INDEX BY TOPIC

00 STATE OF THE ART

2824 NON-ENGINEERED CONSTRUCTION IN DEVELOPING COUNTRIES – AN APPROACH TOWARD EARTHQUAKE RISK REDUCTION
   Anand ARYA

2825 PASSIVE CONTROL OF STRUCTURES FOR SEISMIC LOADS
   Ian BUCKLE

2826 RISK ASSESSMENT AND RETROFIT OF EXISTING BUILDINGS
   William HOLMES

2827 ENGINEERING MANAGEMENT OF LIFELINE SYSTEMS UNDER EARTHQUAKE RISK
   Hiroyuki Kameda

2828 SEISMIC DESIGN AND RETROFIT OF BRIDGES
   Kazuhiko KAWASHIMA

2829 ADVANCES IN SEISMIC RISK MANAGEMENT IN DEVELOPING COUNTRIES
   Shirley MATTINGLY

2830 DESIGN FOR LOW/MODERATE SEISMIC RISK
   Paolo PINTO

2831 PERFORMANCE BASED SEISMIC DESIGN
   M PRIESTLY

2832 GEOTECHNICAL FACTORS IN SEISMIC DESIGN OF FOUNDATIONS STATE-OF-THE-ART REPORT
   Silvia GARCÍA, Manuel MENDOZA, Miguel ROMO

2833 SEISMIC HAZARD EVALUATION
   PAUL SOMERVILLE

2834 ACTIVE, SEMI-ACTIVE AND HYBRID CONTROL OF STRUCTURES
   T SOONG, B SPENCER, Jr

01 EARTHQUAKE ENGINEERING IN DEVELOPING COUNTRIES

0182 EARTHQUAKE VULNERABILITY EVALUATION OF BUILDINGS IN BANDUNG MUNICIPALITY
   Adang SURAHMAN

0225 EVALUATION OF THE OUTCOME OF THE IDNDR PROGRAMME AND EARTHQUAKE RISK REDUCTION IN PERU
   Julio Kuroiwa

0309 TECHNO-LEGAL REGIME FOR EARTHQUAKE RISK REDUCTION IN INDIA
   Anand ARYA, T GUPTA

0468 A RACE WITH TIME IN THE EASTERN MEDITERRANEAN REGION
   Walter HAYS

0508 REDUCING EARTHQUAKE VULNERABILITY THROUGH ENVIRONMENTAL JUSTICE: A CASE COMPARISON FROM INDIA
   Martha KIRPES

0582 EARTHQUAKE RESISTANT DESIGN AND CONSTRUCTION PRACTICES IN JAMAICA, WEST INDIES
   George BLANKSON

0618 PRACTICAL REHABILITATION OF BUILDINGS IN CRITICAL CONDITIONS
   W Lobo-Quintero1

0786 IMPLEMENTATION OF THE IDNDR-RADIUS PROJECT IN LATIN AMERICA
   Carlos Villacis, Cynthia Cardona

0788 THE KATHMANDU VALLEY EARTHQUAKE RISK MANAGEMENT PROJECT: AN EVALUATION
   Shiva Pradhanang, Brian Tucker, Mahesh Nakarmi, Laura Dwelley-Samant, Amod Dixit

0791 A PROJECT TO STUDY URBAN EARTHQUAKE RISK WORLDWIDE
   Carlos VILLACIS, Cynthia CARDONA, Brian TUCKER, Rachel DAVIDSON

0796 IMPLEMENTATION OF FAST EARTHQUAKE SCENARIOS FOR RISK MANAGEMENT IN DEVELOPING COUNTRIES
   Cynthia CARDONA, Brian TUCKER, Carlos VILLACIS

0960 AN INNOVATIVE HOOK-CLIP FOR PERFORMANCE IMPROVEMENT OF REINFORCED CONCRETE TIED COLUMNS
   Panitan LUKKUNAPRASIT

1239 IMPROVEMENT ON LOW COST HOUSING THROUGH NON-CONVENTIONAL CONSTRUCTION SYSTEMS
   Jorge GALLARDO, Carlos ZAVALA

1284 EFFECT OF ASEISMIC DESIGN ON BUILDING COST IN EGYPT
   Yasser EL-HAKEM, Mohamed SOBAIH

1444 STRATEGIES TO EXPAND EARTHQUAKE MITIGATION IN MACEDONIA
   Timiovksa LENKA
### INDEX BY TOPIC

#### 01 EARTHQUAKE ENGINEERING IN DEVELOPING COUNTRIES

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1780</td>
<td>A MASONRY DESIGN STANDARD FOR USE IN DEVELOPING COUNTRIES</td>
<td>Jason INGHAM</td>
</tr>
<tr>
<td>1792</td>
<td>HISTORICAL DEVELOPMENTS AND CURRENT STATUS OF EARTHQUAKE ENGINEERING IN INDIA</td>
<td>Sudhir JAIN, Navin NGAM</td>
</tr>
<tr>
<td>1808</td>
<td>AN INTEGRATED PUBLIC POLICY TOWARD NATURAL HAZARD MITIGATION: CAN URBAN PLANNING AND CONSTRUCTION SUPERVISION FIX ECONOMIC LOSSES?</td>
<td>Murat BALAMIR, Polat GULKAN, Halak SUCUOGLU</td>
</tr>
<tr>
<td>1855</td>
<td>PERFORMANCE-BASED EARTHQUAKE-RESISTANT DESIGN OF CONFINED MASONRY WALLS</td>
<td>Victor Rodriguez, Mario Rodriguez</td>
</tr>
<tr>
<td>1881</td>
<td>SEISMIC CAPACITY EVALUATION AND RETROFITTING OF ADOBE CONSTRUCTIONS</td>
<td>Raúl VERA, Angel ALBITER, Sandra MIRANDA</td>
</tr>
<tr>
<td>1904</td>
<td>PREDICTION OF THE PROBABILITY OF EARTHQUAKE DAMAGE TO EXISTING BUILDINGS IN CHINA</td>
<td>Zengping Wen, Hussain Hu</td>
</tr>
<tr>
<td>2064</td>
<td>SKELETON SYSTEM - AN APPROACH FOR CONSTRUCTION OF RURAL BUILDINGS IN EARTHQUAKE PRONE AREAS</td>
<td>V MATHUR, N GOEL</td>
</tr>
<tr>
<td>2110</td>
<td>STRATEGIES FOR SEISMIC PREVENTION IN SCHOLAR’S BUILDINGS</td>
<td>Osvaldo ALBARRACÍN, Mota ROMERO, Aldo ZARAGOZA, Marta MARTINET</td>
</tr>
<tr>
<td>2130</td>
<td>SEISMIC SAFETY IN OWNER-BUILT BUILDINGS</td>
<td>Jitendra Bothara, Richard Sharpe, Anand Arya, Yogeshwar Parajuli</td>
</tr>
<tr>
<td>2146</td>
<td>NEPAL BUILDING CODE - NEED, DEVELOPMENT PHILOSOPHY AND MEANS OF IMPLEMENTATION</td>
<td>Yogeshwar Parajuli, Jyoti Pradhan, Anod Dixit, Richard Sharpe, Jitendra Bothara</td>
</tr>
<tr>
<td>2151</td>
<td>SEISMIC HAZARD ASSESSMENT - PRACTICAL CONSIDERATIONS</td>
<td>Richard Sharpe, Robert Jary</td>
</tr>
<tr>
<td>2163</td>
<td>THE IMPACT OF THE ‘BUILDING FOR SAFETY PROJECT’ ON EARTHQUAKE RISK REDUCTION IN DEVELOPING COUNTRIES</td>
<td>Ian Davis, Robin SPENCE</td>
</tr>
<tr>
<td>2187</td>
<td>AN INITIATIVE TO REDUCE EARTHQUAKE RISK IN MAHARASHTRA, INDIA:</td>
<td>Frederick KRIMGOLD, Marjorie GREENE, Svetlana NIKOLIC-BRZEV, Jelena PANTELEC, Krishna VATSA</td>
</tr>
<tr>
<td>2266</td>
<td>DISASTER RECOVERY AND MITIGATION AS SUSTAINABLE DEVELOPMENT TOOLS: THE CASE OF THE 1993, MAHARASHTRA (INDIA) EARTHQUAKE</td>
<td>Frederick KRIMGOLD, Marjorie GREENE, Svetlana NIKOLIC-BRZEV, Jelena PANTELEC</td>
</tr>
<tr>
<td>2290</td>
<td>OVERVIEW OF THE MAHARASHTRA, INDIA EMERGENCY EARTHQUAKE REHABILITATION PROGRAM</td>
<td>Marjorie GREENE, Frederick KRIMGOLD, Jelena PANTELEC, Svetlana NIKOLIC-BRZEV, Chandra GODAVITARNE</td>
</tr>
<tr>
<td>2380</td>
<td>EARTHQUAKE HAZARD MITIGATION ACHIEVEMENT IN IRAN</td>
<td>Mohsen Tehranizadeh, Mohsen GHAFORY-ASHTIANY, Mohammad-Kazem Jafari</td>
</tr>
<tr>
<td>2465</td>
<td>CHALLENGES IN THE IMPLEMENTATION OF EARTHQUAKE DISASTER REDUCTION PROGRAMS</td>
<td>Sergio ALCOCER, Roberto MELI</td>
</tr>
<tr>
<td>2526</td>
<td>METHODOLOGY OF ASSESSMENT AND MITIGATION OF URBAN SEISMIC RISK, TAKING INTO ACCOUNT VARIABILITY OF SEISMIC HAZARD PARAMETERS</td>
<td>Bakhtiar NURTAEV, Shamil KHAKIMOV, Rastam IBRAGIMOV</td>
</tr>
<tr>
<td>2527</td>
<td>REVIEW ON THE RADIUS TRAINING COURSE IN BRI</td>
<td>Hatsukazu Mizuno</td>
</tr>
<tr>
<td>2528</td>
<td>RADIUS INITIATIVE FOR IDNDR - HOW TO REDUCE URBAN SEISMIC RISK</td>
<td>Kenji Okazaki, RADIUS Team</td>
</tr>
<tr>
<td>2530</td>
<td>RADIUS PROJECT IN ASIA – COMMENTS FROM THE INTERNATIONAL ADVISORY MEMBERS</td>
<td>Tsunehisa TSUGAWA, Jack RYNN, Anand ARYA</td>
</tr>
<tr>
<td>2532</td>
<td>SUVA EARTHQUAKE RISK MANAGEMENT SCENARIO PILOT PROJECT (SERMP)</td>
<td>Jack RYNN, Josefa SERULAGILAGI, Atu KALOUMARIA, Allan HULL</td>
</tr>
<tr>
<td>2540</td>
<td>RADIUS PROJECT IN TASHKENT, UZBEKISTAN</td>
<td>Sergey TYAGUNOV, Shamil KHAKIMOV, Rajib SHAW, Akham MIRJALLOV, Ken SUDO, Tursunbay RASHIDOV</td>
</tr>
<tr>
<td>2581</td>
<td>SEISMIC RISK ASSESSMENT METHODS AND APPLICATION IN CHINA</td>
<td>Ming Lu</td>
</tr>
<tr>
<td>2582</td>
<td>DEMONSTRATED PROJECT FOR SEISMIC HAZARD PREVENTION AND REDUCTION IN MINNAN AREAS, SOUTH FUJIAN PROVINCE</td>
<td>Jinhai Chen, Yunlian Du</td>
</tr>
</tbody>
</table>
INDEX BY TOPIC

01 EARTHQUAKE ENGINEERING IN DEVELOPING COUNTRIES

2583 THE EARTHQUAKE DISASTER PREDICTION AND DECISION SUPPORT SYSTEM IN SOUTHERN AREA OF FUJIAN PROVINCE IN CHINA
   Xiaoxian Wang, Xiangrong Huang

2670 ASSESSMENT OF VULNERABILITY AND RISK OF LIFELINE SYSTEMS WITHIN THE FRAMEWORK OF THE RADIUS PROJECT FOR TASHKENT
   Tursunbay RASHIDOV, Elena KUZMINA, Atkham MIRJALILOV

2695 GENERAL ASPECTS OF SEISMIC RISK REDUCTION IN THREATENED REGIONS
   Darius AMIR-MAZAHERI

2818 HOW DO WE EVALUATE IDNDR?
   Li-Li Xie

2820 RADIUS – AN IDNDR PROJECT ON URBAN EARTHQUAKE RISK MANAGEMENT
   Carlos Villacis

2820 WSSI-AN IAEE’S UNDERTAKING FOR IDNDR
   Tsuneo KATAYAMA

02 EARTHQUAKE ENGINEERING IN PRACTICE

0133 SEISMIC RESPONSE OF GRAVITY DAMS - CORRELATIONS BETWEEN SHAKE TABLE TESTS AND NUMERICAL ANALYSES
   Martin Leclerc, Pierre Leger, Rene Tinawi

0232 EFFECTS OF JOINT OPENING AND MATERIAL NONLINEARITY ON THE SEISMIC RESPONSE OF A CONCRETE ARCH DAM
   Soheil Razavi, Hiroyaki Watanabe

0402 SEISMIC MONITORING OF NUCLEAR POWER PLANT: AN APPROACH TO OPTIMAL AND MORE ACCURATE SEISMIC DATA PROCESSING AND INTERPRETATION PROCEDURE
   Dimco MAMUCEVSKI, Dragi DOJCINOVSKI

0808 ENGINEERING PROPERTIES OF BEDROCK AT THE LIANYUNGANG NPP SITE IN CHINA
   Yoshiharu KIYOTA, Zhi QIAO, Takaaki KONNO

0890 ENSURING SEISMIC RESISTANCE OF BRIDGE CROSSINGS ON THE RAILWAY LINE IN DAGHESTAN (RUSSIA)
   V Sarovtsev, V Seliverstov, M Sokolov

0911 SEISMIC DESIGN STRATEGY OF THE NEW EAST BAY BRIDGE SUSPENSION SPAN
   Marwan Nader, Rafael Manzanarez, Brian Maroney

0964 MEASUREMENT OF DYNAMIC PROPERTIES AND EVALUATION OF LIQUEFACTION POTENTIAL OF A 500MW Prototype Fast Breeder Reactor Site Located in South of India
   P C Koteswara Rao, A Boominathan, S Hari, C Sivathana Pillai

1155 THE STRENGTHENING OF AUCKLAND TOWN HALL
   Trevor ROBERTSON

1200 SEISMIC PROTECTION OF ITALY’S HISTORIC HERITAGE USING THE SEISMIC ISOLATION APPROACH
   Alberto PARDUCCI

1336 A PRACTICAL PROPOSAL FOR SEISMIC ISOLATION DESIGN AGAINST EXTREMELY STRONG EARTHQUAKES
   Takayuki SHIMAZU, Ali BAKHSHI, Hideo ARAKI

1398 DAMAGE-TOLERANT DESIGN IN SHANGHAI JINMAO-TYPE BUILDINGS
   Ruichong Zhang

1578 AUCKLAND HARBOUR BRIDGE SEISMIC RETROFIT
   Michael BEAMISH, Ian BILLINGS

1636 HEART MEMORIAL MINING BUILDING SEISMIC IMPROVEMENTS, UNIVERSITY OF CALIFORNIA, BERKELEY
   Douglas ROBERTSON, Harold DAVIS

1713 DEVONPORT ROYAL DOCKYARD NUCLEAR SAFETY UPGRADE
   Philip Hoby, Steven Drew

1714 ON THE DESIGN HISTORY OF A HYDROELECTRIC POWER PLANT IN TECTONIC ACTIVE ENVIRONMENTS
   Jóhla Sigtryggsson, Ragnar Sigbjörnsson, Jónas Snæbjörnsson, Jan Henje

1738 HYBRID EARTHQUAKE LOADING TEST (PSEUDO-DYNAMIC TEST) OF BI-DIRECTIONAL BASE ISOLATION BEARING FOR A LARGE PEDESTRIAN BRIDGE
   Hirokazu IEMURA, Shuji IWATA, Atsushi HONDA, Katuhira SAKAI, Toru FUKUSHIMA, Kouichi SUGIYAMA

1779 EARTHQUAKE SAFETY OF AN ARCH-GRAVITY DAM WITH A HORIZONTAL CRACK IN THE UPPER PORTION OF THE DAM
   Sujan Malla, Martin Wieland

1781 SEISMIC EARLY WARNING SYSTEM FOR A NUCLEAR POWER PLANT
   Lothar Griesser, Martin Wieland, Christoph Kuendig
INDEX BY TOPIC

02 EARTHQUAKE ENGINEERING IN PRACTICE

1879 SEISMIC REHABILITATION OF NONDUCTILE REINFORCED CONCRETE GRAVITY FRAME
Javeed MUNSHI

2011 SEISMIC REHABILITATION OF JUSTICE HEADQUARTERS BUILDING OTTAWA, CANADA
Avtar Pall, Rashihi ‘Tina’ Pall, John Elliot, Guru Guruswamy, John Balazic

2120 THE EFFECTIVENESS OF LIGHT INTERVENTIONS OF ANTI-SEISMIC REINFORCEMENTS ON A MASONRY BUILDING
Luca FACCHINI, Andrea VIGNOLI, Sandro CHIOSTRINI

2141 INTERFEROMETRIC CHARACTERIZATION OF AREAS DAMAGED BY THE 1995 KOBE EARTHQUAKE USING SATELLITE SAR IMAGES
Masashi MATSUOKA, Fumio YAMAZAKI

2157 DYNAMIC MONITORING OF THE CONFEDERATION BRIDGE
David LAU, M CHEUNG, W Li

2213 DEVELOPMENT OF A NEW SI SENSOR
Hiroyuki FURUKAWA, Kenichi KOGANEMARU, Kou TAKUBO, Yoshihisa SHIMIZU, Takashi YANADA, Wataru NAKAYAMA

2255 GIS-BASED EARTHQUAKE DAMAGE ANALYSIS IN THE GREATER CAIRO AREA
Amr Sadek, Ayman Solaiman, Mostafa Baraka

2375 EXPERIENCE OF RECONSTRUCTION AND REHABILITATION OF HISTORICAL BUILDINGS IN THE DOWNTOWN OF TBLISI
Merab Mamardashvili, Givi Homeriti, Igor Timchenko, Hugh Docherty

2393 SEISMIC RETROFIT OF FEDERAL BUILDINGS IN CANADA
Gerald DAVY, Jacques GRANADINO

2440 AN EXPERIMENTAL STUDY OF THE DYNAMIC CHARACTERISTICS OF VISCOUS FLUID DAMPERS FOR BASE ISOLATED BUILDING
Hyung-Oh Kwon, Min-ki Jeong, Doo-Hoon KIM

2490 ACTIVE FAULTS IN DAM FOUNDATIONS: AN UPDATE
Clarence ALLEN, Lloyd CLUFF

2492 EARTHQUAKE RESISTANCE OF LARGE DAMS IN CHINA
Houqun CHEN

2614 LONG SPAN BRIDGES IN CALIFORNIA - SEISMIC DESIGN AND RETROFIT ISSUES
Frieder Seible

2616 SEISMIC RETROFIT OF LONG BRIDGES IN THE HANSHIN EXPRESSWAY
Kozo NISHIMORI, Toshihiko NAGANUMA, Yukio ADACHI

2650 SEISMIC SAFETY ASSESSMENT OF TWO CONCRETE DAMS IN A CASCADE DEVELOPMENT - INVESTIGATIONS INTO THE USE OF QUALITATIVE RISK ANALYSIS TECHNIQUES
Benedict FAN, Desmond HARTFORD, Gilbert SHAW

2651 SEISMIC SAFETY ASSESSMENT OF DAMS AND APPURTRAN WORKS FOR AREAS OF LOW TO MODERATE SEISMICITY
Jim Hall, John Davis, Colin Taylor

2661 CONSIDERATION OF EARTHQUAKES IN THE DESIGN OF THE MACAU TOWER
Dejan Novakov, Rob Jury, Mark Spencer

2712 MATAHINA DAM - FAULT SURFACE DISPLACEMENT DESIGN CRITERIA
Murray Gillon, Kelvin Berryman, Paul Somerville, Tom Freeman, Lelio Mejia, Yoshihara Moriwaki

2792 SEISMIC STUDIES OF THE SAN FRANSISCO-OAKLAND BAY BRIDGE
Shawn LAUSEN, Abolhassan ASTANEH-ASL, David MCCALLEN

2793 SEISMIC DESIGN AND BEHAVIOR OF THE HIGASHI-KOBE BRIDGE AND RESTORATION AFTER THE 1995 KOBE EARTHQUAKE
M KITAZAWA, T NAGANUMA, J NOGUCHI, Y ADACHI

2794 SEISMIC DESIGN AND BEHAVIOR DURING THE HYOGO-KEN NANBU EARTHQUAKE OF THE AKASHI KAIKYO BRIDGE
Masahiko YASUDA, Makoto KITAGAWA, Toshimi MORITNI, Susumu FUKUNAGA

04 ENGINEERING SEISMOLOGY

0010 PROBABILITY-CONSISTENT SCENARIO EARTHQUAKE AND ITS APPLICATION IN ESTIMATION OF GROUND MOTIONS
Qi-feng Luo

0015 SEISMIC GROUND MOTION SIGNALS FROM DESIGN SPECTRUM FOR SOFT SOIL IN MEXICO CITY
Jorge SILVA-BALLESTEROS, Federico BARRANCO-CICILIA

0076 LOW-FREQUENCY BEHAVIOR OF COHERENCY FOR STRONG GROUND MOTIONS IN MEXICO CITY AND JAPAN
Ronald HARICHANDRAN, Ernesto HEREDIA-ZAVONI, Sandra SANTA-CRUZ
INDEX BY TOPIC

04 ENGINEERING SEISMOLOGY

0106 SEISMIC WAVE AMPLIFICATION BY LOCAL EFFECTS IN SANTA FE DE BOGOTA AND ARMENIA, COLOMBIA
   John Nivia, J. Alvaro, Edgar Rodriguez-Granados, G Gonzalez

0126 GENERATION OF VERTICAL ACCELERATIONS FOR SEISMIC SLIDING RESPONSE OF GRAVITY DAMS
   Pierre Léger, André Filletrait, Constantin Christopoulos

0142 A JOINT RESEARCH ON MICROTREMORS IN FUKUI BASIN, JAPAN - FOR SITE EFFECTS EVALUATION DURING THE 1948 FUKUI (JAPAN) EARTHQUAKE
   Miki Terasaka, Kazuoh Seo, Hiroaki Yamanaka, Katsumi Kurita, Kentaro Motoki, Kiminobu Eto, Hiroshi Kobayashi

0149 3D-SEISMIC WAVES IN A DIPPING SURFACE LAYER
   Piotr Borejko, Franz Ziegler

0168 AN EMPIRICAL METHOD FOR PREDICTING DAMAGE CAUSED BY AN EARTHQUAKE TO ARTIFICIAL HOUSING SITES
   Kenzo Yoshikawa, Takao Jto, Arturo Luna, Akie Asada, Yoshinobu Mori

0171 SITE EFFECTS ON SEISMIC RESPONSE OF NON LINEAR LAYERED GROUND
   K Fuchida, S Shirinashihama, T Akiyoshi, X Sun

0179 INVESTIGATION ON ATTENUATION CHARACTERISTICS OF STRONG GROUND MOTIONS IN CHINA AND HONG KONG
   John Zhao, Y Wong

0188 PROBABILISTIC SEISMIC HAZARD MAPPING IN SLOVENIA
   Polona Zupancic, Janez Lapajne, Barbara Sket-Motnikar

0204 ON THE POTENTIAL OF MICROTREMOR MEASUREMENTS
   S. Steinem, F. Salami, D. Fäh, F. Kind, D. Giardini

0205 EARTHQUAKE SCENARIOS FOR SWITZERLAND
   F Bay, H Bachmann, D Fäh, A Becker, P Huggenberger, F Kind, K Lang, D Mayer-Rosa, T Wenk, S Sellami, T Noack, D Giardini

0206 STRONG-MOTION PARAMETERS: DEFINITION, USEFULNESS AND PREDICTABILITY
   Julian Bommer, Alejandro Martinez-Pereira

0223 AN INTERMITTENTLY PROPAGATING SHEAR-DISLOCATION SEISMIC SOURCE MODEL
   Gwolong Lai

0224 EVALUATION OF LOCAL SITE EFFECTS IN THE KANTO DISTRICT BASED ON OBSERVATION RECORDS
   Satoru Takahashi, Tadashi Annaka, Tetsushi Kurita, Midori Kawahara

0239 RELIABILITY OF IDENTIFIED DYNAMIC SOIL PROPERTIES OF SUBSURFACE LAYERS IN GROUND BY VERTICAL ARRAY RECORDS
   Osamu Tsujihara, Tsutomu Sawada

0251 STRESS DROP AND FMAX ESTIMATED FROM STRONG MOTION RECORDS OBSERVED AT DEEP BOREHOLES IN JAPAN
   Hiroshi Kawano, Yoshishisa Kobayashi, Toshiro Satoh

0252 SENSITIVITY OF SEISMIC HAZARD TO VARIOUS PARAMETERS AND CORRELATION FOR PEAK GROUND ACCELERATION
   A Ghosh, H Kushwaha

0260 SEISMIC VULNERABILITY ASSESSMENT OF REINFORCED CONCRETE BUILDINGS USING MICROTREMOR MEASUREMENTS
   Takuji Hamamoto, Yusuke Ozeki

0264 ATTENUATION LAWS OF SEISMIC MOVEMENT
   Juan Jaramillo, Gloria Echeverrri

0271 SIMULATION OF NEAR FIELD SEISMIC GROUND MOTIONS BY FEM CONSIDERING SOURCE RUPTURE MECHANISM
   Toshihiro Tsuiboi, Fasanori Miura

0277 PREDICTION OF STRONG-MOTION CHARACTERISTICS OF BEDROCK MOTION IN YOKOHAMA, JAPAN, BASED ON SOURCE REGION CLASSIFICATION
   Takumi Toshinawa, Yasuo Uchiyama, Takayuki Kobayashi, Yoshiyuki Watanabe

0316 TEMPORAL DEPENDENCE OF SEISMIC HAZARD IN JAPAN
   Tadashi Annaka, Harumi Yashiro

0322 SUBSURFACE STRUCTURE OF LIJIANG BASIN, YUNNAN, CHINA, AS RELATED TO DAMAGE DISTRIBUTION CAUSED BY THE M7.0 LIJIANG EARTQUAKE OF FEBRUARY 3, 1996
   M Komazawa, L Jiang, K Li, Q Luo, K Nishimura, J Akamatsu, M Nakamura

0343 MICRO ZONING THE CITY OF TUNIS USING BOTH BACKGROUND NOISE AND WEAK MOTIONS
   A Duval, P Meneroud, S Vidal, P Mechler, N Bouden-Romdhane

0379 A GLOBAL MODEL FOR AFTERSHOCK BEHAVIOUR
   Euan Smith, Anmemarie ChristopherSEN
INDEX BY TOPIC

04 ENGINEERING SEISMOLOGY

0383 GUIDANCE ON DESIGN GROUND MOTION FOR CRITICAL FACILITIES
A Murphy, Robin McGuire, R Kenneally, N Chokshi

0407 SEISMIC ANALYSIS OF INTEGRATED WHOLE SYSTEM WITH SOURCE, PROPAGATION PATH AND STRUCTURE
Hiroshi Doi, Satoshi Matsuda, Masahiro Kawano

0440 ESTIMATION OF NON-LINEAR SITE AMPLIFICATION USING DOWNHOLE RECORDINGS
Mohammad Ghayamghamian, Hideji Kawakami

0443 HAZARD-CONSISTENT DESCRIPTION OF SEISMIC ACTION FOR A NEW GENERATION OF SEISMIC CODES: A CASE STUDY CONSIDERING LOW SEISMICITY REGIONS OF CENTRAL EUROPE
Gottfried Grünthal, Jochen Schwarz

0452 A SYSTEM FOR THE PROBABALISTIC ASSESSMENT OF EARTHQUAKE MOTIONS
Hisashi Konno, Hiromi Urakawa, Akio Koike, Kenji Ikeda, Leslie Kazuhiro Hata, Katsuhiko Nishimura

0462 STIFFNESS MATRICES-BASED FORMALISM OF GROUND MOTION SYNTHESIS AND DIFFERENTIAL GROUND MOTIONS
Takanori Harada, Tsuneo Ohsumi

0497 RECENT PROGRESS ON NEURAL NETWORK BASED METHODOLOGY FOR GENERATING ARTIFICIAL EARTHQUAKE ACCELEROMETERS
Chu-Chieh Lin, Jamshid Ghaboussi

0509 RESPONSE SPECTRUM METHOD FOR EVALUATING NONLINEAR AMPLIFICATION OF SURFACE STRATA
Masanori Ibara, Kenji Miura, Kohji Koyamada

0523 NEW ATTENUATION RELATIONS FOR PEAK GROUND ACCELERATION AND VELOCITY CONSIDERING EFFECTS OF FAULT TYPE AND SITE CONDITION
Saboroh MidoriKawa, Hongjua Sl

0538 APPLICABILITY OF EMPIRICAL GREEN’S FUNCTION METHOD TO STRONG MOTION RECORDS ON MAN-MADE ISLAND IN KOBE
Tatsuo Uware, Atushi Nozu

0553 STABILITY ANALYSIS OF FALLS IN STATIC AND DYNAMIC CONDITIONS IN SEISMIC CLASSIFIED AREAS FOR URBAN PLANNING: AN APPLICATION IN A SITE TEST (GARGNANO - REGIONE LOMBARDIA - ITALIA)
Pergalan, A Belloni, N Padovan, M Presbitero, L Luizi, V Peirini

0565 PHASE ANGLE PROPERTIES OF EARTHQUAKE STRONG MOTIONS: A CRITICAL LOOK
B Tilouine, M Hammoutene, P Bard

0569 SOME PRELIMINARY RESULTS AND ANALYSIS OF DIFFERENT GEODYNAMIC TECHNIQUES WITH SPECIAL REMARK ON GPS AND TILTMETER MEASUREMENTS IN CROATIA
Yüksel Altiner, Krešimir Colic, Radovan Marjanovic - Kavanagh

0572 FUNDAMENTAL ASPECTS OF SITE RESPONSE DETERMINED FROM INVERSION OF VERTICAL ARRAY DATA
Steven Glaser, Laurie Baise

0573 SPATIAL EVALUATION OF SITE EFFECTS IN ASHIGARA VALLEY BASED ON S-WAVE VELOCITY STRUCTURES DETERMINED BY ARRAY OBSERVATIONS OF MICROTREMORS
Tatsuo Kanno, Kazuyoshi Kudo, Masayoshi Takahashi, Tsutomu Sasaki, Suqun Linge, Hiroshi Okada

0605 EARTHQUAKE LOSS ESTIMATION FOR THE NEW YORK CITY AREA
Guy Nordenson, George Deodatis, Klaus Jacob, Michael Tantala

0613 STRONG-MOTION RECORDS AT LARGE DAMS
Georges Darbre

0616 BLIND DECONVOLUTION OF GROUND SURFACE SEISMIC RECORDINGS FOR SITE RESPONSE IDENTIFICATION
P Bard, A Petrov, A zerva

0620 DERIVATION OF SEISMIC RESPONSE SPECTRA FROM THE COMBINATION OF FUZZY LOGIC THEORY AND A NON-LINEAR NUMERICAL MODEL
Aissa Mellal

0632 PROBABILISTIC SEISMIC HAZARD MAP ON THE FRENCH NATIONAL TERRITORY
E Andre, P Dominique

0635 SEISMIC RISK ASSESSMENT AT BOTH URBAN AND REGIONAL SCALES IN THE FRENCH LESSER ANTILLES: METHODS AND RESULTS
Myriam Bour, Olivier Monge, Richard Souloumiac, Christoph Martin, Eric Leroi, Franck Chauvel, Jean-Marc Mompelet, Oliver Sedan, Benoit Lebrun, Carola Mergon

0637 INFLUENCE OF A LOW RESISTANCE LAYER ON SEISMIC SOIL RESPONSE USING CYBERQUAKE
Daniel Chassagneux, Pierre Mouroux, Myriam Bour

0643 A COMPARISON OF SITE-AMPLIFICATION ESTIMATED FROM DIFFERENT METHODS USING A STRONG MOTION OBSERVATION ARRAY IN TANGSHAN, CHINA
Wenbo Zhang, Koji Matsumami
<table>
<thead>
<tr>
<th>INDEX BY TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>04 ENGINEERING SEISMOLOGY</strong></td>
</tr>
</tbody>
</table>
| 0661 | INTERPRETING GROUND CONDITIONS AND EARTHQUAKE DAMAGES BASED ON THE LAND USE AND ITS CHANGE  
Akihiko KONDOH, Sachio YAMAGUCHI, Shoichi NAKAI |
| 0664 | SOME SIMULATIONS FOR ASSESSMENT OF EARTHQUAKE HAZARDS IN THE JAPANESE ISLANDS BY USE OF THE ACTIVE FAULT CATALOGUE AND HISTORICAL RECORDS  
Minoru MATSUO, Takashi KUMAMOTO, Yasahiro SUZUKI, Michiyo SUGAI |
| 0676 | 3D VISCO-ELASTIC WAVE PROPAGATION IN THE BORREGO VALLEY, CALIFORNIA  
Kim Olsen, Robert Nighbor, Takaaki Konno |
| 0661 | A SIMPLIFIED PROCEDURE TO MEASURE AVERAGE SHEAR-WAVE VELOCITY TO A DEPTH OF 30 METERS (VS30)  
Leo BROWN, John DIEHL, Robert NIGBOR |
| 0683 | IDENTIFICATION OF PATH AND LOCAL SITE EFFECTS ON PHASE SPECTRUM OF SEISMIC GROUND MOTION  
Sumio SAWADA, Keiya YOKOYAMA, Hitoshi MORIKAWA, Kenzo TOKI |
| 0698 | SOURCE ANALYSIS OF NEAR-FIELD EARTHQUAKE RECORDS OBSERVED IN ROCK SITES  
M YAMADA, N HORI, S YAMAMOTO |
| 0700 | SPATIAL DISTRIBUTION OF STRONG GROUND MOTION CONSIDERING ASPERITY AND DIRECTIVITY OF FAULT  
Shunroku YAMAMOTO |
| 0722 | SENSITIVITY STUDY OF NEAR-SOURCE GROUND MOTION  
Thomas Heaton, Brad Aagaard, John Hall |
| 0724 | THREE DIMENSIONAL ATTENUATION STRUCTURE AND SITE AMPLIFICATION INVERSION BY USING A LARGE QUANTITY OF SEISMIC STRONG MOTION RECORDS IN JAPAN  
Tomiichi UETAKE, Ryoichi NAKAMURA |
| 0730 | A PROCEDURE TO MODIFY THE FREQUENCY AND ENVELOPE CHARACTERISTICS OF EMPIRICAL GREEN'S FUNCTION  
Lin LU |
| 0745 | STATISTICAL CHARACTERISTICS OF LONG PERIOD RESPONSE SPECTRA OF EARTHQUAKE GROUND MOTION  
Zongfang XIANG, Yingmin LI |
| 0751 | REASSESSMENT OF EARTHQUAKE HAZARD IN AUSTRALIA  
Amy Brown, Gary Gibson |
| 0755 | THE SOURCE INVERSION WITH ELEMENT SOURCE WAVEFORMS INCLUDING RUPTURE DIRECTIVITY ON EACH SUBFAULT BY CONVOLUTION TECHNIQUE  
Tomotaka IWATA, Kojiro IRIKURA, Haruko SEKIGUCHI |
| 0757 | THE GROUND MOTION CHARACTERISTICS OF ASHIGARA VALLEY, JAPAN  
Tomiichi UETAKE, Kazuyoshi KUDO |
| 0760 | THE USEFUL METHOD OF PREDICTING SEISMIC GROUND SEVERITY FOR SUBDUCTION ZONES  
Shigeyuki OKADA, Hiroshi UMEDA, Nobuo TAKAI |
| 0763 | A HYBRID METHOD FOR PREDICTING STRONG GROUND MOTIONS AT BROAD-FREQUENCIES NEAR M8 EARTHQUAKES IN SUBDUCTION ZONES  
Yoshiaki HISADA |
| 0770 | EFFECTS OF GROUND WATER ON SEISMIC RESPONSES OF BASIN  
Huo-Tsyr CHEN, Jern-Chern HO |
| 0780 | EFFECTS OF UNDERGROUND TOPOGRAPHICAL IRREGULARITY TO SEISMIC AMPLIFICATION IN THE NOBI PLAIN  
K TANAKA, O KURIMOTO, N FUKUWA |
| 0783 | MICROZONING OF SEISMIC INTENSITY DISTRIBUTION CONSIDERING SITE EFFECTS DUE TO IRREGULARITY OF SUBSURFACE SOIL STRUCTURES  
Takahisa ENOMOTO, Toshio KURIYAMA, Toshio MOCHIZUKI |
| 0784 | ON SEISMIC MOTION NEAR ACTIVE FAULTS BASED ON SEISMIC RECORDS  
H WANG, A NISHIMURA |
| 0790 | A COMBINED APPROACH OF EVALUATION OF LONG-PERIOD DESIGN SPECTRUM  
Yaxian HU, Yan-Xiang YU |
| 0796 | EFFECTS OF RADIATION PATTERN ON LOCAL SITE EFFECTS OF SEDIMENTARY BASIN  
Kiyotaka SATO, Hiroshi YAJIMA, Shunji SASAKI, Sadanori HIGASHI |
INDEX BY TOPIC

04 ENGINEERING SEISMOLOGY

0865 SEISMIC ZONATION OF THE SOUTH-WESTERN PART OF KANTO PLAIN, JAPAN, BASED ON GEOMORPHOLOGICAL ANALYSIS
Diana POLONSKA, Kazuoh SEO

0871 DISTANCE-DEPENDENT ATTENUATION FACTOR IN THE STOCHASTIC SIMULATION OF HIGH-FREQUENCY GROUND MOTIONS
Saori TAKAMI, Koshiro EN, Arihide NOBATA

0894 SEISMIC MONITORING OF STRUCTURES - AN IMPORTANT ELEMENT OF SEISMIC HAZARD REDUCTION
Kosta Talagianov, Vladimir Mihailov, Mehmet Celebi

0897 SEISMIC VULNERABILITY OF PEREIRA CITY, COLOMBIA
Juan JARAMILLO, Ana CAMPOS

0918 STUDY ON MICROTEMPORAL CHARACTERISTICS BASED ON SIMULTANEOUS MEASUREMENTS BETWEEN BASEMENT AND SURFACE USING BOREHOLE
Takahisa ENOMOTO, Takahiro IWATATE

0931 USE OF SYNCHRONOUS NOISE AS TEST SIGNAL FOR EVALUATION OF STRONG MOTION DATA PROCESSING SCHEMES
Ashok Kumar, Susanta Basu, Brijesh Chandra

0953 EMPIRICAL RESPONSE SPECTRAL ATTENUATIONS ON THE ROCKS WITH VS =0.5 TO 3.0KM/S IN JAPAN
Hiroshi KAWANO, Masayuki TAKEMURA, Masanobu TOHDO, Takahide WATANABE, Shizuo NODA, Katsuya TAKAHASHI

