innovation in Dam Construction
Innovation en construction des barrages**

- ✓ **05.01.** A MODEL FOR DETERMINING CONTACT GROUTING INDICATORS IN STEEP SECTION OF HIGH ARCH DAM
- ✓ **05.02.** *NEW NEEDS, NEW DAMS, NEW SOLUTIONS
- ✓ **05.03.** INNOVATION IN CONSTRUCTION OF SARCHESHMEH TAILING DAM FOR INCREASING ITS CAPACITY
- ✓ **05.04.** ASPHALTIC CONCRETE CORE FOR RAPID CONSTRUCTION OF SHUR RIVER DAM (PLANNING- CONSTRUCTION)
- ✓ **05.05.** THE FSHD AND ITS USE IN DIVERSION WORKS
- ✓ **05.06.** MONITORING OF NAM NGUM 2 CONCRETE FACE ROCKFILL DAM
- ✓ **05.07.** COMBINING P.K WEIR AND STEPPED SPILLWAY

- ✓ **05.08.** INVESTIGATION OF CAVITATION OCCURRENCE IN SABALAN DAM SPILLWAY
- ✓ **05.09.** STABILITY ANALYSIS AND DESIGN PRIMARY SUPPORT SYSTEM IN LOWER PRESSURE TUNNELS OF GOTVAND DAM
- ✓ **05.10.** DYNAMIC SIMULATION BASED TEMPERATURE CONTROLLING METHOD FOR CONCRETE CONSTRUCTION OF XILUODU HIGH ARCH DAM
- ✓ **05.11.** ARCH EFFECT OF CURVED GRAVITY DAMS
- ✓ **05.12.** DESIGN, CONSTRUCTION AND PERFORMANCE OF NAM NGUM 2 CFRD
- ✓ **05.13.** STUDY ON THE KEY CONSTRUCTION TECHNOLOGY OF LONGTAN HIGH RCC GRAVITY DAM
- ✓ **05.14.** IMPROVED ENERGY DISSIPATION ON STEPPED SPILLWAYS WITH THE ADDITION OF TRIANGULAR PROTRUSIONS
- ✓ **05.15.** ARCH DAM CONCRETING OPTIMIZATION SYSTEM
- ✓ **05.16.** DESIGNING THE PLASTIC CONCRETE MACHINE FOR DEVISING AN EXACT METHOD OF MEASURING THE ELASTICITY MODULUS OF PLASTIC CONCRETE AS CUT OFF WALL MATERIAL IN UPPER GOTVAND DAM

- **06. Dam Safety, Maintenance & Rehabilitation**
Sécurité des barrages, entretien et réhabilitation

- ✓ **06.01.** ANALYSIS OF SEEPAGE BY ANSYS SOFTWARE AND COMPARING ITS RESULTS WITH THOSE TAKEN BY INSTRUMENTS (A CASE STUDY IN ALAVIAN EARTH DAM)
- ✓ **06.02.** THE EFFECT OF MOISTURE CONTENTS TO THE HYDRAULIC FRACTURING PRESSURE AND TENSILE STRESS AT FAILURE OF CLAY CORE CONTAINING HALLOYSITE MINERAL
- ✓ **06.03.** ESTABLISHMENT OF A NATIONAL DAM SAFETY UNIT (NDSU) IN GHANA - EVALUATION, RECOMMENDATION AND IMPLEMENTATION
- ✓ **06.04.** INVESTIGATION REASONS AND EFFECTS OF CRACKING ON LONG TERM BEHAVIOUR OF KARDEH ARCH DAM
- ✓ **06.05.** EXTERIOR DEFORMATION MEASUREMENT FOR CFRD AFTER A LARGE-SCALE EARTHQUAKE USING GPS

