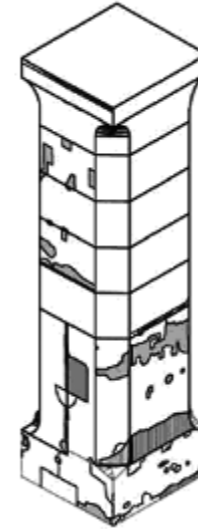


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- DESIGN & INSTALLATION OF THE DYNAMIC MONITORING SYSTEM APPLIED TO PADERNO BRIDGE (1889), C Gentile, A Saisi, Poli di Milano, Italy
- EXTENDING THE FATIGUE LIFE OF STEEL BRIDGES USING A RESPONSE MODIFICATION SYSTEM, A Gastineau, S Wojtkiewicz & A Schultz, Univ of Minnesota, Minneapolis, MN, USA

### Masonry Bridges

- INSPECTION OF MASONRY ARCH ON RAILWAY BRIDGES WITH IMPACT-ECHO & IMPULSE RESPONSE, J S Clausen, S Duus, P Jackson, Ramboll, København, Denmark
- RE-ANALYSIS OF EXISTING MASONRY ARCH BRIDGES – MODELLING OF MATERIAL BEHAVIOUR & SOIL-STRUCTURE INTERACTION, S Franck, S Lange, V Slowik, Leipzig Univ of Applied Science, Leipzig, Germany
- FE MODELLING OF FRP STRENGTHENED MASONRY ARCH STRUCTURES, Y. Tao, J.F. Chen, T.J. Stratford & J.Y. Ooi, Univ of Edinburgh, UK
- ARCHTEC – STRENGTH ASSESSMENT & STRENGTHENING MASONRY ARCH BRIDGES, L. Mabon, C. L. Brookes, Ramboll UK Ltd, Southampton, UK

### Timber Bridges

- EXTENDING THE LIFE OF THE NORTH AMERICAN TIMBER RAILWAY TRESTLE, R A P Sweeney, Modjeski & Masters, Montreal, Canada
- 10 YEAR ANNIVERSARY OF BELFA – LOAD TESTS HELP TO EXTEND LIFETIME OF BRIDGES, Prof M Gutermann, C Schröder, Univ of Applied Sciences, Bremen, Germany
- BRIDGE DAMAGES CAUSED BY THE FLOOD, N Stojić, Highway Inst. Belgrade, M Taric, Kosovska Mitrovica, Serbia
- REHABILITATION OF THE HISTORIC THARWA TIMBER TRUSS BRIDGE, AUSTRALIA, Prof K Crews, Univ of Technology Sydney, M Prelog, Aurecon Consulting Engineers, Sydney, S Millie, Roads & Traffic Authority, NSW