0955 ESTIMATION OF EARTHQUAKE MOTION INCIDENT ANGLE AT ROCK SITE
Takahiro SIGAKI, Takeshi UGATA, Ryoichi TAMURA, Chiaki YOSHIMURA, Kazuhiko KIYOHARA, Yoichi SONO, Daiki KINOSITA, Toru MASAO

0968 A TECHNIQUE FOR QUICK ESTIMATION OF SEISMIC GROUND MOTION DISTRIBUTION FROM OBSERVED SEISMIC INTENSITIES ASSISTED BY PREVIOUSLY CONDUCTED MINUTE SIMULATIONS
Takashi AKAZAWA, Takao KAGAWA

0969 RE-EVALUATION OF NONLINEAR SITE RESPONSE DURING THE 1964 NIGATA EARTHQUAKE USING THE STRONG MOTION RECORDS AT KAWAGISHI-CHO, NIGATA CITY
Tatsuo KANO, Toshiichi UETAKE, Kazuyoshi KUDO

0970 ESTIMATION OF HIGH-FREQUENCY WAVE RADIATION AREAS ON THE FAULT PLANE OF THE 1994 SANRIKU-HARUKA-OKI EARTHQUAKE
S KURITA, Mitsugu TAKITA

0975 POTENTIAL SEISMIC RISK ASSESSMENT OF URBAN CITIES IN JAPAN CONSIDERING THEIR REGIONAL CHARACTERISTICS
Yoshiaki NAKANO, Kangseok LEE, Go URAKAWA, Suminao MURAKAMI, Tsuneyo OKADA

1013 GROUND MOTION CHARACTERISTICS IN THE GRABEN-LIKE IRREGULAR UNDERGROUND STRUCTURE FOR FINITE MOVING SOURCE WITH DIFFERENT SLIP SIZE
Masato MOTOSAKA, Ali NIousHA

1023 THE GROUND TREMOR AND ITS APPLICATION IN ENGINEERING SEISMOLOGY
Xueweng LIN, Lamin WANG

1151 INFLUENCE OF STRONG GROUND MOTION DURATION IN SEISMIC DESIGN OF STRUCTURES
Raúl GUERRERO, Mario ORDAZ, Eduardo REINOSO
INDEX BY TOPIC

04 ENGINEERING SEISMOLOGY

1159 A STUDY OF SEISMICITY AND EARTHQUAKE LOADING AT THE PROPOSED KALABSHA DAM SITE, ASWAN, EGYPT
Raafat Fat-Helbary, Aly Tealb

1179 EFFECTS OF MAGNITUDE UNCERTAINTIES ON SEISMIC HAZARD ESTIMATES
David RHOADES, David DOWRICK

1195 RELATIONSHIPS BETWEEN BASIC GROUND MOTION PARAMETERS FOR EARTHQUAKES OF THE ARGENTINE WESTERN REGION
C MONGUILNER, N PONTI, S PAVONI

1209 ARRAY OBSERVATION OF GROUND STRAINS INDUCED BY EARTHQUAKES
Masakazu TACHIBANA, Shigeaki MORICHI, Yoshinori IMAMURA

1234 INFLUENCE OF EFFECTIVE DURATION OF STRONG MOTION ON ELASTIC RESPONSE SPECTRA
Mohsen TEHRANIZADEH, Farzaneh HAMEDI

1243 ESTIMATION OF EMPirical SITE AMPLIFICATION EFFECTS USING OBSERVED RECORDS
Kojiro IRIKURA, Yoshihiko TATSUMI, Akira KOWADA, Masaru TAI, Masato TSURUGI

1247 RECORDINGS AND APPLICATIONS OF THE ICELANDIC STRONG MOTION NETWORK
Ódinn Thórarinsson, Gunnar I. Baldvinsson, Simon Olafsson, Ragnar Sighjörnsson

1250 ESTIMATION OF SITE EFFECTS USING MICROTREMOR MEASUREMENTS AND ANALYTICAL MODELLING – APPLICATION TO THE LOWER TAGUS VALLEY, PORTUGAL
M.Luisa Senos, Paula Teves Costa

1256 ANALYSIS OF GROUND MOTION AMPLIFICATION OF SEDIMENTARY BASINS: STUDY ON THE HEAVILY DAMAGED BELT ZONE DURING 1995 KOBE EARTHQUAKE
Kazuhiro YOSHIDA, Yaco SHINOZAKI

1257 ANALYSIS OF SEISMIC SITE EFFECTS : BEM AND MODAL APPROACH VS EXPERIMENTS
Anne-Marie DUVAL, Patrick DANGLA, Jean-Francois SEMBLAT

1272 THE DOMINANT RESONANCE RESPONSE OF PARKWAY BASIN
William STEPHENSON

1282 EARTHQUAKE MONITORING BASED ON SEISMIC INTENSITIES
Lenka TIMIOVSKA

1313 INVESTIGATION OF GROUND MOTIONS AND STRUCTURAL RESPONSES IN NEAR FIELD DUE TO INCIDENT WAVES
Niawawi CHOUW, Guenther SCHMID, Maher ADAM

1335 AMPLIFICATION OF SEDIMENTARY LAYERS AND ESTIMATION OF THEIR STRUCTURES IN SHIGA PREFECTURE, JAPAN
Kazumasa FUKUMOTO, Tetsu FUJIWARA

1343 EXAMINATION OF ESTIMATED SURFACE LAYER PROFILES BASED ON SOIL DATA AND MICROTREMOR RECORDS USING OBSERVED SEISMIC GROUND MOTIONS
Jun TOBITA, Nobuo FUKUWA, Ritsu ISHIDA

1347 GROUND MOTIONS FROM LARGE EARTHQUAKES (MW>7) ON THE SANTA MONICA MOUNTAIN THRUST AND HOLLYWOOD-SANTA MONICA-MALIBU FAULTS
C SAIKIA, P SOMMERVILLE

1348 CHARACTERISTICS OF THREE-DIMENSIONAL STRONG GROUND MOTIONS ALONG PRINCIPAL AXES
Bunsu KOIKA, Tsaneo KAYAMA, Keiichi OHTANI

1359 OBSERVATION AND SYNTHESIS OF LONG-PERIOD EARTHQUAKE GROUND MOTIONS AT THE AKASHI KAIKYO BRIDGE CONSTRUCTION SITE
Hirokazu IEMURA, Masahiko YASUDA, Zenon AGUILAR, Akira IGARASHI

1369 PREDICTION OF DAMAGE RATE OF BUILDING GROUPS IN URBAN AREAS BY STRONG EARTHQUAKES
Akenori SHIBATA, Masato MOTOOSAKA, Yoshinori HAGIWARA

1371 POSTDICTION OF STRONG MOTION FOR THE 1923 KANTO EARTHQUAKE CONSIDERING ITS HETEROGENEOUS SOURCE PROCESS
Y SHIBA, M SHIMADA, T ANNKA

1376 ENERGY QUANTIFICATION OF SEISMIC ACTIVITY ORIGINATED IN THE PROVINCE OF MENDOZA IN THE PERIOD 1956-1998
Miguel Eduardo TORNEULLO, Eduardo Oscar SILVA, Carlos Daniel FRAU

1377 DEVELOPMENT OF URGENT EARTHQUAKE DAMAGE ESTIMATION SYSTEM FOR ROAD FACILITIES
Tadashi HAMADA, Masahiro KANEKO, Hideki SUGITA

1390 COMPARISON OF SITE RESPONSE DETERMINATION TECHNIQUES IN THE WELLINGTON REGION, NEW ZEALAND
J Taber

1420 A FUNDAMENTAL STUDY ON THE SEISMIC RESPONSES OF GROUND
Takaaki KAGAWA, Xian TAO
INDEX BY TOPIC

04 ENGINEERING SEISMOLOGY

1424 CALCULATION OF LONG-PERIOD GROUND MOTION RESPONSE SPECTRUM BY USING BROAD-BAND DIGITAL RECORD
  Yuxian HU, Yanxiang YU, Suyun Wang

1432 ATTENUATION RELATION OF RESPONSE SPECTRA IN JAPAN CONSIDERING SITE-SPECIFIC TERM
  Khosrow T. SHABESTARI, Fumio YAMAZAKI

1439 SEISMICITY STUDIES OF THE AZORES ISLANDS - AN APPLICATION TO THE JULY 9, 1998 EARTHQUAKE
  M.Luisa Senos, Paula Teves-Costa, José Nunes

1441 SITE EFFECTS IN AN ALLUVIAL VALLEY: A COMPARISON OF ESTIMATES FROM EARTHQUAKE AND MICROTMOR RECORDS
  Miguel Rodriguez, Francisco Chávez-García, William Stephenson

1447 STRONG GROUND MOTION SIMULATION OF AUSTRALIAN INTRAPLATE EARTHQUAKES AND THEIR RELATIONSHIP WITH THE RECOMMENDED RESPONSE SPECTRA
  Kevin McCue, Malcolm Somerville, Cvetan Sinadinovski

1457 THE DEVELOPING OF GROUND RESPONSE SPECTRA FOR EXTREME SEISMIC EVENTS IN SOUTHERN FINLAND
  Pentti VARPASUO, Yejo NIKKARI, Jouni SAARI

1466 AMPLIFICATION OF EARTHQUAKE GROUND MOTIONS IN BANGKOK
  Warrasak JAKRAPIYANUN, Panitan LUUKUNAPRASIT, Scott ASHFORD

1469 A HIGH-DENSITY ARRAY OBSERVATION SYSTEM: SMALL-TITAN: AN INTRODUCTION AND ITS STRONG-MOTION RECORDS
  Yuichi SHOJI, Makoto KAMIYAMA

1484 EXPLORATION OF BASIN STRUCTURE BY MICROTMOR ARRAY TECHNIQUE FOR ESTIMATION OF LONG-PERIOD GROUND MOTION
  Kazuoh SEO, Yoshihiro KINUGASA, Katsumi KURITA, Hiroaki YAMANAKA, Nobuyuki YAMADA, Hiroki SATO, Seiji OIKAWA, Yoshihisa OGATA

1486 THREE-DIMENSIONAL FINITE DIFFERENCE SIMULATION OF LONG-PERIOD GROUND MOTION IN THE KANTO PLAIN, JAPAN
  Nobuyuki YAMADA, Hiroaki Yamanka

1507 CHARACTERISTICS OF SURFACE MOTION ON A TOPOGRAPHIC IRREGULAR GROUND DURING LARGE EARTHQUAKES
  Masanori NIWA, Toru SASAKI, Kaeko YAHATA, Tsunehisu TSUGAWA

1522 ANALYTICAL STUDY ON RELIABILITY OF SEISMIC SITE-SPECIFIC CHARACTERISTICS ESTIMATED FROM MICROTMOR MEASUREMENTS
  Boming ZHAO, Masanori HORIKE, Yoshihiro TAKEUCHI

1537 EVALUATION OF DESTRUCTIVENESS OF EARTHQUAKE MOTIONS BY COLLAPSE BASE SHEAR COEFFICIENT SPECTRA
  Tetsuhiro ASARI, Keisichi INOUE, Yugi ISHIYAMA

1548 PROBABILISTIC SEISMIC HAZARD ANALYSIS: IMPROVING CONSISTENCY WITH PRECARIOUS ROCK OBSERVATIONS BY REMOVING THE ERGODIC ASSUMPTION
  John Anderson, James Brune

1555 LOWER PROBABILITY HAZARD, BETTER PERFORMANCE? UNDERSTANDING THE SHAPE OF THE HAZARD CURVES FROM CANADA'S FOURTH GENERATION SEISMIC HAZARD RESULTS
  Stephen HALCHUK, John ADAMS, Dieter WEICHERT

1577 EMPIRICAL EVIDENCE FROM THE NORTHRIDGE EARTHQUAKE FOR SITE-SPECIFIC AMPLIFICATION FACTORS USED IN US BUILDING CODES
  Roger Borchert, Thomas Fumal

1588 EARTHQUAKE GROUND DAMAGE HAZARD STUDIES AND THEIR USE IN RISK MANAGEMENT, IN THE WELLINGTON REGION, NEW ZEALAND
  Pathmanathan BRABHARAN

1600 IMPACT OF THE LOCAL GEOLOGY ON THE SEISMIC VULNERABILITY OF THE METROPOLITAN ZONE OF GUADALAJARA, MEXICO
  M CHAVEZ

1607 A STUDY OF SITE AMPLIFICATION EFFECTS IN SANTIAGO BASED ON EARTHQUAKE RECORDS OBTAINED FROM THE SMASCH ARRAY
  Daniel VALDIVIA, Lorena FERNANDEZ, Ernesto CRUZ, Rafael RIDDLE

1616 CREEP VERSUS SEISMIC SLIP ON THE KORIZAN EARTHQUAKE FAULT: THE ARDEKUL, QA'ENAT (EASTERN IRAN) DESTRUCTIVE EARTHQUAKE OF MAY 10, 1997
  Ali Naieri

1656 REGIONAL PROBABILISTIC SEISMIC HAZARD ANALYSES USING GEOLOGIC DATA
  Behrooz Tavakoli, Mohsen Ghofory Ashtiany, Ali-Akbar Eslami
INDEX BY TOPIC

04 ENGINEERING SEISMOLOGY

1659 PEAK GROUND MOTION CHARACTERISTICS OF 1995 KOBE EARTHQUAKE AND AN EXTRACTED SIMPLE EVALUATION METHOD
   J Ejiri, Y GOTO, K Toki

1666 RESPONSE CHARACTERISTICS OF SOIL AND STRUCTURES OBTAINED FROM OBSERVATION NETWORKS
   Teizo FUJIWARA, Yoshiyuki SUZUKI, Kazumasa FUKUMOTO

1670 ISOSEISMAL MAP OF THE 1995 HYOGO-KEN-NANBU EARTHQUAKE
   Saburoh MIDORIKAWA, Kazuo FUJIMOTO

1705 LINEAR AND NONLINEAR BEHAVIORS ON A SOIL SITE USING LOTUNG DOWNHOLE ARRAY IN TAIWAN
   H CHIU, C SHIEH, H HUANG

1724 TIME-FREQUENCY ANALYSIS OF EARTHQUAKE RECORDS
   Carlos Huerta-Lopez, YongJune SHIN, Edward Powers, Jose Roesset

1726 DEVELOPMENT OF SYNTHETIC GROUND MOTIONS - BEDROCK OF JAKARTA
   WIDJADNYANA MERATI, JODI FIRMANSJAH, WIJATMAN WANGSADINATA, ADANG SURACHMAN, MASYHUR IRSYAM

1751 SIMULATION OF STRONG MOTION DURING THE 1995 HYOGO-KEN-NANBU EARTHQUAKE BY USING THE 2D/3D PSEUDOSPECTRAL METHOD
   S HIGASHI

1768 MICROTREMOR STUDIES IN SOUTH OF TEHRAN
   M. Kazem Jafari

1776 SOURCE PARAMETERS STUDY OF LOCAL EARTHQUAKES IN THE GARHWAL HIMALAYA REGION BASED ON THE DIGITAL BROADBAND DATA
   Hans Wason, Mukt Sharma

1825 STATISTICAL CHARACTERIZATION OF THE RESPONSE SPECTRA IN THE ARGENTINE REPUBLIC
   D RICHARTE, S PAVONI, N PONTI, C MONGUILNER

1834 CRUSTAL AND SUBDUCTION ZONE ATTENUATION RELATIONS FOR NEW ZEALAND EARTHQUAKES
   Graeme McVerry, John ZHAO, Norman ABRAHAMSON, Paul SOMERVILLE

1850 SOURCE CHARACTERIZATION OF INLAND EARTHQUAKES IN JAPAN USING SOURCE INVERSION RESULTS
   Kazuo IRIKURA, Ken MIYAKOSHI, Takao KAGAWA, Haruko SEKIGUCHI, Tomotaka IWATA

1867 STRONG GROUND MOTIONS OF THE 1997 NORTHWESTERN KAGO-SHIMA PREFECTURE EARTHQUAKE AND SEISMIC HAZARD OF THE REGION
   Kazuo MATSUMURA

1874 METHODOLOGICAL STUDY ON SEISMIC RISK ASSESSMENT
   Pierre-Yves Bard, Jean-Pierre Méneroud, Anne-Marie Duval

1877 EARTHQUAKE DAMAGE OF BUILDING STRUCTURES AND SITE EFFECTS
   Makoto MORO

1881 CHARACTERISTIC OF SEISMIC GROUND MOTION AND BUILDING DAMAGE DURING THE 1997 NORTHWEST KAGOSHIMA EARTHQUAKE
   M MIYAZAKI, T AKIYOSHI, S SHIRINASHIHAMA, S UMEDA

1895 EFFECTS OF EARTHQUAKE SOURCE PARAMETERS ON ESTIMATED GROUND MOTIONS
   Yoshihiro NAKAO, Shojisro KATAOKA, Keisichi TAMURA

1902 SEISMIC LOSS ESTIMATION MODEL FOR MEXICO CITY
   Luis Eduardo Pérez-Rocha, Eduardo Reinoso, Mario Ordaz, Eduardo Miranda

1905 SEISMIC HAZARD MAP USING CONTRIBUTION FACTORS OF SEISMIC SOURCES
   H Kameda, Y Ishikawa, N NAKAJIMA, T Okumura

1907 THEORETICAL FORMULATION OF STRONG MOTION ATTENUATION BASED ON SEISMIC SOURCE MODELS
   Simon Ølfsson, Ragnar Söghjörnsson

1931 STRONG MOTION OBSERVATION IN METRO MANILA, PHILIPPINES
   KATSUMI KURITA, ESMEERALDA BANGANNAN, RAYMUNDO PUNONGBAYAN, HIROKI YAMANAKA, TATSUO OHMACHI, KAZUHI SEO, YOSHIHIRO KINUGASA, SABUROH MIDORIKAWA, AKUMI TOSHINAWA, ISMAEL NARAG, NERIO AREKI, JANILA BAUL-DEOCAMPO, KAZUO FUJIMOTO, DELFIN GARCIA

1933 THE MODELLING OF INTRAPLATE SEISMIC HAZARD BASED ON DISPLACEMENT
   Graham HUTCHINSON, Nelson LAM, John WILSON

1934 NONLINEARITY IN OBSERVED AND COMPUTED ACCELEROMGRAMS
   Luis Fabián BONILLA, Ralph ARCHULETA, Daniel LAVALLÉE

1943 EARTHQUAKE HAZARD POTENTIAL IN OMAN
   Mohammed QAMARUDDIN, Ali AL-HARTHY
INDEX BY TOPIC

04 ENGINEERING SEISMOLOGY

1948 APPLICATIONS OF PROBABILITY THEORY IN THE EARTHQUAKE RISK ASSESSMENT AND ITS CONSEQUENTIAL POSSIBLE REDUCTION
Syed DEBAJ, Muhammad KHAN, Syed RIZWAN

1959 SITE AMPLIFICATION IN HACHINOHE OBSERVATION SITE, AOMORI, JAPAN: A COMPARISON OF S-WAVES, CODA AND MICROTREMORS SPECTRAL RATIO
Naomi SAKAJIRI

1964 ATTENUATION RELATIONSHIP FOR ESTIMATION OF PEAK GROUND VERTICAL ACCELERATION USING DATA FROM STRONG MOTION ARRAYS IN INDIA
Mukat Sharma

1971 ESTIMATION OF EARTHQUAKE ENGINEERING BASEMENT AND SEISMIC RESPONSE ON NAGOYA CITY IN THE NOBI PLAIN, JAPAN
TOHNISHI, N TANI, S LING, Y SAWADA, H NAGUMO

1987 CHARACTERISTICS OF LONG-PERIOD STRONG GROUND MOTIONS DUE TO EARTHQUAKES IN THE EASTERN MARGIN OF THE JAPAN SEA
Shinsaku ZAMA

2013 ACCOUNTING FOR SITE EFFECTS IN PROBABILISTIC SEISMIC HAZARD ANALYSIS: OVERVIEW OF THE SCEC PHASE III REPORT
Edward FIELD, SCEC Phase III Working Group

2018 SYNTHESES OF SEISMIC MOTIONS IN VIEW OF SOURCE TO SITE: THE KOBE CASE
Hirokazu TAKEMIYA, Gen MIYAGAWA, Yugi KAGAWA

2020 SEISMIC RESPONSE ANALYSIS OF A GRAVITY DAM WITH JOINT TIME-FREQUENCY NON-STATIONARITY MODEL
Jiong Guan, Jing Zhou

2021 INTRODUCTION OF SEISMIC ZONING MAP OF CHINA (1999)
Mengtian GAO

2046 TIME DEPENDENT GROUND MOTION AMPLIFICATION AT RECLAIMED LAND AFTER THE 1995 HYOGO-KEN-NANBU EARTHQUAKE
Yoshinori FURUMOTO, Koichiro YAMADA, Atsushi YASHIMA, Masato SUGITO, Fusao OKA

2062 PROBABILITY-BASED DESIGN EARTHQUAKE LOAD CONSIDERING ACTIVE FAULT
Ichiro SATOH, Jun KANDA

2094 STUDY ON THE STABILITY OF HV SPECTRAL RATIO OF MICROTREMOR IN SHORT PERIOD RANGE FOR THE ESTIMATION OF DYNAMIC CHARACTERISTICS OF SURFACE GEOLOGY
Daisuke WATANABE, Yasumasa NAKAJIMA, Norio ABEI

2103 AN EVALUATION OF SURFACE SOIL AMPLIFICATION PROPERTIES FROM THE ANALYSIS OF RECORDED MOTIONS
Yoshikazu KITAGAWA, Izuru OKAWA, Toshihide KASHIMA, Shin KOYAMA

2106 GROUND RESPONSE OF KATHMANDU VALLEY ON THE BASIS OF MICROTREMORS MADHAB PANDEY

2111 STRONG MOTION PREDICTION ON ROCK SURFACE BY SUPERPOSED EVOLUTIONARY SPECTRA
Yoshinori FURUMOTO, Takeshi SUGIYAMA, Masato SUGITO

2118 MEASUREMENT OF NATURAL FREQUENCIES AND DAMPING OF SPELEOTHEMS
Agnès LEVRET, Corinne LACAVE, Martin KOLLER

2145 SEISMIC HAZARD IN BANGKOK DUE TO LONG-DISTANCE EARTHQUAKES
Pennung WARNITCHAI, Chanet SANGARAYAKUL, Scott ASHFORD

2175 A REVIEW OF SITE SEISMIC RESPONSE USING VERTICAL ARRAYS
Mourad ZEGHAL, Ahmed ELGAMAL

2185 AN EXAMPLE FOR STRONG GROUND MOTION MODELLING IN CONNECTION WITH VRANCEA EARTHQUAKES (CASE STUDY IN NE BULGARIA, RUSSE SITE)
Giuliano Panza, Mihaela KOUTEVA, Ivanka Paskaleva

2195 AVERAGE AMPLIFICATION FACTOR OF SH WAVES IN IRREGULARLY LAYERED MEDIA
Hidenori MOGI, Hideji KAWAKAMI

2199 CHARACTERISTICS OF STRONG EARTHQUAKE MOTIONS OBSERVED AT HACHINOHE CITY HALL
Toshihide Kashiina, Izuru Okawa, Shin Koyama

2200 CHARACTERIZING EARTHQAKE SLIP MODELS FOR THE PREDICTION OF STRONG GROUND MOTION
KIIBUKA, Y TATSUMI, T KAGAWA, N ABRAHAMSON, P SOMERVILLE, S SAWADA

2202 COMPARISON OF SHEAR-WAVE VELOCITY PROFILES FROM SASW AND DOWNHOLE SEISMIC TESTS AT A STRONG-MOTION SITE
Leo BROWN, David ROORE, Kenneth STOKOE, II
INDEX BY TOPIC

04 ENGINEERING SEISMOLOGY

2229 EFFECTIVE APPLICATION OF GEOGRAPHIC INFORMATION SYSTEM IN THE FIELD OF EARTHQUAKE ENGINEERING AND DISASTER PREVENTION
   E ISHIDA, J TOBITA, N FUKUWA, H TAKAI

2231 EFFECTS OF HIDDEN VALLEY ON GROUND RESPONSE AND DAMAGE DISTRIBUTION IN THE 1993 KUSHIRO-OKI EARTHQUAKE
   Kohji TOKIMATSU, Toru SEKIGUCHI, Akio ABE

2232 EFFECTS OF RAYLEIGH AND LOVE WAVES ON MICROTREMOR H/V SPECTRA
   Hiroshi ARAI, Kohji TOKIMATSU

2239 ESTIMATION OF SHALLOW S-WAVE VELOCITY STRUCTURES FROM PHASE VELOCITIES OF LOVE- AND RAYLEIGH- WAVES IN MICROTREMORS
   Hidekazu YAMAMOTO

2254 EMPIRICAL DETERMINATION OF THE GROUND SHAKING DURATION DUE TO AN EARTHQUAKE USING STRONG MOTION ACCELEROMETERS FOR ENGINEERING APPLICATIONS.
   Fabrice COTTON, Bruno HERNANDEZ

2265 INDIRECT BOUNDARY ELEMENT METHOD- A TOOL TO CALCULATE SEISMIC RESPONSE OF IRREGULARLY LAYERED SEDIMENT
   Yoshiaki YOKOI

2275 MODELING OF HIGH-FREQUENCY WAVE RADIATION PROCESS ON THE FAULT PLANE FROM THE ENVELOPE FITTING OF ACCELERATION RECORDS
   Yasunari KAKEHI

2303 RADIATION AND DISPERSION OF SURFACE WAVES IN MEXICO FROM THE 1995 EARTHQUAKE (MW = 7.3)
   Alonso GOMEZ-BERNAL, Rodolfo SARAGONI

2321 SEISMIC HAZARD ANALYSIS BASED ON THE GEOLOGICAL, GEODETIC AND ARCHEOLOGICAL STUDY
   Shigeru SUZUKI

2328 SEISMIC RISK ESTIMATION CONSIDERING THE UNCERTAINTY OF FAULT PARAMETERS FOR NEAR FIELD EARTHQUAKES
   Shigeyuki OKADA, Makoto TOMATSU

2332 SEPARATION OF SOURCE AND SITE EFFECTS USING WAVELET TRANSFORM COEFFICIENTS
   Yoshiaki TATSUMI, Kojiro IRIKURA, Minoru FUSHIMI, Masaru TAI

2337 SOURCE CHARACTERIZATION FOR AN INLAND LARGE EARTHQUAKE AND NEAR-SOURCE STRONG GROUND MOTION SIMULATION
   Kojiro IRIKURA, Katsuhiro KAMAE

2338 RUPTURE MODEL OF THE TAURAMENA EARTHQUAKE (COLOMBIA JAN. 1995)
   N Pulido, K Irikura

2346 THE ENERGY CONTENT OF THE STRONG GROUND MOTIONS IN IRAN
   Mehdi ZARE

2361 ASSESSMENT OF DESIGN BASIS EARTHQUAKE GROUND MOTIONS FOR NEAR-FAULT CONDITIONS
   Eser DURUKAL, Mustafa ERDIK

2362 A NEW PROBABILISTIC SEISMIC HAZARD MODEL FOR NEW ZEALAND
   Mark STIRLING

2419 DEVELOPMENT OF METHODOLOGY FOR EVALUATING GROUND MOTION PARAMETERS AND INFORMATION SYSTEM UNDER SEISMIC EMERGENCY
   I ABE, T KUNO, K TSUZUKI, S HORI, M OOi, K V, K EBISAWA

2436 STOCHASTIC IDENTIFICATION OF EARTHQUAKE WAVE ENTITIES
   Raimar SCHERER, Joerg BRETSCHNEIDER

2458 SIMULATION OF STRONG MOTIONS USING PARAMETERS BASED ON RECORDED ACCELEROMETERS
   Sanshiro SUZUKI, Koichiro ASANO

2473 LOCAL SITE AMPLIFICATION OF PEAK HORIZONTAL GROUND VELOCITY BASED ON MICROTREMORS
   Y Ogawa, J Ejiri, D Maejima, K Shimizu

2502 APPLICATION OF THE LARGE AREA SEISMIC MICROZONING RESULTS TO THE RECONSTRUCTION PLANNING AND CODES IN THE MARCHE REGION.
   MARIO SMARGIASSO, LUIGI DIOTALLEVI, PIERO FARABOLLI

2575 SITE EFFECTS IN EUROSEISTEST: A COMPARISON BETWEEN OBSERVATIONS AND MODELING
   Dimitris Raptakis, Konstantia Makra, Kyriazis Pittilakis, Francisco Chavez-Garcia

2600 COORDINATION OF STRONG MOTION PROGRAMS AND STRONG MOTION DATA DISSEMINATION
   Carl STEPP

2656 CLEAR IDENTIFICATION OF FUNDAMENTAL IDEA OF NAKAMURA'S TECHNIQUE AND ITS APPLICATIONS
   Yataka NAKAMURA
INDEX BY TOPIC

04 ENGINEERING SEISMOLOGY
2658 ESTIMATION OF DEEP UNDERGROUND VELOCITY STRUCTURES BY INVERSION OF SPECTRAL RATIO OF HORIZONTAL TO VERTICAL COMPONENT IN P-WAVE PART OF EARTHQUAKE GROUND MOTION
Hiroshi KOBAYASHI, Mitsugu MASHIMO, Kikuji KOBAYASHI, Tomiichi UEJAKE
2662 EARTHQUAKE HAZARD MITIGATION IN CENTRAL AMERICA BY STUDIES OF SEISMIC SOURCE AND GROUND ACCELERATION
Ronald Arvidsson, Jaime Bouet
2671 OBSERVED SPECTRAL CHARACTERISTICS OF VERTICAL GROUND MOTION RECORDED DURING WORLDWIDE EARTHQUAKES FROM 1957 TO 1995
Yousef BOZORGNIA, Kenneth CAMPBELL, Mansour NIAZI
2681 SIMULTANEOUS SIMULATION FOR KOBE: WHAT WE HAVE LEARNT AT ESG98
Hirosi KAWASEA, Tomotaka IWATA
2682 PREDICTION OF STRONG MOTIONS FROM FUTURE EARTHQUAKES CAUSED BY ACTIVE FAULTS – CASE OF THE OSAKA BASIN
Kojiro Irikura
2683 REDUCING UNCERTAINTY IN STRONG MOTION PREDICTIONS
PAUL SOMERVILLE
2686 A STANDARD BASE MODEL FOR JAPAN USING DIGITAL STRONG MOTION RECORDS OF JMA87 TYPE
Shuji KOBAYASHI, Paul SOMERVILLE, John ZHAO, Yoshimitsu FUKUSHIMA, Masafumi MORI, Tetsuichi TAKAHASHI, Shin ichi MATSUZAKI
2687 ON THE CHARACTERISTICS OF SOFT SOIL INELASTIC DESIGN RESPONSE SPECTRAS FOR THE CITY OF GUAYAQUIL, ECUADOR
Lara Otton, Marcelo Moncayo
2688 THE MARCH 29, 1999 EARTHQUAKE AT CHAMOLI, INDIA
Josodhir DAS, Jayprakash Narayan, Durgesh RAI, Manish SHRIKHANDE
2689 SEISMIC HAZARD IN NORTHERN CENTRAL AMERICA
Diego Cáceres, Ronald Arvidsson

05 GEOTECHNICAL ENGINEERING
2702 FORCED VIBRATION TESTS ON PILE FOUNDATIONS
Y LEE, S YANG, H LIN, J BIAN, M WANG, C YEH, C CHEN
2712 DYNAMIC FE ANALYSIS FOR STABILITY OF EMBANKMENT ON SILTY CLAY DURING EARTHQUAKES
O MATSUO, K YASUHARA, S MURAKAMI
2723 EFFECTS OF VALLEY SHAPE ON SEISMIC RESPONSES OF FILL DAMS
Tagashira HIDEKAZU, Asano ISAMU, Yasunaka MASAMI, Masakawa SUSUMU
INDEX BY TOPIC

05 GEOTECHNICAL ENGINEERING

0128 INVESTIGATION OF LIQUEFIED SITE OF CHIGU, TAINAN, TAIWAN
   Ni Sheng-Huo, Cheng Shih-Nan

0170 ASEISMIC EFFECT OF GEOTECHNICAL IMPROVEMENT FOR TYPICAL QUAY WALLS
   K FUCHIDA, T HYODO, TAKAHASHI, H MATSUMOTO

0180 AN ANALYTICAL METHOD FOR VERTICAL BEHAVIOR OF SLIP LAYER PILE DURING AN EARTHQUAKE
   Ting XU, Koji TOMINAGA, Haruyuki YAMAMOTO

0201 RELIQUEFACTION POTENTIAL OF CEMENT-TREATED SANDY SOILS
   Akira MATSUO, Tomoya YAMAUCHI, Akihiro DATE, Motoyuki SUZUKI, Tetsuro YAMAMOTO

0241 EFFICIENCY OF MICROPILE FOR SEISMIC RETROFIT OF FOUNDATION SYSTEM
   OTANI, YOSHINORI, YAMANE, TAKASHI, NAKATA, YOSHINORI

0265 DISTURBED STATE MODELING OF SATURATED SAND UNDER DYNAMIC LOADS
   Jae-Soon CHOI, Soo-Il KIM, Inn-Joon PARK

0266 IDENTIFICATION OF SOIL LIQUEFACTION USING DOWNHOLE ARRAY RECORDS
   Jun YANG, Tadanobu SATO

0274 3-D DYNAMIC ANALYSIS OF TAIYUAN FLY ASH DAM
   Jian ZHOU, Peijiang QI, Yong CHI

0276 SEISMIC ANALYSIS OF TUNNEL SURROUNDED BY SOFT SOIL IN SHANGHAI
   Xiaoyan HU, Zhanfei HU, Jian ZHOU

0286 THE SOIL STRUCTURE INTERACTION ANALYSIS BASED ON SUBSTRUCTURE METHOD IN TIME DOMAIN
   Muzaffe ELMAS, Mustafa KUTANIS

0290 THREE-DIMENSIONAL STRUCTURE - SOIL - STRUCTURE INTERACTION UNDER SEISMIC EXCITATION WITH PARTIAL UPLIFT
   C BODE, S SAVIDIS, R HIRSCHAUER

0298 EXAMPLE OF IDENTIFICATION OF THE IN SITU SOIL BEHAVIOUR UNDER MAJOR EARTHQUAKES BY A PROPAGATION S.H.S. TEST
   Mokhtar MARSSOUT, Marie-Angèle ABELLAN, Jean-Pierre TOURET, Paul JOUANNA

0312 CRITERIA FOR LIQUEFACTION OF SILTY SOILS
   Geoffrey Martin, Desmond Andrews

0329 EDUS PROJECT (EARTHQUAKE DAMAGE TO UNDERGROUND STRUCTURES)
   Akio ABE, Chikahiro MINOWA, Takaaki KAGAWA

0353 DYNAMIC CHARACTERISTICS OF PILE GROUPS UNDER VERTICAL VIBRATIONS
   A BOOMINATHAN, T LAKSHMI

0366 ENERGY DISSIPATION IN SOIL-STRUCTURE INTERACTION
   C Crouse

0385 SOIL-STRUCTURE INTERACTION IN MEXICO CITY. WAVE FIELD RADIATED AWAY FROM JALAPA BUILDING: DATA AND MODELLING
   Francisco CHAVEZ-GARCIA, Pierre-Yves BARD, Philippe GUEGUEN, Martin CARDEÑAS

0386 EVALUATION OF LIQUEFACTION RESISTANCE AND LIQUEFACTION INDUCED SETTLEMENT FOR RECLAIMED SOIL
   Chih-Hsin CHANG, Yan-Nam OH, Lien-Kwei CHIEN

0422 SEISMIC RESPONSE ANALYSIS OF PILE FOUNDATIONS AT LIQUEFIABLE SITES
   W FINN, T THAVARAJ, D WILSON, R BOULANGER, B KUTTER

0476 CENTRIFUGE DYNAMIC MODELING TEST AND TWO-DIMENSIONAL LIQUEFACTION ANALYSIS FOR HUGER RIVER DIKE
   Hiroshi MORI, Yoshimi OGAWA, Kaoru KUSANO, Jun OKAMOTO, Hiroshi ABE

0487 SEISMIC STABILITY ASSESSMENT OF THE MOA NICKEL TAILINGS FACILITY
   Tom KERR, Graham GREENAWAY, Matthew PARFITT

0490 INPUT MOTION OF A RIGID EXTENDED FOUNDATION DUE TO SPATIALLY VARIABLE SEISMIC GROUND MOTION
   Hiroshi ITOYASHI, Yoshihiro TAKEUCHI

0494 NONLINEAR DYNAMIC ANALYSIS OF PILE FOUNDATION: EFFECT OF SEPARATION AT SOIL-PILE INTERFACE
   Bal Krishna MAHESHWARI, Hirofumi WATANABE

0517 GROUND SEISMIC BEHAVIOR FROM LIQUEFACTION ARRAY OBSERVATION
   Takaaki IKEDA, Shigeru MIWA, Takuya EGAWA, Jun'ichi NISHIKAWA, Hirochika HAYASHI

0530 SHEAR MODULUS OF SOILS UNDER CYCLIC LOADING AT SMALL AND MEDIUM STRAIN LEVEL
   A. Gomes Correia, J.A. SANTOS
05 GEOTECHNICAL ENGINEERING

0535 STUDY ON SHEET PILE WALL METHOD AS A REMEDIATION AGAINST LIQUEFACTION
Masanobu OKAMOTO, Hiroshi KITA, Hiroyoshi MURATA, Hiroyuki TANAKA

0548 STUDY ON DYNAMIC RESPONSE OF RECLAIMED AND SOFT GROUND OF MAN-MADE ISLAND IN KOBE HARBOR DURING 1995 HYOGOKEN NANBU EARTHQUAKE AND LIQUEFACTION CONTROL
Tadahiro FUKUSUMI, Masao KOBAYASHI

0555 ENGINEERING SEISMOLOGY: SEISMIC HAZARD AND RISK ANALYSIS: SEISMIC HAZARD ANALYSIS FROM SOIL-STRUCTURE INTERACTION TO SITE-CITY INTERACTION
P Guéguen, P Bard, J Semblat

0561 LIQUEFACTION OF SILT-CLAY MIXTURES
Shamsheer Prakash, Tiangiang Guo

0562 SEISMIC DISPLACEMENTS OF RIGID RETAINING WALLS ON SUBMERGENCE
Yingwei Wu, Shamsheer Prakash

0568 TWO-AND THREE-DIMENSIONAL TRANSIENT RESPONSES OF HALF-SPACE UNDER DYNAMIC STRIP LOADS AND TRAIN TRACK LOADS
Ahmed ADAM, Gero PFLANZ, Günther SCHMIDT

0589 IDEALIZING REINFORCED EARTH EMBANKMENTS IN DYNAMIC ANALYSIS
B LAVANIA, Mehdi STAVISHNIAH, Y JOSHI

0601 NUMERICAL ANALYSIS OF THE DAMAGED DIKES IN THE 1995 HYOGO-KEN NANBU EARTHQUAKE
Ryoouke UZUOKA, Osamu MATSUO, Masaya MIHARA, Mitsu OKAMURA