- ✓ **06.06.** DEVELOPMENT OF CONCRETE DETERIORATION INSPECTION METHOD BY VIDEO CAMERA ON THE ENTIRE ARCH DAM DOWNSTREAM SIDE
- ✓ **06.07.** ADVANCED MONITORING CASE STUDY IN MAJIMEGAWA DAM TO MEASURE THE ACCURATE BEHAVIORS
- ✓ **06.08.** GPS MEASURING APPLICATION ON INITIAL FILLING OF TOKUYAMA DAM - MONITORING RESULTS ON DAM BODY ASSOCIATED WITH THE INITIAL FILLING AND RESPONSE TO THE INITIAL DISCHARGE –
- ✓ **06.09.** A SYNTHETIC METHOD FOR ASSESSING THE RISK OF DAM FLOODING
- ✓ **06.10.** *SEISMIC ASPECTS OF LARGE DAMS: LESSONS LEARNT FROM THE MAY 12 2008 WENCHUAN EARTHQUAKE
- ✓ **06.11.** CONCRETE DAMS CRACKED BY TEMPERATURE CHANGES
- ✓ **06.12.** LANDSLIDE - INDUCED WAVES AND ITS IMPACT TO SAFETY OF EMBANKMENT DAMS
- ✓ **06.13.** AMÉLIORATION DE LA SÉCURITÉ DU BARRAGE DE BAGRE VIS-A-VIS DES CRUES
- ✓ **06.14.** DAM SAFETY RISK ASSESSMENT FOR KIU KOH MA AND KIU LOM DAMS
- ✓ **06.15.** IN SERVICE DAM REPAIR. HIGH PRESSURE PLOLYMERS INJECTIONS
- ✓ **06.16.** QUANTITATIVE RISK-MODEL FOR ANTONIO JOSE DE SUCRE-MACAGUA DAM (EDELCA, VENEZUELA)
- ✓ **06.17.** REHABILITATION OF LAMPAO DAM
- ✓ **06.18.** NATURAL AFSLUITDIJK – A SECOND LIFE FOR THE AFSLUITDIJK
- ✓ **06.19.** INTERFACES AND DISCONTINUITIES - A VERY DANGEROUS MISSED FACTORS ON EMBANKMENT DAM ACCIDENTS
- ✓ **06.20.** A NEW APPROACH FOR DAM SAFETY CRITERIA
- ✓ **06.21.** THE LIMITS OF REGULATION IN SIPHONS
- ✓ **06.22.** RECOVERY OF LEVELS OF SECURITY OF AN OLD DAM
- ✓ **06.23.** OPERATION AND MANAGEMENT OF KARUN 4 DAM
- ✓ **06.24.** REHABILITATION OF TEMPORARY COMPOSITE DAMS (CASE STUDY: MARED SOIL-SHEET PILE DAM)
- ✓ **06.25.** CRITERIA FOR SAFETY EVALUATION OF A DAM NEAR ACTIVE FAULT

- ✓ **06.26.** STUDY ON EFFECTS OF DAM BREAK IN KHERSAN III CATCHMENT AREA
- ✓ **06.27.** ESTABLISHMENT OF MANAGEMENT INFORMATION SYSTEM USING INFORMATION SYSTEMS (EIS, DSS, MIS) IN DAMS
- ✓ **06.28.** SEEPAGE MONITORING OF EMBANKMENT DAMS UTILIZING TEMPERATURE METHOD
- ✓ **06.29.** ESTABLISHMENT OF PREVENTIVE MAINTENANCE (PM) IN DAMS (CASE STUDY OF MARAGHEH ALAVIAN DAM)
- ✓ **06.30.** SOLUTIONS TO CONSTRUCTION OF A NEW BOTTOM OUTLET IN DEZ DAM
- ✓ **06.31.** STATISTICAL ANALYSIS OF LAR DAM'S WATER LOSS
- ✓ **06.32.** STRESS DISTRIBUTION SAFETY ANALYSIS OF YAMCHI (ARDEBIL) DAM
- ✓ **06.33.** VERIFICATION OF PORE PRESSURE ANALYZING RESULTS WITH FIELD MEASUREMENTS IN ALAVIAN DAM
- ✓ **06.34.** EARTHQUAKE RESPONSE OF GOLESTAN EARTH DAM (IRAN) CONSIDERING DAM-FOUNDATION INTERACTION
- ✓ **06.35.** BEHAVIOR OF JEGIN RCC DAM AFTER IMPOUNDING
- ✓ **06.36.** EVALUATION OF CORE PERFORMANCE DURING OPERATIONAL YEARS USING PIEZOMETRIC DATA
- ✓ **06.37.** EXAMINATION OF RESERVOIR INDUCED SEISMIC OF EAST AZERBAIGAN AND ARDABIL PROVINCES' DAMS