- ULTRASONIC INVESTIGATION OF (WC)NI+CO, (WC)+NI, (WC)NI +MG, (TIO)+(FE+NI) CERAMIC METAL COMPOSITES, Il H. Sarpun, H Bodur, M Erdoğan, AfyonKocatepe Univ, V Özkan, MuşAlparslanUniv, Si Tuncel,TÜBİTAK Marmara Research Center, Turkey.
- STRUCTURAL ANALYSIS OF CONCRETE BLOCKS USING ECHNIQUE OF ULTRASONOGRAPHY, C E Santos,
- LASER INDUCED BREAKDOWN SPECTROSCOPY FOR FAST ANALYSIS OF INGRESS PROFILES OF IONS ON CONCRETE, G Wilsch & D Schaurich, BAM, Berlin, Germany
- ESTIMATION OF COMPRESSIVE STRENGTH OF CONCRETE BY MEANS OF MECHANICAL IMPEDANCE, G Kubo, H Kubo, Nitto cNstruction Co.,Ltd, Hokkaido, T Sakai, Applied Research Inc. Ibaraki, Japan
- USING THE SONREB METHOD FOR EVALUATION OF CONCRETE STRENGTH USING REBOUND HAMMER & ULTRASONIC TESTING, M Grantham, Sandberg LLP, Margate, UK
- APPLICATION OF DECAT SYSTEM FOR DAMAGE EVALUATION OF CONCRETE IN DISASTER AREAS DUE TO THE GREAT EAST JAPAN EARTHQUAKE, T Suzuki, Niigata Univ & M Ohtsu, Kumamoto Univ, Japan
- MODIFIED NDT FOR INNER ELECTRICAL RESISTIVITY MEASUREMENTS IN CEMENT-BASED COMPOSITES, NH El-Ashker, MIS Elmasry & MAA Andrif, AASTMT, Alexandria, Egypt.
- SEISMIC TOMOGRAPHY WITH ESTIMATION OF SOURCE LOCATION FOR CONCRETE STRUCTURES, Y. Kobayashi, Nihon Univ, Tokyo, Japan
- NUMERICAL SIMULATION OF PROPAGATION PHASE IN AN ACCELERATED CORROSION TEST IN CONCRETE, M.G Sohail, S Laurens, F Deby, JP Balayssac, Université de Toulouse; Toulouse, France
- MONITORING OF THE E-MODULUS IN EARLY AGE CONCRETE SINCE SETTING TIME WITH EMBEDDED PIEZOELECTRIC TRANSDUCERS, C. Dumoulin, G. Karaiskos, J. Carette, S. Staquet & A. Deraemaeker, Université Libre de Bruxelles, Brussels, Belgium
- ELASTIC PROPERTIES OF CONCRETE AT EARLY AGE: MONITORING OF THE E-MODULUS & POISSON'S RATIO WITH CYCLIC LOADINGS & ULTRASONIC MEASUREMENTS, C. Boulay, M. Crespin, IFSTAR, Paris, France & B. Delsaute, J. Carette, S. Staquet, Université Libre de Bruxelles, Brussels, Belgium
- ACOUSTIC EMISSION IMAGING ON CONCRETE STRUCTURES USING A PIEZOELECTRIC WAFER SENSOR ARRAY, L Yu, P Ziehl, Univ of South Carolina
- ACOUSTIC EMISSION & CYCLIC LOAD TEST CRITERIA DEVELOPMENT FOR PRESTRESSED GIRDERS, M ElBatanouny, J Mangual, F Barrios, Pl Ziehl & F Matta, Univ of South Carolina, USA
- IDENTIFICATION OF PC CABLES' BREAKAGE BY MEANS OF ACOUSTIC EMISSION ACTIVITY, T Shiotani, Y Oshima & MGoto, Kyoto Univ, S Momoki, Tobishima Corporation, Chiba, Japan
- EVALUATION OF SELF-HEALING EFFECT AGAINST FREEZING & THAWING DAMAGE IN FLY-ASH CONCRETE BY UT METHOD, T Watanabe, Y Fujiwara, C Hashimoto, K Ishimaru, Univ of Tokushima, Japan
- ANALYSIS OF EFFECTS OF DRYING & WETTING ON IMPROVING MICROSTRUCTURE OF COVERCONCRETE BY NEW SURFACE WATER ABSORPTION TEST, U Akmal, A Hosoda, K Hayashi, Yokohama National Univ, Japan
- SURFACE RESISTIVITY MEASUREMENTS AS AN ALTERNATIVE TO THE RAPID CHLORIDE PERMEABILITY TEST FOR ACCEPTANCE OF STRUCTURAL CONCRETE, TD Rupnow & P J Icenogle, Louisiana Transportation Research Center, Baton Rouge, LA, USA