0605 A PRACTICAL METHOD TO ESTIMATE DYNAMIC SOIL IMPEDANCE FOR SEISMIC ANALYSIS OF NUCLEAR POWER STRUCTURES DEEPLY EMBEDDED IN HALFSPACE SOIL
Naohiro NAKAMURA, Noriyoshi NAKAMURA, Kazuhiro KOBAYASHI, Yukio OHMIA

0609 COMPARATIVE STUDY ON INTERACTIVE RESPONSE ANALYSES BETWEEN SOIL AND PILE FOUNDATION UNDER LIQUEFACTION
Katsuo Togashi, Satoshi Goto, Yasanobu Tsukahara, Satoru Nakafusa, Shunji Kanie, Shunichi Suzuki

0618 NON-LINEAR ANALYSES OF DYNAMIC BEHAVIOR OF EMBANKMENT STRUCTURES CONSIDERING TENSILE FAILURE
Kenzo TOKI, Sumio SAWADA, Hisakazu SAKAI

0621 NUMERICAL ANALYSIS OF THE Damaged Dikes in the 1995 Hyogo-Ken Nanbu Earthquake
Ryoouke UZUOKA, Osamu MATSUO, Masaya MIHARA, Mitsu OKAMURA

0628 EARTHQUAKE RESPONSE ANALYSIS OF AN EMBEDED STRUCTURE UTILIZING AN AVERAGED HORIZONTAL SOIL STIFFNESS
Yoshio IKEDA, Yukio SHIMOMURA

0635 SEISMIC ANALYSIS OF LOS REYUNOS DAM USING GENERALIZED PLASTICITY MODEL
Luciano Oldecop, Francisco Zubala

0661 SEISMIC ANALYSIS OF BURIED ARCH STRUCTURES
Doug JENKINS, John WOOD

0668 EXPERIMENTAL STUDY ON PILE STRESS IN LIQUEFIED AND LATERALLY SPREADING SOILS
Tsunehisa TSUGAWA, Naohiko ADACHI, Yasutaka SUZUKI

0701 DAMAGE TO A PILE FOUNDATION DUE TO LIQUEFIED GROUND MOTION
Shin'ichiro MORI, Atsunori NUMATA, Baqi GUAN

0708 EXPERIMENTAL STUDY OF SEISMIC BEHAVIOR OF BOX TYPE TUNNEL CONSTRUCTED BY OPEN CUTTING METHOD
Akihiko NISHIMURA, Itsuo KAWAMA, Seiji NISHIYAMA, Kosuke MUROYA, Hiroshi HAYA

0715 LIQUEFACTION POTENTIAL USING S-WAVE CROSSHOLE TOMOGRAPHY
Ichiro PURUTA, Akio YAMAMOTO, Hideaki SHINOHARA

0722 EXPERIMENTAL AND ANALYTICAL STUDY ON THE EFFECT OF INPUT MOTION ON THE BEHAVIOR OF A CAISSON QUAYWALL
Takahiro SUGANO, Masafumi MIYATA

0725 PROBABILISTIC ASSESSMENT OF LIQUEFACTION INITIATION HAZARD
Raymond SEED, Armen DER KIUREGHIAN, K. Onder CETIN
INDEX BY TOPIC

05 GEOTECHNICAL ENGINEERING

0902 EFFECT OF LATERAL STIFFNESS OF SUPERSTRUCTURE ON BENDING MOMENTS OF PILE FOUNDATION DUE TO LIQUEFACTION-INDUCED LATERAL SPREADING
  RICARDO Dobry, TAREK Abdoun, RAMOS Ricardo

0903 DYNAMIC RESPONSE AND FAILURE MECHANISMS OF A PILE FOUNDATION DURING SOIL LIQUEFACTION BY SHAKING TABLE TEST WITH A LARGE-SCALE LAMINAR SHEAR BOX
  SHUNJI FUJI, TAKAAKI KAGAWA, TOMIO TSUCHIYA, SHUJI TAMURA, YASUTSU GUGU SUZUKI

0914 NUMERICAL MODELING OF SEISMIC SOIL-PILE-SUPERSTRUCTURE INTERACTION
  Juan Pestana, Thomas Lok, Raymond Seed

0915 LARGE SCALE SHAKING TABLE TESTS OF SEISMIC SOIL-PILE INTERACTION IN SOFT CLAY
  Philip Meymand, Raymond Seed, Michael Riemen

0916 AN ENHANCED HYSTERETIC MODEL FOR SITE RESPONSE ANALYSIS
  Thomas LOK, Juan Pestana

0927 NUMERICAL SIMULATION OF PILE FAILURE IN LIQUEFIED SOIL OBSERVED IN LARGE-SCALE SHAKING TABLE TEST
  Hideki FUNAHARA, Shuji TAMURA, Shunji FUJI

0946 EMERGENCE OF WATER FILM IN LIQUEFIED SAND AND ITS ROLE IN LATERAL FLOW
  Tetsuro KOJIMA, Nosami NONAKA, Takeji KOKUSHO

0947 GEOREGRID REINFORCED SUBGRADES UNDER SIMULATED EARTHQUAKE LOADING
  Arvind Verma, A Santha Kumar, Appa Rao T.V.S.R

1035 DILATION OF GRANULAR PILES IN MITIGATING LIQUEFACTION OF SAND DEPOSITS
  Madhira Madhav, Jaspawt Arlekar

1038 AN EXPERIMENTAL STUDY ON THE PIER DAMAGED BY 1995 HYOGOKEN-NANBU EARTHQUAKE
  Masaki MOTO, Ken OKAYA, Takahiro SUGANO, Tomohiro NAKAHARA

1042 STUDY ON SEISMIC CALCULATION METHOD FOR SHIELD TUNNELS UNDER STRONG GROUND MOTION
  Shiro TAKADA, Tengyan Li

1043 INVESTIGATION AND SHAKING TABLE TESTS OF SUBWAY STRUCTURES OF THE HYOGOKEN-NANBU EARTHQUAKE
  Y KOBAYASHI, T IWATATE, K RIN, H KUS

1047 THE ROLE OF SOIL ON THE COLLAPSE OF 18 PIERS OF THE HANSHIN EXPRESSWAY IN THE KOBE EARTHQUAKE
  George Mylonakis, George Gazetas, Sissy Nikolaou, Odysseus Michaelides

1051 GEOTECHNICAL CONSIDERATIONS IN PERFORMANCE BASED EARTHQUAKE-RESISTANT DESIGN
  Carl Kim, Marshall Lew

1074 EFFECTS OF OVERCONSOLIDATION ON LIQUEFACTION STRENGTH OF SANDY SOIL SAMPLES
  A HIRO-OKA, M OHTA, H NAGASE, S MOCHINAGA, K SHIMIZU

1085 INVESTIGATION OF LIQUEFACTION AT RECLAIMED LAND IN JAPAN DURING THE 1995 HYOGOKEN-NANBU EARTHQUAKE
  Atsunori NUMATA, Baoqi GUAN, Shin'ichiro MORI

1113 STUDY ON FREQUENCY CHARACTERISTICS OF NON-LINEARITY OF STRESS AND STRAIN RELATIONSHIP IN SOIL DEPOSIT
  Susumu NAKAMURA

1116 LIQUEFACTION ANALYSIS OF A HIGH ROCK-FILL DAM SUBJECTED TO SEVERE EARTHQUAKE MOTION
  Dilip Pal

1117 EFFECTS OF OVERCONSERVATION ON LIQUEFACTION STRENGTH OF SANDY SOIL SAMPLES
  A HIRO-OKA, M OHTA, H NAGASE, S MOCHINAGA, K SHIMIZU

1133 INVESTIGATION OF LIQUEFACTION AT RECLAIMED LAND IN JAPAN DURING THE 1995 HYOGOKEN-NANBU EARTHQUAKE
  Atsunori NUMATA, Baoqi GUAN, Shin'ichiro MORI

1138 STUDY ON FREQUENCY CHARACTERISTICS OF NON-LINEARITY OF STRESS AND STRAIN RELATIONSHIP IN SOIL DEPOSIT
  Susumu NAKAMURA

1146 SEISMIC SAFETY ANALYSIS OF A HIGH ROCK-FILL DAM SUBJECTED TO SEVERE EARTHQUAKE MOTION
  Dilip Pal

1150 LIQUEFACTION ANALYSIS OF A HIGH ROCK-FILL DAM SUBJECTED TO SEVERE EARTHQUAKE MOTION
  Young-Ho PARK, Sung-Ryu KIM, Sung-Hwan KIM, Myoung-Mo KIM
# INDEX BY TOPIC

## 05 GEOTECHNICAL ENGINEERING

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1175</td>
<td>STRUCTURAL POUNDING OF ADJACENT MULTI-STORREY STRUCTURES CONSIDERING SOIL FLEXIBILITY EFFECTS</td>
<td>Athol Carr, Peter Moss, Amar Rahman</td>
</tr>
<tr>
<td>1190</td>
<td>TIME EFFECT ON LIQUEFACTION POTENTIAL OF SILT CONTAINING VARIOUS AMOUNTS OF CLAY PARTICLES</td>
<td>Qiyiing Niu</td>
</tr>
<tr>
<td>1191</td>
<td>LARGE SCALE SOIL-STRUCTURE INTERACTION EXPERIMENTS ON SAND UNDER CYCLIC LOADING</td>
<td>Ezio Faccioli, Stefania Pedretti, Roberto Paolucci, Paolo Negro</td>
</tr>
<tr>
<td>1193</td>
<td>SHAKING TABLE TESTS AND EFFECTIVE STRESS ANALYSES ON THE DYNAMIC BEHAVIOR OF WEDGED CAISSONS</td>
<td>Shin’ichi IDO, Takahiro SUGANO, Masanori SHIMA, Kou NISHINAKAGAWA, Masaaki MITO, Katsumi KISHITANI, Koji SEKIGUCHI</td>
</tr>
<tr>
<td>1203</td>
<td>A SIMPLE METHOD FOR THE SEISMIC ANALYSIS OF PILES AND ITS COMPARISON WITH THE RESULTS OF CENTRIFUGE TESTS</td>
<td>H.G. POULOS, A. TABESH</td>
</tr>
<tr>
<td>1220</td>
<td>IDENTIFICATION OF MEXICO CITY CLAY DYNAMIC PROPERTIES</td>
<td>Victor Taboada-Urtuzastegai, Hernán Martínez, Miguel Romo, Carlos Ardila</td>
</tr>
<tr>
<td>1224</td>
<td>APPLICATION OF BACK-ANALYSIS FOR STRUCTURAL FOUNDATION IN SOFT SOIL IN SEISMICALLY PRONE AREA</td>
<td>Kosta Talaganov, Vlatko Sesov</td>
</tr>
<tr>
<td>1231</td>
<td>SEISMIC DESIGN OF BRIDGE FOUNDATION AGAINST LIQUEFACTION-INDUCED GROUND FLOW</td>
<td>Tadashi HAMADA, Keiichi TAMURA, Takao AZUMA</td>
</tr>
<tr>
<td>1237</td>
<td>ANALYSIS OF THREE DIMENSIONAL EARTHQUAKE RESPONSE OF SOIL-STRUCTURE SYSTEM BY RESPONSE MODE ANALYSIS METHOD</td>
<td>Mitsugu TAKITA, Jun TOBITA, Masaaki MORO, Keiichi ITO</td>
</tr>
<tr>
<td>1258</td>
<td>AN APPROACH FOR MONITORING LATERAL SPREADING DUE TO LIQUEFACTION USING STRONG GROUND MOTION RECORDS</td>
<td>Shiro TAKADA, Ryozo OZAKI</td>
</tr>
<tr>
<td>1259</td>
<td>BEARING CAPACITY DURING EARTHQUAKE OF THE SPREAD FOOTING REINFORCED WITH MICROPILES</td>
<td>Y Tsukada, G You, Y Ohtani, N Nishimura, Y Tsubokawa, K Miura, M Ishito</td>
</tr>
<tr>
<td>1285</td>
<td>PORE WATER PRESSURE CHANGES IN SANDS UNDER EARTHQUAKE LOADING</td>
<td>T UENG, M WU, R YU, C LIN</td>
</tr>
<tr>
<td>1300</td>
<td>LIQUEFACTION ANALYSIS OF SEAWALL STRUCTURES UNDER BOTH DRAINED AND UNDRAINED CONDITIONS</td>
<td>Katsumi OZEKI, Jun WANG, Masayuki SATO, Nozomu YOSHIDA, Hiroki KUROSE</td>
</tr>
<tr>
<td>1310</td>
<td>LIQUEFACTION POTENTIAL STUDY OF TAIWAN</td>
<td>Ming-Hong CHEN, Chin-Hsiung LOH, Ming-Huei WANG</td>
</tr>
<tr>
<td>1319</td>
<td>THE EFFECT OF DENSITY ON SEISMIC SUBSIDENCE OF LOESS</td>
<td>Zhonghua YUAN, Jin-Li-Lan WANG, Lanmin WANG</td>
</tr>
<tr>
<td>1324</td>
<td>SOME OBSERVATIONS RELATED TO LIQUEFACTION SUSCEPTIBILITY OF SILTY SOILS</td>
<td>Utpal Anukula, Dharma Wijewickreme, Norman McCammon</td>
</tr>
<tr>
<td>1325</td>
<td>A STUDY ON SEISMIC BEHAVIOR OF LIQUEFIED GROUND USING STRONG MOTION ARRAY RECORDS OF THE 1995 HYOGOKEN-NANBU EARTHQUAKE</td>
<td>Takaaki IKEDA, Hiroshi OH-OKA, Shigeru MIWA</td>
</tr>
<tr>
<td>1334</td>
<td>SIMULATION OF ENERGY INFUX AND EFFLUX THROUGH SOIL-STRUCTURE INTERFACE</td>
<td>Rurui AHSAN, Kazuo KONAGAI, Daiwae MARUYAMA</td>
</tr>
<tr>
<td>1381</td>
<td>DYNAMIC RESPONSE ANALYSIS OF SOIL-PILE-BUILDING INTERACTION SYSTEM IN LARGE STRAIN LEVELS OF SOILS</td>
<td>Yoshikazu KITAGAWA, Masanori IBA, Shin’ichiro TAMORII</td>
</tr>
<tr>
<td>1385</td>
<td>EXPERIMENTAL AND ANALYTICAL STUDY OF THE FLOTATION OF BURIED GAS STEEL PIPE DUE TO LIQUEFACTION</td>
<td>M Hamada, K Shimamura, S Yasuda, S Koijma, Y Fujita, T Kikuchi</td>
</tr>
<tr>
<td>1397</td>
<td>NONLINEAR SEISMIC SOIL-STRUCTURE INTERACTION USING A BE-FE METHOD IN THE TIME DOMAIN</td>
<td>Athol Carr, Peter Moss, Jiannong Zhang</td>
</tr>
<tr>
<td>1409</td>
<td>DYNAMIC BEHAVIOR OF GROUP-PILE FOUNDATION BY THREE-DIMENSIONAL ELASTO-PLASTIC FINITE ELEMENT ANALYSES</td>
<td>Makoto KIMURA, Feng ZHANG</td>
</tr>
<tr>
<td>1419</td>
<td>ANALYSIS OF FLUID-SATURATED POROUS MEDIA IN TWO DIMENSIONS UNDER EARTHQUAKE LOAD</td>
<td>Xinchuan ZENG, Shaolin CHEN, Xiaojuan QIN</td>
</tr>
<tr>
<td>1421</td>
<td>EFFECT OF THE EXISTENCE OF UNDERLYING LAYER ON ANTI-PLANE DYNAMIC BEHAVIOUR</td>
<td>Xinchuan Zeng, Xiaojuan Qin</td>
</tr>
</tbody>
</table>
# INDEX BY TOPIC

## 05 GEOTECHNICAL ENGINEERING

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1427</td>
<td>DYNAMIC CHARACTERISTICS OF PILE FOUNDATION SYSTEM CONSIDERING NON-LINEARITY OF SURROUNDING SOIL MEDIUM</td>
<td>Mikio YOSHIZAWA, Kaoru KUSAKABE</td>
</tr>
<tr>
<td>1430</td>
<td>A STUDY ON LIQUEFIED GROUND DISRUPTION EFFECTS ON LIQUID STORAGE TANK BEHAVIOR</td>
<td>Munenori HATANAKA, Sadatomo ONIMARU, Mitsuhiro YOSHIZAWA, Akihiko UCHIDA</td>
</tr>
<tr>
<td>1440</td>
<td>SIMPLIFIED METHOD TO EVALUATE CAISSON TYPE QUAY WALL MOVEMENT</td>
<td>Masayuki SATO, Hiroyuki WATANABE, Masayoshi SHIMADA, Tomoyoshi TAKEDA</td>
</tr>
<tr>
<td>1450</td>
<td>A STUDY ON EARTHQUAKE RESPONSES OF ACTUAL ROCK-FILL DAM AND NUMERICAL ANALYSES</td>
<td>Hiroshi Sato, Yasuyoshi Obuchi</td>
</tr>
<tr>
<td>1454</td>
<td>BEHAVIOR OF PHC PILE FITTED WITH ASEISMIC SPLICE UNDER THE CYCLIC HORIZONTAL LOADING AND VARIABLE VERTICAL LOADS</td>
<td>Yoshihiro SUGIMURA, Madan KARKEE</td>
</tr>
<tr>
<td>1462</td>
<td>LARGE-SCALE SHAKE TABLE TESTS ON PILE FOUNDATIONS IN LIQUEFIED GROUND</td>
<td>Shuji TAMURA, Masatoshi IKEDA, Rolandino ORENSE, Iwao MORIMOTO, Kenji ISHIHARA, Susumu YASUDA</td>
</tr>
<tr>
<td>1465</td>
<td>A PROCEDURE FOR EVALUATION OF DIFFERENTIAL SETTLEMENTS OF BUILDINGS DURING EARTHQUAKE</td>
<td>Xiaoming YUAN, Rui SUN, Shangjiu MENG, Zhuoji SHI</td>
</tr>
<tr>
<td>1467</td>
<td>A STUDY ON EARTHQUAKE RESPONSES OF ACTUAL ROCK-FILL DAM AND NUMERICAL ANALYSES</td>
<td>Hiroshi Sato, Yasuyoshi Obuchi</td>
</tr>
<tr>
<td>1474</td>
<td>CHARACTERISTICS OF LIQUEFIED GROUND FLOW AT PLANE RECLAIMED LAND DURING THE 1995 KOBE EARTHQUAKE</td>
<td>Masaho YOSHIDA, Masakatsu MIYAJIMA, Masaru KITAURA</td>
</tr>
<tr>
<td>1483</td>
<td>EVALUATION OF SEISMIC FORCE OF PILE FOUNDATION INDUCED BY INERTIAL AND KINEMATIC INTERACTION</td>
<td>Yoshihiko MURONO, Akihiko NISHIMURA</td>
</tr>
<tr>
<td>1496</td>
<td>KINEMATIC SOIL-MICROPILE INTERACTION</td>
<td>Jianxun YANG, Kevin MCMANUS, John BERRILL</td>
</tr>
<tr>
<td>1503</td>
<td>EFFECT OF CLAY PARTICLE CONTENT ON LIQUEFACTION OF SOIL</td>
<td>RenWang liang, Xiaohong Bai, JuChen Wang</td>
</tr>
<tr>
<td>1504</td>
<td>EXPERIMENTAL STUDY OF THE BEHAVIOR OF HYBRID (STEEL-CONCRETE COMPOSITE) CAISSON-TYPE QUAY WALLS DURING EARTHQUAKES USING AN UNDERWATER SHAKE TABLE</td>
<td>Koji SEKIGUCHI, Tsuyoshi TANAKA, Shunsuke YAMAMOTO, Yoshiro SHIOZAKI, Takahiro SUGANO</td>
</tr>
<tr>
<td>1505</td>
<td>LIQUEFACTION OF IMPROVED GROUND IN PORT ISLAND AND ITS EFFECT ON VERTICAL ARRAY RECORD</td>
<td>Nezuma YOSHIDA</td>
</tr>
<tr>
<td>1508</td>
<td>THE DYNAMIC CONSTITUTIVE MODEL OF COMPACTED LOESS</td>
<td>Lamin Wang, Zhongxia YUAN</td>
</tr>
<tr>
<td>1515</td>
<td>EXPERIMENTAL STUDY OF THE BEHAVIOR OF HYBRID (STEEL-CONCRETE COMPOSITE) CAISSON-TYPE QUAY WALLS DURING EARTHQUAKES USING AN UNDERWATER SHAKE TABLE</td>
<td>Koji SEKIGUCHI, Tsuyoshi TANAKA, Shunsuke YAMAMOTO, Yoshiro SHIOZAKI, Takahiro SUGANO</td>
</tr>
<tr>
<td>1520</td>
<td>EFFECT OF CLAY PARTICLE CONTENT ON LIQUEFACTION OF SOIL</td>
<td>RenWang liang, Xiaohong Bai, JuChen Wang</td>
</tr>
<tr>
<td>1522</td>
<td>A SYNTHESIZED APPROACH FOR PREDICTING LIQUEFACTION AND RESULTING DISPLACEMENTS</td>
<td>Peter Byrne, Michael Beatty</td>
</tr>
<tr>
<td>1524</td>
<td>A GEOTECHNICAL SEISMIC SITE RESPONSE EVALUATION PROCEDURE</td>
<td>Adrian Rodriguez-Marek, Jonathan Bray, Norman Abrahamson</td>
</tr>
<tr>
<td>1526</td>
<td>HAZARD OF LANDSLIDING DURING EARTHQUAKES - CRITICAL OVERVIEW OF ASSESSMENT METHODS</td>
<td>R.N Chowdhury</td>
</tr>
<tr>
<td>1528</td>
<td>ANALYSIS OF TWO CASE HISTORIES ON LIQUEFACTION OF RECLAIMED DEPOSITS</td>
<td>Kenji ISHIHARA, Kenroa FURUKAWAZONO, Misko CUBRINOFSKI</td>
</tr>
<tr>
<td>1529</td>
<td>PORE PRESSURE EFFECT ON SEISMIC RESPONSE OF SLOPES</td>
<td>Ernesto CASCON, Giovanni BIONDI, Ernesto MOTTA, Michele MAUGERI</td>
</tr>
<tr>
<td>1535</td>
<td>STRAIN DEPENDENT IMPEDANCE IN SHALLOW FOUNDATIONS</td>
<td>Michele MAUGERI, Maria Rossella MASSIMINO, Paolo CARRUBBA</td>
</tr>
<tr>
<td>1536</td>
<td>UNDRAINED SHEAR BEHAVIOR OF MEXICO CITY SEDIMENTS DURING AND AFTER CYCLIC LOADING</td>
<td>Pedro MORENO, J. Abraham DÍAZ-RODRÍGUEZ, Guadalupe SALINAS</td>
</tr>
<tr>
<td>1539</td>
<td>CHANGES IN NATURAL FREQUENCY OF APARTMENT BUILDINGS BEFORE AND AFTER THE HYOGOKEN-NANBU EARTHQUAKE</td>
<td>T FUKUDA, S OHBA</td>
</tr>
<tr>
<td>1541</td>
<td>SEISMIC RESPONSE OF NTT KOBE EKIMAE BUILDING WITH CONSIDERATION OF NONLINEAR SOIL-STRUCTURE INTERACTION DURING THE 1995 HYOGO-KEN-NANBU EARTHQUAKE</td>
<td>Taku SATO, Taka INABA, Hisanobu AKAGI, Hiroshi DOHI, Kenji OKUTA</td>
</tr>
</tbody>
</table>
INDEX BY TOPIC

05 GEOTECHNICAL ENGINEERING

1729 ANALYSIS OF SOIL NONLINEAR PROPERTIES AT PORT ISLAND BY NIOM METHOD DURING 1995 HYOGO-KEN-NANBU EARTHQUAKE IN JAPAN
Hamid Haddadi, Hideji Kawakami

1737 BEHAVIOR OF GRAVITY TYPE QUAY WALL DURING EARTHQUAKE REGARDING DYNAMIC INTERACTION BETWEEN CAISSON AND BACKFILL DURING LIQUEFACTION
N Yoshida, T Sasajima, E INOUE, K Miura, E Kohama, T HAYASHI, N Ohtsuka

1744 OSCILLATOR TESTS OF PILE FOUNDATION IN DISSIPATION PROCESS OF EXCESS PORE WATER PRESSURE AFTER LIQUEFACTION
Hatsukazu MIZUNO, Tsutomu HIRAIDE, Toshihiro MORI, Masanori IIBA, Michio SUGIMOTO

1745 VIBRATION TESTS OF A FULL-SCALE PILE GROUP IN SOFT CLAY
Kyle ROLLINS, Ikhsan MUHAMMAD, Kevin WOMACK, Marvin HALLING

1748 DYNAMIC DEFORMATION PROPERTY TESTS AT LARGE STRAINS
Hiroyoshi KIKU, Nozomu YOSHIDA

1754 PERFORMANCES OF FOUNDATIONS AGAINST LIQUEFACTION-INDUCED PERMANENT GROUND DISPLACEMENTS
Masanori HAMADA

1761 COMPARISON OF EQUIVALENT LINEAR ANALYSIS AND NONLINEAR ANALYSIS FOR A LIQUEFACTION PROBLEM
Yasushi Nukui, Katsuichiro Hijikata, Andrew Chan, Tadahiko Shiom, Kesiuke Koyama

1784 EVALUATION OF THE SEISMIC PERFORMANCE OF GRAVITY TYPE QUAY WALL USING EFFECTIVE STRESS ANALYSES
Susumu IAI, Koji ICHII, Hanlong LIU,ukihiro SATO

1794 INVERSE ANALYSIS OF DYNAMIC SOIL PARAMETERS USING ACCELERATION RECORDS
Masaru KITAURA, Masakatsu MIYAJIMA, Toshihiko IKEMOTO

1806 FREQUENCY DEPENDENT EQUIVALENT-LINARIZED TECHNIQUE FOR FEM RESPONSE ANALYSIS OF GROUND
Atsushi YASHIMA, Yoshihito FURUMOTO, Masata SUGITO

1810 ESTIMATION OF RESPONSE OF STRUCTURES UNDER NEAR FIELD GROUND MOTIONS CONSIDERING INHOMOGENEOUS FAULTING
Tadao MINAMI, Hisashi UMEMURA, Yuki SAKAI

1832 EQUIVALENT LINEAR ANALYSIS CONSIDERING LARGE STRAINS AND FREQUENCY DEPENDENT CHARACTERISTICS
Kinya MIURA, Satoshi KOBAYASHI, Nozomu YOSHIDA

1844 SHAKING TABLE TESTS WITH SHORT UNDERGROUND WALLS ON REDUCING SETTLEMENT OF SPREAD FOUNDATION IN LIQUEFIED SOIL
Yukihiko KITADA, Masaru KITAURA, Masakatsu MIYAJIMA

1849 MODELLING OF HARDENING AND DEGRADATION BEHAVIOR OF CLAYS AND SANDS DURING CYCLIC LOADING
Diego LO PRESTI, Antonio CAVALLARO, Michele MAUGERI, Oronzo PALLARA, Florentina IONESCU

1859 DISCUSSION ON THE PROBLEM ABOUT SATURATED LOESS DYNAMIC PORE PRESSURE BY VIBRATION
Tan LI, Lammin WANG

1871 DETECTION OF SOIL LIQUEFACTION USING STRONG GROUND MOTION RECORDS
Masaru KITAURA, Masaki YAMAMOTO, Masakatsu MIYAJIMA

1878 FUNDAMENTAL STUDY OF DYNAMIC RESPONSE OF POROUS MEDIA WITH RANDOM VARIABLES
KAZUYA MITSUJI, YOSHIIRO SUGIMURA

1883 DYNAMIC BEHAVIOR OF PILE FOUNDATION IN LIQUEFACTION PROCESS - SHAKING TABLE TESTS UTILIZING BIG-SHEAR BOX
Hatsukazu MIZUNO, Michio SUGIMOTO, Toshihiro MORI, Masanori IIBA, Tsutomu HIRAIDE

1885 RETAINING WALLS UNDER SEISMIC ACTIONS: SHAKING TABLE TESTING AND NUMERICAL APPROACHES
Antonietta FEOLA, Adam CREWE, Pasquale CARAFA, Armando SIMONELLI, Colin TAYLOR

1894 DISSIPATIVE ENERGY AND STORED ELASTIC ENERGY DURING LIQUEFACTION PROCESS
Yoshimi OGAWA, Hiroshi ABE, Kaoru KUSANO

1922 EXPERIMENTAL STUDY ON THE SOIL-PILE-STRUCTURE INTERACTION BY SHAKING TABLE TESTS USING LARGE-SCALE LAMINAR BOX
Toshiaki HATORI, Kaeko YAHATA, Taro NAKAGAWA, Takeshi FUJIMORI, Masara TANAKA

1930 EFFECTS OF VERTICAL SEISMIC MOTION ON PERFORMANCE OF CAISSON TYPE QUAY WALLS
Masaru KITAURA, Masakatsu MIYAJIMA, Hiroshi NAKAGAWA

1949 CONTROLLED BLASTING TO SIMULATE LIQUEFACTION FOR FULL-SCALE LATERAL LOAD TESTING
Scott ASHFORD, Kyle ROLLINS, J. Dusty LANE, Roman HRYCIW

1952 NON-LINEAR MOMENT-ROTATION RELATIONSHIP AT THE BASE OF SHEAR WALLS
Michele MAUGERI, Maria Rossella MASSIMINO, Aurelio GHESRI
INDEX BY TOPIC

05 GEOTECHNICAL ENGINEERING

1970 NONLINEAR SEISMIC ANALYSIS OF SUBGRADE PILES WITH SOIL DURING STRONG GROUND MOTIONS
Hirokazu TAKEMIYA, Jorge SHIMABUKU

1978 ANALYSIS OF THE DAMAGE TO THE PILE FOUNDATION OF A HIGHWAY BRIDGE CAUSED BY SOIL LIQUEFACTION AND ITS LATERAL SPREAD DUE TO THE 1995 GREAT HANSHIN EARTHQUAKE
Masaki FUCHIMOTO, Atsushi NANO, Yasuo FUJII, Akinori NAKAHIRA, Choji KURODA, Furitsu YASUDA, Akira OHTSUKI, Takashi TAZOH

2029 SEISMIC RESISTANT RETAINING WALLS OF REINFORCED SOIL
Paul GREENING, Colin TAYLOR, Ramiro SOFRONIE

2086 A STUDY ON EARTHQUAKE RESPONSE OF AN ARMORED EMBANKMENT FOR ARTIFICIAL ISLAND
Kouichi SATO, Yoshiji MORO, Toru MASAO, Setsuo IIZUKA

2093 REPRODUCTION OF A LARGE-SCALE 1G TEST ON UNSATURATED SAND DEPOSITS AND PILE FOUNDATIONS USING CENTRIFUGE MODELING
Chikahiro MINOWA, Takaaki KAGAWA, Masayoshi SATO

2099 SOIL SPRING CONSTANTS DURING LATERAL FLOW OF LIQUEFIED GROUND
Masahiro TAKAGI, Iwao MORIMOTO, Susumu YASUDA, Kenji ISHIHARA, Rolando ORENSE

2116 3-D ANALYSIS TO EVALUATE THE EFFECT OF SOIL IMPROVEMENT ON LIQUEFACTION OF MAN-MADE ISLAND
Hiroki KANAMI, Atsushi YASHIMA, Fusao OKA

V BALJAEV, V VINogradov, S PRIVALOV

2132 REFINEMENTS TO THE NEWMARK SLIDING BLOCK MODEL
David ELMS

2136 A STUDY ON DAMAGE TO STEEL PIPE PILE FOUNDATION ON RECLAIMED LAND DURING HYOGO-KEN-NAMBU EARTHQUAKE
Takaaki IKEDA, Shigeru MIWA, Hiroshi OH-Oka

2161 DYNAMIC PROPERTIES OF UNTREATED AND TREATED COHESIVE SOILS
M AGGOUR, K CHEPKOIT

2177 A STUDY ON IDENTIFYING METHOD OF NONLINEAR DYNAMIC SOIL RESISTANCE AGAINST PILES
Takayoshi MUTO, Michio IGUCHI

2195 SOIL SPRING CONSTANTS DURING LATERAL FLOW OF LIQUEFIED GROUND
Masahiro TAKAGI, Iwao MORIMOTO, Susumu YASUDA, Kenji ISHIHARA, Rolando ORENSE

225 EFFECT OF FOUNDATION INTERACTION ON REQUIRED SEISMIC INTENSITY OF RC PIERS SUBJECTED TO LEVEL2 EARTHQUAKE MOTIONS
Syyuji SASADA, Yoshifumi NARIYUKI, Tsutomu SAWADA, Kiyoshi HIRAO

2228 EFFECT OF THE GRID-SHAPED STABILIZED GROUND IMPROVEMENT ON LIQUEFIABLE GROUND
T Matsuda, K Sato

2263 IN SITU VS MEASUREMENTS IN SOIL AND ROCK USING THE BOREHOLE SASW TOOL
Kenneth Stokoe II, Michael Kalinski

2270 LIQUEFACTION HISTORY, 416-1997, IN JAPAN
Kazue WAKAMATSU

2384 RESPONSE OF TYPICAL BUILDINGS TO LONG-DISTANCE EARTHQUAKES
Tso-Chien Pan, Qiurong Lu

2404 ESTIMATION OF LATERAL SPREAD OF A CAISSON TYPE QUAY CAUSED BY BACK FILL LIQUEFACTION
Kunio MIZUMOTO, Tetsuya TSURUMI, Hidekatsu NAKAJIMA, Susumu OKADA

2405 EXPERIMENTAL CONSIDERATION ON THE MECHANISM OF LIQUEFACTION
Testuya TSURUMI, Susumu OKADA, Kunio MIZUMOTO

2423 SURFACE WAVE MODELLING USING SEISMIC GROUND RESPONSE ANALYSIS
E John Marsh, Tam Larkin

2429 ESTIMATION OF DYNAMIC DISPLACEMENT OF GRAVITY TYPE QUAY WALLS BASED ON CENTRIFUGE MODELING
Tora SUEOKA, Tadafumi FUJIIWARA, Yuichi HIGUCHI, Kenichi HORIKOSHI

2441 COUNTERMEASURES AGAINST LIQUEFACTION INDUCED SETTLEMENT FOR POWER TRANSMISSION TOWERS
Masayuki SATOH, Susumu YASUDA, Kenichi HORIKOSHI, Hidenori ABO
### 05 GEOTECHNICAL ENGINEERING

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>2443</td>
<td>DYNAMIC CENTRIFUGE TEST OF PILE FOUNDATION STRUCTURE PART ONE : BEHAVIOR OF FREE GROUND DURING EXTREME EARTHQUAKE CONDITIONS</td>
<td>Satoru NAKAFUSA, Tsutomu NAMIKAWA, KatsuO TOGASHI, Ryouichi BABASAKI, Toshio HASHIBA</td>
</tr>
<tr>
<td>2444</td>
<td>DYNAMIC CENTRIFUGE TEST OF PILE FOUNDATION STRUCTURE PART TWO : BEHAVIOR OF STRUCTURE AND GROUND DURING EXTREME EARTHQUAKE CONDITIONS</td>
<td>Tsutomu NAMIKAWA, Ryouichi BABASAKI, KatsuO TOGASHI, Toshio HASHIBA, Satoru NAKAFUSA</td>
</tr>
<tr>
<td>2445</td>
<td>DYNAMIC MODEL TESTS ON L-SHAPED GRAVITY RETAINING WALLS</td>
<td>Ernesto CASCON, Michele MAUGERI, Simone LO GRASSO</td>
</tr>
<tr>
<td>2446</td>
<td>TILTING FAILURE OF RETAINING WALLS INCLUDING P-DELTA EFFECT AND APPLICATION TO KOBE WALLS</td>
<td>J MANDER, K FISHMAN, D Yao, R RICHARDS Jr</td>
</tr>
<tr>
<td>2447</td>
<td>LIQUEFACTION POTENTIAL BY TORSIONAL SHEAR</td>
<td>Ghasem Habibagahi, Masood Dehghani, Arsalan Ghahramani, John Berrill</td>
</tr>
<tr>
<td>2448</td>
<td>SHAKING TABLE TESTS ON PERMANENT DISPLACEMENT OF CAISSON QUAY WALL DURING EARTHQUAKES</td>
<td>Abbas GHALANDARZADEH, Takashi ORITA, Ikuo TOWHATA</td>
</tr>
<tr>
<td>2449</td>
<td>DETAILED INVESTIGATION OF PILES DAMAGED BY HYOGOKEN- NANBU EARTHQUAKE</td>
<td>Hiroyasu OHTSU, Akira TATEISHI, Kenichi HORIKOSHI</td>
</tr>
<tr>
<td>2450</td>
<td>SHAKING TABLE TESTS ON THE MECHANISM OF LIQUEFACTION-INDUCED GROUND FLOW BEHIND QUAY WALLS</td>
<td>Daisuke ARAI, Toshio KOBAYASHI, KeySasumu YASUDA, Key HIGUCHI, Tomohiro TANAKA</td>
</tr>
<tr>
<td>2451</td>
<td>SIMULTANEOUS MODEL TESTS ON QUAY WALL AND LIQUEFIED BACKFILL GROUND DURING EARTHQUAKE</td>
<td>Susumu YASUDA, Nozomo YOSHIDA, Mamoru KANATANI</td>
</tr>
<tr>
<td>2452</td>
<td>RESIDUAL DEFORMATION OF CAISSON, SHEET PILE AND GROUND BY SIMPLIFIED ANALYSIS</td>
<td>Tsunehiro IRISAWA, Susumu YASUDA, Nozomo YOSHIDA, Hiroyuki KIKU, Hiromitsu MORIMOTO</td>
</tr>
<tr>
<td>2453</td>
<td>ANALYSIS OF LIQUEFACTION INDUCED RESIDUAL DEFORMATION FOR TWO TYPES OF QUAY WALLS ANALYSIS BY “FLIP”</td>
<td>Osamu OZUTSUMI, Shun-ichi SAWADA, Susumu IAI</td>
</tr>
<tr>
<td>2454</td>
<td>RESIDUAL DEFORMATION ANALYSIS OF SHEET PILE QUAY WALL AND BACKFILL GROUND AT SHOWA-OHASHI SITE BY SIMPLIFIED METHOD</td>
<td>Osamu OZUTSUMI, Ketsu YUU, Masaaki KIYAMA, Susumu IAI</td>
</tr>
<tr>
<td>2455</td>
<td>BEHAVIOR OF THE MAIN WHARF IN SAN PEDRITO PORT IN MANZANILLO, MEXICO</td>
<td>M Romo, E Ovando-Shelley</td>
</tr>
<tr>
<td>2456</td>
<td>SURVEY AND EVALUATION OF ACTIVE FAULTS ON DAM CONSTRUCTION IN JAPAN</td>
<td>Yasushiko Wakizaka, Choshiro Tamura, Sigehiro Kano, Tsuneo Uesaka, Isao Nogoyama</td>
</tr>
<tr>
<td>2457</td>
<td>RADIATION DAMPING OBSERVED FROM SEISMIC RESPONSES OF BUILDINGS</td>
<td>Mehmet CELEBI</td>
</tr>
<tr>
<td>2458</td>
<td>RESPONSE SPECTRA FOR DIFFERENTIAL MOTION OF COLUMNS</td>
<td>Maria Todorovska, Mihailo Trifunac</td>
</tr>
<tr>
<td>2459</td>
<td>THE GUTS OF SOIL-STRUCTURE INTERACTION</td>
<td>John WOLF, Chongmin SONG</td>
</tr>
<tr>
<td>2460</td>
<td>CENTRIFUGE RESEARCH OF LIQUEFACTION PHENOMENA</td>
<td>Michael SHARP, Ricardo DOBRY, Richard LEDBETTER</td>
</tr>
<tr>
<td>2461</td>
<td>SHAKE TABLE TESTING ON SEISMIC PERFORMANCE OF GRAVITY QUAY WALLS</td>
<td>Susumu IAI, Takahiro SUGANO</td>
</tr>
<tr>
<td>2462</td>
<td>STUDY ON EFFECTIVE SEISMIC MOTION AND ITS APPLICATION TO SEISMIC DESIGN</td>
<td>M Saitoh, A Nishimura</td>
</tr>
<tr>
<td>2463</td>
<td>CYCLIC SETTLEMENT AND SLIDING OF CAISSON SEAWALLS</td>
<td>Shunichi HIGUCHI, Doug STEWART, Tomoyoshi TAKEDA, Tadashi KAWAI, Bruce KUTTER, Randolph SETTGAST</td>
</tr>
<tr>
<td>2464</td>
<td>DYNAMIC COMPLIANCE OF SHALLOW FOOTINGS ON NONLINEAR SOIL</td>
<td>M PENDER</td>
</tr>
<tr>
<td>2465</td>
<td>SEISMIC DESIGN OF PORT OF LOS ANGELES' PIER 400: A GEOTECHNICAL ENGINEERING PERSPECTIVE</td>
<td>Kanthasamy MURALEETHARAN, Kandiah ARULMOLL, John FOXWORTHY, Richard WITTKOP</td>
</tr>
<tr>
<td>2466</td>
<td>NUMERICAL MODELING OF LIQUEFACTION-INDUCED LATERAL SPREADING</td>
<td>Zhaohui Yang, Ahmed-W. Elgamal</td>
</tr>
</tbody>
</table>