- **07. Downstream & Estuary Works / Ouvrages en aval et d'estuaire**

- ✓ **07.01.** RIVER CLEANING: REMOVING MUD AND SILT WITHOUT DIGGING

- **08. Financial Aspect & Cost Reduction of Dam Investment**
Aspect financier & Réduction de coûts d'investissement de barrage

- ✓ **08.01.** COST ESTIMATION OF TRAINING WITH RESPECT TO COMPENSATION COST OF DAMAGES OF CONSTRUCTION OF DAM ON ENVIRONMENT (CASE STUDY: REASON OF DAM CONSTRUCTION ON THE CRITICAL PLATEAU OF QAZVIN)
- ✓ **08.02.** COST-SAVING MEASURES FOR LARGE INFRASTRUCTURE PROJECTS, THE OLIVENHAIN DAM EXPERIENCE

- ✓ **08.03.** MOBILIZING DOMESTIC FINANCIAL RESOURCES IN DEVELOPING COUNTRIES
- ✓ **08.04.** THE ROLE OF VALUE ENGINEERING TO IMPROVE THE OPERATION AND MAINTENANCE OF DAMS AND DEPENDENT EQUIPMENTS

- **09. Advanced Construction Materials / Progrès en Matériaux de construction**

- ✓ **09.01.** EFFECTIVE AND ECONOMICAL PRODUCTION OF HIGH QUALITY CONCRETE FOR DAMS SHOWN ON THE EXAMPLES FROM SONLA, SESAN III, BANVE (VIETNAM) AND YEWA DAMS (MYANMAR)
- ✓ **09.02.** ROLLER COMPACTED CONCRETE (RCC) MIX DESIGN - PRACTICAL ASPECTS AND IMPLEMENTATION OF A MANAGEMENT SYSTEM QUALITY DURING THEIR PLACEMENT
- ✓ **09.03.** STUDY ON FEASIBILITY OF DISTRIBUTED OPTICAL FIBER IN SMALL SCALE MODEL LABORATORY TEST
- ✓ **09.04.** REPAIRING AND IMPROVING THE CONCRETE STRUCTURES USING POLYURETHANE MATERIALS
- ✓ **09.05.** A CRITICAL INVESTIGATION OF SOME MATERIAL SPECIFICATIONS IN CFRD
- ✓ **09.06.** SEARCHING FOR THE BEST ABRASION-RESISTANT CONCRETE LININGS ON THE DAM STRUCTURES ON THE SAVA RIVER

- **10. Computational Modelling of Dams & Structures**
Modélisation numérique des barrages & structures

- ✓ **10.01.** COMPUTER PROGRAM FOR DESCRIBING THE SIZE DISTRIBUTION OF SEDIMENTS
- ✓ **10.02.** 3D FINITE ELEMENT ANALYSIS OF A 50.8m HIGH CFRD BUILT ON 20 ~ 37m THICK ALLUVIUM DEPOSIT
- ✓ **10.03.** CONCRETE DAM'S JOINT SIMULATE BASED ON ELASTIC – PLASTIC CREEP MODEL
- ✓ **10.04.** DEFORMATION AND STRESS ANALYSIS ON LIYUTANG CONCRETE FACED ROCKFILL DAM
- ✓ **10.05.** OPTIMIZATION RESEARCH ON CONNECTING FORM BETWEEN DAM AND POWERHOUSE BASED ON COMPUTER SIMULATION