### Concrete & Advanced composites

- FIRE PROTECTION OF CONCRETE MEMBERS STRENGTHENED WITH FIBER REINFORCED POLYMERS, S Witt, Fyfe Company, USA & C Kolyvas, Fyfe Europe, Athens, Greece
- REHABILITATION OF CORRODED COLUMNS WITH CFRP JACKETS & EVALUATION OF HYBRID COLUMNS WITH GFRP SPIRALS IN A CORROSIVE ENVIRONMENT, C P. Pantelides, M E. Gibbons, & L D. Reaveley, Univ of Utah, Salt Lake City, UT, USA
- RETROFITTING OF RC BEAM-COLUMN JOINTS USING EXTERNAL PRE-STRESSING, E E. Etman, A Atta, H Afefy & N Kassem, Tanta Univ, Egypt
- REPAIR OF CONCRETE GIRDERS WITH FLEXURE-SHEAR CRACKS USING EXTERNAL POST-TENSIONED CFRP RODS, C P Pantelides, C A Burningham & L D Reaveley, Univ of Utah, Salt Lake City, UT, USA
- EXPERIMENTAL STUDY ON SHEAR CAPACITY OF R.C T-BEAMS STRENGTHENED WITH CFR PLASTIC, M S Tughar, Al Margeb Univ, Garaboli, Libya
- BONDING TECHNIQUES FOR FLEXURAL STRENGTHENING OF R.C. BEAMS USING CFRP LAMINATES, A M. Morsy, AASTMT, & E M. El-Tony, Alexandria Univ, Egypt.
- EXPERIMENTAL RESULTS OF RESEARCH PROGRAM ON RC SLABS RETROFITTED BY MIXED CFRP SYSTEM, S. C. Florut, V. Stoian, T. Nagy-Gyorgy, D Dan & D. Diaconu, Politehnica Univ of Timisoara, Romania
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- FRP & CONVENTIONAL STRENGTHENING TO PROVIDE STRUCTURAL BEARING CAPACITY AT THE UNDERGROUND CAR PARK, D Kartuzov, M Kurgansky, ZAO "Triada-Holding", Moscow, Russia
- FRP REPAIR FOR RC BEAMS PRE-DAMAGED IN SHEAR, N H El-Ashkar, KM Helmi, AM Morsy, AASTMT, Alexandria, Egypt
- EXPERIMENTAL STUDIES ON STRENGTHENING OF UTILITY TUNNEL SLABS WITH CARBON FIBRE MESHES IN MINERAL MATRIX, Prof., Dr. A Shilin, V.Gaponov, ZAO "Triada-Holding", Moscow, Russia
- STRENGTHENING THIN-WEB PANNEL WITH & WITHOUT OPINING USING (CFRP) LAMINATE, N M Yossef, Tanta Univ, Egypt
- FLEXURAL CAPACITY ANALYSIS OF CONCRETE BEAMS STRENGTHENED WITH EXTERNALLY PRESTRESSED FRP TENDONS, W Xue, Yuan Tan, Tongji Univ, Shanghai, China
- REPAIR OF PRE-LOADED R.C. COLUMNS USING EXTERNAL CFRP SHEETS & EMBEDDED LONGITUDINAL STEEL REINFORCEMENT, A M. Morsy, AASTMT & E M El-Tony, Alexandria Univ, Egypt.
- REHABILITATION OF CORRODED COLUMNS WITH CFRP JACKETS & EVALUATION OF HYBRID COLUMNS WITH GFRP SPIRALS IN A CORROSIVE ENVIRONMENT, C P. Pantelides, M E. Gibbons, & L D. Reaveley, Univ of Utah, Salt Lake City, UT, USA
- FLEXURAL BEHAVIOUR OF CONTINUOUS FRP REINFORCED CONCRETE SLABS, M. E. M. Mahroug, Dr. A. F. Ashour & Pro. D. Lam, Univ of Bradford, Bradford

- EVALUATION OF SHEAR STRENGTH OF MASONRY PANELS THROUGH DIFFERENT EXPERIMENTAL ANALYSES, A Borri, G Castori, M Corradi, Univ of Perugia, Perugia, Italy
- SONIC TOMOGRAPHY APPLIED TO HISTORIC MASONRY STRUCTURES: VALIDATION BY DIFFERENT COMPUTER CODES, R Felicetti, L Cantini, L Zanzi, L Binda, S. Munda, Poli di Milano, MRValluzzi, Univ of Padua, Italy
- ON SITE INVESTIGATION & CRACK MONITORING OF AN ANCIENT BELL-TOWER, L Binda, P Condoleo & C Tiraboschi, Politecnico di Milano, Milan, Italy
- STRENGTHENING OF BRICK MASONRY VAULTS BY COMPATIBLE COMPOSITE MATERIALS, L Garmendia, P Larrinaga, D Garcia, J Diez, R San-Mateos, Tecnalia, Derio – Bizkaia, Spain
- EFFECT OF DIFFERENT ADMIXTURES ON GROUT BEHAVIOUR FOR MASONRY CONSOLIDATION, L G. Baltazar, FMA, Henriques, F Jorne, Univ Nova de Lisboa, Caparica, Portugal
- NON DESTRUCTIVE INVESTIGATION FOR DIAGNOSIS OF MASONRY DAMAGED BY EARTHQUAKE & AS A SUPPORT FOR CHOICE OF REPAIR TECHNIQUES, L. Cantini, C. Tedeschi, P. Condoleo, L. Binda, Poli di Milano, Italy