### 06 STRUCTURAL ENGINEERING

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>0006</td>
<td>ZOOMING PARADOX AND DAMPING MODELS IN DYNAMIC ANALYSIS</td>
<td>Alexander TYAPIN</td>
</tr>
<tr>
<td>0007</td>
<td>IMPROVING THE PERFORMANCE OF STEEL BEAM-COLUMN MOMENT-RESISTANT CONNECTIONS</td>
<td>Kevin Truman, Gary Warmka</td>
</tr>
</tbody>
</table>
INDEX BY TOPIC

06 STRUCTURAL ENGINEERING

0021 GPS IN DYNAMIC MONITORING OF LONG-PERIOD STRUCTURES
   Mehmet CELEBI

0024 ON THE SEISMIC BEHAVIOR OF RC FRAMES DESIGNED ACCORDING TO EUROCODE 8
   Artur PINTO, Antonio AREDE

0026 ANALYTICAL AND EXPERIMENTAL STUDY OF REAL MASONRY BUILDINGS
   M. I. Enrique Cruz Gómez

0037 BEHAVIORS OF FRAMED MASONRY WALLS
   Yaw-Jeng CHIOU, Jyh-Cheng TZENG, Yuh-Wehn LIOU

0040 SEISMIC BEHAVIOUR OF FIBRE REINFORCED CONCRETE FRAMES
   L. LA MENDOLA, G. ZINGONE, G. CAMPIONE

0043 STRUCTURAL IDENTIFICATION AND POTENTIAL SYSTEMS
   Gaetano Zingone, Cavaleri Liborio

0050 NONLINEAR HYDRODYNAMIC PRESSURES ON RIGID ARCH DAMS DURING EARTHQUAKES
   Bang-Fuh CHEN, Yin-Sen YUAN

0059 A NEW METHOD FOR THE SEISMIC DESIGN OF STRUCTURES WITH BILINEAR ISOLATORS USING INELASTIC SPECTRA
   Arturo TENA-COLUNGA

0063 THE CONTROL OF BUILDING MOTION BY FRICTION DAMPERS
   Cedric MARSH

0069 3-D SIMPLIFIED DYNAMIC ANALYSIS OF THE XIAOLANGDI EARTH-ROCK DAM
   Shen ZHENZHONG, Xu ZHIYING

0071 NONLINEAR SEISMIC RESPONSE ANALYSIS OF XIAOWAN ARC DAM WITH CONTRACTION JOINT
   Chuhan ZHANG, Guanglan WANG, Yanjie XU, Feng JIN

0072 DESIGN BASED SEISMIC INPUT FOR SEISMIC ISOLATION SYSTEM
   Katsuhiko ISHIDA

0073 PERFORMANCE COMPARISON OF DIFFERENT FRICTION DAMPED SYSTEMS
   Yaomin Fu, Sheldon Cherry

0074 THE EFFECT OF FLEXIBLE HORIZONTAL DIAPHRAGMS ON THE SEISMIC TORSIONAL RESISTANCE OF SYSTEMS WITH DUCTILE WALLS
   Athol CARR, Peter MOSS, Mashiro INAYAMA, Masahide MURAKAMI

0088 SEISMIC ISOLATION FOR STRONG, NEAR-FIELD EARTHQUAKE MOTIONS
   Victor ZAYAS, Stanley LOW

0101 THE CONCEPT OF DAMPING TUNING FOR SEISMIC ISOLATION
   Alexander UZDIN, Angelica DOLGAYA

0110 SEISMIC EVALUATION OF EARTHQUAKE RESISTANT AND RETROFITTING MEASURES OF STONE MASONRY HOUSES
   Thakkar SHASHI, Agarwal PANKAJ

0111 THE OBSERVED PERFORMANCE OF PARTIALLY REINFORCED MASONRY PIERS SUBJECTED TO COMBINED HORIZONTAL CYCLIC AND COMpressive LOADS

0112 INFLUENCE OF MASONRY INFILLS ON THE EARTHQUAKE RESPONSE OF MULTI-STOREY REINFORCED CONCRETE STRUCTURES
   George Manos, Bilal Yasin, Jafar Thaumpta

0113 ELASTO-PLASTIC BEHAVIOR OF HORIZONTAL HAUNCHED BEAM-TO-COLUMN CONNECTION
   Yoshihazu SAWAMOTO, Toshio SAEKI, Naoki TANAKA

0114 FLEXIBLE BUILDING BASEMENT WITH MULTICOLUMNs
   Luis CARRILLO-GUTIERR

0116 SEISMIC PERFORMANCE OF REINFORCED CONCRETE COLUMNS WITH 90 DEGREE END HOOKS FOR SHEAR REINFORCEMENT UNDER HIGH SPEED LOADING
   Shigeru HAKUTO

0119 DAMPING AND ENERGY CHARACTERISTICS OF PC RIGID-FRAME VIADUCT BRIDGES
   Takakichi KANEKO, Yoshitaka MATSUI, Toshiro HAYASHIKAWA, Koichi SATO

0122 PASSIVE CONTROL OF EARTHQUAKE-INDUCED VIBRATIONS IN ASYMMETRIC BUILDINGS
   Rakesh Goel

0123 STATISTICAL ANALYSIS OF MODAL PARAMETERS FOR RC BUILDINGS
   Chi-Ching LO, Li-Ling HONG
INDEX BY TOPIC

06 STRUCTURAL ENGINEERING

0127 SEISMIC STRENGTHENING OF REINFORCED CONCRETE BRIDGE PIER WITH FRP COMPOSITES
Vladimir Volnyy, Chris Pantelides, Janos Gergely, Lawrence Reaveley

0129 SEISMIC RESPONSE OF BUILDINGS ISOLATED BY SLIDING-ELASTOMER BEARINGS SUBJECTED TO BI-DIRECTIONAL MOTION
Sajal DEB, Dilip PAUL

0130 TESTING OF A FULL SCALE BASE ISOLATED FOUR STORY APARTMENT BUILDING IN THE CITY OF SPITAK, ARMENIA
Sam LOO, Grgory VARDARAJAN, Keith FULLER, Levik BEIBUTIAN, Tigran NERSESSIAN, Grant SARGISSIAN, VanikArsen KAZARIANAZARIAN, Mikayel MELKUMYAN

0131 STUDY ON STABILITY AGAINST SLIDING OF DEEP EMBEDDED NUCLEAR POWER BUILDING
H TAKAHARA, T HAMADA, K TOGASHI

0132 CENTERCORE STRENGTHENING SYSTEM FOR SEISMIC HAZARD REDUCTION OF UNREINFORCED MASONRY BEARING WALL BUILDINGS
David BREIHOZL, P.E.

0133 SOME DIFFERENCES BETWEEN COUPLED WALL AND CANTILEVER WALL STRUCTURES
Mulyo Harris Pradono, Sugeng Wijanto

0134 SEISMIC RETROFIT OF NON-PRISMATIC RC BRIDGE COLUMNS WITH FIBROUS COMPOSITES
Brett McElhaney, David Sanders, Faramarz Gordaninejad, Frank martinovic, M. Satid Saiidi

0135 STRUCTURAL MODELS FOR TWO INSTRUMENTED BUILDINGS WITH SOIL STRUCTURE INTERACTION
Nefal Rodriguez Cuervas

0136 SEISMIC RESPONSE OF BUILDING BASE ISOLATED WITH FILLED RUBBER BEARINGS UNDER EARTHQUAKES OF DIFFERENT CHARACTERISTICS
Shashi THAKKAR, Sarvesh JAIN

0137 BI-AXIAL PSEUDODYNAMIC TESTING
Shuenn-Yih CHANG, Gee-Yu LIU

0138 SELECTIVE COLUMN REHABILITATION OF RC FRAMES
Ahmed Ghobarah

0139 REHABILITATION OF RC BUILDINGS USING STRUCTURAL WALLS
Ahmed Ghobarah, Maged Youssef

0140 ANALYTICAL METHOD FOR PREDICTING THE RESPONSE OF TIED CONCRETE COLUMNS TO SEISMIC LOADING
Minehiro NISHIYAMA, Fumio WATANABE, Beni ASSA

0141 SEISMIC BEHAVIOUR OF STRUCTURES WITH ENERGY DISSIPATING SYSTEMS IN MEXICO
J JARA, A AYALA, E MIRANDA

0142 RECENT ADVANCES IN CONCRETE MATERIAL MODELING AND APPLICATION TO THE SEISMIC EVALUATION AND RETROFIT OF CALIFORNIA BRIDGES
Robert Dowell, Robert Dameron, Joseph Rashid

0143 FRACTURE AND PLASTIC DEFORMATION CAPACITY OF THE WELDED JOINT OF COMPOSITE BEAM-TO-STEEL COLUMN CONNECTIONS
Akira MATSUO, Yuji NAKAMURA, Takaao TAKAMATSU, Yoshimasa MATSUI

0144 SEISMIC BEHAVIOUR OF MIXED STEEL STRUCTURES
F DANESI

0145 ULTIMATE STRENGTH AND STRAIN OF CONCRETE STRUTS IN INFILLED WALL PANELS OF FRAMED SHEARWALLS
Fumiya ESAKI

0146 ADVANCED PASSIVE CONTROL TECHNIQUES FOR RETROFIT OF EXISTING BUILDINGS IN SEISMIC ZONE
Joe CHUNG, J XIE, Fu Lin ZHOU, X GAO, W YAN, Z XU, W LIU

0147 STRENGTH AND BEHAVIOR OF SLENDER CONCRETE FILLED STEEL TUBULAR COLUMNS
Chiaki MATSUI, Eiji MINO, Keigo TSUDA

0148 COST BENEFIT ANALYSIS OF EARTHQUAKE PROTECTION PROGRAMME THROUGH RETROFITTING OF NON-ENGINEERED BUILDINGS
Kumar Amit, Bose Pratima Rani

0149 A DETAILED EXPERIMENTAL STUDY ON CHINESE LEAD RUBBER BEARING
Keiji MASUDA, Takafumi MIYAMA, Falin ZHOU, Binghu ZHENG, Demin FENG, Zhengrong LI, Wenguang LIU

0150 A NEW ANALYTICAL MODEL FOR THE LEAD RUBBER BEARING
Demin FENG, Takafumi MIYAMA, Tsujiro TORII, Satoshi YOSHIDA, Biao SHIMODA, Masayoshi IKENAGA

0151 PERIODS OF REINFORCED CONCRETE FRAMES DURING NONLINEAR EARTHQUAKE RESPONSE
Nove NAUMOSKI, Arthur HEIDEBRECHT
# INDEX BY TOPIC

## 06 STRUCUTRAL ENGINEERING

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>0213</td>
<td>Statical Characteristics of the Improved Rigid Beam-to-Column Connections of Steel Structure</td>
<td>Masuda Hiroshi, Atsuo Tanaka</td>
</tr>
<tr>
<td>0216</td>
<td>Influence of Hysteretic Deteriorations in Seismic Response of Multistory Steel Frame Buildings</td>
<td>Konstantinos Skliros, Andrei Reinhorn, Farzad Naem</td>
</tr>
<tr>
<td>0218</td>
<td>Shaking Table Experimental Study of Reinforced Concrete High-Rise Building</td>
<td>Weixing Shi</td>
</tr>
<tr>
<td>0221</td>
<td>Capacity Design of Infilled Frame Structures</td>
<td>Athol Carr, Robert Park, Francisco Crisafalli</td>
</tr>
<tr>
<td>0222</td>
<td>Seismic Response Evaluation Using Impulse Series Method</td>
<td>Adrian Danilji, Mirela Batalan</td>
</tr>
<tr>
<td>0231</td>
<td>Performance of Reinforced Concrete Beams Under Seismic and Cyclic Loadings</td>
<td>Vsevolod Levitch</td>
</tr>
<tr>
<td>0240</td>
<td>Simulation of Concrete Frame Collapse Due to Dynamic Loading</td>
<td>Motohiko Hakuno</td>
</tr>
<tr>
<td>0247</td>
<td>Ultimate Tensile Strength of 780MPa-Grade and 590MPa-Grade H-Shaped Steel Members Jointed With High-Strength Bolts</td>
<td>Kuniaki Udagawa, Takao Yamada</td>
</tr>
<tr>
<td>0250</td>
<td>Seismic Performance of Large RC Circular Hollow Columns</td>
<td>M Priestley, Giulio Ranzo</td>
</tr>
<tr>
<td>0257</td>
<td>Experimental Program and Proposed Design Method for the Retrofit of Steel Moment Connections</td>
<td>Scott Civjan, John Gross, Michael Engelhardt</td>
</tr>
<tr>
<td>0263</td>
<td>Finite Element Techniques for Simulation of Infilled Reinforced Concrete Buildings Under Earthquake Loading</td>
<td>Anton Vrouwenvelder, Tom Scarpas, Flavio Galanti</td>
</tr>
<tr>
<td>0269</td>
<td>Seismic Analysis of Frames with Semi-Rigid Eccentric Connections</td>
<td>Rashmi “Tina” PALL, Tom Hale</td>
</tr>
<tr>
<td>0273</td>
<td>Aluminiun Shear-Link for Seismic Energy Dissipation</td>
<td>Benjamin Wallace, Durgesh Rai</td>
</tr>
<tr>
<td>0281</td>
<td>Seismic Model Test and Analysis of Multi-Tower High-Rise Buildings</td>
<td>Wenheng Lu, Xilin Lu</td>
</tr>
<tr>
<td>0284</td>
<td>Seismic Design of Tall Structures Using Variable Frequency Pendulum Oscillator</td>
<td>Ravi Sinha, M Pranesh</td>
</tr>
<tr>
<td>0289</td>
<td>Collapse Analysis of Reinforced Concrete Frame Structures Considering Collision Effects</td>
<td>Leiming Zhang, Xila Liu</td>
</tr>
<tr>
<td>0304</td>
<td>A Study on Modal Strain Energy Method for Viscoelastically Damped Structures</td>
<td>K Chang, M Tsai</td>
</tr>
<tr>
<td>0308</td>
<td>A Development of a New Technology for Base-Isolated Buildings Using Crossed Linear Bearings</td>
<td>Hiroyuki Harada, Norikatsu Takase, Toru Suzuki, Fumiaki Arima</td>
</tr>
<tr>
<td>0310</td>
<td>Dynamic Response of Earthquake Excited Inelastic Primary-Secondary Systems</td>
<td>Christoph Adam, Peter Fotiu</td>
</tr>
<tr>
<td>0311</td>
<td>Non-Linear Seismic Response Characteristics Study of a RC Bridge Column with Seismic Isolators by a Shaking Table Test</td>
<td>Yukio Adachi, Taichi Kaguayama, Shigeki UNJOH, Masuo Kondo</td>
</tr>
<tr>
<td>0315</td>
<td>Effect of Impact Vibration Absorber with Hysteresis Damping to Earthquake Excitation</td>
<td>Takeshi Watanabe, Shigeru Aoki</td>
</tr>
<tr>
<td>0321</td>
<td>Dynamic Behavior and Seismic Performance of Base-Isolated Bridges in Observed Seismic Records</td>
<td>Junji Yoshida, Masato Abe, Yozo Fujino</td>
</tr>
<tr>
<td>0324</td>
<td>Cyclic Response of a New Steel-Concrete Composite Frame System</td>
<td>Riyadh Aboutaha</td>
</tr>
</tbody>
</table>
INDEX BY TOPIC

06 STRUCTURAL ENGINEERING

0328 DYNAMIC CHARACTERISTICS AND EARTHQUAKE RESPONSE ANALYSIS OF THREE-SPAN CONTINUOUS STRESS RIBBON BRIDGE
Masakatsu WATANABE, Hiroshi OKAZAKI, Toshihiko ASO, Kiyoshi UNO, Yoshio FUJIMOTO

0332 HYSTERESIS CHARACTERISTIC OF LEAD PILLAR DAMPER
Kazuhiko NOYORI, Yoshito MAEDA, Shinji ARAMAKI, Kiyoshi UNO

0334 DETERMINATION OF DYNAMIC PROPERTIES OF EXISTING CONCRETE GRAVITY DAM BASED ON ACTUAL EARTHQUAKE MOTIONS
Hiroyuki ASAKA, Yoshiaki ARIGA, Susumu TSUNODA

0338 NON-LINEAR SEISMIC RESPONSE OF A RC BUILDING MOCK-UP: NUMERICAL MODELLING BY MULTILAYERED SHELL ELEMENTS
Jean-François SEMBLAT, Franc-Josef ULM, Amel AOUAMEUR

0340 ADAPTIVE RESPONSE CONTROL AND ASSOCIATE SYSTEM MONITORING ON INTERACTIVE SOIL-STRUCTURE CONSTRUCTIONS DURING SEISMIC EXITATIONS
Nobuhoro KASUMOTO, Naoto YABUSHITA, Kensuke Baba, Ryo HASEGAWA, Yataka INOUE

0344 A PERFORMANCE-BASED OPTIMAL DESIGN METHODOLOGY INCORPORATING MULTIPLE CRITERIA
Costas Papadimitriou, Ayhan Irfanoglu, James Beck, Siu Kui Au

0350 SHEAR PERFORMANCE OF RC MEMBERS STRENGTHENED WITH EXTERNALLY BONDED FRP WRAPS
AHMED KHALIFA, ABDELLJELIL BELARBI, ANTONIO NANNI

0351 INCORPORATION OF THE EFFECT OF BIAXIAL STRESSES IN THE AVERAGE STRESS-STRAIN RELATIONSHIP OF REBAR IN RC PANELS
Amlan SENGUPTA, Abdeldjelil BELARBI

0352 SEISMIC BEHAVIOR OF RC COLUMN-S BEAM MOMENT FRAMES
Nozomu Baba, Yasushi NISHIMURA

0354 BEHAVIOUR OF REPAIRED PRETENSIONED PRESTRESSED CONCRETE BEAMS UNDER CYCLIC LOADING
Bambang BUDONO, Titik PENTA, Dicky MUNAF

0357 DEVELOPMENT OF THE STEEL TYPE SEISMIC-ISOLATION DEVICE (METAL LINK BEARING)
TOSHIHIKO BESHHO, Kenji Ikeda, Katsuhiko Nishimura, Akio Hayashi, Hiroshi Mitamura

0358 MACRO-MODELS FOR THE IN-PLANE ANALYSIS OF INFILLED RC FRAMES: AN APPRAISAL THROUGH PSEUDODYNAMIC TESTS
Felice COLANGELO

0361 EXPLICIT PSEUDODYNAMIC TEST WITH NUMERICAL DISSIPATION
Gee-Yu Liu, Shuen-Yih Chang

0362 DYNAMIC BEHAVIOR IN TRANSVERSE DIRECTION OF SHIELD TUNNEL WITH CONSIDERING EFFECT OF SEGMENT JOINTS
Atsushi KOIZUMI, Chuan HE

0368 PERFORMANCE OF STRUCTURES DURING NEAR-SOURCE EARTHQUAKES
Nawawi CHOUW

0370 EVALUATION OF THE RADIATION DAMPING IN DAM-Foundation SYSTEM
Yoshiaki ARIGA, Hiroyuki WATANABE, Masatoshi YOSHIDA, Zengyan CAO

0372 THREE-DIMENSIONAL BUILDINGS SUBJECTED TO BI-DIRECTIONAL EARTHQUAKES: VALIDITY OF ANALYSIS CONSIDERING UNI-DIRECTIONAL EARTHQUAKES
Silvana COMINETTI, Ernesto CRUZ

0373 ELASTIC AND INELASTIC RESPONSE OF THREE-DIMENSIONAL BUILDINGS MODELS, A COMPARISON OF DIFFERENT MODELS FOR ANALYSIS
Silvana COMINETTI, Ernesto CRUZ

0374 CLOSED-OPEN-LOOP OPTIMAL CONTROL OF BUILDING STRUCTURES SUBJECTED TO EXPONENTIALLY ATTENUATING HARMONIC LOADING
Genda CHEN

0378 DUCTILE CONCRETE WALLS WITH STEEL ENDS
Denis MITCHELL, Soon Ho CHO, Li Hyung LEE, Bryce TUPPER

0382 AN INNOVATIVE ELASTO-PLASTIC ENERGY DISSIPATOR FOR THE STRUCTURAL AND NON-STRUCTURAL BUILDING PROTECTION
Luis BOZZO, Lluis TORRES, Xavier CAHIS

0384 DYNAMIC PUSH-OVER CURVE FOR BUILDING STRUCTURES UNDER 3-DIRECTIONAL EARTHQUAKE INPUT
Yi-Hsin CHEN, Pai-Mei LIU, Maw-Shyong SHEU

0392 INFLUENCE OF LIFT-OFF PHENOMENA ON SEISMIC RESPONSE OF MULTI-STORY BUILDINGS
Yugi ISHIYAMA, Tomoyuki KUMAGAI, Cornelia CHIOVEANU
INDEX BY TOPIC

06 STRUCTURAL ENGINEERING

0393 SEISMIC RESISTANCE OF HIGH-STRENGTH R/C MEMBERS
Golubka NECEVSKA-CVETANOVSKA, Kiril TRENKOVSKI, Dime DANILOVSKI, Roberta PETRUSEVSKA

0399 DISTRIBUTION OF SEISMIC LINKS IN HYSTERETIC DEVICE SYSTEMS
Uwe DORKA, Veit BAYER

0400 SEISMIC RELIABILITY ASSESSMENT OF MULTI-STOReY R/C FRAMES
Marios Chryssanthopoulos, Christiana Dyniotis, Andreas Kappos

0401 A NEW ALGORITHM FOR REAL-TIME SUB-STRUCTURE PSEUDO-DYNAMIC TESTS
Veit BAYER, Uwe DORKA, Ulrich Füllekrug

0405 IMPROVEMENT AS A CRITERION FOR THE ANTI-SEISMIC SAFEGUARDING AND STRUCTURAL CONSERVATION OF HISTORICAL SITES: METHODOLOGY AND EXAMPLES
Salvatore D'AGOSTINO, Mariangela BELLOMO

0406 EFFECT OF FLOOR IN PLANE FLEXIBILITY ON THE RESPONSE OF TORSIONALLY UNBALANCED SYSTEMS
Jaime DE LA COLINA

0408 NON-LINEAR BEHAVIOR OF STEEL PLATE SHEAR WALL WITH LARGE RECTANGULAR OPENING
Hossein DAFTARI, Ardeshir DEYLAMI

0409 STRUCTURAL DYNAMIC RESPONSE MITIGATION BY A CONTROL LAW DESIGNED IN THE PLASTIC DOMAIN
Alessandro BARATTA, Ottavia CORBI

0416 BENCHMARK ANALYSIS OF A STRUCTURAL WALL
Matej FISCHINGER, Tatjana Isakovic

0424 HYSTERESIS MODEL FOR CONCRETE FILLED STEEL SQUARE TUBULAR BEAM-COLUMNS
Takashi FUJINAGA, Keigo TSUDA, Chiaki MATSUI

0432 SYSTEM IDENTIFICATION OF THE BASE ISOLATED STRUCTURE BY PREDICTION ERROR METHOD USING RECORDED SEISMIC RESPONSE DATA UNDER HYOGOKEN-NANBU EARTHQUAKE
Masashi Itô, Yutaka Inoue, Tadashiti Fukuoka

0435 CONSIDERING THE BI-DIRECTIONAL EFFECTS AND THE SEISMIC ANGLE VARIATIONS IN BUILDING DESIGN
Silvana COMINETTI, Ernesto CRUZ, Iván FERNANDEZ-DAVILA

0436 STUDY ON SEISMIC RESPONSE CONTROL SYSTEM FOR HEAVY, RIGID BUILDINGS OF REINFORCED CONCRETE: PART-1 SEISMIC RESPONSE CONTROL METHOD AND RESPONSE REDUCTION
Hideaki SAITO, Tomohiro FUJITA, Yasuaki FUKUSHIMA, Hiroyuki SUGITA, Kiyoshi HARA

0438 INFLUENCE OF SOIL-STRUCTURE INTERACTION ON THE SEISMIC RESPONSE OF BRIDGE PIERS
Domenico LIBERATORE, Giuseppe DE CARLO, Mauro DOLCE

0445 SEISMIC RISK ASSESSMENT OF MOTORWAY BRIDGE WARTH / AUSTRIA
Fabio Romanelli, Michel Kahan, Alex Barbat, Raimundo Delgado, Ennio DARIN, Rainer Flesch, Aitar Pinto

0449 PROPOSAL OF SOFT-ELASTIC BUILDING STRUCTURE WITH HIGH CAPACITY DAMPER
Takanori SATO, Takehiro TERADA, Tetsuya HANZAWA

0450 DYNAMIC RESPONSE OF CONICAL SHELL USING NEURAL-NETWORK-BASED VIBRATION CONTROL
Kiyoshi SHINGU, Kiyotoshi HIRATSUMA

0451 THE BEAM RETROFITTED BY CARBON FIBER-EXPERIMENT AND DESIGNS
Hiroshi HAGIO, Hideo KATSUMATA, Kohzo KUMURA

0454 MULTI-DIRECTIONAL LOADING TEST FOR RC SEISMIC SHEAR WALLS
Atsushi HABASAKI, Yoshiho KITADA, Katsuki TAKIGUCHI, Takao NISHIKAWA, Haruhiko TORITA

0457 MOMENTARY ENERGY ABSORPTION AND EFFECTIVE LOADING CYCLES OF STRUCTURES DURING EARTHQUAKES
Yutaka HAGIWARA

0458 DISSIPATION OF ENERGY IN STEEL FRAMES UNDER DYNAMIC LOADING
Alfredo Reyes-Salazar, Achintya Haldar

0463 EFFECT OF VERTICAL MOTION OF EARTHQUAKE ON FAILURE MODE AND DUCTILITY OF RC BRIDGE PIERS
Atsushi Machida, Khairiy abdelkareem

0464 ANALYSIS OF A SMALL SCALE RC BUILDING SUBJECTED TO SHAKING TABLE TESTS USING APPLIED ELEMENT METHOD
Hatem TAGEL-DIN, Kimiro MEGURO

0469 NONLINEAR DYNAMIC BEHAVIOR AND SEISMIC ISOLATION OF STEEL TOWERS OF CABLE-STAYED BRIDGES UNDER GREAT EARTHQUAKE GROUND MOTION
Takakichi KANEKO, Toshiro HAYASHIKAWA, Yosihiko MITSU

0470 CHAOTIC PHENOMENA OBSERVED IN SEISMIC RESPONSE AND AFTER-EVENT BEHAVIOUR OF VARIOUS SYSTEMS
Heki SHIBATA
INDEX BY TOPIC

06 STRUCTURAL ENGINEERING

0472 DEVELOPMENT AND USE OF AN ANALYTICAL MODEL TO PREDICT THE INELASTIC SEISMIC BEHAVIOR OF SHEAR WALL, REINFORCED CONCRETE BUILDINGS
Pedro Hidalgo, Rodrigo Jordan, Marcelo Martinez

0473 A STUDY ON VARIABLE STIFFNESS DEVICE HAVING ELASTIC NON-LINEAR CHARACTERISTICS
Hideo Suitsu

0477 MODEL TEST ON DYNAMIC CROSS INTERACTION OF ADJACENT BUILDINGS IN NUCLEAR POWER PLANTS
Kazuhiko Yoshiida, Tsutomu Hirotanai, Michio Iguchi, Tatsuo Yano, Yoshihito Kitada

0486 A SIMPLIFIED SEISMIC RESPONSE ANALYSIS METHOD OF CYLINDRICAL LIQUID STORAGE TANKS
Degao Zou, Xianjing Kong

0488 DAMAGE MECHANISM ANALYSIS OF RC BRIDGE BY NONLINEAR DYNAMIC SIMULATIONS
Kenji Kosaka, Hiroyasu Hayashi, Limin Sun, Yozo Goto

0495 SEISMIC ANALYSIS OF A TRUSS-ARCH BRIDGE CROSSING THE MISSISSIPPI RIVER
Mark Aschheim, Douglas Foutch, Seung-il Nam, Wanchalearn Kornkaseem, Jamshid Ghaboussi

0496 ANALYSIS OF SOIL-STRUCTURE INTERACTION OF MAJOR RIVER-CROSSING BRIDGES
Mark Aschheim, Douglas Foutch, Jamshid Ghaboussi, Wanchalearn Kornkaseem, Seung-il Nam

0498 COMPOSITE SUBSTRUCTURES WITH PARTIAL SHEAR CONNECTION: LOW CYCLE FATIGUE BEHAVIOUR AND ANALYSIS ISSUES
Roberto Caldara, Oreste Barsi

0499 A SEISMIC DIAGNOSIS AND UPGRADING OF EXISTING STEEL FRAMED BUILDINGS
Kichiro Sawada, Toshimizu Tanaka, Yaji Nakamura, Akira Matsumo

0500 DYNAMIC CHARACTERISTICS OF A R/C BUILDING OF FIVE STORIES BASED ON MICROTREMOR MEASUREMENTS AND EARTHQUAKE OBSERVATIONS
Yasutaka Irie, Kazuya Nakamura

0501 SEISMIC RETROFIT OF URM WALLS WITH FIBER COMPOSITES
Hamid Saadatmanesh, Juan Dimas, Mohammad Elsani

0504 IN PLANE SEISMIC BEHAVIOUR OF SEVERAL 1/3RD SCALED R/C BEARING WALLS - TESTING AND INTERPRETATION USING NON LINEAR NUMERICAL MODELLING
Pierre Sollogoub, Didier Combesvre, Thierry Chaudat, Jean-Claude Queval

0505 APPLICATION OF THE LOCAL TO GLOBAL APPROACH TO THE STUDY OF INFILLED FRAME STRUCTURES UNDER SEISMIC LOADING
Didier Combesvre, Pierre Pegon

0512 INVESTIGATION OF THE MODELLING METHOD OF THE DAM - FOUNDATION - RESERVOIR SYSTEM
Hiroyuki Watanabe, Zengyan Cao

0514 THE NONLINEAR RESPONSE EMULATION ANALYSIS OF THE STOCHASTIC STRUCTURE SUBJECTED TO THE EARTHQUAKE EXCITATION
G Ding, J Li

0518 STRUCTURAL RESPONSE OF RC PIER UNDER VERTICAL EARTHQUAKE SHOCK
Ayaho Miyamoto, Klaus brandsen, Satoshi katsuka, Masahito Hirose, Nobutaka Ishikawa

0520 CORRELATION OF NONLINEAR DISPLACEMENT RESPONSES WITH BASIC CHARACTERISTICS OF EARTHQUAKE MOTION
Toshimi Kabeyasawa, Yukiko Nakamura

0522 EVALUATION OF THE SHEAR STRENGTH OF BEAM-COLUMN JOINTS OF REINFORCED CONCRETE FRAMES SUBJECTED TO EARTHQUAKE LOADING
Cheng-Ming Lin, Jose' Restrepo

0524 PROBLEMS RELEVANT TO POOR DUCTILITY PROPERTIES OF EUROPEAN REINFORCING STEEL
Hugo Bachmann

0529 EFFECTS OF NON PROPORTIONAL DAMPING ON THE SEISMIC RESPONSES OF SUSPENSION BRIDGES
Lei Lou, Quan Qin

0534 SEISMIC RESPONSE ANALYSIS FOR TELECOMMUNICATION TOWERS BUILT ON THE BUILDING
K Kanazawa, K Hirota

0536 UPGRADING OF STEEL BOX PIER UNDER CYCLIC LATERAL LOADING
D Chang, H Hsu

0540 DEVELOPMENT OF SEISMIC DAMAGE EVALUATION SYSTEM FOR BRIDGE STRUCTURES BY USING DAMAGE TRANSITION MODEL
Akio, Kanaeishi, Ayaho Miyamoto

0542 EXPERIMENTAL STUDY ON BASE ISOLATED SHELL
Kiyoshi Shingu, Taro Niki
## INDEX BY TOPIC

### 06 STRUCTURAL ENGINEERING

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>0550</td>
<td>SIMPLIFIED METHOD OF FRAGILITY ANALYSIS OF STRUCTURES WITH NON-TRADITIONAL SEISMIC PROTECTION</td>
<td>S DIMOVA, K HIRATA</td>
</tr>
<tr>
<td>0556</td>
<td>SEISMIC VULNERABILITY OF OLDER SWISS R. C. BUILDINGS</td>
<td>Marc BADOUX, Kaspar PETER</td>
</tr>
<tr>
<td>0570</td>
<td>STRUCTURAL SYSTEMS</td>
<td>Patricio Bonelli</td>
</tr>
<tr>
<td>0579</td>
<td>DYNAMIC RESPONSE AND PERFORMANCE EVALUATION OF MULTISPAN HIGHWAY BRIDGES WITH DISPLACEMENT CONTROL</td>
<td>Jakim Petrovski, Vlado Micov</td>
</tr>
<tr>
<td>0581</td>
<td>A STUDY ON EARTHQUAKE DAMAGES OF TIMBER HOUSING AND SIMULATION BY THE THREE DIMENSIONAL VIBRATION ANALYSIS</td>
<td>Kenji MIYAZAWA, Katsumi KOHARA, Yoichiro OHKI</td>
</tr>
<tr>
<td>0585</td>
<td>ARRANGEMENT OF REINFORCEMENTS TO RAISE SHEAR RESISTANCE AND MAINTAIN THE DUCTILITY OF REINFORCED CONCRETE PIERS ON BRIDGES</td>
<td>A Hasegawa, Y Hashizume, M Kosaka, Y Shiota</td>
</tr>
<tr>
<td>0587</td>
<td>SEISMIC UPGRADING BY PRECAST CONCRETE BRACE WITH ENERGY DISSIPATING FRICTION JOINT</td>
<td>Yutaka Osanai, Fumio Watanabe</td>
</tr>
<tr>
<td>0588</td>
<td>PRINCIPLES AND CHARACTERISTICS OF VISCOUS DAMPING DEVICES (GYRO-DAMPER): THE DAMPING FORCES WHICH ARE HIGHLY AMPLIFIED BY CONVERTING THE AXIAL MOVEMENT TO ROTARY ONE</td>
<td>Kensuke BABA, Yutaka INOUE, Fumiaji ARIMA, Hidetsuya KURODA</td>
</tr>
<tr>
<td>0593</td>
<td>SEISMIC BEHAVIOR OF HIGH STRENGTH RC COLUMNS</td>
<td>D Galeota, M Giammatteo, G Beolchini, M Zalli</td>
</tr>
<tr>
<td>0596</td>
<td>3-D ANALYSIS OF A RC FRAME-WALL BUILDING DAMAGED IN THE 1995 HYOGOKEN-NANBU EARTHQUAKE</td>
<td>Hiroshi HIBINO, Kangning LI, Kazahiko ISHIBASHI, Tetsuo KUBO</td>
</tr>
<tr>
<td>0598</td>
<td>RESPONSE OF BASE ISOLATED STRUCTURE IN CHAOTIC DYNAMIC SYSTEM UNDER EARTHQUAKE MOTION WITH LARGE AMPLITUDE</td>
<td>Shuichi ASAYAMA, Masato AIZAWA</td>
</tr>
<tr>
<td>0609</td>
<td>APPLICATION OF THE CAPACITY SPECTRUM METHOD TO R.C. BUILDINGS WITH BEARING WALLS</td>
<td>Kaspar PETER, Marc BADOUX</td>
</tr>
<tr>
<td>0612</td>
<td>RELIABILITY ASSESSMENT OF TIMBER SHEAR WALLS UNDER EARTHQUAKE LOADS</td>
<td>Greg Foliente, Naohito Kawai, Phillip Paevere, Taiki Saito</td>
</tr>
<tr>
<td>0619</td>
<td>MEASUREMENT OF DYNAMIC RESPONSE OF ARCH DAMS INCLUDING INTERACTION EFFECTS</td>
<td>Bruce Redpath, Robert Hall, Yasof Ghanaat</td>
</tr>
<tr>
<td>0623</td>
<td>STUDY ON THE IMPROVEMENT OF ON-LINE TEST APPLYING THE LINEARLY INTERPOLATION METHOD</td>
<td>Kenji KABAYAMA</td>
</tr>
<tr>
<td>0634</td>
<td>DYNAMIC AND PSEUDODYNAMIC RESPONSES IN A TWO-STOREY BUILDING RETROFITTED WITH RATE-SENSITIVE RUBBER DISSIPATORS</td>
<td>Georges MAGONETTE, Guido VERZELETTI, Javier MOLINA, Fabio TAUCER</td>
</tr>
<tr>
<td>0636</td>
<td>CYCLIC BEHAVIOR OF A SECOND GENERATION DUCTILE HYBRID FIBER REINFORCED POLYMER (D-H-FRP) FOR EARTHQUAKE RESISTANT CONCRETE STRUCTURES</td>
<td>Harry HARRIS, Frank KO, Francis HAMPTON, Stephen MARTIN</td>
</tr>
<tr>
<td>0640</td>
<td>INFLUENCE OF THE ELASTO-PLASTIC BEHAVIOR OF COLUMN BASES ON THE ULTIMATE EARTHQUAKE RESISTANCE OF MULTI-STORY STEEL MOMENT FRAMES</td>
<td>Satoshi YAMADA</td>
</tr>
<tr>
<td>0641</td>
<td>INTERFACE SHEAR TRANSFER FOR HIGH STRENGTH CONCRETE AND HIGH STRENGTH REINFORCEMENT</td>
<td>Susumu KONO, Hitoshi TANAKA</td>
</tr>
<tr>
<td>0642</td>
<td>BOND-SLIP BEHAVIOR OF LONGITUDINAL REINFORCING BARS CONFINED WITH FRP SHEETS</td>
<td>Kazunari MATSUNI, Susumu KONO, Tetsuo KAKU</td>
</tr>
<tr>
<td>0644</td>
<td>DAMPING CHARACTERISTICS OF RC SHEAR WALL IN THE WEAK NONLINEAR RANGE</td>
<td>Katsuya IGARASHI</td>
</tr>
<tr>
<td>0645</td>
<td>BIDIRECTIONAL SHAKING TABLE TESTS OF A ONE-FOURTH SCALE REINFORCED CONCRETE SPACE FRAME</td>
<td>Hajime HAGIWARA, Takashi NAKAYAMA, Katsuya IGARASHI</td>
</tr>
<tr>
<td>0648</td>
<td>RETROFITTING METHOD OF EXISTING REINFORCED CONCRETE BUILDINGS USING ELASTO-PLASTIC STEEL DAMPERS</td>
<td>Mitsuo SAKAMOTO, Jun AGAMI, Norihide KOSHIKA, Yasushi KUROKAWA, Norio SUZUKI, Akihiro KUNISUE</td>
</tr>
<tr>
<td>0649</td>
<td>SEISMIC RESPONSES OF STRUCTURES SUBJECTED TO INCIDENT INCOHERENT WAVES CONSIDERING A LAYERED MEDIA WITH IRREGULAR INTERFACES</td>
<td>Katsuhisa KANDA</td>
</tr>
</tbody>
</table>
INDEX BY TOPIC