- ✓ **10.06.** APPLICATION OF DIRECT COMPUTING OF ONE – WAY COUPLE TECHNIQUE ON SEISMIC ANALYSIS OF CONCRETE GRAVITY DAM
 - ✓ **10.07.** DETERMINING OF FLOW CHARACTERISTICS AND UPLIFT PRESSURE THROUGH THE LAYERED FOUNDATIONS IN IMPERVIOUS DAMS WITH A SHEET PILE USING FINITE ELEMENT METHOD
 - ✓ **10.08.** EVALUATION AND COMPARING OF FACED SYMMETRICAL HARD-FILL DAMS (FSHD) AND CONCRETE FACED ROCK-FILL DAMS (CFRD)
- **11. Advanced Structural Engineering / Progrès en Génie structurale**
 - ✓ **11.01.** THE DESIGN OF REINFORCED CONCRETE LINING OF PENSTOCK IN PRESSURE TUNNELS IN SYMAREH DAM
- **12. Geotechnics & Foundation Treatment**
Geotechniques et Traitements de Fondation
 - ✓ **12.01.** A FORTRAN PROGRAM FOR THE GENETIC INTERPRETATION OF THE GRAIN SIZE DISTRIBUTION OF SANDS
 - ✓ **12.02.** RATIONALIZATION OF GROUTING IN UNSATURATED SOFT ROCK FOUNDATION BASED ON RESULTS OF LONG-TERM PERMEABILITY TESTS
 - ✓ **12.03.** DESIGN OF FOUNDATION TREATMENT (CURTAIN GROUTING) AT OYAMA DAM
 - ✓ **12.04.** ENABLING INNOVATION TO ACHIEVE A SUCCESSFUL DAM FOUNDATION REPAIR
 - ✓ **12.05.** STUDYING THE DIAGNOSTIC EFFECTIVENESS OF AUDIO FREQUENCY DOMAIN MAGNETICS IN KARSTIC ENVIRONMENTS
 - ✓ **12.06.** ON THE GEOLOGICAL PROBLEMS OF KARUN3 DAM RESERVOIR REGARDING TO SEEPAGE SUBJECT
 - ✓ **12.07.** ENGINEERING GEOLOGICAL EVALUATION AND COMPARISON IN LOCATING AND SETTLING BASINS – A CASE FROM NEPAL HIMALAYA
- **13. Hydropower Construction & Equipment**
Construction & équipement d'hydroélectrique
 - ✓ **13.01** PUMP STORAGE POWER PLANT AND ITS ROLE IN NATIONAL ENERGY DEMAND AND SUPPLY NETWORK

- ✓ **13.02** STABILITY ANALYSIS AND DESIGN PRIMARY SUPPORT SYSTEM IN LOWER PRESSURE TUNNELS OF GOTVAND DAM
- ✓ **13.03** UNDERWATER TUNNEL PIERCING IN REFURBISHMENT OF AKKATS POWER STATION
- ✓ **13.04.** EXCAVATION METHOD OF S-SHAFT IN GOTVAND OLIYA H.P.P. DAM
- ✓ **13.05.** STABILIZATION OF ACCESS TUNNEL TO BARROW AREA OF UPPER GOTVAND RESERVOIR DAM AND H.P.P. PROJECT
- ✓ **13.06.** COMPARISON METHODS OF EXCAVATION IN BENCHING OF WATERWAY TUNNELS IN GOTVAND H.P.P.
- ✓ **13.07.** STABILITY ANALYSIS, INSTALLATION METHOD AND PRICE ANALYSIS OF 12 METERS ROCK BOLTS IN BIFURCATION OF WATER WAY TUNNELS OF GOTVAND DAM AND POWERPLANT
- ✓ **13.08.** MANUALLY RELEASED STOPLOGS, DESIGN AND OPERATION