### Steel

- EXPTL STUDY ON BONDING CHARACTERISTICS & FLEXURAL STRENGTHENING EFFECT OF STRAND SHEET BONDING METHOD FOR STEEL BEAMS, M. Nagai, Nagaoka Univ of Tech, Hidekuma, T.Miyashita, Y.Okuyama, A.Kudo, A.Kobayashi, Nippon Steel Composite Company, Ltd, W Horimoto, Kurabo Industries, Ltd, Japan
- SHEAR BUCKLING TEST OF STEEL GIRDER BONDED CARBON FIBER REINFORCED PLASTIC ON ITS WEB, T Miyashita, Y Okuyama, M Nagai, Nagaoka Univ of Technology, D Wakabayashi, Nippon Expressway Research Institute Co Ltd, N Koide, Kawasaki Heavy Industries Ltd, Y Hidekuma, A Kobayashi, Nippon Steel Composite Co, Ltd, W Horimoto, Kurabo Industries, Ltd

### Civil & Structural Repair

- CASE STUDY ON THE REHABILITATION OF THE BELL ALIANT COMMUNICATIONS TOWER, J Percival, Fibrwrap Construction Canada Ltd, Coquitlam, BC, Canada
- FAILURES IN LARGE GLULAM MEMBERS – MAJOR CAUSALITIES & ADHESIVE BASED REPAIR, S Aicher, Univ Stuttgart, Germany
- PHYSICAL MODEL TESTS & NUMERICAL SIMULATION FOR ASSESSING THE STABILITY OF TUNNELS, HM Chen, Prof HS Yu & M Smith, Univ of Nottingham, UK
- MATERIALS & TECHNIQUES FOR THE RESTORATION OF HISTORIC LIGHTHOUSES, I Papayianni, V Pachta, Aristotle Univ of Thessaloniki, Greece
- ASSESSMENT METHODOLOGY OF CONCRETE GRAVITY DAMS, R Folic, UNIV of Novi Sad, D Zenuonovic, Univ of Tuzla, Serbia
- CHAMBER OF VALVES IN THE ARENOSO RESERVOIR, Prof C J Cabanes, Polytechnic Univ of Madrid, Madrid, Spain
- SEISMIC PROTECTION OF EARTHEN BUILDINGS VIA CONNECTIONS IMPROVEMENT. A COMPARISON BETWEEN EARTH BLOCK MASONRY & RAMMED EARTH, U Müller, L Miccoli, A Gardei, BAM, Berlin, Germany
- CONCEPT OF STRUCTURAL HEALTH MONITORING OF EXISTING UNIQUE MARINE STRUCTURES, Dr. A Kirilenko, Dr. A Baukov, ZAO "Triada-Holding", Russia

### NDT & Structural Health Monitoring

- AXIAL STRESS EVALUATION OF GROUND ANCHORS WITH REFLECTION WAVES OF ULTRASONIC, K Iwamoto, Ti Shiotani, H Ohtsu, Kyoto Univ, S Yanagisako, T Hamasaki & Y Maeda, West Nippon Expressway Company Limited, Japan
- GPR INVESTIGATIONS AT WESTMINSTER ABBEY, E Utsi, Utsi Electronics Ltd, Harston, Cambridge, UK
- ACOUSTIC EMISSION SIGNATURE OF FRACTURE MODES I, II & III IN METAL PLATES, T. E. Matikas, G. Spiridon, D. G. Aggelis, Univ of Ioannina, Greece
- NDT & DIAGNOSTIC RESEARCH METHODS ON BUILDING & PAINTING - A CASE STUDY OF TAIWAN'S TRADITIONAL TEMPLE, C Li-Fen, H Min-Fu, National Cheng Kung Univ, Taiwan
- MEASUREMENT OF INSULATION COMPACTION IN THE CRYOGENIC ROCKET FUEL TANKS AT KENNEDY SPACE CENTER BY FAST/THERMAL NEUTRON TECHNIQUES, RA Livingston, Univ of Maryland, College Park, MD, J.S. Schweitzer, Univ of Connecticut, Storrs, CT, A.M Parsons, Goddard Space Flight Center, Greenbelt, MD, E.E. Arens, John F. Kennedy Space Center, FL, USA
- HORIZONTAL & VERTICAL GPR SURVEY FOR ROAD EMBANKMENT ANALYSIS: A CASE STUDY, C Kaouane, C Fauchard, CETE-Normandie Centre, France
- CONCEPT OF STRUCTURAL HEALTH MONITORING OF EXISTING UNIQUE MARINE STRUCTURES, Dr. A Kirilenko, Dr. A Baukov, ZAO "Triada-Holding", Russia
- EVALUATING & ISOLATING GROUND BORNE VIBRATIONS IN BUILDINGS FROM HIGH SPEED TRAINS, D Connolly, A Giannopoulos, MC Forde, Univ of Edinburgh & PK Woodward, Heriot-Watt Univ, Edinburgh, UK