06 STRUCTURAL ENGINEERING

0658 SEISMIC HAZARD AND DESIGN BY USING ENERGY FLUX
Erdal SAFAK, Steve HARMSEN

0660 CYCLIC PERFORMANCE AND RETROFIT DESIGN OF PRE-NORTHBRIDGE STEEL MOMENT CONNECTION WITH WELDED HAUNCH
Qi-Song Yu, Chia-Ming Uang

0663 EFFECTS OF VERTICAL GROUND MOTIONS ON EARTHQUAKE RESPONSE OF STEEL FRAMES
Kuniaki UDAGAWA, Shinji YAMAZAKI, Susumu MINAMI, Hiroaki MIMURA

0669 STUDY ON PERFORMANCE AND PRACTICAL USE OF NEW BUILDING STRUCTURAL SYSTEM WITH STEEL PLATES AND CONCRETE (PLRC TECHNIQUE): THE STRENGTH EVALUATION METHOD OF LONGITUDINAL SLIP OF THE COLUMN
Yoshiaki NAKANO, Tomoki FURUTA , Tomohiko KAMIMURA

0673 SEISMIC BEHAVIOUR OF R/C BRIDGE PIERS: NUMERICAL SIMULATION AND EXPERIMENTAL VALIDATION
Nelson Vila Pouca, Raimundo Delgado, Rui FARA

0679 SHEAR STRENGTH AND DEFORMATION CAPACITY OF INTERIOR R/C BEAM-COLUMN JOINT SUBASSEMBLAGE
HIDEO MURAKAMI, SHIGERU FUJI, YASUHIRO ISHIWATA, SHIRO MORITA

0680 HYSTERESIS CHARACTERISTICS OF HIGH STRENGTH REINFORCED CONCRETE BEAMS
Shunsuke OTANI, Satoru NAGAI

0682 DIAGONAL TRANSFER CAPACITY OF COMPRESSIVE FORCE IN CONCRETE OF R/C FRAMES
Koshiro NISHIMURA, Norio NAKANISHI, Katsuki TAKIGUCHI

0689 EXPERIMENTAL STUDY ON REINFORCED CONCRETE COLUMN STRENGTHENED WITH FERROCEMENT JACKET
Katsuki TAKIGUCHI, Abdullah

0693 TRI-AXIAL NON-LINEAR RESTORING FORCE MODEL OF R/C STRUCTURE USING THE THEORY OF PLASTICITY
Katsuki TAKIGUCHI, Zhilong GAO

0695 STUDY ON THE DAMAGES OF STEEL GIRDERS BY HYOGO-KEN NANBU EARTHQUAKE USING NONLINEAR SEISMIC RESPONSE ANALYSIS
Kichiro YAMAHIRA, Hisanori OTSUKA

0696 DIAPHRAGM BEHAVIOUR OF THE FLOOR WITH PRESTRESSED BEAM AND FILLER BLOCKS
Horea MANIU, Octavian GOSA, Cornel BIA, Atiila TOKES, Carmen DICO, Levente KOVACS, Alexandru DAMIAN

0699 AN EVALUATION METHOD OF MODAL DAMPING AND ITS APPLICATION BASED ON A FVT OF CABLE STAYED BRIDGE
Shuji UEDA, Jun-ichi SUZUMURA, Kazufumi HANADA, Makoto NAKAI, Mitsuhide YOSHIDA, Masataka NAKAMURA

0703 PROPOSAL AND VERIFICATION OF PULSE-SEISMIC-DESIGN FOR BUILDING STRUCTURES
K KATAGIHARA , H KAWAMURA , A TANI , H KAMISAWA , M TASAKI

0705 CLASSIFICATIONS OF STRUCTURAL TYPES AND DAMAGE PATTERNS OF BUILDINGS FOR EARTHQUAKE FIELD INVESTIGATION
Shigeyuki OKADA, Nobuo TAKAI

0707 THREE-DIMENSIONAL BEHAVIORS OF REINFORCED CONCRETE BEAM-COLUMN JOINT UNDER SEISMIC LOAD
Yoshimasa OWADA

0711 TESTS ON STEEL T-STUB CONECTIONS
Roberto Leon, James Swanson

0715 ASSESSMENT OF SEISMIC VULNERABILITY TO OUT-OF-PLANE COLLAPSE OF MASONRY WALLS
Renato GIANNINI, Gianmarco de FELICE

0718 PERFORMANCE OF HIERARCHICAL FRICTION DISSIPATING JOINTS IN MOMENT RESISTING STEEL FRAMES
John Butterworth, Charles Clifton

0720 DYNAMIC ANALYSIS OF NAILLED WOOD-FRAME SHEAR WALLS
Ario CECCOTTI, Erol KARACABEYLI

0725 COMPARISON OF STORY DRIFT DEMANDS OF VARIOUS CONTROL STRATEGIES FOR THE SEISMIC RESISTANCE OF STEEL MOMENT FRAMES
H. Smith, Scott Breneman, Luciana Barroso

0726 A RATIONAL DYNAMIC ANALYSIS PROCEDURE FOR THE DAMAGE CONTROLLED STRUCTURES (DCS)
Akira WADA, Hiroyuki NAKAMURA, Yi-Hua HUANG

0728 INVESTIGATION ON THE LOAD TRANSFER MECHANISM FOR THE JOINT OF REINFORCED CONCRETE COLUMN AND STEEL BEAM
Li Hyung LEE, Seung Hun KIM, Sang Whan HAN

0732 A RATIONAL MODEL FOR REINFORCED CONCRETE MEMBRANE ELEMENTS SUBJECTED TO SEISMIC SHEAR
Marc Gerin, Perry Adebay

0734 DYNAMIC ASSESSMENT OF THE REDUCTION OF RIGIDITY OF AGED RC BRIDGES
Hiroaki EDAMOTO, Fujio IMAI , Takao NAKAZAWA, Rihong ZHANG, Nario SHINNISHI
INDEX BY TOPIC

06 STRUCTURAL ENGINEERING

0736 THE SEISMIC PERFORMANCE OF REINFORCED CONCRETE WIDE BAND BEAM CONSTRUCTION
  John STEHLE, Kamiran ABDOUKA, Helen GOLDSWORTHY, Priyan MENDIS

0738 EVALUATION OF PERFORMANCE OF MULTI-SUSPENDED PENDULUM ISOLATION (MPI) SYSTEM WITH SPATIAL TRUSS STRUCTURE.
  Michio KURAMOCHI, Haruo KURAMOCHI, Ryosuke NARITA, Teiji KOJIMA, Takashi TORIYA, Naomi KITAYAMA, Tsuyoshi OHTSUKA

0739 THE ANALYTICAL ACCURACY OF AUTHORS’ THREE MACROSCOPIC MODELS OF RC FRAMED SHEAR WALLS USING FIVE HUNDRED AND SEVENTY THREE SPECIMENS.
  Masao TAKEHARA, Michika OKABE, Norikazu ONOZATO, Makoto Makoto

0742 THE PROPOSAL OF AN ASEISMIC REINFORCEMENT METHOD OF RC FRAME STRUCTURES BY PRECAST-PRESTRESSED CONCRETE FRAMED SHEAR WALLS AND ITS EXPERIMENTAL VERIFICATION
  Takashi TORIYA, Makoto MOCHIZUKI, Haruo KURAMOCHI, Atsushi NARA

0743 NONLINEAR CHARACTERISTICS OF CONFINED MASONRY WALL WITH LATERAL REINFORCEMENT IN MORTAR JOINTS
  Fumitoshi KUMAZAWA, Masadaiki OHKUBO

0744 SEISMIC DESIGN OF A SUPER FRAME STRUCTURAL SYSTEM WITH PASSIVE ENERGY DISSIPATION DEVICES
  Tadashi SUGANO, Yukihiro OMIIKA, Jun OKAWA, Toshiyuki YOSHIIMATSU, Yasukazu TSUII, Yukimasa YAMAMOTO

0746 ASSESSING SEISMIC PERFORMANCE OF COMPOSITE (RCS) AND STEEL MOMENT FRAMED BUILDINGS
  Gregory Deierlein, Sameh Mehanny

0747 CYCLIC LOADING BEHAVIOR OF A PERFORATED UNREINFORCED MASONRY WALL MODEL
  Cornel BlA, Maria IRIMIES

0749 A STUDY ON USE OF SEVERED REINFORCING BARS TO IMPROVE FLEXURAL DUCTILITY OF RC COLUMNS
  Hisato HOTTA, Kentaro WAKIMOTO

0750 OPTIMUM DESIGN METHOD FOR HIGH-RISE BUILDING FRAME WITH VISCOUS DAMPERS
  Masaki TSUIII, Koji UEIIANI, Yasuyuki NAGANO, Makoto OHSUKI

0752 EXPERIMENTAL RESEARCH ON INTELLIGENT ACTIVE CONTROL OF BUILDING STRUCTURES BY FUZZY OPTIMAL LOGIC
  KAWAMURA, M NISHHATA, S RYU, K NISHIMURA, A TANI

0758 SEISMIC UPGRADE FOR REINFORCED CONCRETE COLUMNS BY STRENGTHENING THE CROSS SECTIONAL CENTER
  Hideto OMIKE, Keichi HIROSE, Yasuo TANAKA, Ichiro SADAMURA, Hammi YASHIRO

0760 SEISMIC DESIGN OF A BASE ISOLATED BUILDING IN THE VICINITY OF A HYPOTHETICAL M8 EARTHQUAKE IN SUBDUCTION ZONE
  Yoshiaki HIASDA, Yoe MASUZAWA, Saburo MIDORIKAWA, Hiroaki YAMANAKA, Shouichi YAMAGUCHI, Mitsukazu KIMURA, Toshiyuki NAKAZAWA, Tsunehisa KOUNO, Tsuqahisa NISHIMURA

0772 REINFORCED CONCRETE UNDER CYCLIC LOADING
  Joaquim Barros, Jose Cruz, Raimundo Delgado, Antal Costa

0775 SEISMIC ANALYSIS AND DYNAMIC TESTING OF A SPILLWAY RADIAL GATE
  Colin Taylor, Wendy Daniell

0779 BEHAVIOUR COEFFICIENT ASSESSMENT FOR SOFT STOREY STRUCTURES
  Rita Bento, João Azevedo

0781 INELASTIC EARTHQUAKE RESPONSE OF BUILDINGS SUBJECTED TO TORSION
  Stavros Anagnostopoulos, Kyriakos Stathopoulos

0782 MODELLING THE SEISMIC BEHAVIOUR OF BRIDGES WITH VISCOUS DAMPERS
  Luis Guerreiro, Francisco Virtuoso, João Azevedo

0798 ASPECTS OF CONCRETE DAMS RESPONSES TO NEAR-FIELD GROUND MOTIONS
  Tatsuo Ohmachi, Abdolrahim Jalali

0801 NUMERICAL INVESTIGATION OF THIN UNSTIFFENED STEEL PLATE SHEAR WALLS
  Helmut Plon, Carlos Ventura, Mahmoud Rezaei

0803 STUDY ON MODELING OF STEEL RIGID FRAME BRIDGE FOR DYNAMIC ELASTO-PLASTIC ANALYSIS
  Masaru NARITOMI, Osumu ISHIBASHI, Masahide KAWAKAMI, Tsutomu YOSHIZAWA

0804 AN EVOLUTIONARY HYBRID CONTROL SYSTEM OF BUILDING STRUCTURES BY FUZZY AND GA LOGIC
  KAWAMURA, T MITSUL, A TANI, J YAO, S RYU

0806 CORRELATION BETWEEN NONLINEAR RESPONSE OF BRIDGE PIERS AND NATURAL-PERIOD-DEPENDENT SPECTRUM INTENSITY
  Takeshi KITAHARA, Yoshito ITOH

0809 APPLICATIONS OF HIGH STRENGTH CONCRETE IN SEISMIC REGIONS
  C PANAGOPoulos, P MENDIS
## INDEX BY TOPIC

### 06 STRUCTURAL ENGINEERING

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>0810</td>
<td>A NEW COMPUTER PROGRAM FOR THE SEISMIC ANALYSIS OF ARCH DAMS INCLUDING JOINT NONLINEARITY AND FLUID-STRUCTURE INTERACTION</td>
<td>Benedikt Weber, Hugo Bachmann</td>
</tr>
<tr>
<td>0813</td>
<td>EXPERIMENTAL EVALUATION OF RESERVOIR LEVEL EFFECTS ON THE DYNAMIC PROPERTIES OF A LARGE ARCH DAM</td>
<td>Patrick PAULTRE, Julien RHEAULT, Jean PROULX</td>
</tr>
<tr>
<td>0814</td>
<td>SEISMIC RESPONSE OF 3-D STEEL BUILDINGS WITH CONNECTION FRACTURES</td>
<td>Yi-Kwei Wen, Chi-Hsiang Wang</td>
</tr>
<tr>
<td>0816</td>
<td>USE OF HIGH-YIELD STRENGTH MATERIALS IN SEISMIC ZONES: A STRATEGIC APPROACH</td>
<td>Patrick Paulitre, Frederic Légeron, Charles Savard</td>
</tr>
<tr>
<td>0821</td>
<td>ENVELOPES FOR SEISMIC RESPONSE VECTORS IN NONLINEAR STRUCTURES</td>
<td>Charles Menun, Armen Der Kiureghian</td>
</tr>
<tr>
<td>0822</td>
<td>THE EFFECTS OF LOADING VELOCITY ON ELASTO-PLASTIC BEHAVIOR OF REINFORCED CONCRETE FRAMED SHEAR WALLS WITH AN OPENING</td>
<td>Masayuki ONO, Fumiya EZAKI</td>
</tr>
<tr>
<td>0833</td>
<td>ELASTIC-PLASTIC BEHAVIOR OF BUILDING STEEL FRAME WITH STEEL BEARING WALL WITH SLITS</td>
<td>Toko HITAKA, Chuki MATSUI, Keigo TSUDA, Yoshihide SADAKANE</td>
</tr>
<tr>
<td>0835</td>
<td>A NOVEL EXPERIMENTAL SETUP TO MODEL EARTHQUAKE EXCITATED ELASTIC-PLASTIC STRUCTURES</td>
<td>Christoph ADAM, Rudolf HEUER, Franz ZIEGLER, Markus HOCHRAINER</td>
</tr>
<tr>
<td>0837</td>
<td>A STUDY ON ALLOWANCE LIMITS OF RATIO OF HEIGHT TO WIDTH FOR FRICITION-SLIDING BASE-ISOLATED MASONRY BUILDING</td>
<td>Suyan Wang, Hongnan Li, Junhui Jia</td>
</tr>
<tr>
<td>0839</td>
<td>DAMAGING PROPERTIES OF GROUND MOTIONS AND RESPONSE BEHAVIOR OF STRUCTURES BASED ON MOMENTARY ENERGY RESPONSE</td>
<td>Norio HORI, Tomoyo IWASAKI, Norio INOUE</td>
</tr>
<tr>
<td>0843</td>
<td>DEVELOPMENT OF A REAL-TIME HYBRID EXPERIMENTAL SYSTEM USING A SHAKING TABLE</td>
<td>Masahiko INOUE, Takao KONNO, Toshihiko HORIUCHI</td>
</tr>
<tr>
<td>0847</td>
<td>APPLICATION OF A COMPREHENSIVE APPROACH FOR THE PERFORMANCE-BASED EARTHQUAKE-RESISTANT DESIGN OF BUILDINGS</td>
<td>Vitelmo Bertero, Raul Bertero</td>
</tr>
<tr>
<td>0850</td>
<td>STEEL FRAME CONNECTION TECHNOLOGY OF THE NEW MILLENNIUM: SATISFYING HEIGHTENED PERFORMANCE EXPECTATIONS WITH SIMPLICITY AND RELIABILITY AT LOW COST</td>
<td>DAVID HOUGHTON</td>
</tr>
<tr>
<td>0851</td>
<td>STATIC AND DYNAMIC LOADING TESTS OF BRACKET COMPLEXES USED IN TRADITIONAL TIMBER STRUCTURES IN JAPAN</td>
<td>Kaori FUJITA, Yoshimitsu OHASHI, Masahiko KIMURA, Isao SAKAMOTO</td>
</tr>
<tr>
<td>0857</td>
<td>DESIGN AND ANALYSIS OF A BUILDING WITH THE MIDDLE-STORY ISOLATION STRUCTURAL SYSTEM</td>
<td>T TERAMOTO, K MURAKAMI, H KITAMURA, H OZAKI</td>
</tr>
<tr>
<td>0859</td>
<td>EFFECT OF THE TORSIONAL MOMENT ON THE SHEAR STRENGTH OF REINFORCED CONCRETE COLUMNS DUE TO ECCENTRIC JOINTING OF BEAM TO COLUMN</td>
<td>Jiandong ZHOU, Masaya HIROSAWA, Tatuya KONDO, Yasushi SHIMIZU</td>
</tr>
<tr>
<td>0868</td>
<td>RESEARCH AND DEVELOPMENT OF RESPONSE-CONTROL RETROFITTING TECHNIQUES BY MEANS OF FRICTION DAMPER</td>
<td>Hideaki AGETA, Mitsukazu NAKANISHI, Keiji KITAJIMA, Hiromi ADACHI</td>
</tr>
<tr>
<td>0869</td>
<td>PSEUDO-DYNAMIC TEST ON REINFORCED CONCRETE FRAME RETROFITTED WITH DAMPER</td>
<td>Hideaki AGETA, Mitsukazu NAKANISHI, Keiji KITAJIMA, Hiromi ADACHI</td>
</tr>
<tr>
<td>0872</td>
<td>EVALUATION OF SEISMIC DIAGNOSIS OF AQUEDUCT LINES USING NON-LINEAR DYNAMIC ANALYSIS</td>
<td>Shusaku KAWAGUCHI, Takashi TAKEUCHI, Hisanori OTSUWA, Yoji MIZUTA, Tetsuya NONAKA</td>
</tr>
<tr>
<td>0877</td>
<td>SEISMIC PERFORMANCE OF WOODEN SHEAR WALLS ON DYNAMIC CONDITION</td>
<td>Masashi MIYAMURA, Chikahiro MINOWA, Nobuyoshi YAMAGUCHI</td>
</tr>
<tr>
<td>0885</td>
<td>AN ECONOMICAL STRUCTURAL SYSTEM FOR WIND AND EARTHQUAKE LOADS</td>
<td>Fumio LI Lee, Chiew Hui Yu, Thambirajah BALEN德拉</td>
</tr>
<tr>
<td>0891</td>
<td>STRENGTHENING EFFECTS OF RC COLUMNS USING THIN STEEL SPIRAL TUBE</td>
<td>Tatsumi SATO, Ben WADA, Koschi MINAMI</td>
</tr>
<tr>
<td>0896</td>
<td>INFLUENCE OF BUCKLING OF LONGITUDINAL REBARS IN FINITE ELEMENT MODELLING OF REINFORCED CONCRETE STRUCTURES SUBJECTED TO CYCLIC LOADING</td>
<td>A Attolico, S Bioni, M Petrangeli, C Nati</td>
</tr>
</tbody>
</table>
06  STRUCTURAL ENGINEERING

0899  EARTHQUAKE DESIGN AND CONSTRUCTION OF TALL COMPOSITE BRIDGE PIERS
T Kato, Y Takahashi

0900  THE TEST METHODOLOGY TO EVALUATE ULTIMATE EARTHQUAKE RESPONSE OF AN NPP BUILDING USING EARTHQUAKE MOTION BY BLASTING
TETSUO KUBO, YOSHIKO YAMANAKA, MASAMITSU KINOSHITA, KAZUO SUGIYAMA, TAKAHIRO IWASAKI

0907  ANALYSIS OF A NON-PROPORTIONALLY DAMPED BUILDING STRUCTURE WITH ADDER VISCOELASTIC DAMPERS
Chang-Yong Lee, Jinkoo Kim

0908  DYNAMIC ANALYSIS OF LIQUID-TANK-SOIL SYSTEM USING BE-FE-BE COUPLING
Kyounghwan CHO, MoonKyu JUN, YunMook KIM, SangYong CHOI

0909  THE ENGINEERING THEORY AND COMPUTATION METHOD FOR DESIGNING ISOLATION SYSTEM OF RUBBER BEARING AND ITS COMPOSITE DEVICE
Jiyuan Zhou, Donghui MA, Demin ZENG, Miao HAN

0921  REAL TIME TESTING OF REINFORCED INFILLS
Paolo CONTRI, Ramiro SOFRONIE, Emília JUHÁSOVÁ

0923  STUDY ON INVERSE PROBLEM IN STRUCTURAL DAMAGE IDENTIFICATION
J. LI, J. CHEN

0929  DYNAMIC DESIGN PROCEDURE FOR THE DESIGN OF BASE ISOLATED STRUCTURES LOCATED ON THE MEXICAN PACIFIC COAST
Arturo TENA-COLUNGA, Omar VILLEGAS-JIMÉNEZ

0937  DYNAMIC-RESPONSE CHARACTERISTICS OF STRUCTURES WITH MICROPILE FOUNDATION SYSTEM
FUSANORI MIURA, ETSURO SAITO, TAKAHIRO KISHISHITA

0944  THEORETICAL CRACK ANGLE IN REINFORCED CONCRETE ELEMENTS SUBMITTED TO STRONG EARTHQUAKES
Jang Hoon KIM, John MANDER

0948  PRECAST CONCRETE CONSTRUCTION SYSTEM OF FOOTING BEAMS FOR PRECAST CONCRETE WALLED STRUCTURES
Katsumi KOBAYASHI, Yusaku ARAI, Fumitaka IKADAI

0952  DYNAMIC BEHAVIOR IN LONGITUDINAL DIRECTION OF SHIELD TUNNEL LOCATED AT IRREGULAR GROUND WITH CONSIDERATION EFFECT OF SECONDARY LINING
Chuan HE, Atushi KOIZUMI

0957  3D BEHAVIOR OF SHOTCRETE LIGHT WEIGHT PANEL BUILDINGS
Faruk KARADOGAN, Ercan YUKSEL, Arda BALCI, Wael MOURTAJA, Alper Ilki

0958  CORRELATION OF EXPERIMENTAL AND ANALYTICAL RESPONSES OF A 1:12 SCALE 10-STORY REINFORCED CONCRETE FRAME HAVING NONSEISMIC DETAILS
Kyi-Yong KANG, Han-Seon LEE

0962  SEISMOISOLATION FOR UPGRADING OF AN EXISTING HISTORICAL BUILDING IN IRKUTSK-CITY, SIBERIA-RUSSIA
Jacob EISENBERG, Fu Lin ZHOU, Yoe CHUNG, Anatoly NIKITIN, Vladimir SMIRNOV

0965  EXPERIMENTAL STUDY ON THE VALIDITY OF REAL-TIME HYBRID VIBRATION EXPERIMENTS WITH A 2-DIMENSIONAL AND 3-DEGREES-OF-FREEDOM MODEL
Hiroshi KOBAYASHI, Keiichi TAMURA

0967  EARTHQUAKE RESPONSE OF CONCRETE GRAVITY DAMS BY COMBINATION OF FINITE ELEMENT AND BOUNDARY INTEGRAL FORMULATIONS
Vahid LOTFI, Mohammad SHARGHI

0972  RESPONSE OF MODEL STRUCTURE UNDER SIMULATED BLAST-INDUCED GROUND EXCITATIONS
Yingxin ZHOU, Guowei MA, Hong HAO, Yong LU

0973  A METHOD TO MODELIZE THE OVERALL STIFFNESS OF A BUILDING IN A STICK MODEL FITTED TO A 3D MODEL
Marc LEBELLE

0974  SEISMIC-RESISTANT BEHAVIOR OF MINOR REINFORCED CONCRETE FRAMES WITH MASONRY INFILL WALLS
A MOLINA, M LAFUENTE, C GEFNATOS

0977  POSTERIOR TIMESTEP ADJUSTMENT TECHNIQUE IN SUBSTRUCTURING PSEUDODYNAMIC TEST
Woon-Ho YI, Li-Hyung LEE, Yoshiaki NAKANO, Koichi KUSUNOKI

0980  STRENGTHENING OF MONOLITHIC BUILDINGS DAMAGED BY SEVERE EARTHQUAKES
Alexander KIRPY

0981  PASSIVE CONTROL OF BUILDING FRAMES BY MEANS OF LIQUID DAMPERS SEALED BY VISCOELASTIC MATERIAL
Shigeya KAWAMATA, Yoshiro ITOH, Naoki FUNAKI

0982  SEISMIC BEHAVIOR OF R/C SHORT COLUMNS CONFINED LATERALLY BY A STEEL SQUARE TUBE
Kenji KIKUCHI, Akihiro KUMAMOTO, Masayuki KUROKI, Koji YOSHIURA
INDEX BY TOPIC

06 STRUCTURAL ENGINEERING

0983 SEISMIC SAFETY OF EXISTING CONCRETE MASONRY GARDEN WALLS
Hideko NONAKA, Koji YOSHIMURA, Kenji KIKUCHI, Tomoyuki KAJIMURA, Yoichi MORISHITA

0984 EFFECT OF WALL REINFORCEMENTS, APPLIED LATERAL FORCES AND VERTICAL AXIAL LOADS ON SEISMIC BEHAVIOR OF CONFINED CONCRETE MASONRY-WALLS
Kenji KIKUCHI, Masayuki KUROKI, Lizhen LIU, Lin MA, Koji YOSHIMURA

1009 SEISMIC HAZARD, SEISMIC RISK, PRINCIPLES OF OPTIMIZATION OF REHABILITATION OF EXISTING DWELLING STOCK BUILDINGS
Rustam IBRAGIMOV, Shamil KHAKIMOV

1010 IDENTIFICATION OF STRUCTURAL DEGRADATION BY TIME-FREQUENCY SYSTEM ANALYSIS
Akira SONE, Arata MASUDA

1011 EFFECT OF SHEAR REINFORCEMENT ON FAILURE MODE OF RC BRIDGE PIERS SUBJECTED TO STRONG EARTHQUAKE MOTIONS
Atsuhiko MACHIDA, Khatiry Abdulkarreem

1014 STUDY ON A METHOD TO IDENTIFY EXTERNAL FORCES AND DAMPING PARAMETERS OF STRUCTURE FROM RANDOM RESPONSE VALUES
D INABA, T MATSUYAMA, E MARUTA, M KANDA

1016 EFFECTS OF VARIOUS BEAM-BAR ANCHORAGES ON THE STRENGTH AND DEFORMATION OF PRECAST REINFORCED CONCRETE BEAM-COLUMN JOINTS
Toshio MATSUMOTO, Hiroshi NISHIYAMA

1017 EFFECT OF BEAM AXIAL DEFORMATION ON COLUMN SHEAR IN REINFORCED CONCRETE FRAMES
Toshimi KABEYASAWA, Yasashi SANADA, Masaki MAEDA

1020 EXPERIMENTAL STUDY ON HYSTERETIC DAMPER WITH LOW YIELD STRENGTH STEEL UNDER DYNAMIC LOADING
Tadaki KATAYAMA, Shigeki ITO, Hisaya KAMURA, Takuya UEKI, Haruhiito OKAMOTO

1024 RESTORING FORCE MODEL OF RC COLUMN SUBJECTED TO DYNAMICALLY VARYING AXIAL FORCE
Motoo SAISHO, Kazuya SUDA

1026 EFFECT OF THE AXIAL FORCE AND OF THE VERTICAL GROUND MOTION COMPONENT ON THE SEISMIC RESPONSE OF RC FRAMES
P DIOTALLEVI, L LANDI

1028 STRUCTURAL CAPACITIES OF H-SHAPED RC CORE WALL SUBJECTED TO LATERAL LOAD AND TORSION
Takamasa NISHIOKA, Takashi MIYASHITA, Norio SUZUKI, Makoto MARUTA

1030 SEISMIC BEHAVIOUR OF EXISTING MOMENT-RESISTING FRAMES WITH PLAIN ROUND REINFORCING BARS DESIGNED TO PRE-1970S CODES
Aizhen LIU, Robert PARK

1048 EXPERIMENTAL EVALUATION OF NEW FRICTION DAMPER DEVICE
Imad Mualla

1052 STATE-OF-THE-ART APPLICATIONS OF PASSIVE ENERGY DISSIPATORS
S.H. Kit MIYAMOTO

1056 GROUND MOTION CHARACTERISTIC EFFECTS ON MULTISTOREY STEEL FRAME RESPONSE
Gregory MACRAE, David FIELDS, Joshua MATTHEIS

1058 THE SEISMIC DESIGN AND PERFORMANCE OF REINFORCED CONCRETE BEAM-COLUMN KNEE JOINTS
Leslie MEGGET

1060 ANALYSIS OF EARTHQUAKE SAFETY OF A LARGE ARCH DAM
Radivoje Mrdak, Miodrag Sekulovic, Radenko Pejovic

1061 APPLICATIONS OF QUASI-OPTIMIZING CONTROL METHOD FOR ASEISMIC STRUCTURAL RESPONSE CONTROL SYSTEM
Yutaka INOUE, Atsushi KUBO, Yoichi MUKAI, Shogo KAWASAKI, Eizzaburo TACHIBANA

1066 THE INFLUENCE OF DYNAMIC SOIL-STRUCTURE INTERACTION ON THE SEISMIC DESIGN AND PERFORMANCE OF AN ETHYLENE TANK
M Willford, J Pappin, Z Lubkowski

1069 A STUDY ON ASEISMIC VERIFICATION AND RETROFIT METHODS FOR AN ELEVATED WATER TANK AGAINST STRONG EARTHQUAKES
Ryochi FUJITA, Kiyoaki YASUGI, Ryoji ISOYAMA, Yuichi HAYASHI, Atsushi MORI, Kenji NIWA

1070 SUPER-FEM FOR ANALYSIS OF INELASTIC RESPONSE OF TALL STEEL BUILDINGS SUBJECTED TO EARTHQUAKES
Guo-Qiang LI, Jian FENG

1071 SEISMIC ANALYSIS OF VERTICAL CYLINDRICAL TOWERS IN ICE-COVERED SEAS
Yasu TANAKA, Masashi INOUE, Takaji HAMAMOTO
INDEX BY TOPIC

**06 STRUCTURAL ENGINEERING**

1072 SEISMIC BEHAVIOR OF STEEL-CONCRETE COMPOSITE COLUMN BASES  
Junichi SAKAI, Chiaki MATSUI, Tao LI

1073 SEISMIC DESIGN OF BRIDGES: THE INFLUENCE OF TWO DIMENSIONAL SITE RESPONSE  
Geoffrey MARTIN, Ping QIU

1075 EFFECTS OF AXIAL FORCE ON DEFORMATION CAPACITY OF STEEL ENCASED REINFORCED CONCRETE BEAM-COLUMNS  
Chiaki MATSUI, Li LI

1076 STRUCTURAL CONTROL OF A HIGH ARCH DAM  
Guo Lin, Shichun CHI, Zhiqiang HU

1081 THE BEHAVIOR OF REINFORCED CONCRETE PIERS UNDER STRONG SEISMIC ACTIONS  
Luca MARTINELLI

1082 SIMULATION OF COLLAPSE OF RC BUILDING SUBJECTED TO SEISMIC LOADS  
Masaki MAEDA

1087 SUGGESTED IMPROVEMENTS TO PERFORMANCE-BASED SEISMIC GUIDELINES  
Joe Maffei

1090 RESTORING FORCE CHARACTERISTICS AND MODEL OF HIGH-STRENGTH CONCRETE FILLED, STEEL TUBE COLUMN  
Tetsu Matsuyama, Motoo SAISHO

1091 NON-LINEAR SEISMIC RESPONSE OF A PWR-TYPE REACTOR BUILDING SIMULATED BY A 3-D FEM MODEL  
Hideo NAMBA, Noboru MAEDA, Seiya KATAIYAMA, Minoru FUSHIHI, Takehiko KITANO, Yasuhiro KASUGA, Sadatoshi ONIMARU, Atsushi KAMRAYASHI

1093 PUSHOVER ANALYSIS FOR ASYMMETRIC AND SET-BACK MULTI-STORY BUILDINGS  
A. MOGHADAM, W. K. TSO

1098 BOUNDARY EFFECTS IN STEEL MOMENT CONNECTIONS  
Kyoung-Hyog LEE, Bozidar STOJADINOVIC, Subhash GOEL

1100 COST EFFECTIVENESS OF SEISMIC ISOLATION FOR BRIDGES IN LOW AND MODERATE SEISMIC REGIONS  
Dong-Ho HA, Hyun Moo KOH, Junho SONG

1103 IDENTIFICATION OF ANTI-RESONANCE FREQUENCY IN BUILDINGS BASED ON VIBRATION MEASUREMENTS  
Nai-Chi LIEN, George YAO

1105 AN EXPERIMENTAL STUDY ON THE ROTATIONAL AND Vertical LOAD-CARRYING CHARACTERISTICS OF RUBBER BEARINGS  
Hisayoshi ISHIHASHI, Osamu CHIBA, Eiichi INAI, Shinichi IIZUKA, Satsuya SODA, Hiroyuki YAMANOUCHI, Takaomi MIYAMOTO, Yasumasa KATO

1109 COLUMN-TO-BEAM STRENGTH RATIO REQUIRED FOR ENSURING BEAM-COLLAPSE MECHANISMS IN EARTHQUAKE RESPONSES OF STEEL MOMENT FRAMES  
Shinichi SAWAIU, Masayoshi NAKASHIMA

1110 ANALYSIS OF NON-STATIONARY RESPONSE OF STRUCTURES DUE TO SEISMIC RANDOM PROCESSES OF EVOLUTIONARY TYPE  
Jiri NAPRISTEK, Cyril FISCHER

1111 REDUCED RESIDUAL DISPLACEMENTS OF PARTIALLY PRESTRESSED CONCRETE BRIDGE PIERS  
Wael ZATAR, Hiroshi MITSUYOSHI

1115 THE RION ANTIRION BRIDGE DESIGN AND CONSTRUCTION  
Jean-Paul TESSANDIER, Jacques COMBAULT, Pierre MORAND

1118 A MASONRY SCHOOL BUILDING RETROFITTED BY BASE ISOLATION TECHNOLOGY  
Kanio KATAOKA, Matsuura SEKI, Masaki MIYAZAKI, Yasuhiro TSUNEKU

1119 DAMAGED MASONRY STRUCTURES AND THEIR RESIDUAL SHEAR CAPACITY BY FRICTION EFFECT  
Dan OLARU

1122 ANALYSIS OF SEISMIC RECORDS OBTAINED IN ISOLATED STRUCTURES  
Rubén BOROSCHEK, Mauricio SARRAZIN, Ofelia MORONI, Rubén VALDEBENITO, David ROMO

1123 SEISMIC BEHAVIOR QUALIFICATION METHODOLOGY FOR CONFINED MASONRY BUILDINGS  
Maximiliano ASTROZA, Maria Ofelia MORONI, Carlos SALINAS

1124 MIXED STEEL-BRICK STRENGTHENING SYSTEM FOR DAMAGED MASONRY STRUCTURES  
Constantin MITROI, Dan OLARU

1129 TORSIONAL RESPONSE OF RC BUILDINGS RETROFITTED WITH STEEL FRAMED BRACES  
Yoshiaki NAKANO, Yasumichi HINO, Koichi KUSUNOKI

1130 SEISMIC CAPACITY OF EXISTING RC SCHOOL BUILDINGS IN OTA CITY, TOKYO, JAPAN  
Tsuneo OKADA, Yoshiaki NAKANO, Toshio OHBA, Shigeru TAKADA, Yoshimasa OWADA, Hideo KIMURA
INDEX BY TOPIC

06 STRUCTURAL ENGINEERING

1131 SEISMIC RETROFIT OF RC SCHOOL BUILDINGS USING POST-INSTALLED WALLS WITH OPENINGS
Tsutomu OHTA, Shigeru TAKADA, Hideki OKUMURA, Yoshiaki NAKANO, Etsuo NIINO, Tsuneo OKADA

1136 ENERGY AND DISPLACEMENT DEMANDS IMPOSED BY NEAR-SOURCE GROUND MOTIONS
Rodolfo SARAGONI, Fabrizio MOLLAIOLI, Luis DECANINI

1144 IMPROVED DEPLOYMENT OF FRICTION DAMPERS IN ASYMMETRIC MULTI-STORY BUILDINGS
H BÉRAIR, O PEKAU, B DASGUPTA

1149 OPTIMUM DESIGN OF ENERGY DISSIPATION BRACES IN R/C FRAME STRUCTURES
Fulin ZHOU, Quaoling XIAN

1154 PERFORMANCE VALIDATION OF LARGE SEISMIC RESPONSE MODIFICATION DEVICES
Dorie Mellon, Andre Filiastraui, Gianmario Benzioni, Frieder Seible, Tom Post

1158 SEISMIC RESPONSE OF YELDING SYSTEMS UNDER THREE COMPONENT EARTHQUAKES
Marina COMO, Mario DE STEFANO, Roberto RAMASCO

1166 improving the ductility of connections on seismic response of steel frames
Alfredo REYES-SALAZAR, Achintya HALDAR

1173 WELDING NEWLY DEVELOPED, HIGH STRENGTH, SEISMIC GRADE REINFORCING BARS
Bruce Roberts, Wolfgang Scholz

1176 INFLUENCE OF THE STEEL PROPERTIES ON THE DUCTILITY OF R.C. STRUCTURES
Antonio GRIMALDI, Zila RINALDI

1177 SEISMIC PERFORMANCE OF FLAT-SLAB SHEAR REINFORCEMENT
Ian Robertson, Tadashi Kawai, James Lee, Brian Enomoto

1185 NONLINEAR ANALYSIS OF THIN-WALL CYLINDRICAL LIQUID STORAGE RESERVOIRS UNDER SEISMIC ACTION
Branislav Pujevic, Marija Nefovska, Miodrag Sekulovic