- **14. Optimum Exploitation of Reservoirs**
Exploitation optimale des réservoirs

- ✓ **14.01** APPLICATION OF THE WQI NSF INDEX SHEET CLASSIFICATION AND ANALYSIS OF THE QUALITATIVE STATUS OF SURFACE WATER RESOURCES
- ✓ **14.02** STUDY OF STORAGE EFFICIENCY IN FLOOD CONTROL IN ORDER TO OPTIMUM USE OF WATER RESOURCES, ALLAVIAN DAM CASE STUDY

- **15. Sedimentation Management / Gestion de sédimentation**

- ✓ **15.01.** APPLICATION OF ARTIFICIAL NEURAL NETWORKS TO INVESTIGATE THE EFFECT OF OSCILLATION OF RIVER WATER LEVEL ON SUSPENDED SEDIMENT
- ✓ **15.02.** PRESENT STATE OF RESERVOIR SEDIMENT COUNTERMEASURES AND DRAFT OF SYSTEMATIC METHODOLOGY FOR SELECTING APPROPRIATE COUNTERMEASURES
- ✓ **15.03.** EFFECT OF RESERVOIRS ON SEDIMENT LOAD IN THE LO RIVER BASIN (CHINA-VIETNAM)
- ✓ **15.04.** NUMERICAL MODELLING OF HYDROPOWER DAM RESERVOIR SEDIMENT REMOVAL IN TRANSIENT CONDITION

- ✓ **15.05.** INTEGRATED SEDIMENT MANAGEMENT AT RANTEMBE RESERVOIR, MAHAWELL GAUGE, SRI LANKA
- ✓ **15.06.** APPLY LANDUSE CHANGE AND RESERVOIR SEDIMENTATION FOR EXTEND LAM PHRA PLOENG RESERVOIR LIFESPAN IN NORTHEASTERN THAILAND
- ✓ **15.07.** CAUSES AND EFFECTS OF SEDIMENTATION IN NIGERIAN DAMS: THE WAY FORWARD

- **16. Irrigation & Drainage, Water System Management**
Irrigation, drainage et gestion de systèmes hydrauliques

- ✓ **16.01.** APPLICATION OF META HEURISTIC OPTIMIZATION METHOD TO INVESTIGATE VELOCITY PROFILE EFFECT ON OPTIMAL DESIGN OF OPEN CHANNELS APPLICATION OF META HEURISTIC OPTIMIZATION METHOD TO INVESTIGATE VELOCITY PROFILE EFFECT ON OPTIMAL DESIGN OF OPEN CHANNELS
- ✓ **16.02.** WATER EVALUATION AND PLANNING SYSTEM (WEAP) APPLICATION FOR OPTIMIZATION-SIMULATION OF SABALAN IRRIGATION NETWORK
- ✓ **16.03.** IRRIGATION SYSTEM DESIGNING (CASE STUDY: DATE PALM AREAS OF ABADAN ISLAND, IRAN)
- ✓ **16.04.** ANALYTICAL ATTITUDE TO QUALITY MANAGEMENT OF WATER RESOURCES

- **17. Urban, Industrial & Rural Water Supply**
Approvisionnement urbain, industriel et rural en eau

- ✓ **17.01.** EFFECT OF INDUSTRIAL DEVELOPMENT ON WATER SUPPLY IN THE NIGER DELTA AREA OF NIGERIA
- ✓ **17.02.** PADEŽ PROJECT: A CASE STUDY OF STRATEGICALLY PLANNING OF WATER RESOURCES FOR WATER SUPPLY

- **18. Pumps & Hydraulic Equipments / Pompes et équipements hydrauliques**

- **19. Education Tools & Capacity Promotion of Hydro Engineers**
Outils éducatifs & Promotion de la capacité d'ingénieurs hydrauliques