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## Keynote Papers

- AVOIDING STRUCTURAL FAILURES IN CONSTRUCTION, PL Popovic, President of IABSE, Wiss, Janney, Elstner Associates, Inc, Northbrook, IL, USA
- CONDITION ASSESSMENT AND STRENGTH EVALUATION OF CABLE-SUPPORTED BRIDGES, Dr K Mahmoud, Bridge Technology Consulting, New York, NY, USA

## Theme 1: Bridge Inspection & Repair

### NDT & Structural Health Monitoring of Bridges

- EXTENDING THE LIFE OF BRIDGES – THE BENEFITS OF CONDITION MONITORING, Dr D Pearson-Kirk, EnterpriseMouchel, Exeter, UK
- 10 YEAR ANNIVERSARY OF BELFA – LOAD TESTS HELP TO EXTEND LIFETIME OF BRIDGES, Prof M Gutermaun, & C Schröder, Univ of Applied Sci, Bremen, Germany
- APPLICATION OF ACOUSTIC EMISSION DURING PROOF LOADING OF AN OLD REINFORCED CONCRETE BRIDGE DECK, K.K. Minalu, J.A. den Uijl, J.C. Walraven, Delft Univ of Technology, A B. Suma, TNO innovation for life, Delft, The Netherlands
- ACOUSTIC EMISSION TESTING OF GFRP BRIDGE DECKS, HR. Hamilton, R Ascencio, Univ. of Florida, Gainesville, FL, USA
- LONG-TERM MONITORING OF A PRESTRESSED CONCRETE BOX GIRDER BRIDGE BY ACOUSTIC EMISSION – PLANNING & EXECUTING, M Kalicka, T Vogel, ETH Zurich, Switzerland
- MULTI-MODAL REMOTE SENSING SYSTEM FOR THE SURFACE & SUBSURFACE INSPECTION OF BRIDGES, T Yu, C Niezrecki, C P Lai, Y J Ren, S Ahmed, C Noris, Univ of Massachusetts Lowell, MA, USA

### Post-Tensioned Bridges

- EXTENDING THE LIFE OF P-T CONCRETE BRIDGES IN THE UK, K J Barker & R J Woodward, TRL Limited, Crowthorne, UK.
- PERFORMANCE OF POST-TENSIONED BRIDGES, Dr D Pearson-Kirk, EnterpriseMouchel, Exeter, S Pottle, K Duguid, Transport for London, London, UK

### Concrete & GFRP Bridges

- ASSESSMENT & REPAIR OF A FIRE-DAMAGED CONCRETE BRIDGE, M De-Melo, K Harwood, M Gonzalez-Quesada, Arup, Solihull, UK
- SULFATE ATTACK OF ABOVE GROUND COMPONENTS OF HIGHWAY STRUCTURES, Dr D Pearson-Kirk, R Langworthy, EnterpriseMouchel, Exeter, UK
- REPAIR & STRENGTHENING OF DETERIORATED CONCRETE BRIDGES INCLUDING CASES FROM DENMARK & UK, U S Andersen, P Jackson, Ramboll UK & H O Nielsen, Danish Road Directory, Denmark

## Theme 2: Concrete & Composites

### Concrete Diagnosis

- SPALLING REPAIR & MAINTENANCE DURING CONDITION SURVEY EXTENDS LIFE SPAN OF HIGH RISE CONCRETE STRUCTURES, Dr. LL. Luke, Construction Management Inspection, LLC, Honolulu, HI, USA
- DIAGNOSIS OF CONCRETE STRUCTURES EXPOSED TO FIRE, E Annerel, L Taerwe, Ghent Univ, Belgium
- INFLUENCE OF CHLORIDE INDUCED CORROSION ON BOND STRENGTH OF CONFINED & UNCONFINED REINFORCED CONCRETE, T.C.K Molyneux, D. Law, R.J. Gravina & D.L. Tang, RMIT Univ, Melbourne, Australia
- DETERIORATION OF HPC FROM ACCELERATED CARBONATION & CHLORIDE INGRESS, Y Wang, Prof M Basheer, S Nanukuttan, Y Bai, Queen's Univ, Belfast, NI, UK