1190 STUDY ON SEISMIC RESPONSE CONTROL SYSTEM FOR HEAVY, RIGID BUILDINGS OF REINFORCED CONCRETE: PART-2 INFLUENCE OF DIVERSIFICATION OF DESIGN FACTORS ON SEISMIC RESPONSE
Masayuki TAKEUCHI, Masasaki NAKAZAWA, Kiyoshi HARA, Hirohiko SUGITA, Yasuaki FUKUSHIMA

1197 CONSIDERATION OF VERTICAL ACCELERATION AND FLEXIBILITY OF CONNECTIONS ON SEISMIC RESPONSE OF STEEL FRAMES
William ROBINSON

1202 NONLINEAR ANALYSIS OF THIN-WALL CYLINDRICAL LIQUID STORAGE RESERVOIRS UNDER SEISMIC ACTION
Branislav Pujevic, Marija Nefovska, Miodrag Sekulovic

1207 STUDY ON SEISMIC RESPONSE CONTROL SYSTEM FOR HEAVY, RIGID BUILDINGS OF REINFORCED CONCRETE: PART-2 INFLUENCE OF DIVERSIFICATION OF DESIGN FACTORS ON SEISMIC RESPONSE
Masayuki TAKEUCHI, Masasaki NAKAZAWA, Kiyoshi HARA, Hirohiko SUGITA, Yasuaki FUKUSHIMA

1212 EXPERIMENTAL STUDY ON SEISMIC RESPONSE OF FULLY GROUTED CONCRETE MASONRY WALLS
Akihiro Tanaka, Koji YOSHIMURA, Kenji KIKUCHI

1217 COMPARISON OF SEISMIC RESPONSE BETWEEN BRIDGE WITH SLIDING-TYPE BASE-ISOLATION SYSTEM AND THAT WITH LAMINATED RUBBER BEARING
Toshiyuki SUGIYAMA

1221 A STUDY ON CHARACTERISTICS OF STRUCTURAL ELASTO-PLASTIC RESPONSE BASED ON “3-D VIEW OF NONLINEAR RESPONSE SPECTRUM”
Seiya KATAYAMA, Takehito KITANO, Yoshihisa TAKUO

1225 PERFORMANCE BASED SEISMIC DESIGN OF BUILDING STRUCTURES WITH VISCOELASTIC DAMPERS
Yuji TAKASHI, Satsuya SODA
INDEX BY TOPIC

06 STRUCTURAL ENGINEERING

1242 SEISMIC VULNERABILITY OF OLD URBAN NUCLEI: THE CASE OF COMMERCIAL BUILDINGS
Christian Thibault

1244 RESIDUAL AXIAL CAPACITY AND DAMAGE RESTORABILITY OF REINFORCED CONCRETE COLUMNS AFTER EARTHQUAKE
Akira TASA

1245 RESPONSE BEHAVIOR OF RC PILES UNDER SEVERE EARTHQUAKE
Hiroshi MUTSUZOHASHI, Takeshi MAKA

1248 HYSTERETIC PERFORMANCE OF SHEAR PANEL DAMPERS OF ULTRA LOW-YIELD-STRENGTH STEEL FOR SEISMIC RESPONSE CONTROL OF BUILDINGS
Kiyoshi TANAKA, Yasuhiro SASAKI

1249 CYCLIC STRUT AND TIE MODELLING OF SIMPLE REINFORCED CONCRETE STRUCTURES
S SRIHARTAN, Nicholas TO, Jason INGHAM

1251 SUMMARY OF PREDICTION AND CORRELATION ANALYSES IN THE HUALIEN LARGE SCALE SEISMIC TESTS
Hiroshi TAIJMI, Hideaki SAITO, Masashi NAKAWA, Toshio KOIYASHI, Kazuhiro YOSHIDA, Toshikazu HANAZATO

1252 EFFECTS OF PANEL ZONE DEFORMATIONS ON CYCLIC PERFORMANCE OF WELDED MOMENT CONNECTIONS
SHANG-HSIEN HSIEH, S KONG, K LIN, K TSAI

1254 ADV RESPONSE SPECTRUM FOR PERFORMANCE EVALUATION OF RC BUILDING WITH/WITHOUT DAMPING DEVICES
Satsuya SODA, Yuji TAKAHASHI, Atsushi ISHIKURA

1269 DEVELOPMENT OF POST-NORTH RIDGE STEEL MOMENT CONNECTIONS
Subhash GOEL, Young-Hyang LEE, Bozidar STOJADINOVIC

1270 DEVELOPMENT OF SEISMIC ISOLATION TABLE COMPOSED OF AN X-Y TABLE AND WIRE ROPE ISOLATORS
Hirokazu SHIMODA, Kenichiro OHTSUKA, Haruo SHIMOSAKA, Norio NAGAI

1273 DYNAMIC PROPERTIES OF STRUCTURE-PILE SYSTEM USING MOCK-UP MODEL
Hiroshi SHIMIZU, Akira KASAHARA, Masataka NAKAMURA, Toshiaki ARAI, Jun-ichi SUZUMURA, Kazufumi HANADA, Hiroshi ASEG

1275 SEISMIC EVALUATION AND RETROFIT OF INDUSTRIAL BUILDINGS
Osakar URBAN, Mohamed DAALI

1279 SHAKING TABLE TEST AND ANALYSIS ON BASE ISOLATED FBR PLANT MODEL WITH HIGH-DAMPING RUBBER BEARING
Nobuhisa SATO, Katsuhiko UMEKI, Takahiro SOMAI, Asao KATO, Yukio WATANABE

1280 EARTHQUAKE RESISTANT PROPERTIES OF CORE STEEL COMPOSITE COLUMNS
Kouichi MINAMI, Chiaki MATSUMI,Junichi SAKAI

1295 FINITE ELEMENT ANALYSIS FOCUSED ON THE FLANGE PLATES AND CONNECTING BOLTS OF RUBBER BEARINGS
Keiko MORITA, Mineo TAKAYAMA

1299 A FIVE STORY PRECAST CONCRETE TEST BUILDING FOR SEISMIC CONDITIONS - DESIGN DETAILS
John Stanton, Rebecca Collins, Suzanne Nakaki, Masahiro Sugata, Joe Galusha

1301 IMPROVED WELDED CONNECTIONS FOR EARTHQUAKE LOADING
Wolfgang Schulz, Charles Clifton

1304 STUDY OF EARTHQUAKE GROUND MOTION TO EXAMINE SLOSHING IN LNG INGROUND STORAGE TANKS
Takashi OKAMOTO, Osamu WATANABE, Atsushi KAMIYAMA, Shigeru NAGATA

1307 PROPERTY MODIFICATION FACTORS FOR ELASTOMERIC SEISMIC ISOLATION BEARINGS
Stephen Mahin, Gregory Fuentes, Andrew Whitaker, Andrew Thompson

1311 INSTRUMENTING THE GOLDEN GATE BRIDGE TO RECORD SEISMIC BEHAVIOR AND TO DEPLOY RAPID INSPECTION RESPONSE
Mervin Giacomini, Charles Seim
INDEX BY TOPIC

06 STRUCTURAL ENGINEERING

1317 EXPERIMENTAL RESEARCH ON SHEAR STRENGTH OF SHORT REINFORCED CONCRETE COLUMNS WITH PRESTRESSED HOOPS
Yoshinori ITO, Eiji MAKITANI, Hiroshi WATANABE

1318 SEISMIC RESPONSE AND FAILURE MECHANISM OF FLEXIBLY SUPPORTED LIQUID STORAGE TANKS
J Habenberger, J Schwartz, C Seiler, W Wunderlich

1320 ESTABLISHMENT OF MATHEMATICAL MODEL FOR AN EXPERIMENTAL FULL-SCALE BUILDING WITH ACTIVE BRACING SYSTEM
Jann N. Yang, Jong-Cheng Wu, Chin-Hsiang Loh

1321 DAMAGES TO BEAM-TO-COLUMN JOINT PANELS OF R/C BUILDINGS CAUSED BY THE 1995 HYOGO-KEN NANBU EARTHQUAKE AND THE ANALYSIS
Tomoaki AKIYAMA, Tatsuya KONDO, Masaya HIROSAWA, Jiandong ZHOU

1326 ANCHORAGE BEHAVIOR OF 90-DEGREE HOOKED BEAM BARS IN REINFORCED CONCRETE KNEE JOINTS
Yasuaki GOTO, Osamu JOH

1327 EFFECT OF UPLIFT ON EARTHQUAKE RESPONSE OF HOOKED BEAM BARS IN REINFORCED CONCRETE KNEE JOINTS
Hajime TANIGUCHI, Keizo IWASHITA

1333 BASE ISOLATION VERSUS ENERGY DISSIPATION FOR SEISMIC RETROFITTING OF EXISTING STRUCTURES
Dragos Sarbu, Ioan Olariu, Felicia Olaria

1338 EARTHQUAKE-RESISTANCE OF FOUR-SPAN CONTINUOUS PC RIGID-FRAME BOX GIRDER BRIDGE
Takahiro SAKATA, Mitsuo TOKUNAGA, Takao NAKAZAWA, Ryuichi KANEMARU

1342 LARGE SCALE DYNAMIC FAILURE TESTS OF LOW DAMPING RUBBER BASE ISOLATORS
Masanori Iiba, Nobuo MASAKI, Chikahiro MINOWA

1345 INNOVATIVE APPLICATION OF DUCTILE SYSTEMS IN SEISMIC RETROFIT OF DECK-TRUSS BRIDGES
Michel BRUNEAU, Majid SARRAF

1352 THE MAIN FACTORS AND MECHANISM EFFECTING ON THE EARTHQUAKE RESISTANCE STABILITY OF GROTTOES RELICS AND COUNTERMEASURES
Yucheng Shi, Hongwei Cai

1355 EXPERIMENTAL STUDY ON STRENGTH AND DEFORMATION CAPACITY OF REINFORCED CONCRETE COLUMNS AND STEEL BEAMS STRUCTURE JOINT
Yasuhiro MATSUZAKI, Atsushi NAKADE, Hitoshi MORIMOTO, Masakazu ICHIKAWA, Jun FURUKAWA

1357 INELASTIC SEISMIC PERFORMANCE OF RC TALL PIERS WITH HOLLOW SECTION
Hirokazu IEMURA, Yoshikazu TAKAHASHI

1366 MODELING STRATEGIES FOR THREE DIMENSIONAL ANALYSIS OF PRECAST PANEL BUILDINGS UNDER SEISMIC LOAD
Serdar ASTARLIOGLU, Ali MEMARI, Andrew SCANLON

1367 NONLINEAR ANALYSIS OF FRAME SYSTEMS BY STATE SPACE APPROACH (SSA)
Vassil Simeonov, Andrei Reinhold, Sivaselvan Mettupalayam (Siva)

1369 THE MODEL OF SEISMIC IMPACT AS A SHORT TEMPORARY PROCESS FOR CALCULATING SEISMOISOLATED SYSTEMS
Oleg SAKHAROV, Galina BOGDANOVA, Janna IVANOVA, Alexander UZDIN3, Angelica DOGLAYA

1372 NON-LINEAR EARTHQUAKE RESPONSE ANALYSIS OF PC CABLE STAYED BRIDGE CONSIDERING THE FLUCTUANT AXIAL FORCE
Kunihiro MOMOTA, Masanori SHUTO, Hisanori OTSUKA, Toshihiko ASO, Akira ARIKADO, Kazuyuki MIZUTORI

1378 A PROPOSED METHODOLOGY FOR SEISMIC RISK EVALUATION OF HIGHWAY BRIDGES
Mohamed SOBAIH, Adel GABR

1380 A PROPOSED METHOD FOR EVALUATING THE TOTAL SEISMIC PERFORMANCE OF EXISTING PUBLIC BUILDINGS AND ITS VERIFICATION
Tomoaki Akiyama, Eiji Makitani, Masaya Hiroswawa, Takao Takehara

1382 APPLICATION OF AN ESTIMATION METHOD FOR RESPONSE OF STRUCTURES BY EQUILIBRIUM OF ENERGIES
Allan SUMAYA, Taiji MAZDA, Tatsuo IRIE
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1387</td>
<td>SEISMIC ANALYSIS OF A POST-TENSIONED PRECAST CONCRETE FRAME</td>
<td>John STANTON, Gregory MacRae, Masahiro SUGATA</td>
</tr>
<tr>
<td>1392</td>
<td>SEISMIC BEHAVIOR OF INDUSTRIAL FACILITIES WITH ENERGY DISSIPATORS</td>
<td>Rodrigo RETAMALES, Mauricio SARRAZIN, Ofelia MORONI, Felipe LOYOLA, Rubén BOROSCHEK</td>
</tr>
<tr>
<td>1396</td>
<td>SHAKING TABLE TEST AND ANALYSIS ON ULTIMATE CHARACTERISTICS OF LEAD RUBBER BEARING FOR BASE ISOLATED FBR PLANT MODEL</td>
<td>Junji SUHARA, Yasuaki OHBA, Tetsuo IIZUKA, Fumihiko SUGIYA, Genji Yoneda, Asaro KATO, Takahito SUGIYA, Ken-ichiro YAMAMOTO, Shuh KONO</td>
</tr>
<tr>
<td>1406</td>
<td>SEISMIC CRACKING AND STRENGTHENING OF CONCRETE GRAVITY DAMS</td>
<td>Hongyuan ZHANG, Tatsuo OHMACHI</td>
</tr>
<tr>
<td>1409</td>
<td>USING A LEAD-BASED DAMPER TO INCREASE NEAR-SOURCE GROUND MOTION RESISTING CAPACITY OF EXISTING BASE-ISOLATED STRUCTURES</td>
<td>William ROBINSON, Jim COWINS, John ZHAO</td>
</tr>
<tr>
<td>1411</td>
<td>SEISMIC BEHAVIOR OF CONCRETE AND STEEL COMPOSITE COLUMNS UNDER CYCLIC LOADING</td>
<td>Weidong LU, Xilin LU</td>
</tr>
<tr>
<td>1417</td>
<td>DYNAMIC INTERACTION OF DEEPLY BURIED NUCLEAR POWER BUILDINGS</td>
<td>S YAMAMOTO, K TOGASHI, S NAKAFUSA, S KAWAMURA</td>
</tr>
<tr>
<td>1423</td>
<td>EXPERIMENTAL STUDY ON SEISMIC CAPACITY OF COMPOSITE COLUMN FORMED SRC AND RC PART</td>
<td>Yoshiyuki KOMIYA, Koichi MINAMI, Kazumasa SUGIYA, Takayuki IMAIZUMI, Ken-ichiro YAMAMOTO, Shuh KONO</td>
</tr>
<tr>
<td>1430</td>
<td>AN UNLOADING AND RELOADING STRESS-STRAIN MODEL FOR CONCRETE CONFINED BY TIE REINFORCEMENTS</td>
<td>Junichi SAKAI, Kazuhiko KAWASHIMA</td>
</tr>
<tr>
<td>1434</td>
<td>EFFECT OF RESTRainers TO MITIGATE POUNDING BETWEEN ADJACENT DECKS SUBJECTED TO A STRONG GROUND MOTION</td>
<td>Kazuhiko KAWASHIMA, Gaku SHOJI</td>
</tr>
<tr>
<td>1436</td>
<td>MODELS FOR CONCRETE COVER SPALLING AND REINFORCEMENT BUCKLING OF REINFORCED CONCRETE</td>
<td>Junji MASUKAWA, Kumiko SUDA</td>
</tr>
<tr>
<td>1447</td>
<td>STRUT-AND-TIE MODEL CONCEPTS FOR SEISMIC DESIGN AND ASSESSMENT OF CONCRETE BRIDGE JOINTS</td>
<td>S. (Sri) Saritharan, M. J. Nigel Priestley, Jason M. Ingham</td>
</tr>
<tr>
<td>1449</td>
<td>A STUDY OF THE INTERACTION BETWEEN THE PIER TYPE WHARF AND CONTAINER CRANE DURING EARTHQUAKES</td>
<td>Sasumu NAKASHIMA, Masafumi MIYATA, Takaki ETOH, Tsuyoshi TANAKA, Yuichiro TATSUMI, Shunsuke YAMAMOTO, Takahiro SUGANO, Toshiro TANABE</td>
</tr>
<tr>
<td>1451</td>
<td>A STUDY ON UNIAXIAL COMPRESSIVE STRENGTH OF PLAIN CONCRETE UNDER DYNAMIC CYCLIC LOADING</td>
<td>Eizaburo TACHIBANA, Taka SHIMIZU</td>
</tr>
<tr>
<td>1452</td>
<td>TEST AND ANALYSIS OF RC CURVE BEAMS UNDER REVERSED CYCLIC IN-PLANE LOADS</td>
<td>Yih-Houng CHEN, Chi-Huang CHEN, Maw-Shyong SHEU</td>
</tr>
<tr>
<td>1452</td>
<td>VULNERABILITY EVALUATION OF JACKETED VIADUCT USING MICROTREMOR MEASUREMENT AND NUMERICAL SIMULATION</td>
<td>Fumiaki UEHAN, Kimito MEGURO</td>
</tr>
<tr>
<td>1458</td>
<td>SEISMIC RESPONSE ANALYSIS AND IN-STRUCTURE SPECTRA FOR THE REACTOR BUILDING OF LIANYUNGA NPP IN CHINA</td>
<td>Pekka Ivonen, Pentti Varpassuo</td>
</tr>
<tr>
<td>1459</td>
<td>SEISMIC PERFORMANCE ASSESSMENT AND RETROFIT OF RECTANGULAR BRIDGE PIERS WITH EXTERNALLY ENCASED CIRCULAR STEEL JACKETS</td>
<td>Genda CHEN, Wancheng YUAN, Xinbao YANG, Lichu FAN</td>
</tr>
<tr>
<td>1462</td>
<td>APPLICATION OF OPTIMUM DESIGN METHODS TO ACTUAL HIGH-RISE BUILDING WITH HYSTERETIC DAMPERS</td>
<td>Yasuyuki NAGANO, I TAKAWAKI, T OKAMOTO, M TSUJI</td>
</tr>
</tbody>
</table>
INDEX BY TOPIC

06 STRUCTURAL ENGINEERING

1468 ANALYSIS OF DAMPING IN EARTHQUAKE RESPONSE OF CABLE-STAYED BRIDGES
John WILSON, Jodie ATKINS

1471 STRUCTURAL SYSTEM IDENTIFICATION BASED ON SUBSYSTEM ANALYSES
Akira NISHITANI, Seiji YAMADA

1478 FULL SCALE TESTING OF CONCRETE BEAM-COLUMN JOINTS USING ADVANCED CARBON-FIBER COMPOSITES
Kevin Womack, Marvin Halling, Robert Moyle

1479 RESISTING CHARACTERISTICS OF HYBRID CENTER CORE SHEAR WALL SYSTEMS
Minoru YAMADA, Takayoshi YAMAKAJI

1482 EFFECT OF JOINT DETAILS FOR BEHAVIOR OF MOMENT RESISTING STEEL FRAMES WITH COMPOSITE GIRDERS-TO-SHS COLUMN
Il-Seung YANG, Yasuhisa TAGAWA

1485 BEHAVIOR AND STRENGTH OF RC COLUMN-TO-STEEL BEAM CONNECTIONS SUBJECTED TO SEISMIC LOADING
Gustavo Parra-Montesinos, James Wight

1493 SHEAR TRANSFER MECHANISM OF PRE-CRACKED RC PLATES
Takao NISHIKAWA, Kazunori KAMIMURA, Mamoru YAMADA, Koichi MAEKAWA, Yoshio KITADA, Atsushi HABASAKI, Katsuhiko UMEKI

1499 STATISTICAL ANALYSIS OF CONCRETE STRENGTH IN EXISTING REINFORCED CONCRETE BUILDINGS IN JAPAN
Masaya HIROSAWA, Jianyong ZHOU, Yasushi SHIMIZU

1503 VIBRATION TEST OF A FRAME WHICH HAS AN OIL-DAMPER BRACE
Yutaka ISHIDA, Masayuki NINOMIYA, Masato USAMI, Yasuo TSUYUKI, Toshifumi OKUZONO, Osamu TAKAHASHI, Shigekatsu ICHIHASI

1516 MODEL AND ANALYSIS OF VARIABLE STIFFNESS SEMI-ACTIVE CONTROL SYSTEM
Yan Xinghua

1519 SHEAR-FAILING REINFORCED CONCRETE COLUMNS SUBJECTED TO MULTI-AXIAL LOADING
M YOSHIMURA, K TSUMURA

1521 CHARACTERISTICS OF SEISMICALLY ISOLATED BUILDING
Yasutaka MAEDA, Kiyosato UNO, Takahiro SAKATA, Yasuyuki FUJIO

1523 FUNDAMENTAL STUDY ON THE EFFECT OF VARIATION OF MATERIAL PROPERTIES ON THE FAILURE BEHAVIOR OF WHOLE STRUCTURAL SYSTEM
Yasuhiro SAITO, Kimiro MEGURO

1527 ANALYSIS OF HIGHRISE BUILDING STRUCTURE WITH SETBACK SUBJECT TO EARTHQUAKE GROUND MOTIONS
John MEEK, Xiaojun ZHANG

1534 SOME FUNDAMENTAL ASPECTS OF TORSIONALLY COUPLED STRUCTURES
Juan DE LA LLERA

1535 THE EXPERIMENTAL STUDY ON VISCOELASTIC MATERIAL DAMPERS AND THE FORMULATION OF ANALYTICAL MODEL
Higashino Masahiko, Mitsuo Asano, Masashi Yamamoto

1541 EARTHQUAKE-RESISTANT CONSTRUCTION WITH MULTI-PERFORATED CLAY BRICK WALLS
Sergio ALCOCER, Leonardo FLORES, José ZEPEDA

1543 BEHAVIOUR OF A PRECAST CONCRETE BEAM-TO-COLUMN CONNECTION
RENE CARRANZA, DAVID PEREZ-NAVARETE, SERGIO ALCOCER

1544 ANALYTICAL STUDIES OF SHEAR-YIELDING MOMENT-RESISTANT STEEL FRAMES
Arne HALTERMAN, Mark ASCHHEIM

1550 RESTORATION OF AKASHI MUNICIPAL MUSEUM OF ASTRONOMY AND SCIENCE DAMAGED BY THE GREAT HANSHIN EARTHQUAKE IN 1995
Tomoaki AKIYAMA, Tsutomu ITAGAKI, ISHIMARU ISHIMARU

1559 A SHEAR MODEL FOR RC STRUCTURES UNDER CYCLIC LATERAL LOADS
Filip FILIPPOU, Angelo D'AMBRISI

1562 SEISMIC SHEAR STRENGTH OF COLUMNS WITH INTERLOCKING SPIRAL REINFORCEMENT
Nigel PRIESTLEY, Frieder SEIBLE, Gianmario BENZONI

1593 RECENT DEVELOPMENTS IN THE USE OF ADVANCED COMPOSITE MATERIALS FOR SEISMIC RETROFITTING
Rob Irwin, José Restrepo, Yang-Chih Wang, Paul Wymer

1596 MODELING OF REINFORCED CONCRETE SHEAR WALL FOR NONLINEAR ANALYSIS
Shaohua CHEN, Toshimi KABEYASAWA

1597 EXPERIMENTAL INVESTIGATION ON OPTIMAL DIRECT OUTPUT FEEDBACK CONTROL OF STRUCTURES
L CHUNG, L WU, K HUANG
INDEX BY TOPIC

06 STRUCTURAL ENGINEERING

| 1601 | PERFORMANCE OF RIGID WELDED BEAM TO COLUMN CONNECTIONS UNDER SEVERE SEISMIC CONDITIONS | Clark Hyland, Charles Clifton, Wolfgang Scholz, John Butterworth |
| 1602 | MOMENT-RESISTING STEEL FRAMED SEISMIC-RESISTING SYSTEMS WITH SEMI-RIGID CONNECTIONS | Charles Clifton, John Butterworth |
| 1604 | DUCTILE CLADDING SYSTEMS FOR SEISMIC DESIGN | Tumay Doyan, Peeraman Towashiraporn, Barry Goodno, James Craig |
| 1605 | EXPERIMENTAL RESPONSE OF A NON-DUCTILE R/C BUILDING REHABILITATED BY MEANS OF FIBRE REINFORCED POLYMERS | Antonella Colombo, Alberto Castellani, Paolo Negro, Muriel Castellani |
| 1609 | STRUCTURAL RESPONSE OF THE RION-ANTIRION BRIDGE | Jacques COMBAULT, Pierre Morand, Alain PECKER |
| 1612 | CAPACITY-DEMAND DIAGRAM METHODS BASED ON INELASTIC DESIGN SPECTRUM | Rakesh Goyal, Anil Chopra |
| 1622 | STATE-OF-THE-ART IN HYBRID CONTROL AND ISSUES ON OPTIMUM SEISMIC OBSERVER AND DEVICE PLACEMENT | Hongping Jiang, Franklin Cheng, Zunquan Wang |
| 1625 | THE BIFURCATION BEHAVIOUR OF VERTICALLY IRREGULAR BUILDINGS IN LOW SEISMICITY REGIONS | Nelson Lam, Chen CHEN, Priyan MENDIS |
| 1626 | MONITORING THE ONGOING EUROPEAN EFFORT IN STRUCTURAL CONTROL | A.BARATTA, F Cauaiati |
| 1632 | ON SEISMIC BEHAVIOR AND MATHEMATICAL MODELLING OF INFILLED RC FRAME STRUCTURES | Peter Fajfar, Matjaz Dolsek |
| 1644 | LIFE CYCLE ANALYSIS IN THE SEISMIC DESIGN AND MAINTENANCE POLICIES OF BUILDINGS WITH HYSTERETIC ENERGY DISSIPATORS | Luis Esteva, Orlando Díaz-López, Jaime García-Pérez |
| 1645 | THE MODELLING OF EARTHQUAKE INDUCED COLLAPSE OF UNREINFORCED MASONRY WALLS COMBINING FORCE AND DISPLACEMENT PRINCIPALS | Kevin Doherty, Nelson Lam, John Wilson, Mike Griffith, Ben Rodolico |
| 1647 | IMPLEMENTATION AND VALIDATION OF FINITE ELEMENT MODELS OF STEEL HYSTERETIC TORSIONAL ENERGY DISSIPATORS | Massimo FORNI, Franco BETTINAI, Samuele INFANTI, Marilena LA GROTERIA, Maria Gabriella CASTELLANO, Giuseppe BONACINA, Giulia BERGAMO, Alberto DUSI |
| 1655 | EXPERIMENTAL SEISMIC RESPONSE OF REINFORCED CONCRETE COMPOSITE GIRDERS | Carol ENYEDI, Ovidiu DUMITRESCU, Ioan BOTEZ |
| 1657 | SEISMIC ANALYSIS OF CONCRETE ARCH DAMS BY SMEARED CRACK APPROACH | Radin espandar, Vahid lotfi, Ghani razagpur |
| 1662 | RELIABILITY INDEXES IN EARTHQUAKE RESISTANT DESIGN OF MULTI-STOREY FRAME BUILDINGS | Orlando Díaz-López, Enrique Mendoza, Luis Esteva |
| 1663 | LATERAL BEHAVIOUR OF LIGHT FRAMED WALLS IN RESIDENTIAL STRUCTURES | Emad Gid, Colin Duffield |
| 1671 | REDUCED BEAM SECTION WELDED STEEL MOMENT FRAMES | Gary Fry, Michael Engelhardt, Scott Jones |
| 1672 | DUCTILE ENGINEERED CEMENTITIOUS COMPOSITE ELEMENTS FOR SEISMIC STRUCTURAL APPLICATION | Yasuhiro MATSUZAKI, Victor LI, Hiroshi FUKUYAMA, Yukihiro SATO, Hirozo MIHASHI |
| 1673 | ENERGY ASPECT OF COUPLED SHEAR WALLS BEHAVIOUR IN AN EARTHQUAKE | R FOLIC, D Ladjimovic |
| 1674 | UPGRADE OF FIRST GENERATION UNIAXIAL SEISMIC SIMULATION SYSTEM WITH SECOND GENERATION REAL-TIME THREE-VARIABLE DIGITAL CONTROL SYSTEM | Frieder SEIBLE, Richard NOWAK, Brad THOEN, André FILIATRAULT, Spyridon KREMМИDИS, Allan CLARK |
| 1678 | RUBBER-BASED ENERGY DISSIPATORS FOR EARTHQUAKE PROTECTION OF STRUCTURES | Claude DUMOULIN, Ian GOODCHILD, Keith FULLER, Hamid AHMADI, Fabio TAUCER, Georges MAGONETTE |
| 1681 | IMPLEMENTATION OF EFFECTIVE FORCE TESTING: METHOD OF SEISMIC SIMULATION FOR STRUCTURAL TESTING | Carol SHIELD, Catherine FRENCH, John TIMM |
# INDEX BY TOPIC

## 06 STRUCTURAL ENGINEERING

### 1683 ANALYSIS OF 3-D VIBRATIONS OF THE BASE ISOLATED SCHOOL BUILDING "PESTALOZZI" BY ANALYTICAL AND EXPERIMENTAL APPROACH
   Nikola Zisi, James Kelly, Mihail Garevski

### 1695 COMPARISON OF SEISMIC PERFORMANCE BETWEEN U.S. STEEL PERIMETER FRAME AND JAPANESE SPATIAL MOMENT RESISTING FRAME
   Tadaharu NAGAO, Kenji TAKAHASHI, Takashi HASEGAWA

### 1701 SEISMIC BEHAVIOR OF R/C COLUMN MEMBERS USING PRECAST CONCRETE SHELL UNDER HIGH AXIAL LOAD
   Hiroshi HOSOYA, Yoshinobu ASANO

### 1702 MODAL IDENTIFICATION OF STRUCTURES USING ARMAV MODEL FOR AMBIENT VIBRATION MEASUREMENT
   C HUANG

### 1704 PERFORMANCE DESIGN PARAMETERS: STRENGTH VS. DUCTILITY DEMAND
   Eduardo Fierro, Cynthia Perry

### 1706 INFLUENCE OF DIFFERENT TYPES OF FULLY RESTRAINED CONNECTIONS ON THE RESPONSE OF SMRF STRUCTURES
   Akshay GUPTA, Helmut KRAWINKLER

### 1710 EXPERIMENTAL STUDY OF A SEISMICALLY ISOLATED BUILDING STRUCTURE SUBJECT TO TRIAXIAL GROUND MOTIONS
   Ting-Yu HSU, Jenn-Shin HWANG

### 1716 INELASTIC RESPONSE OF MULTI-STOREY ASYMMETRIC BUILDINGS
   Pier Paolo ROSSI, Edoardo MARINO, Aurelio GHERSI

### 1725 REGULARITY INDICES FOR BRIDGE STRUCTURES
   Tatjana Isakovic, Matej Fischinger

### 1728 SEISMIC DESIGN OF LOW TO MID-RISE BUILDING WITH A SOFT FIRST STOREY SUBJECT TO SEMI-ACTIVE VISCOS DAMPING CONTROL
   Satoshi Soda, Norio Iwata

### 1730 ON THE SEISMIC UPGRADING OF EXISTING BUILDING BY SEISMIC ISOLATION SYSTEM
   Y NAKAJIMA, S SHINASHIHI, M HAYASHI

### 1733 IMPROVEMENT OF SEISMIC PERFORMANCE OF REINFORCED CONCRETE SCHOOL BUILDINGS IN JAPAN -PART2 SYSTEMATIC PROJECT FOR RETROFIT AND QUICK RESPONSE AGAINST FUTURE EARTHQUAKES
   K SHINOPO, T KABEYAZAWA, Ken-ichiro KANEMITSU

### 1734 SHAKING TABLE TESTS OF REINFORCED CONCRETE COLUMNS SUBJECTED TO SIMULATED INPUT MOTIONS WITH DIFFERENT TIME DURATION
   HEDETO Kanno, HEISHA Wenliuhan, NORIO Inoue, NORIO Hiro, JUNJI Ogawa

### 1735 DUCTILITY IMPROVEMENT OF PCA MEMBERS WITH SLEEVE SLEEVE JOINT BY INTENSIVE SHEAR REINFORCING METHOD
   Fumitaka IKADAI, Katsumi KOBAYASHI, Masaki ASE

### 1739 HYBRID STEEL REINFORCED CONCRETE STRUCTURE : STRENGTHENING OF REINFORCED CONCRETE COLUMNS BY CENTRAL REINFORCING STEEL ELEMENT
   Y KANEO, Y TANAKA, H YASHIRO, Y RO, O NAKAGAWA, I SADAMURA

### 1740 IMPORTANT FEATURES OF THE RESPONSE OF INELASTIC STRUCTURES TO NEAR-FIELD GROUND MOTION
   Wilfred Iwan, Chung-Tung Huang, Andrew Guyader

### 1752 SEISMIC BEHAVIOUR OF R/C SHEAR WALL STRUCTURES DESIGNED ACCORDING TO THE FRENCH PS92 AND EC8 CODES: A COMPARISON BETWEEN SHAKING-TABLE RESPONSE DATA AND 2D MODELLING
   J REYNouARD, N ILE

### 1755 SEISMIC STRENGTHENING OF INADEQUATE LENGTH LAP SPLICES
   FATHON SHKHURT, YONGQIAN LIN, WILLIAM GAMBLE, NEIL HAWKINS

### 1757 COMPUTED VERSUS OBSERVED INELASTIC SEISMIC RESPONSE OF LOW-RISE R/C SHEAR WALLS WITH BOUNDARY ELEMENTS
   D CHAUVEL, F FLEURY, J REYNouARD, N ILE

### 1758 AN INTERVAL ANALYSIS APPROACH TO DEAL WITH EARTHQUAKE RESPONSE OF UNCERTAIN STRUCTURAL SYSTEMS
   Hector JENSEN

### 1759 BEHAVIOR OF MOMENT CONNECTIONS BETWEEN CONCRETE-FILLED STEEL TUBE COLUMNS AND WIDE FLANGE STEEL BEAMS SUBJECTED TO SEISMIC LOADS
   James Jirsa, Joseph Yura, Bradley Koester

### 1760 HIGH PERFORMANCE CONCRETE IN SEISMICALLY ACTIVE AREAS OF THE ARGENTINEAN REPUBLIC
   Claudia Oliva, Ricardo Uliarte, Javier Morandi
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>06</td>
<td>LATERAL STIFFNESS – STRENGTH DISTRIBUTION AND DAMAGE CONCENTRATION</td>
<td>Keiichi INOUE, Yuji ISHIYAMA, Tetsuhiro ASARI</td>
</tr>
<tr>
<td></td>
<td>ALONG THE HEIGHT OF A BUILDING</td>
<td></td>
</tr>
<tr>
<td>1764</td>
<td>SHAKING TABLE TESTS ON PERFORMANCE OF ISOLATORS FOR HOUSES</td>
<td>Hiroi YAMANOUCHI, Mitsunasa MIDORIKAWA, Yoshihito OHASHI, Shoichi YAMAGUCHI, Mineo TAKAYAMA, Masanori IBA</td>
</tr>
<tr>
<td></td>
<td>SUBJECTED TO THREE DIMENSIONAL EARTHQUAKE MOTIONS</td>
<td></td>
</tr>
<tr>
<td>1765</td>
<td>DEVELOPMENT OF REINFORCEMENT DETAILS TO IMPROVE THE CYCLIC RESPONSE</td>
<td>Chadchart SITIPUNT, Sharon WOOD</td>
</tr>
<tr>
<td></td>
<td>OF SLENDER STRUCTURAL WALLS</td>
<td></td>
</tr>
<tr>
<td>1767</td>
<td>EXPERIMENTAL TESTS ON MASONRY STRUCTURES PROVIDED WITH SHAPE MEMORY</td>
<td>Bruno CARPANI, Giorgio CROCI, Alessandro BONCI, Samuele INFANTI, Alessandro MARTELLI, Mario BIBITOGNOLO, Maurizio INDIRL, Silvano VIANI, Alberto VISKOVIC, Maria Gabriella CASTELLANO</td>
</tr>
<tr>
<td></td>
<td>ALLOY ANTISEISMIC DEVICES</td>
<td></td>
</tr>
<tr>
<td>1768</td>
<td>SEISMIC RESPONSE ANALYSIS OF PILE-SUPPORTED BUILDINGS CONSIDERING</td>
<td>Masafumi MORI, Masayuki HASEGAWA</td>
</tr>
<tr>
<td></td>
<td>MATERIAL NONLINEARITY AND PILE-SOIL SEPARATION</td>
<td></td>
</tr>
<tr>
<td>1770</td>
<td>DEVELOPMENT OF SUBSTRUCTURED SHAKING TABLE TEST METHOD</td>
<td>Akira IZAGASHI, Hirokazu IEMURA, Takanori SUWA</td>
</tr>
<tr>
<td>1771</td>
<td>A SHAKING TABLE TEST OF REINFORCED CONCRETE FRAMES DESIGNED UNDER</td>
<td>Masanori IBA, Hiroshi KURAMOTO, Akira WADA, Eiichi INAI, Namibiko INOUE, Issa FUJIMOTO</td>
</tr>
<tr>
<td></td>
<td>OLD SEISMIC REGULATIONS IN JAPAN</td>
<td></td>
</tr>
<tr>
<td>1772</td>
<td>REDUCTION OF STRENGTH AND STIFFNESS AND HYSTERETIC</td>
<td>S Sabouri-Ghomi</td>
</tr>
<tr>
<td></td>
<td>CHARACTERISTICS OF PERFORATED THIN STEEL PLATE SHEAR WALLS</td>
<td></td>
</tr>
<tr>
<td>1774</td>
<td>SEISMIC RESPONSE OF PILE-SUPPORTED BUILDINGS CONSIDERING MATERIAL</td>
<td>Masafumi MORI, Masayuki HASEGAWA</td>
</tr>
<tr>
<td></td>
<td>NONLINEARITY AND PILE-SOIL SEPARATION</td>
<td></td>
</tr>
<tr>
<td>1775</td>
<td>DEVELOPMENT OF SUBSTRUCTURED SHAKING TABLE TEST METHOD</td>
<td>Akira IZAGASHI, Hirokazu IEMURA, Takanori SUWA</td>
</tr>
<tr>
<td>1776</td>
<td>THE APPLIANCE OF WAVELET TRANSFORM IN THE ANALYSIS OF SEISMIC</td>
<td>Hui CAO, Ming LAI</td>
</tr>
<tr>
<td></td>
<td>STRUCTURE DYNAMIC RELIABILITY</td>
<td></td>
</tr>
<tr>
<td>1777</td>
<td>FULL-SCALE VERIFICATION TEST OF DYNAMIC RESPONSE CONTROL TECHNIQUES</td>
<td>Torajiro FUJIWARA, Akira IZAGASHI, Hirokazu IEMURA, Akihito TOYOOKA</td>
</tr>
<tr>
<td></td>
<td>FOR STRONG EARTHQUakes</td>
<td></td>
</tr>
<tr>
<td>1778</td>
<td>SYMMETRIC 3D R/C BUILDINGS SUBJECTED TO BI-DIRECTIONAL INPUT GROUND</td>
<td>Giuseppe FAELLA, Vojko KILAR, Gennaro MAGLIULO</td>
</tr>
<tr>
<td></td>
<td>MOTION</td>
<td></td>
</tr>
<tr>
<td>1779</td>
<td>INFLUENCE OF BIDIRECTIONAL SEISMIC MOTION ON THE RESPONSE OF</td>
<td>Julio Hernández, Oscar Lopéz</td>
</tr>
<tr>
<td></td>
<td>ASYMMETRIC BUILDINGS</td>
<td></td>
</tr>
<tr>
<td>1780</td>
<td>DYNAMIC BEHAVIORS OF BRIDGES UNDER SEISMIC EXCITATIONS WITH POUNDING</td>
<td>Ho-Seong Mha, Jeong-Hun Won, Sang-Hyo Kim, Sang-Woo Lee</td>
</tr>
<tr>
<td></td>
<td>BETWEEN ADJACENT GIRDERS</td>
<td></td>
</tr>
<tr>
<td>1781</td>
<td>CYCLIC LOADING TEST OF SMALL SCALE BRIDGE PIER MODELS WITHOUT</td>
<td>Ick-Hyun KIM, Jar Kwan KIM, Hyun-Woo LIM, Gui-Hyun JUHN</td>
</tr>
<tr>
<td></td>
<td>SEISMIC DETAILING</td>
<td></td>
</tr>
<tr>
<td>1782</td>
<td>A METHOD FOR EVALUATING DEFORMATION CAPACITY OF EXTERIOR R/C</td>
<td>Zongfang XIANG, HONGLIU XIA</td>
</tr>
<tr>
<td></td>
<td>COLUMNS AFTER FLEXURAL YIELDING</td>
<td></td>
</tr>
<tr>
<td>1783</td>
<td>SEISMIC RESPONSE OF A REINFORCED CONCRETE ARCH BRIDGE</td>
<td>Hisahiro HIRAISHI, Eiichi INAI</td>
</tr>
<tr>
<td>1784</td>
<td>SEISMIC BEHAVIOR AND DESIGN OF STEEL SHEAR CONNECTIONS WITH FLOOR</td>
<td>Abolhassan Astaneh-Asl, Judy Liu</td>
</tr>
<tr>
<td></td>
<td>SLABS</td>
<td></td>
</tr>
<tr>
<td>1785</td>
<td>DEVELOPEMENT OF ANCHORAGE SYSTEM FOR CFRP SHEET IN STRENGTHENING OF</td>
<td>Masahico MATSUI, Naoto FUJITA, Yoshio ARIDOME, Toshiyuki KANAKUJO</td>
</tr>
<tr>
<td></td>
<td>REINFORCED CONCRETE STRUCTURES</td>
<td></td>
</tr>
<tr>
<td>1786</td>
<td>INVESTIGATION ON STRESS-TRANSFER MECHANISM OF SRC INTERIOR BEAM-COLUMN</td>
<td>Osamu JOH, Atsunori KITANO, Yasuaki GOTO</td>
</tr>
<tr>
<td></td>
<td>JOINTS</td>
<td></td>
</tr>
</tbody>
</table>
INDEX BY TOPIC

06  STRUCTURAL ENGINEERING

1836  NEW DESIGN APPROACHES BASED ON ENERGY CONCEPTS AND RELATED SEISMIC HARDWARE
  Renzo MEDEOT

1838  LONG TERM TESTS FOR CREEP OF LAMINATED RUBBER BEARINGS
  Keiko MORITA, Mineo TAKAYAMA

1840  FULL-SCALE SHAKING TABLE TEST OF PASSIVE RESPONSE CONTROL IN EXISTING OLD BUILDINGS
  Kazuyuki FUJISAWA, Shinichi HIZUKA, Nobuo MASAKI, Shinji MASE, Satuya SODA, Takafumi MIYAMA

1845  ACTIVE CONTROL FOR THE SERVICEABILITY OF CONTROL-TOWERS
  Alberto PARDUCCI, Marco MEZZI

1852  A STUDY OF SIMPLIFIED ANALYSIS METHOD OF THE HORIZONTAL SEISMIC ACTION ON STRUCTURES CONSIDERING SDDI EFFECTS
  Hui LI, Liping LIU

1861  GENETIC ALGORITHM-BASED MULTI-OBJECTIVE STRUCTURAL CONTROL WITH ACCELERATION FEEDBACK
  Jamshid Ghaboussi, Yoon-Jun Kim

1864  RESPONSE OF A PILE SUPPORTED LNG STORAGE TANK DURING STRONG EARTHQUAKE
  Yasunari Yanou, Yozo Goto, Takeyoshi Nisizaki, Daiichi Okai, Takashi Matsuda

1865  EXPERIMENTAL STUDY ON REINFORCED CONCRETE COLUMNS HAVING WING WALLS RETROFITTED WITH CONTINUOUS FIBER SHEETS
  Masato ISO, Yasuhiro MATSUZUKI, Yasuhisa SONOBE, Hirono YAKURU, Masayoshi WATANABE

1866  A METHOD FOR PUSHOVER ANALYSIS IN SEISMIC ASSESSMENT OF MASONRY BUILDINGS
  Guido MAGENES

1869  PREDICTING POST-PEAK BEHAVIOUR OF HIGH BRIDGE PIER WITH HOLLOW SECTION USING A NEW MODEL FOR SPALLING OF COVER CONCRETE AND BUCKLING OF REINFORCEMENT
  Junji MASUKAWA, Kuniko SUDA, Koichi MAEKAWA

1870  PREDICTION OF DAMAGE TO WOODEN HOUSES
  Masaru KITAURA, Masakatsu MIYAJIMA, Akira MURATA

1872  DYNAMIC RESPONSE OF NONSTRUCTURAL SYSTEMS MOUNTED ON FLOORS OF BUILDINGS
  Takeyuki SHIMAIZU, Hideo ARAKI, Rusky MARISANDO

1875  AN EXPERIMENTAL STUDY ON APPLICATION OF HYBRID-TYPE BASE ISOLATION SYSTEM TO HIGH-RISE BUILDINGS
  Ichiro NAGASHIMA, Ryota MASEKI, Masayoshi HISANO

1876  SEISMIC BEHAVIOR OF A REINFORCED CONCRETE BUILDING DUE TO LARGE VERTICAL GROUND MOTIONS IN NEAR-SOURCE REGIONS
  Kazuo DAN, Kazuhiko YASHIRO, Masaru KIKUCHI

1880  SHAKING TABLE TEST OF R. C. BRACED FRAME
  Han Liting, Xiao Jianzhuang, Li Jie

1884  SEISMIC VULNERABILITY OF SCHOOL BUILDINGS IN TOLUCA CITY
  Sandra MIRANDA, Raul VERA

1888  SEISMIC BEHAVIOR OF SHIELD TUNNEL ACROSS ACTIVE FAULT
  Naoto OHBO, Takashi FURUYA, Ken TAKAMATI, Shanzw KOMAKI

1891  STUDY ON EARTHQUAKE RESPONSE CAHARACTERISTICS OF BASE-ISOLATED BUILDING USING THE FRICTION DAMPERS WITH CONED DISC SPRINGS
  Sawa HITOSHI, Nakamura TAKASHI, Inaba SATOKU, Nobata ANRIKI, Suzuki TETSUO

1893  EARTHQUAKE RECORDS OBSERVED IN TALL BUILDINGS WITH TUNED PENDULUM MASS DAMPER
  Tadashi NAGASE

1896  VERIFICATION TEST AND EARTHQUAKE RESPONSE OBSERVATION OF A BASE ISOLATED BUILDING WITH ECCENTRIC ROLLER BEARINGS
  Akihiko NAKE, Susumu OTSUZUKA, Nobuyasu WAKAI, Isao AKI, Toru NAGAOKA, Ikuo SHIMODA, Yumi KAWAGUCHI

1897  HYBRID STRUCTURAL CONTROL COMBINING ACTIVE MASS DRIVER AND HYSTERETIC DAMPER SYSTEMS
  Yoshihiro NITTA, Akira NISHITANI

1903  EVALUATION OF REINFORCED CONCRETE BRIDGE JOINTS
  Khalid MOSALAM, Jack MOEHL, Clay NAITO

1904  FORCED VIBRATION SYSTEM IDENTIFICATION OF A SINGLE-SPAN BRIDGE UNDER VARIOUS DAMAGE STATES
  Ikhsan Muhammad, Marvin Halling, Kevin Womack, Bryant Nelson

1909  STRUCTURAL CONTROL BASED ON SEMI-ACTIVE VARIABLE FRICTION DAMPERS
  Yoji ISHIBASHI, Yoshihiro NITTA, Akira NISHITANI

1910  IMPROVING DUCTILITY AND ENERGY DISSIPATION CAPACITY OF INFILLS BY MEANS OF POLYMERIC NETS
  Antonella COLOMBO, Paolo NEGRO, Guido VERZELETTI
<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1911</td>
<td>BI-DIRECTIONAL BEHAVIOR OF INTERIOR-, EXTERIOR-, AND CORNER-JOINTS OF RCS SYSTEM</td>
<td>Isao NISHIYAMA, Hiroshi KURAMOTO, Kunio SUGIHIRO, Hidetiko ITADANI</td>
</tr>
<tr>
<td>1913</td>
<td>SIMPLIFIED APPROACH TO THE NON-LINEAR BEHAVIOR OF RC MEMBERS</td>
<td>Hidetaka UMEHARA, Shahid NASIR, Supratic GUPTA</td>
</tr>
<tr>
<td>1916</td>
<td>INDICES OF EFFECTS OF TORSIONAL COUPLING ON EARTHQUAKE RESPONSE OF STRUCTURES</td>
<td>Masaya MURAKAMI, Koichi OHAMAI</td>
</tr>
<tr>
<td>1921</td>
<td>FEM ANALYSIS OF HYBRID STRUCTURAL FRAMES WITH RC COLUMNS AND STEEL BEAMS</td>
<td>Kazuhira UCSUDA, Hiroshi NOGUCHI</td>
</tr>
<tr>
<td>1923</td>
<td>FLEXURAL BEHAVIOR OF CONCRETE FILLED SQUARE STEEL TUBULAR BEAM-COLUMNS</td>
<td>Hiroyuki NAKAHARA, Kenji Sakino</td>
</tr>
<tr>
<td>1926</td>
<td>SEISMIC DESIGN OF ARCH BRIDGES DURING STRONG EARTHQUAKE</td>
<td>Kazuya ODA, Kiyofumi NAKAZAWA, Tatsuo IRIE, Allan SUMAYA</td>
</tr>
<tr>
<td>1928</td>
<td>TRANSVERSE REINFORCEMENT AND DUCTILITY OF REINFORCED CONCRETE HIGH PIER WITH HOLLOW SECTION</td>
<td>Kamiko SUDA, Junji MASUKAWA, Tatsuo Ogata</td>
</tr>
<tr>
<td>1935</td>
<td>STUDIES ON THE SEISMIC BEHAVIOUR OF THE LEANING TOWER OF PISA</td>
<td>A PAVSE</td>
</tr>
<tr>
<td>1937</td>
<td>EXPERIMENTAL STUDIES ON THE CYCLIC RESPONSE OF FULL-SCALE STEEL BEAM-COLUMN CONNECTIONS</td>
<td>Egor POPOV, Marcial BLONDET, Lev STEPANOV</td>
</tr>
<tr>
<td>1940</td>
<td>A STUDY ON IMPROVEMENT OF PUSHOVER ANALYSIS</td>
<td>Pu YANG, Yayong Wang</td>
</tr>
<tr>
<td>1945</td>
<td>DISPLACEMENT AMPLIFICATION FACTORS FOR DEGRADING SYSTEMS SUBJECTED TO NEAR-FAULT GROUND MOTIONS</td>
<td>José Pincheira, Jong-Keol Song</td>
</tr>
<tr>
<td>1951</td>
<td>DUCTILITY AND ENERGY DISSIPATION DEMANDS OF ASYMMETRIC BUILDINGS</td>
<td>Pier Paolo ROSSI</td>
</tr>
<tr>
<td>1953</td>
<td>OPTIMAL SEISMIC DESIGN OF FRICTION DAMPED BRACED FRAMES BASED ON EXISTING EARTHQUAKE RECORDS</td>
<td>Robert LEVY, Avigdor RUTENBERG, Eduard MARIANCHIK, Fred SEGAL</td>
</tr>
<tr>
<td>1957</td>
<td>RELATIVE DISPLACEMENT RESPONSE SPECTRA WITH POUNDING EFFECT</td>
<td>Kazuhiko KAWASHIMA, Anat RUANGRASSAMEE</td>
</tr>
<tr>
<td>1958</td>
<td>BENDING INDUCED VERTICAL OSCILLATIONS DURING SEISMIC RESPONSE OF RC BRIDGE PIERS</td>
<td>Paolo PINTO, Marco PETRANGELI, Giulio RANZO</td>
</tr>
<tr>
<td>1965</td>
<td>EXPERIMENTAL STUDY OF AN ADAPTIVE BASE ISOLATION SYSTEM FOR BUILDINGS</td>
<td>Glenn Madden, Michael Symans, Nat Wongprasert</td>
</tr>
<tr>
<td>1972</td>
<td>RELIABILITY OF NONLINEAR STATIC METHODS FOR THE SEISMIC PERFORMANCE PREDICTION OF STEEL FRAME BUILDINGS</td>
<td>Matthew J. SKOKAN, Gary C. HART</td>
</tr>
<tr>
<td>1975</td>
<td>IN SITU TESTS FOR THE ASSESSMENT OF SEISMIC RESISTANCE OF OLD STONE-MASONRY HOUSES</td>
<td>Marjana Lutman, Miha Toma evic, Izjak Klemenc</td>
</tr>
<tr>
<td>1979</td>
<td>DESIGN-ORIENTED APPROACH FOR SEISMIC NONLINEAR ANALYSIS OF NONSTRUCTURAL COMPONENTS</td>
<td>Roberto Villaverde</td>
</tr>
<tr>
<td>1982</td>
<td>COMPARATIVE STUDY OF THE SEISMIC PERFORMANCE OF FRAMES USING DIFFERENT DISSIPATIVE BRACES</td>
<td>Alfonso VULCANO, Fabio MAZZA</td>
</tr>
<tr>
<td>1990</td>
<td>SEISMIC RESPONSE OF REINFORCED MASONRY STRUCTURES</td>
<td>Giovanna ZANARDO, Claudio MODENA, Daniele ZONTA</td>
</tr>
<tr>
<td>1991</td>
<td>NONLINEAR BEHAVIOR OF STEEL FRAMES AND SPECTRUM REDUCTION FACTOR</td>
<td>Carlos AGUIRRE</td>
</tr>
<tr>
<td>1994</td>
<td>AN APPLICATION OF AN ELASTOPLASTIC DAMPER UTILIZING CONTINUOUS PLASTIC BENDING OF METAL RODS TO AN APPARATUS IN A BUILDING</td>
<td>Tosiharu ARAKAWA, Hirokazu SHIMODA, Ken-ichiro OHMATA</td>
</tr>
<tr>
<td>1999</td>
<td>EXPERIMENTAL STUDY OF THE PARAMETRIC AND NON-PARAMETRIC SYSTEM IDENTIFICATION USING NEURAL NETWORKS</td>
<td>Stephen SHNEIDER, Jamshid Ghaboussi, Khaldoon BANI-HANI</td>
</tr>
<tr>
<td>2001</td>
<td>INELASTIC BEHAVIOUR OF THREE-DIMENSIONAL STRUCTURES UNDER CONCURRENT SEISMIC EXCITATIONS</td>
<td>Baher ZAGHLool, Athol CARR, Peter MOSS</td>
</tr>
<tr>
<td>2008</td>
<td>FRICTION-DAMPERS FOR SEISMIC CONTROL OF LA GARDENIA TOWERS SOUTH CITY, GURGAON, INDIA</td>
<td>C Tripathi, S Nandi, Avtar Pall, Motti Masand, Ramesh Chandra, Rashmi Pall</td>
</tr>
</tbody>
</table>
## INDEX BY TOPIC

### 06 STRUCTURAL ENGINEERING

<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>STRUCTURAL DAMAGE DETECTION AND PHYSICAL STATE OF FRAME BUILDINGS</td>
<td>Jesús Sosa, Roberto Gómez, J Alberto Escobar</td>
</tr>
<tr>
<td>2014</td>
<td>FRICTION-DAMPERS FOR SEISMIC UPGRADE OF QUEBEC POLICE HEADQUARTERS, MONTREAL</td>
<td>Rashmi ‘Tina’ Pall, Serge Delisle, Avtar Pall, Gilles Gauthier</td>
</tr>
<tr>
<td>2023</td>
<td>DEVELOPMENT OF HIGH FLOW, HIGH PERFORMANCE HYDRAULIC SERVO VALVES AND CONTROL METHODOLOGIES IN SUPPORT OF FUTURE SUPER LARGE SCALE SHAKING TABLE FACILITIES</td>
<td>Omar ROOD, Han-Sheng CHEN, Rodney LARSON, Richard NOWAK</td>
</tr>
<tr>
<td>2028</td>
<td>SEISMIC REHABILITATION OF BUILDINGS-RESEARCH ACCOMPLISHMENTS/RESEARCH NEEDS</td>
<td>James Jirsa, Loring Wylie, Jr.</td>
</tr>
<tr>
<td>2032</td>
<td>SEISMIC STRENGTHENING AND REPAIR OF REINFORCED CONCRETE SHEAR WALLS</td>
<td>M CHEUNG, Simon FOO, Jag HUMAR, David LAU, Josh LOMBAR</td>
</tr>
<tr>
<td>2035</td>
<td>UTILIZING MODERN DIGITAL SIGNAL PROCESSING FOR IMPROVEMENT OF LARGE SCALE SHAKING TABLE PERFORMANCE</td>
<td>Rodney L. LARSON, Bradford K. THOEN, David A. KUSNER, Richard F. NOWAK</td>
</tr>
<tr>
<td>2047</td>
<td>CHARACTERIZATION OF SEISMIC ISOLATION BEARINGS FOR BRIDGES FROM BI-DIRECTIONAL TESTING</td>
<td>Stephen MAHIN, Andrew WHITTAKER, Gregory FENVES, Wei-Hsi HUANG</td>
</tr>
<tr>
<td>2052</td>
<td>INFLUENCE OF MODELING PARAMETERS ON STEEL FRAME BUILDING RESPONSE</td>
<td>Gary C. HART, Matthew J. SKOKAN, Sampson C. HUANG</td>
</tr>
<tr>
<td>2060</td>
<td>EVALUATING CURRENT PROCEDURES AND MODELING FOR SEISMIC PERFORMANCE OF REINFORCED CONCRETE BUILDINGS</td>
<td>Satwant Rihal, David Weggel, Abraham Lynn, Vicki May, Rakesh Goel</td>
</tr>
<tr>
<td>2065</td>
<td>PERFORMANCE-BASED SEISMIC DESIGN OF REINFORCED CONCRETE BRIDGE COLUMNS</td>
<td>Jack MOEHLE, Dawn LEHMAN</td>
</tr>
<tr>
<td>2077</td>
<td>SIMULATION OF THE NON-LINEAR SEISMIC RESPONSE OF AN ARCH DAM</td>
<td>Barry Davidson, Daren Bell</td>
</tr>
<tr>
<td>2080</td>
<td>A NEW ELASTIC-PLASTIC DISSIPATION DEVICE FOR SEISMIC PROTECTION OF THE BRIDGE PILE STRUCTURES: EXPERIMENTAL INVESTIGATION</td>
<td>Antonio BADALA, Sebastiano COSTA, Laura ANANIA</td>
</tr>
<tr>
<td>2082</td>
<td>SHAKING TABLE TESTS ON A LIQUEFIED NATURAL GAS STORAGE TANK MOCK-UP SEISMICALLY PROTECTED WITH ELASTOMERIC ISOLATORS AND STEEL HYSTERETIC TORSIONAL DAMPERS</td>
<td>Alessandro MARTELLI, Alberto DUSI, Laurent DUCOUP, M.Gabriella CASTELLANO, Samuele INFANTI, Claude DUMOULIN</td>
</tr>
<tr>
<td>2083</td>
<td>SEISMIC SCREENING OF BRIDGES IN NEW ZEALAND</td>
<td>Howard CHAPMAN, Graeme OAKDEN, Merv LAUDER</td>
</tr>
<tr>
<td>2084</td>
<td>ASSESSMENT OF EXPERIMENTAL SEISMIC RESPONSE THROUGH DAMAGE EVALUATION</td>
<td>Ema Coelho, Alfredo Campos-Costa, Eduardo C. Carvalho</td>
</tr>
<tr>
<td>2092</td>
<td>UNCERTAINTIES IN THE ESTIMATION OF NATURAL FREQUENCIES OF BUILDINGS IN MEXICO CITY</td>
<td>David Muriá-Vila, Luis Fuentes Olivares, Ricardo Gonzalez, Alcorta</td>
</tr>
<tr>
<td>2100</td>
<td>INTERACTION OF NONLINEAR RESPONSE BETWEEN PIER AND ISOLATOR IN SEISMICALLY ISOLATED BRIDGES</td>
<td>TSAWADA, Y NARIYUKI, K HIRAOR, K KONDO</td>
</tr>
<tr>
<td>2105</td>
<td>PROTECTION OF NUCLEAR INSTALLATIONS IN THE CZECH REPUBLIC AGAINST EARTHQUAKES</td>
<td>Dana PROCHAZCOVA</td>
</tr>
<tr>
<td>2109</td>
<td>EVALUATION OF A SIMPLIFIED METHOD FOR THE DETERMINATION OF THE NON LINEAR SEISMIC RESPONSE OF RC FRAMES</td>
<td>Misael Requena, A. Gustavo Ayala</td>
</tr>
<tr>
<td>2114</td>
<td>EARTHQUAKE RESISTANCE BEHAVIOR OF CFT COLUMNS</td>
<td>Toshiyuki FUKUMOTO, Yoshinari TANAKA, Takashi NOGUCHI, Kenzo YOSHIOKA, Akiyoshi MUKAI, Hiroyoshi TOKINOYA, Yoshiyuki MURATA</td>
</tr>
<tr>
<td>2115</td>
<td>DESIGN VERIFICATION OF AN EXISTING 8-STOREY IRREGULAR STEEL BUILDING BY 3-D DYNAMIC AND PUSHOVER ANALYSES</td>
<td>Mahmoud HOSEINI, Fariborz YAGHOOBI VAYEGHAN</td>
</tr>
<tr>
<td>2123</td>
<td>SEISMIC CONCEPTUAL DESIGN OF LONG-SPAN CABLE-STAYED BRIDGE</td>
<td>Shide HU, Aijun YE</td>
</tr>
<tr>
<td>2129</td>
<td>SHAKING TABLE TESTING OF CIVIL ENGINEERING STRUCTURES - THE LNEC 3D SIMULATOR EXPERIENCE</td>
<td>Rogerio BAIRRAO, Carlos VAZ</td>
</tr>
</tbody>
</table>
06 STRUCTURAL ENGINEERING

2131 SEISMIC PERFORMANCE OF PRE-CODE REINFORCED CONCRETE BUILDINGS
   Silvia BRUNO, Luis DECANNINI, Fabrizio MOLLAOLI

2135 DEVELOPMENT OF LOW-FRICTION FACTOR SLIDING ISOLATION DEVICE
   Hiroki HAMAGUCHI, Masahiko HIGASHINO

2137 SEISMIC ENERGY DISSIPATION SYSTEM OF 12-STOREY COUPLED SHEAR WALLS
   Yoshiyuki MATSUSHIMA, Ken-ichi SUGAYA, Masaoomi TESHIGAWARA, Makoto KATO

2139 CYCLIC RESPONSES GENERATING A CRITICAL DAMAGE OF REINFORCED CONCRETE STRUCTURE DURING AN INTENSE EARTHQUAKE GROUND MOTION
   Tetsuo KUBO

2143 SEISMIC PERFORMANCE EVALUATION METHOD FOR A BUILDING WITH CENTER CORE REINFORCED CONCRETE WALLS AND EXTERIOR STEEL FLAME
   Masaoomi TESHIGAWARA, Makoto KATO, Yoshiyuki MATSUSHIMA, Kenichi SUGAYA

2147 INCORPORATION OF HYSTERETIC DEVICES ON BRACING SYSTEMS OF LOW INVASIVITY: A NEW APPROACH FOR THE SEISMIC REDESIGN OF FRAMED STRUCTURES
   Juan Enrique MARTINEZ-RUEDE

2149 AN INNOVATIVE DISTRIBUTED BASE-ISOLATION SYSTEM FOR MASONRY BUILDINGS: THE REINFORCED CUT-WALL
   Mauro SASSU, Christian RICCI

2152 EXPERIMENTAL STUDY ON CARRYING SHEAR FORCE RATIO OF 12-STOREY COUPLED SHEAR WALL
   Kenichi SUGAYA, Masaoomi TESHIGAWARA, Makoto KATO, Yoshiyuki MATSUSHIMA

2153 EXPERIMENTAL STUDY ON THE PERFORMANCE OF THE RC FRAME INFILLED CAST-IN-PLACE NON-STRUCTURAL RC WALLS RETROFITTED BY USING CARBON FIBER SHEETS
   Hiroshi FUKUYAMA, Katsushiko NAKANO, Tomoki SUGAYA, Masahiko UEMURA, Yasuhiro MATSUZAKI

2156 DEVELOPMENT OF CORE TECHNOLOGY FOR 3-D 1200 TONNE LARGE SHAKING TABLE
   Nobuyuki OGAWA, Takashi NAGASAKI, Eiji SATO, Kenjichi OHTANI, Izumi NAKAMURA

2165 A CORRELATION STUDY AMONG SEISMIC MONITORING, PSEUDO-DYNAMIC TEST, AND NUMERICAL SIMULATION OF INELASTIC RESPONSES OF STEEL BRACED FRAME MODEL
   Kenichi OHI, Yosuke SHIMAOKI, Hideko KONDO, Seung-Jae LEE

2167 AN EXPERIMENTAL STUDY ON SCALE EFFECTS IN SHEAR FAILURE OF REINFORCED CONCRETE COLUMNS
   Takeshi OHTAKI

2188 AN INNOVATIVE APPLICATION OF DAMPING DEVICES IN SEISMIC UPGRADE OF A WATER RESERVOIR
   Svetlana NIKOLIC-BRZEV, John SHERSTOBITOFF

2189 ANALYSIS OF THE SEISMIC RESPONSE OF A DAMAGED MASONRY BELL TOWER
   Giovanni BONGIOVANNI, Paolo CLEMENTE, Giacomo BUFFARINI

2191 APPLICATION OF HIGH-RISE PRECAST Prestressed concrete buildings in high-seismicity regions
   Satoru FUJAI

2196 BEAM-COLUMN JOINT BEHAVIOR AFTER BEAM YIELDING IN R/C DUCTILE FRAMES
   Osamu JOH, Yasuaki GOTO

2197 BEHAVIOR OF BEAM-TO-COLUMN CONNECTION OF CFT COLUMN SYSTEM
   Koji MORI, Osamu MORI, Makoto KAI, Toshiki FUJIMOTO, Isao NISHIHARA, Eiichi INAI

2204 CONSISTENT INSERTION OF BOND-SLIP INTO BEAM FIBER ELEMENTS FOR BIAXIAL BENDING
   Giorgio MONTI, Enrico SPACONE

2205 CONSTRUCTION AND QUALITY CONTROL GUIDELINE FOR PRESTRESSED CONCRETE BUILDINGS
   Kazuhiro WATANABE, Masato TANIDA, Hiroaki TOMOZUMI, Hiroshi TAKAYAMA, Shunsuke SUGANO, Takashi KAMINOSONO

2211 DEVELOPMENT OF A NONLINEAR MULTI-INPUT/MULTI-OUTPUT MODEL FOR THE VINCENT THOMAS BRIDGE UNDER EARTHQUAKE EXCITATIONS
   Andrew Smyth, Robert Ngboe, Sami Masri, Ahmed Abdel-Glaffar

2212 DEVELOPMENT OF BUILDING DAMAGE CHART FOR POST DISASTER MANAGEMENT
   Haruo HAYASHI, Shin HASHITERA, Satoshi TANAKA, Hengjian LU, Masayuki KOHINAMI, Norio MAKI, Kei HORIE

2216 DEVELOPMENT OF THE STRUCTURAL DESIGN AND CONSTRUCTION GUIDELINE FOR HIGH-RISE PC BUILDINGS - JAPANESE PC PROJECT
   Hisahiro Hiraishi, Fumio Watanabe, Shin Okamoto

2217 DEVELOPMENTS IN THE USA IN THE FIELD OF STRUCTURAL CONTROL AND MONITORING OF CIVIL INFRASTRUCTURE SYSTEMS
   George HOUSNER, Sami MASRI
<table>
<thead>
<tr>
<th>INDEX BY TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>06 STRUCTURAL ENGINEERING</strong></td>
</tr>
<tr>
<td>2223</td>
</tr>
<tr>
<td>Naoto OKAMOTO, Hiroto KATO, Kei TAKAMATSU, Yuuhiok Ichisawa</td>
</tr>
<tr>
<td>2227</td>
</tr>
<tr>
<td>Masanobu Shinozuka, Vinata Saxena, George Deodatis</td>
</tr>
<tr>
<td>2230</td>
</tr>
<tr>
<td>Shunsuke OTANI, Hitoshi SHIOHARA, Reza ALAGHERBANDIAN</td>
</tr>
<tr>
<td>2234</td>
</tr>
<tr>
<td>Ivan FELIX, Emilio SORDO</td>
</tr>
<tr>
<td>2240</td>
</tr>
<tr>
<td>Peter CLARK, Kazuhiko KASAI, Ian AIKEN, Isao KIMURA</td>
</tr>
<tr>
<td>2244</td>
</tr>
<tr>
<td>Nobuo FUKUWA, Shigebaru YAGI, Jun TOBITA</td>
</tr>
<tr>
<td>2245</td>
</tr>
<tr>
<td>Carlos Vaz, Rui Pinho, Amr ELNASHAIE</td>
</tr>
<tr>
<td>2246</td>
</tr>
<tr>
<td>Mizuo INUKAI, Takashi KAMINOSONO</td>
</tr>
<tr>
<td>2248</td>
</tr>
<tr>
<td>Hirokazu SAKATA, Hiromichi ITO, Toshio KUSUNOKI, Hiroshi ABE, Hisayuki OKADA</td>
</tr>
<tr>
<td>2250</td>
</tr>
<tr>
<td>Hiroshi IMAI, Primo Allan ALCANTARA</td>
</tr>
<tr>
<td>2251</td>
</tr>
<tr>
<td>Minehiro NISHIYAMA, Masato ADACHI</td>
</tr>
<tr>
<td>2256</td>
</tr>
<tr>
<td>Tohru YAMANAKA, Toshio KOBAYASHI, Yoshihumi YAMAMOTO, Fumio SASAKI</td>
</tr>
<tr>
<td>2257</td>
</tr>
<tr>
<td>Makoto TOCHIO, Shinji TAKEDA, Tomohiko KAMIMURA</td>
</tr>
<tr>
<td>2260</td>
</tr>
<tr>
<td>Cameron Black, Ian Aiken</td>
</tr>
<tr>
<td>2270</td>
</tr>
<tr>
<td>Felice PONZO, Mauro DOLCE, Donatello CARDONE, Claudio VALENTE</td>
</tr>
<tr>
<td>2270</td>
</tr>
<tr>
<td>Gary HART, Chukwuma EKWUEME</td>
</tr>
<tr>
<td>2280</td>
</tr>
<tr>
<td>Yozo GOTO, Takashi MATSUDA</td>
</tr>
<tr>
<td>2283</td>
</tr>
<tr>
<td>Hisatuka SATO, Katsuhiro YAMAGUCHI</td>
</tr>
<tr>
<td>2286</td>
</tr>
<tr>
<td>Emanuele Renczi, Vincenzo Ciampi, Maurizio De Angelis</td>
</tr>
<tr>
<td>2290</td>
</tr>
<tr>
<td>H MORITAKA, M HAYASHI, T TOMA, Y OHNO, M INUKAI, Jinhua FU</td>
</tr>
<tr>
<td>2293</td>
</tr>
<tr>
<td>Bruce Ellingwood, Nozari Kishi, Jianliu Song</td>
</tr>
<tr>
<td>2300</td>
</tr>
<tr>
<td>Yosuke SHIMAIZAWA, Hideo KONDO, Seung-Jae LEE, Kenichi OHI</td>
</tr>
</tbody>
</table>
INDEX BY TOPIC

06 STRUCTURAL ENGINEERING

2302 FRACTURE TOUGHNESS DEMANDS IN STANDARD AND REDUCED BEAM SECTION WELDED MOMENT CONNECTIONS
Gregory Deierlein, Wei-Ming Chi

2304 RATING SEISMIC BRACING ELEMENTS FOR TIMBER BUILDINGS
Bruce Deam

2306 REHABILITATION OF RC BUILDING JOINTS WITH FRP COMPOSITES
Lawrence Reaveley, Chandra Clyde, Chris Pantelides

2307 RESEARCH AND DEVELOPMENT OF SMART STRUCTURAL SYSTEMS
Masaomi TESHIGAWARA, Hisahiro HIRAISHI, Shunsuke OTANI, Mitumasa MIDORIKAWA

2308 RESPONSE ANALYSIS OF ADJACENT STRUCTURES AND COMPARISON WITH RECORDED DATA
Yoshitomo Sugimura, Farhad Behnamfar

2310 RETROFIT OF SUSPENSION BRIDGES SUBJECTED TO LONG PERIOD EARTHQUAKE MOTION
Kevin COLLINS, Thomas MURPHY

2313 ROCKING MOTION AND CRITERIA FOR OVERTURNING OF BODIES ON A FLOOR: COMPARISON BETWEEN ANALYSIS AND EXPERIMENT
Takeyoshi UEMATSU, Masahiro MIYAGI, Yaji ISHIYAMA

2318 DESIGN, ANALYSIS AND TESTING OF A VISCOELASTICALLY DAMPED STEEL FRAME
Christopher HIGGINS, Kazuhiro KASAI

2320 SEISMIC EVALUATION OF HIGH-RISE BUILDINGS BY MODIFIED DYNAMIC INELASTIC ANALYSIS METHOD
Wonkee HONG, Sangdae KIM, Youngku JU

2324 SEISMIC REHABILITATION OF EXISTING CONCRETE BUILDINGS IN JAPAN
Shunsuke SUGANO

2325 SEISMIC RESPONSE OF AN INSTRUMENTATED REINFORCED CONCRETE BUILDING FOUND ON PILES
Sanja Ivanovic

2326 SEISMIC RESPONSE OF STEEL BUILDING FRAME WITH WEAK BEAM-TO-STRONG COLUMN BY SUBSTRUCTURE PSEUDO DYNAMIC TESTING METHOD
Fumitoshi KUMAZAWA, Almila UZEL, Hiroto KATO, Toshihumi FUKUTA

2327 SEISMIC RETROFIT OF REINFORCED CONCRETE BUILDINGS - A REVIEW AND CASE STUDY
A Pinto, Mike Griffith

2329 SEISMIC VERIFICATION OF UPDATED FINITE ELEMENT MODELS OF CABLE-STAYED BRIDGES
Nick Lieven, Mariana Papathodorou, Colin Taylor

2333 SHEAR STRENGTH OF CONCRETE COLUMNS WITH STEEL JACKETS
José Juan GUERRERO CORREA, Bernardo GOMEZ GONZALEZ, Félix Alberto FLORES DIAZ, Oscar GONZALEZ CUEVAS

2340 STRUCTURAL DESIGN CONCEPT FOR HIGH-RISE PC BUILDINGS- JAPANESE PC PROJECT -
Shigemi MACHIDA, Masaomi TESHIGAWARA

2341 STRUCTURAL PERFORMANCE OF MIXED MEMBER COMPOSED OF STEEL REINFORCED CONCRETE AND REINFORCED CONCRETE
Koichi MINAMI, Yasuhito MATSUZAKI, Hiroshi NISHIHARA, Hideyuki SUZUKI

2342 STRUCTURAL PERFORMANCES OF PRESTRESSED CONCRETE INTERIOR BEAM-COLUMN JOINTS
Takashi KASHIWAZAKI, Hiroshi NOGUCHI

2343 STUDY FOR SEISMIC CRITERIA BY EQUIVALENT LINEARIZATION
H KATO, H FUKUYAMA, M TESHIGAWARA, Jinhua FU, M HAYASHI, Y ICHISAWA

2344 STUDY ON TORSIONAL MOTION OF STRUCTURE
Masashi HAYASHI, Nobuyuki OOHASHI, Shigeru TAGO, Tsutomu OOTA

2348 THE JAPAN PRESSS PRECAST CONCRETE CONNECTION DESIGN
Fumio WATANABE, Hitoshi SHIOHARA

2365 EFFECT OF PHASE DIFFERENCES ON THE DYNAMIC BEHAVIOR OF LARGE-SCALE APARTMENT HOUSES
Kazuhito WATANABE, Tooru NAGAOKA, Masayuki OHNAMI, Masahiro AKIMOTO, Yoshikazu KITAGAWA

2370 ANALYSES OF SEISMIC BEHAVIOUR OF STRUCTURAL WALLS WITH VARIOUS REINFORCEMENTS AND BOUNDARY CONDITIONS
CÉCILE CREMER, PANAGIOTIS KOTRONIS, JACKY MAZARS

2376 SEISMIC DESIGN LOADS FOR STORAGE TANKS
David Whittaker, Robert Jury

2386 PASSIVE SEISMIC DEVICES BASED ON SHAPE MEMORY ALLOYS
Mauro DOLCE, Roberto MARNETTO
INDEX BY TOPIC

06 STRUCTURAL ENGINEERING

2387 EXPERIMENTAL TESTS ON SEISMIC DEVICES BASED ON SHAPE MEMORY ALLOYS
Domenico NIGRO, Mauro DOLCE, Donatello CARDONE

2389 SEISMIC RESPONSE OF TYPICAL MASONRY BUILDINGS IN THE COMMUNE OF CATANIA
Domenico LIBERATORE, Giuseppe SPERA, Domenico PALERMO

2396 EXPERIMENTAL ANALYSIS AND ANALYTICAL MODELLING OF AN INNOVATIVE ELASTIC-PLASTIC DISSIPATION DEVICE FOR SEISMIC PROTECTION OF THE STRUCTURES
Laura ANANIA

2399 BASE ISOLATION FOR SEISMIC PROTECTION OF STATUES
Fabrizio Vestrioni, Simone Di Cintio

2400 ANALYSIS PROCEDURES FOR PERFORMANCED BASED DESIGN
Trevor Kelly, Jonathan Chambers

2402 INFLUENCE OF DIFFERENT HYSTERETIC BEHAVIOURS ON SEISMIC RESPONSE OF SDOF SYSTEMS
Gaetano DELLA CORTE, Raffaele LANDOLFO, Gianfranco DE MATTEIS