### Cathodic Protection

- CATHODIC PREVENTION & PROTECTION OF REINFORCED CONCRETE STRUCTURES, YY Wu, Structural Group, Inc., Accord, NY, USA
- INVESTIGATIONS ON THE SECONDARY PROTECTION MECHANISMS IN CATHODIC PROTECTION APPLICATIONS, T Eichler, B Isecke & Gerd Wilsch, BAM, Berlin, Germany

### Concrete & Concrete Repair

- RELIABLE CONCRETE REPAIR-A CRITICAL REVIEW, Ma Luković, G Ye, K van Breugel, Delft Univ of Technology, Delft, The Netherlands
- HIGH PERFORMANCE REPAIR SYSTEM FOR REHABILITATION OF CORRODED REINFORCEMENT IN RC COLUMNS, M Tavallae, Kingston Univ London, UK.
- REHABILITATION OF A 40 YEARS OLD RC FRAME BUILDING WHILE IN SERVICE, Dr. K Al-Deen Bsisu, Univ of Jordan, Amman, Jordan
- ZERO CORROSION MAINTENANCE, K Irving, AZZ Galvanising Services, Joliet, IL, USA
- INFLUENCE OF CASTING CONSOLIDATION ON CONCRETE DURABILITY, Y.Fu, J.Q.Zhang, S.Q. Zhang, W.H. Li, MOT, Beijing, 1 W. Sun, Northeastern Univ, Nanjing, China
- IMPROVED DURABILITY OF CONCRETE BY EARLY-AGE CARBONATION TREATMENT, Y Shao, V Rostami, A J. Boyd, McGill Univ, Montreal, Canada & Z He, Wuhan Univ, China
- EFFECT OF LIGHTWEIGHT AGGREGATE MOISTURE CONTENT ON INTERNALLY CURED CONCRETE, C Jones, D R. Goad, W. M Hale, Univ of Arkansas, USA
- USE OF FLY ASH IN CONCRETE DAM TO REDUCE CA LEACHING DAMAGE, Z He, H Sun, Wuhan Univ, China, & Y Shao, McGill Univ, Montreal, Canada.
- IDENTIFICATION OF HARDENING PROCESS IN CONCRETE VIA THE INVERSE HEAT TRANSFER PROBLEM (IHTP), G Knor, M A Glinicki, J Holnicki-Szulc, Polish Academy of Sciences, Warsaw, Poland
- INNOVATIVE METHOD FOR STRENGTHENING REINFORCED CONCRETE SLABS USING PRESTRESS, EXPERIMENTAL STUDY, D Faria, Univ Nova de Lisboa, Caprica, Portugal
- EFFECT OF PRELOADING ON FLEXURAL BEHAVIOR OF RC CANTILEVER SLABS STRENGTHENED USING EXTERNAL PRESTRESSING, M. Hussein, Tanta Univ, Egypt
- REHABILITATION OF A FORTY YEARS OLD REINFORCE CONCRETE FRAME BUILDING WHILE IN SERVICE, Dr. K Al-Deen Bsisu, Univ of Jordan, Amman, Jordan
- REPLACEMENT & RELOCATION OF REINFORCED FRAME COLUMNS USING PRESTRESSING CABELS, L Kusaček, Z Bazant, Ji Strnad, TU Brno, Czech Republic
- EXPTL ANCHORAGE BOND-SLIP TEST OF REINFORCING STEEL BARS ANCHORED IN REPAIR MORTARS, Prof. R Nsambu, Agostinho, Neto Univ, Luanda, Angola & Prof. A Gomes, Technical Univ of Lisbon, Portugal

### Concrete Behaviour

- WATER EXTRACTION FROM PLANETARY SURFACES, H. Toutanji & C. Goff, Univ of Alabama in Huntsville, Dept. of Civil Engineering, Huntsville, AL, USA
- PROPERTIES OF MICRO EXPANSIVE CONCRETE WITH INCORPORATION OF LIGHT-BURNT MGO, X Chen, H Yang, Changjiang River Scientific Research Institute, Wuhan, W Li, China Three Gorges Corporation, P.R.China

## Theme 3: Conservation, Recycled Materials, & Repair of Buildings

### Conservation

- STITCHING THE PAST - "THE STRENGTHENING OF TWO HERITAGE MARINE STRUCTURES IN JERSEY WITH NEEDLING TECHNOLOGY", S Hold, Arup, Cardiff, UK
- REPAIR OF PIERS, SLIPS & JETTIES, R Curtis, Historic Scotland, Edinburgh, UK
- STRUCTURAL REPAIR & RETROFIT OF OLD HISTORICAL BUILDING IN CENTRAL PART OF BULGARIA, I Geshanov, K&G Consult, Sofia, Bulgaria
- RESTORATION & REHABILITATION CONCEPT OF A 19TH CENTURY PUBLIC CONSTRUCTED IN SECESSION STYLE, Z Jaksic, M Trivunic, N Harmati, Univ of Novi Sad, Serbia
- REHABILITATION & REPAIR OF THE STRUCTURAL ELEMENTS OF INDUSTRIAL BUILDINGS & FACILITIES, A Traykov, Univ of Architecture, Sofia, Bulgaria
- REHABILITATION OF STRUCTURES OF BUILDINGS OF THE BULGARIAN HISTORICAL HERITAGE – PROBLEMS, SOLUTIONS, RECOMMENDATIONS, M Traykova, Univ of Architecture, Sofia, Bulgaria
- ELECTROKINETIC DESALINATION OF SALT INFECTED MASONRY OF A HISTORIC WAREHOUSE, L M. Ottosen & I V. Christensen, Technical Univ of Denmark
- DYNAMIC TESTS ON A STRENGTHENED CROSS VAULT, C Mouzakis, C E Adami, L Karapitta, E Vintzileou, National Technical Univ of Athens, Greece
- SUSTAINABLE REPAIR & REFURBISHMENT OF THE LION CHAMBERS IN GLASGOW, Dr B Dimitrijevic, Glasgow Caledonian Univ, Glasgow UK
- SEISMIC BEHAVIOUR OF A TRADITIONAL STONE MASONRY BUILDING MODEL WITH TIMBER TIES BEFORE & AFTER REHABILITATION, C E Adami, E Vintzileou, C Mouzakis, L Karapitta, National Technical Univ of Athens, Greece
- NON-DESTRUCTIVE TESTING OF HISTORIC MONUMENTS, J. Frick, F. Lehmann, Univ Stuttgart, Germany
- INTERVENTIONS TO HISTORIC MASONRY BUILDINGS: THEIR EFFECT ON THE DYNAMIC BEHAVIOUR OF A THREE LEAF STONE MASONRY MODEL, C Mouzakis, E Vintzileou, C E Adami, L Karapitta, National Technical Univ of Athens, Greece
- ACOUSTIC EMISSION OF MARBLE MEASURED IN THE LABORATORY, P.P. Nomikos, K.M. Sakkas, G. Papandonopoulos, A.I. Sofianos, National Tech Univ of Athens, Greece
- PLASTIC REPAIR OF STONE: PROS & CONS OF 'RESTORATION MORTARS', C Torney, Historic Scotland, Edinburgh, UK
- PLASTIC REPAIR OF STONE: PROS & CONS OF 'RESTORATION MORTARS', C Torney, Historic Scotland, Edinburgh, UK
- IN-SITU PROTECTION OF OLD BUILDINGS & SYNERGY ANALYSIS WITH NEW CONSTRUCTION, S He, C Shen, L Xia, Xn Zhao, CCDI, China
- STANDARDS FOR RESTORATION OF BUILT HERITAGE ENDANGERED BY NATURAL HAZARDS, N Kurtovic-Folic, Univ of Novi Sad, Serbia

### Recycled Materials

- EFFECTS OF RECYCLED CONCRETE AGGREGATE SURFACE TREATMENTS ON RECYCLED AGGREGATE CONCRETE, A E Geister, Atkinson-Noland & Assoc Inc, Y Xi, YC Liang, Univ of Colorado, Bolder, CO, USA
- EVALUATION OF ENVIRONMENTAL ECONOMICS ON RECYCLING OF CONSTRUCTION WASTES, T Isoda, S Inazumi, H Ohtsu & T Shiotani, Kyoto Univ, Japan

- MECHANISMS OF CORROSION-INDUCED CRACKS IN REINFORCED CONCRETE BY BEM & AE-SIGMA, Y Kawasaki, T Kobara & M Ohtsu, Kumamoto Univ, Japan
- FORTH ROAD BRIDGE: REPLACEMENT OF VIADUCT BEARINGS, C Hendy, Atkins, London & B Colford, FETA, South Queensferry, UK

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