2406 SEISMIC PERFORMANCE OF DIAPHRAGMS IN SLAB-ON-GIRDER STEEL BRIDGES
Michel Bruneau, Seyed Zahrai

2408 EFFECT OF VARIOUS ENERGY DISSIPATION MECHANISMS IN SUPPRESSING STRUCTURAL RESPONSE
Nicos MAKRIS, Shih-Po CHANG

2413 SEISMIC DESIGN AND BEHAVIOUR OF CHEVRON STEEL BRACED FRAMES
Robert TREMBLAY, Nathalie ROBERT

2420 SMART STRUCTURAL SYSTEMS FOR EXPOSED TO EXTERNAL DISTURBANCES: CONCEPT AND TECHNOLOGY
Yoshikazu KITAGAWA, Masaki TAKESHITA, Hiroyuki TAMAI

2421 IMPROVEMENT OF SEISMIC PERFORMANCE OF REINFORCED CONCRETE SCHOOL BUILDINGS IN JAPAN: PART 1
Damage Survey and Performance Evaluation After 1995 Hyogo-Ken Nambu Earthquake
Toshimi KABEYASAWA, Yoshiaki NAKANO, Masaki MAEDA, Takayuki NAKAMURA, Tsuneo OKADA

2438 EVALUATION AND RETROFITTING OF BUILDINGS DAMAGED DUE TO JABALPUR (INDIA) EARTHQUAKE OF MAY 22ND 1997
S JAWADE, M GAULKAR, P PAJGADE, S KULKARNI

2446 DYNAMIC RESPONSE OF REINFORCED CONCRETE COLUMNS TO MULTIDIRECTIONAL EXCITATIONS
Mahmoud HACHEM, Stephen MAHIN

2452 MECHANICAL PROPERTIES OF LAMINATED RUBBER BEARINGS FOR THREE-DIMENSIONAL SEISMIC ISOLATION
Shuichi YABANA, Akihito MATSUDA

2455 SEISMIC POWER FOR EARTHQUAKE DESIGN
G Rodolfo Saragoni, Héctor Díaz

2470 APPLICATION OF ULTRA-LIGHT WEIGHT FIBER REINFORCED CONCRETE FOR THE INCREASED EARTHQUAKE RESISTING WALLS
Yoshinori KITAGAWA, Tokunao OH-OKA

2475 RESPONSE EVALUATION AND MODIFICATION OF TYPICAL BRIDGES IN THE CENTRAL AND SOUTHEASTERN UNITED STATES
Laura Jansen, Roberto Leon, Eunsoo Choi, Reginald DesRoches, Shirley Dyke, Tam Lam

2522 IMPLEMENTATION OF SEISMIC REHABILITATION OF BUILDINGS
Takashi KAMINOSONO

2523 SEISMIC ISOLATION RETROFIT IN JAPAN
Keiji OGURA, Soichi KAWAMURA, Ryosuke SUGISAKI, Sumio MAEZAWA, Akihiko YAJIMA, Shoji TANAKA

2524 SEISMIC RETROFIT USING CONTINUOUS FIBER SHEETS
Hiroshi FUKUYAMA, Shigeru FUJII, Katsuhiko NAKANO, Yasuhiko MATSUZAKI

2525 STEEL JACKETING FOR IMPROVEMENT OF COLUMN STRENGTH AND DUCTILITY
Kenji SAKINO, Yuping SUN

2541 OVERVIEW OF A PROGRAM FOR REDUCTION OF EARTHQUAKE HAZARDS IN STEEL FRAME STRUCTURES
James Malley, Ronald Hamburger, Michael Mahoney, Stephen MAHIN

2543 PERFORMANCE BASIS OF GUIDELINES FOR EVALUATION, UPGRADE AND DESIGN OF MOMENT-RESISTING STEEL FRAMES
C Cornell, Ronald Hamburger, Douglas Fouach

2544 MATERIALS AND FRACTURE INVESTIGATIONS IN THE FEMA/SAC PHASE 2 STEEL PROJECT
James Malley, Karl Frank

2545 SYSTEM PERFORMANCE OF STEEL MOMENT RESISTING FRAME STRUCTURES
Helmut KRAWINKLER
INDEX BY TOPIC

06 STRUCTURAL ENGINEERING

2546 PERFORMANCE OF MOMENT-RESISTING CONNECTIONS
Charles ROEDER

2550 AN EVALUATION OF THE AASHTO UNIFORM LOAD METHOD FOR ESTIMATING FORCES AND DEFORMATIONS IN SEISMICALLY ISOLATED BRIDGE SYSTEMS
Gregory FENVES, Eric ANDERSON, Stephen MAHIN, Andrew WHITTAKER

2560 SEISMIC LOAD EFFECT DIRECTLY LINKED TO SPECIFIED COLLAPSE MECHANISMS IN ULTIMATE LIMIT STATE DESIGN
Tsuyoshi TAKADA, Takashi NAKANO

2561 DUAL SEMI-ACTIVE FRICTION DAMPERS TO REDUCE BUILDING RESPONSE TO SEISMIC INPUTS
Tudor SIRETEANU, Charles STAMMERS

2562 INNOVATIVE RETROFIT TECHNIQUES FOR SEISMIC RETROFIT OF CONCRETE ARCH BRIDGES OF EARLIER VINTAGE
Raj Valluvan, John Stephenson, Don Bergman, Peter Backlund, Dave Pajouhesh

2563 EXPERIMENTAL STUDY ON SHEAR STRENGTH OF THE PHC PILE WITH LARGE DIAMETER
Masahiro HIRII, Shizuo HAYASHI, Fumio KUWABARA, Shinji KISHIDA

2564 ON THE DETERMINATION OF STRENGTH OF ANCIENT MASONRY WALLS VIA EXPERIMENTAL TESTS
Andrea VIGNOLI, Luciano GALANO, Sandro CHIOSTRINI

2566 REPAIRING OF TUBULAR JOINTS DAMAGED UNDER CYCLIC LOADINGS: INNOVATIVE TECHNIQUE
A Madhava Rao, T Thandavamoorthy, A Santhakumar

2567 EXPERIMENTAL BEHAVIOUR OF LOW-RISE STEEL BUILDINGS WITH FLEXIBLE ROOF DIAPHRAGMS
André FILATRAULT, Robert TREMBLAY, Tarek BERAIR

2568 DESIGN ASPECTS AFFECTING THE SEISMIC BEHAVIOUR OF STEEL MRF BUILDINGS: ANALYSIS OF THREE CASE STUDIES
E MELE, A DE LUCA, L DI SARNO

2569 THE RETROFIT OF HISTORIC BUILDINGS THROUGH SEISMIC ISOLATION: RESULTS OF PSEUDO-DYNAMIC TESTS ON A FULL SCALE SPECIMENT
E Mele, A Pinto, Guido Verzeletti, A De Luca, J Molina

2570 EXPERIMENTAL BEHAVIOR OF STEEL BEAM-TO-COLUMN JOINTS: FULLY WELDED VS BOLTED CONNECTIONS
Luis CALADO, Elena MELE

2573 DESIGN ASPECTS AFFECTING THE SEISMIC BEHAVIOUR OF STEEL MRF BUILDINGS: ANALYSIS OF THREE CASE STUDIES
(Ted) Blaikie, (Robert) Davey

2574 SEISMIC BEHAVIOUR OF FACE LOADED UNREINFORCED MASONRY WALLS
(Robert) Davey, (Ted) Blaikie

2576 STRESS ANALYSIS OF PRESTRESSED CONCRETE LIQUID STORAGE TANKS SUBJECTED TO STRONG GROUND MOTION
Ayaho MIYAMOTO, Hideaki NAKAMURA, Samio HAMADA, Shingo MORIKAWA

2577 EARTHQUAKE-RESISTANT REINFORCED CONCRETE STRUCTURES
Mechyslav Chekanovych

2578 THE PERFORMANCE OF MECHANICAL SPLICES
Steven McCabe

2580 NO-TENSION THEORY FOR SEISMIC ANALYSIS OF MASONRY STRUCTURES
A BARATTA, A BINETTI, G VOIELLO

2585 PROVING TEST OF ANALYSIS METHOD ON NONLINEAR RESPONSE OF CYLINDRICAL STORAGE TANK UNDER SEVERE EARTHQUAKES
Hiroshi AKIYAMA, Nobuyuki KOBAYASHI, Kazuo ISHIDA, Tomoki SAKurai, Motoaki TANAKA, Hideyuki TAZUKE, Toshio CHIBA

2586 TEST OF NOZZLES AT WALL OF CYLINDRICAL TANK FOR SEVERE LOADS UNDER EARTHQUAKE
Mitsuru AIBA, Toshio CHIBA, Hiroshi AKIYAMA, Kaoru GRASHI

2588 PROVING TESTS OF ENER Y ABSORBING SEISMIC TIES FOR ASEISMIC DESIGN OF BOILER PLANT STRUCTURES
T CHIBA, S FUJITA, K SUZUKI, N MARUYAMA, K KAWAMURA, K AIDA

2618 RESEARCH ON CTF COLUMN SYSTEMS
Charles ROEDER, Shosuke MORINO

2619 HYBRID WALL SYSTEMS: US-JAPAN RESEARCH
John Wallace, Akira Wada

2620 EXPERIMENTAL STUDY ON THE PERFORMANCE OF THE RC RESEARCH ON NEW MATERIALS, ELEMENTS AND SYSTEMS
Hiroyuki YAMANOUCHI, Hiroshi FUKUYAMA, Atsuo TANAKA, Subhash GOEL
INDEX BY TOPIC

06 STRUCTURAL ENGINEERING

2621 RESEARCH ON RC/SRC COLUMN SYSTEMS
Hiroshi Noguchi, Gregory Deierlein

2623 RECENT ACTIVITIES IN RESEARCH AND APPLICATION OF STRUCTURAL CONTROL AND MONITORING SYSTEMS IN KOREA
Sang Pil CHANG, Hyeon Moo KOH, Chul-Young KIM, Wonsuk PARK

2624 LNEC EXPERIENCES AND STRATEGIES IN EARTHQUAKE SIMULATION: RECENT DEVELOPMENTS
Rogerio Bairrao, Joaquim Duque

2626 A COMPARATIVE STUDY OF THE ADAPTIVE MCS CONTROL ALGORITHM ON EUROPEAN SHAKING-TABLES
Eduardo Gomez, David Stoten

2657 DESIGN METHOD OF CONTROLLING THE MAXIMUM RESPONSE DISPLACEMENTS OF THE BUILDING
Kazushige YAMAMURA, Cheng WU, Takao NISHIKAWA

2660 VULNERABILITY INVESTIGATION OF ROMAN COLISEUM USING MICROTREMOR
E GURLER, Jun SAITA, Antonio ROVELLI, Stefano DONATI, Yukata NAKAMURA

2663 ASSESSMENT OF THE CYCLIC INTERACTION IN STEEL FRAMES WITH COMPOSITE RC INFILL WALLS
C Shield, A Schultz, J Hajjar, W Saari, X Tong

2674 SHAPE EFFECT ON SEISMIC ENERGY ABSORPTION CAPACITY OF HYSTERETIC DAMPER FOR K-BRACED FRAME
Hiroyuki TAMAI, Kazuo KONDOH, Yoshikazu KITAGAWA, Masami HANAI

2675 A STUDY OF THE STRENGTH AND DEFORMATION OF PRECAST SHEAR WALL
Yoji HSOKAWA, Yasahiro MATSUIZAKI, Shinji KATO, Koji AOTA

2706 EXPERIMENTAL INVESTIGATION ON SEISMIC BEHAVIOUR OF KNEE JOINTS IN REINFORCED CONCRETE FRAMES
Jianping FU, Chuan ZHANG, Shaoliang BAI

2707 EFFECT OF AXIAL LOAD RATIO ON SEISMIC BEHAVIOUR OF INTERIOR BEAM-COLUMN JOINTS
Jianping FU, Tao CHEN, Zheng WANG, Shao Liang BAI

2718 EFFECTS OF DISTANT AND LARGE MAGNITUDE EARTHQUAKES ON THE TALLEST BUILDINGS IN BUENOS AIRES CITY
Roberto PINCIROLI, Juan CARMONA, Cristian SISTERNA, Nora SABBIONE, Marcelo MAGRINI, Raquel PALAU, Luisa GARCIA

2720 MASONRY STRUCTURES CONFINED WITH CONCRETE BEAMS AND COLUMNS
Mao-zheng WANG, Du-hai LIU

2723 IMPLEMENTATION OF DISTRIBUTED ACTIVE CONTROL IN STRUCTURES LOCATED IN SEISMIC AREAS
Fideliu Paulet-Crainiceanu

2726 USE OF FRAGILITY MODELS AND DAMAGE RISK MATRICES IN STRUCTURAL DAMAGEABILITY EVALUATION
Adrian Vulpe, Alexandra Carausu, George Emanuel Vulpe

2727 STUDY OF THE CYCLIC INTERACTION IN STEEL FRAMES WITH COMPOSITE RC INFILL WALLS
C Shield, A Schultz, J Hajjar, W Saari, X Tong

2738 STRUCTURAL SEMI-ACTIVE CONTROL DEVICE
Ming-Hsiang SHIH

2799 ASSESSMENT OF CURRENT PREDICTION CAPACITIES OF THE RESPONSE OF EXISTING REINFORCED CONCRETE BUILDINGS
Martin RECLA, Gian Michele CALVI

2801 SEISMIC DESIGN CRITERIA FOR RETROFITTING OF BUILDINGS WITH HYSTERETIC ENERGY DISSIPATORS
Luis ESTEVA, Hiram BADILLO, Sonia RUIZ, Francisco SILVA

2802 RESPONSE PREDICTION OF PRESTRESSED CONCRETE BUILDINGS AGAINST EARTHQUAKE EXCITATIONS BY CAPACITY SPECTRUM METHOD
Munehiro NISHIYAMA

2803 INFERENCE OF LOAD-DEFORMATION CHARACTERISTICS FROM PROPOSED MACRO-MODEL FOR CANTILEVER PRECAST PC BEAMS ASSEMBLED BY PRESTRESSING TO COLUMNS WITH ROUND PC TENDON
Masayuki AWANO, Tadashi NAKATSUKA

2823 APPLICATION OF THE POWERFUL TMD AS A MEASURE FOR SEISMIC RETROFIT OF OLD BRIDGES
Takeyasu SUZUKI, Isao KANEKO, Toots KATSUKAWA

2840 STRUCTURAL CONTROL IMPLEMENTATIONS IN JAPAN
Akira NISHITANI

2841 FUTURE PERSPECTIVE OF STRUCTURAL CONTROL IN EARTHQUAKE ENGINEERING
Takaji KOBORI

2844 THE SIGNIFICANCE OF THE DIRECTION OF GROUND MOTION ON THE STRUCTURAL RESPONSE
Julio HERNÁNDEZ, Anil CHOPRA, Oscar LÓPEZ
INDEX BY TOPIC

06  STRUCTURAL ENGINEERING

2845 AN INNOVATIVE APPROACH FOR SEISMIC REPAIR AND UPGRADE OF REINFORCED CONCRETE MOMENT FRAME CONNECTIONS
Ayman Mosallam

2850 INVESTIGATION INTO THE SIGNIFICANCE OF STRENGTH CHARACTERISTICS IN INELASTIC TORSIONAL SEISMIC RESPONSE
Peter Dasicka, Barry Davidson, Carlos Ventura

07  LIFELINE SYSTEMS

0003 SEISMIC VULNERABILITY OF AIRPORT FACILITIES
Michael Roark, Kevin Truman, Phillip Gould

0065 SEISMIC BEHAVIOUR OF EXTENDED STRUCTURES
Albert PETROV

0134 EFFECTIVENESS OF THE DEFORMABILITY-EVALUATION FOR BURIED PIPELINES USING THE GROUND-BLOCK METHOD
Nobuaki NISHIO

0236 RELIABILITY ANALYSIS OF URBAN TRANSPORTATION SYSTEM
Liu CHUNGUANG, Gao HUIYING

0291 A SIMPLIFIED ESTIMATION METHOD OF ELASTO-PLASTIC DEFORMATIONS OF BURIED PIPELINES CAUSED BY LATERAL SPREADING DUE TO LIQUEFACTION
T SUZUKI, N HOSOKAWA, J UENO, T KUWAJIMA, Y OGAWA, T KITANO, S TAKADA, T KOIKE

0292 STRUCTURAL STRAIN ESTIMATION OF SEGMENTED SHIELD TUNNEL FOR SEVERE EARTHQUAKES
T KOIKE

0367 BEHAVIOR OF PIPELINE WITH INITIAL BOW UNDER THE ACTION OF AXIAL LOAD
Ja-Shian CHANG, Young-Hong HESI, Jan-Fu WANG

0425 RESPONSE BEHAVIOR OF PIPELINE SYSTEM SUBJECTED TO SUBSIDENCE OF GROUND LIQUEFACTION
Kunihiko FUCHIDA, Shozo SHIRINASHIHA, Takeshi AKIYOSHI

0492 LOAD ON PIPES BURIED IN A NON-LIQUEFACTION LAYER DUE TO LIQUEFACTION-INDUCED GROUND DISPLACEMENT
Youichi TAIJ, Seiji KOJIMA, Kazunori SHIMAMURA, Masanori HAMADA, Susumu YASUDA, Keizo OHTOMO, Yusuke FUJITA

0513 ANALYSIS OF CAUSAL FACTORS GENERATING LARGE-SCALE DEFORMATION PATTERNS IN BURIED PIPELINE UNDER THE INFLUENCE OF LATERAL FLOWS BY LIQUEFACTION
S TAKADA, N HOSOKAWA, T KITANO, Y OGAWA, T KUWAJIMA, K OKAMURA

0546 EVALUATION OF SEISMIC FRAGILITY FOR HIGHWAY TRANSPORTATION SYSTEMS
Satoshi TANAKA, Nobuoto NOJIMA, Hirokazu KAMEDA, Shunsuke OHNISHI

0551 DAMAGE ASSESSMENT OF EXPRESSWAY NETWORKS IN JAPAN BASED ON SEISMIC MONITORING
Hitoshi MOTOMURA, Tatsuya HAMADA, Fumio YAMAZAKI

0616 SOIL FRICTION RESTRAINT OF OBLIQUE PIPELINES IN LOOSE SAND
Chun-Yen WU, Tung-Wen HSU, Yuh-Jyh CHEN

0662 SOIL FRICTION RESTRAINT OF OBLIQUE PIPELINES IN LOOSE SAND
Chun-Yen WU, Tung-Wen HSU, Yuh-Jyh CHEN

0697 SEISMIC HAZARD ASSESSMENT AND DESIGN METHODOLOGY FOR STEEL BURIED PIPELINES
B DESTOMBES, D CHASSAGNEUX, M ZAREA, P MOURoux, P PRuvost

0848 DEVELOPMENT OF EARTHQUAKE-PROOF PERFORMANCE EVALUATION PROGRAM FOR UNDERGROUND TELECOMMUNICATION FACILITIES
Masaru OKUTSU, Kazuhiko FUJIHASHI, Ken'ichi HONDA

0893 USING NON-LINEAR SOIL MODEL TO ANALYZE SEISMIC RESPONSE OF UNDERGROUND PIPELINES
Xin Li, Jing ZHOU

0906 SEISMIC BEHAVIOR OF PIPELINES DURING TRANSVERSE LIQUEFACTION CONSIDERING EFFECTS OF GROUND DEFORMATION
YunMook LIM, TaeWook KIM, MoonKyum KIM, SungWoo PARK

0930 A NEW PROPOSAL FOR SIMPLIFIED SEISMIC RESPONSE ANALYSIS OF PIPES IN GROUND WITH INCLINED BED-ROCK
Nemat Hassani, Shiro Takada, Toshisame Tsuyoshi, Ryozo Ozaki
INDEX BY TOPIC

07 LIFELINE SYSTEMS

0943 LIFELINE PIPELINE RESTORATION AND SEISMIC MITIGATION
Le Val LUND, P. ASCE

0966 ANALYTICAL AND EXPERIMENTAL INVESTIGATION OF THE DYNAMIC RESPONSE OF LIQUID-FILLED CONICAL TANKS
L. TANG, R. KOROL, A. EI DAMATTY

1094 EARTHQUAKE PERFORMANCE OF HIGHWAY SYSTEM IN TOKYO
Hideji KAWAKAMI

1140 A METHOD TO DETERMINE SEISMIC PERFORMANCE OF HIGHWAY NETWORK SYSTEM
Hideki SUGITA, Tomofumi KOZAKI

1215 STUDY ON BEHAVIOR OF BURIED PIPES IN LIQUEFIED GROUND
Toshi NAKAJIMA, Toshiyuki IWAMOTO, Toshio TOSHIKA

1268 DEVELOPMENT OF A WARNING INFORMATION SYSTEM OF EARTHQUAKE
Takayuki NAKAJIMA, Toshihiko NAKAJIMA, KANEO TAKAKI

1388 SEISMIC RELIABILITY ASSESSMENT METHOD FOR LIFELINE SYSTEMS USING UNAVAILABLE TIME
Takayoshi SUZUKI

1433 DEFORMATION AND FRACTURE PROPERTIES OF STRAIGHT STEEL PIPE WITH INTERNAL PRESSURE UNDER UNIAXIAL COMPRESSION AND BENDING LOAD
Chitoshi MIKI, Noritake OGUCHI, Takayoshi UCHIDA, Atsushi SUGANUMA, Takehiro INOUE

1508 LARGE DEFORMATION BEHAVIOR OF LOW-ANGLE PIPELINE ELBOWS SUBJECTED TO IN-PLANE BENDING
Masanori Hamada, Thomas O’Rourke, Koji Yoshizaki

1742 OPTIMUM RESTORATION MODEL CONSIDERING INTERACTIONS AMONG LIFELINE SYSTEMS-INTERACTIONS AMONG RESTORATION ACTIVITIES OF LIFELINE UTILITIES
Yasunori HADA, Kimihiro MEGURO

1762 SEISMIC DAMAGE ESTIMATION PROCEDURE FOR WATER SUPPLY PIPESLINE
Ryoji ISAYAMA, Eiichi ISHIHARA, Kiyotaka YUNE, Toru SHIROZU

1814 DEFORMATION AND FRACTURE PROPERTIES OF STEEL PIPE BEND WITH INTERNAL PRESSURE SUBJECTED TO IN-PLANE BENDING
Noritake OGUCHI, Takayoshi UCHIDA, Akiko KATO, Takashi KOBAYASHI, Chitoshi MIKI, Atsushi SUGANUMA

1919 SEISMIC RELIABILITY OF THE ABRUZZO HOSPITAL SYSTEM AND UPGRADE STRATEGIES
Camillo NUTI, Silvia SANTINI, Ivo VANZI

1927 SIMULATION AND EVALUATION OF POST-EARTHQUAKE FUNCTIONAL PERFORMANCE OF TRANSPORTATION NETWORK
Nobuoto NOJIMA, Masato SUGITO

2041 SEISMIC RELIABILITY OF ELECTRIC NETWORKS AND INTERACTION WITH OTHER DAMAGE INDICATORS
Ivo VANZI, Renato GIANNINI

2128 RISK MANAGEMENT AND LIFELINE ENGINEERING
Shahinaz BAKIR, David ELMS, John LAMB

2182 AMPLIFICATION OF GROUND STRAIN IN IRREGULAR SURFACE LAYERS DURING STRONG GROUND MOTION
Mio KOBAYASHI, Hirokazu ANDO, Takahito WATANABE

2262 ELECTRICAL SUBSTATION EQUIPMENT DAMAGE DATABASE FOR UPDATING FRAGILITY ESTIMATES
Thalia Anagnos, Dennis Ostrom

2311 RISK ANALYSIS OF PORT FACILITIES
Anne Kiremidjian, Stephanie King, Samuel Chiu, Mark Audigier

2345 SUPER HIGH-DENSITY REALTIME DISASTER MITIGATION SYSTEM
Wataru NAKAYAMA, Kenichi KOGANEMARU, Yoshihisa SHIMIZU, Akihiko WATANABE, Fumio YAMAZAKI

2587 SEISMIC PERFORMANCE OF LNG STORAGE TANK FOUNDATIONS DURING THE VERY LARGE EARTHQUAKE
Makoto KOBAYASHI, Kenzo TAKI, Shinichi HIGUCHI, Takako MORI, Takashi MATSUDA, Yozo GOTO, Bruce KUTTER, Hiroshi AKIYAMA

2798 A DECADE OF LIFELINES ENGINEERING IN NEW ZEALAND
David Brunsdon

08 DESIGN CRITERIA AND METHODS

0018 APPROXIMATE ESTIMATIONS OF NATURAL PERIODS FOR APARTMENT BUILDINGS WITH SHEAR-WALL DOMINANT SYSTEMS
Young-Soo CHUN, Ji-Soo YANG, Kang-Kwan CHANG, Li-Hyung LEE

0023 RELIABILITY ANALYSIS OF SEISMIC SHEAR-TYPE STRUCTURES
Boquan LIU, Ming LIU
INDEX BY TOPIC

08 DESIGN CRITERIA AND METHODS

0030 EFFECT OF HYSTERETIC MODELS ON THE INELASTIC DESIGN SPECTRA
    Li-Hyung Lee, Sang Whan Han, Young-Han Oh

0036 EQUIVALENT DUCTILITY DAMAGE CRITERION OF EARTHQUAKE RESISTANT STRUCTURES AND ITS
    VERIFICATION BY SUB-STRUCTURE METHOD
    Boquan LIU, Ming LIU

0051 CODE RECOMMENDATIONS FOR THE ASEISMIC DESIGN OF TALL REINFORCED CONCRETE CHIMNEYS
    J WILSON

0060 SAFETY EVALUATION METHOD OF STRUCTURAL SYSTEMS AND ITS APPLICATION TO SEISMIC DESIGN OF RC
    BRIDGE PIER
    Motoyuki SUZUKI, Mitsuyoshi AKIYAMA

0062 A SIMPLE DISPLACEMENT COMPATIBILITY-BASED SEISMIC DESIGN STRATEGY FOR REINFORCED CONCRETE
    BUILDINGS
    Tom PAULAY

0146 NECESSARY STATIC CONDITIONS FOR THE SEISMIC VIABILITY OF REINFORCED CONCRETE OR MASONRY
    STRUCTURES
    Mario PAPARONI

0155 AN EVALUATION OF THE DISPLACEMENT CONTROLLED DESIGN PROCEDURES
    Vladimir Sigmand, Kresimir Herman, Ivica Guljas

0207 COMPATIBLE ACCELERATION AND DISPLACEMENT SPECTRA FOR SEISMIC DESIGN CODES
    Andrew Weir, Amr Elnashai, Julian Bommer

0209 APPLICATIONS OF DRIFT SPECTRA IN SEISMIC DESIGN
    Avigdor RUTENBERG, Arthur HEIDEBRECHT

0245 GRAVITATIONAL SEISMIC COLLAPSE MECHANISM ANALYSIS IN VIEW OF CONCEPTUAL DESIGN
    Jacob Eisenberg

0330 THE DIRECT DISPLACEMENT BASED DESIGN METHOD: A DAMPING PERSPECTIVE
    Kazushi SHIMAZAKI

0526 STATE OF THE SEISMIC DESIGN AND DETAILING OF BUILDINGS WITH RC STRUCTURAL WALLS IN EUROPE
    Alessandro Dazio, Hugo Bachmann

0652 TARGET SEISMIC PERFORMANCE LEVELS IN STRUCTURAL DESIGN FOR BUILDINGS
    Taiki SAITO, Yoshitsugu AOKI, Hideo FUJITANI, Jun KANDA, Testsuya EMOTO, Mamoru KOHNO, Yuji OHASHI

0686 A TWO-LEVEL OPTIMIZATION METHOD FOR SEISMIC DESIGN OF ELASTIC THREE-DIMENSIONAL FRAMES
    Kazanori WAKAMATSU, Makoto OHSAKI, Yasuyuki NAGANO

0714 MODELIZATION OF LOW CYCLE FATIGUE DAMAGE IN FRAMES
    Alberto CARNICERO, Ricardo PERERA, Enrique ALARCON

0716 LIMIT STATES FOR PERFORMANCE-BASED DESIGN
    Kevin Collins, Bozidar Stojadinovic

0825 SEISMIC DESIGN REQUIREMENTS FOR REGIONS OF MODERATE SEISMICITY
    Mario Lopes, Rita Bento

0836 A VISION FOR A COMPLETE PERFORMANCE-BASED EARTHQUAKE ENGINEERING SYSTEM
    William HOLMES

0989 SEISMIC DESIGN AND PERFORMANCE ASSESSMENT OF MASONRY INFILLED R/C FRAMES
    Andreas Kappos, Frederick Ellul

1005 EVALUATION OF ANALYSIS PROCEDURES FOR PERFORMANCE-BASED SEISMIC DESIGN OF BUILDINGS
    H Lew, Sashi Kunnath
# INDEX BY TOPIC

## 08 DESIGN CRITERIA AND METHODS

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1033</td>
<td>RELIABILITY OF STRUCTURAL SAFETY OF SCHOOL GYMNASIUMS IN HEAVY SNOW REGIONS AGAINST COMBINED LOAD OF SNOW AND EARTHQUAKE</td>
<td>Kengo TAGAWA, Toshinobu MIYASAKAT</td>
</tr>
<tr>
<td>1039</td>
<td>PREDICTING THE EARTHQUAKE RESPONSE OF BUILDINGS USING EQUIVALENT SINGLE DEGREE OF FREEDOM SYSTEM</td>
<td>Norihide KOSHIKA, Masaoami TESHIGAWARA, Toshifumi OKUZONO, Masaharu TAKAYAMA, Hiroshi KURAMOTO, Tomohiro HIRI</td>
</tr>
<tr>
<td>1096</td>
<td>INELASTIC DISPLACEMENT RATIOS FOR DISPLACEMENT-BASED EARTHQUAKE RESISTANT DESIGN</td>
<td>Eduardo MIRANDA</td>
</tr>
<tr>
<td>1121</td>
<td>METHODOLOGY FOR SEISMIC DESIGN OF R/C BUILDING STRUCTURES</td>
<td>Norihide KOSHIKA, Masaomi TESHIGAWARA, Toshifumi OKUZONO, Masaharu TAKAYAMA, Hiroshi KURAMOTO, Tomohiro HIRI</td>
</tr>
<tr>
<td>1147</td>
<td>EUROPEAN RESEARCH AND CODE DEVELOPMENTS ON SEISMIC DESIGN OF COMPOSITE STEEL CONCRETE STRUCTURES</td>
<td>Eduardo MIRANDA, Perla SANTA-ANA</td>
</tr>
<tr>
<td>1206</td>
<td>INELASTIC DISPLACEMENT RATIOS FOR DISPLACEMENT-BASED EARTHQUAKE RESISTANT DESIGN</td>
<td>Eduardo MIRANDA</td>
</tr>
</tbody>
</table>
INDEX BY TOPIC

08 DESIGN CRITERIA AND METHODS

1841 PERFORMANCE BASED ANALYSIS AND MODELING OF A DUAL SEISMIC FORCE-RESISTING SYSTEM
Limin JIN, Atila ZEKIOGLU And King-Le CHANG

1851 DISPLACEMENT-BASED SEISMIC DESIGN OF STATICALLY-INDETERMINATE BRIDGE PIERS
Silvia MAZZONI, Gregory FENVES

1976 OPINION OF USERS AND OWNERS ABOUT SAFETY PERFORMANCE OF BUILDING STRUCTURE (CONCEPT OF PERFORMANCE-BASED DESIGN STANDING ON QUESTIONNAIRES)
Hideo Fujitani, Ikuo Takahashi, Akinori Tani

2074 PERFORMANCE-BASED SEISMIC ENGINEERING: CONVENTIONAL VS. INNOVATIVE APPROACHES
Vitelmo V. BERTERO

2098 A NEW FRAMEWORK FOR PERFORMANCE-BASED DESIGN OF BUILDING STRUCTURES
Katsumi YANO, Hiroshi AKIYAMA, Yoshitsuga AOKI, Hideo FUJITANI, Tsuneo OKADA, Yuji OHASHI, Hisahiro HIRAIASHI

2171 A FRAMEWORK OF STRUCTURAL PERFORMANCE EVALUATION SYSTEM FOR BUILDINGS IN JAPAN
Hiroshi AKIYAMA, Masanori HIBA, Masao TESHIGAWARA, Hiroshi ISODA, Hisahiro HIRAIASHI, Mitsumasa MIDORIKAWA

2215 DEVELOPMENT OF SEISMIC PERFORMANCE EVALUATION PROCEDURES IN BUILDING CODE OF JAPAN
Izuru OKAWA, Masanori HIBA, Masao TESHIGAWARA, Hiroshi ISODA, Hisahiro HIRAIASHI, Mitsumasa MIDORIKAWA

2241 EVALUATION OF INPUT ENERGY CAUSED BY EARTHQUAKES AS SEISMIC LOAD FOR HIGHWAY BRIDGES
Taiji MAZDA, Hisanori OTSUWA, Anne KIREMIDJIAN

2293 PERFORMANCE-BASED BUILDING CODE OF JAPAN: FRAMEWORK OF SEISMIC AND STRUCTURAL PROVISIONS
Mitsumasa MIDORIKAWA, Izuru OKAWA, Wataru GOJO, Masao TESHIGAWARA, Hisahiro HIRAIASHI

2322 SEISMIC PERFORMANCE ESTIMATION OF ASYMMETRIC BUILDINGS BASED ON THE CAPACITY SPECTRUM METHOD
Tatsuya AZUHATA, Taiki SAITO, Masaharu TAKAYAMA, Katsumi NAGAHARA

2381 SIMPLIFIED METHODS FOR SEISMIC RELIABILITY ANALYSIS
Michael BAKER, Edmund BOOTH

2471 SEISMIC ANALYSIS OF BRIDGES INCLUDING SOIL-ABUTMENT INTERACTION
Michael KARANTZIKIS, Constantine SPYRAKOS

2551 TORSIONAL EFFECTS AND REGULARITY CONDITIONS IN RC BUILDINGS
Edoardo COSENZA, Gaetano MANFREDI, Roberto REALFONZO

2552 DEFINITION OF SEISMIC ACTION IN THE CONTEXT OF EC-8: TOPICS FOR DISCUSSION
Carlos Oliveira, Alfredo Campos-Costa, M. Luísa Sousa

2553 DESIGN PROVISIONS FOR MASONRY-INFILLED RC FRAMES
Michael FARDIS

2554 MODERN SEISMIC DESIGN OF STEEL STRUCTURES AND EC8 DEVELOPMENTS
Amr Elmashai

2556 BUILDING CODES AND TRADEOFFS FOR EARTHQUAKE RISK REDUCTION: DISASTER MANAGEMENT FOR HOUSING
Norio MAKI, Haruo HAYASHI

2665 CONSIDERATION OF NEAR-FAULT GROUND MOTION EFFECTS IN SEISMIC DESIGN
Helmut KRAWINKLER, Babak ALAVI

2733 DEALING WITH BUILDINGS LIKELY TO BE UNSAFE IN EARTHQUAKE - TECHNICAL CONSIDERATIONS
Rob Jury, R Bruce Shephard, David Bransdon, David Hopkins

2745 REGULATORY ISSUES IN THE PROPOSED CHANGES TO THE NEW ZEALAND BUILDING ACT 1991
Brian Cashin, David Bransdon

09 SOCIAL & ECONOMIC ISSUES

0007 USING GIS AS A TOOL TO EXECUTE THE FARMLAND RELEASE POLICY WITH CONSIDERING FIELD CONDITIONS
Hui-Mi HSU, Sao-Jeng CHAO

0091 A GIS BASED EARTHQUAKE LOSSES ASSESSMENT AND EMERGENCY RESPONSE SYSTEM FOR DAQING OIL FIELD
Li Li XIE, Aiping TANG, Zhengtao CUI, Xiasin TAO, Ruizhi WEN

0108 THE PRELIMINARY USE OF MAPINFO PROGRAMME TO EARTHQUAKE HAZARD ASSESSMENT IN THAILAND AND MAINLAND SE ASIA
Chaiyan HINTHONG, Suwit KOSUWAN, Punya CHARUSIRI
INDEX BY TOPIC

09  SOCIAL & ECONOMIC ISSUES

0163  PORTFOLIO THEORY FOR EARTHQUAKE INSURANCE RISK ASSESSMENT
Weimin DONG, Felix WONG

0178  EVALUATION OF SEISMIC RISK THROUGH TOTAL ACCEPTABLE COST MODEL
Vilas MUJUMDAR

0272  STUDY ON SEARCH AND RESCUE OPERATIONS IN THE 1995 HANSHIN-AWAJI EARTHQUAKE – ANALYSIS OF LABOR WORK IN RELATION TO BUILDING TYPES
Hitomi MURAKAMI, Koichi SAKAMOTO, Toru TAKEMOTO

0323  ESTIMATION OF TRAFFIC DEMAND OWING TO THE CONSTRAINED LIFE OF EARTHQUAKE DISASTER IN TOKYO
Yoshimi OGAWA, Atsushi SEKINE

0326  SEISMIC RISK IN SAN JUAN CITY, ARGENTINE
Dora Roitman SCHABELMAN

0337  A STUDY ON SCENARIO-TYPE SEISMIC DAMAGE ESTIMATION BY USING GIS
Suminao MURAKAMI, Satoru SADOHARA

0364  UNCERTAINTY MODELING FOR DISASTER LOSS ESTIMATION
Felix WONG, Hanyao CHEN, Weimin DONG

0380  DEVELOPMENT OF A NATIONAL EARTHQUAKE RISK ASSESSMENT MODEL FOR TAIWAN
R.Scott LAWSON, Chin-Hsiung LOH, Weimin DONG

0388  THE ECONOMIC BENEFITS OF A DISASTER RESISTANT UNIVERSITY
Mary COMERIO

0403  EARTHQUAKE DAMAGE AND RISK EXPERIENCE AND MODELLING IN NEW ZEALAND
David Dowrick, David Rhoades

0419  THE USE OF INSURANCE AND OTHER POLICY INSTRUMENTS IN MANAGING CATASTROPHIC RISK
Scott Lawson, Paul Kleindorfer, Patricia Grossi, Howard Kunreuther, Weimin Dong

0471  METHODS AND DIFFICULTIES OF NATURAL HAZARD ASSESSMENT - A REINSURANCE PERSPECTIVE
Paul Hertelendy, Dörte Aller, Rick Thomas

0537  DEVELOPMENT OF THE SEISMIC DISASTER INFORMATION SYSTEM FOR HIROSHIMA CITY
Kenzo FUJWARA, Satoshi FURUKAWA, Fusanori MIURA, Yasushi SASAKI, Hiroyuki KONISHI

0629  MACRO-ZONATION OF POTENTIAL SEISMIC RISK IN URBAN CITIES
Satoru SADOHARA, Urakawa GO, Suminao MURAKAMI

0633  DEVELOPMENT OF THE SEISMIC DISASTER INFORMATION SYSTEM FOR HIROSHIMA CITY
Kenzo FUJWARA, Satoshi FURUKAWA, Fusanori MIURA, Yasushi SASAKI, Hiroyuki KONISHI

0688  SOCIAL SYSTEM FOR PERFORMANCE BASED DESIGN (P.B.D.) OF BUILDING STRUCTURES -- ITS PERSPECTIVE AND KEY ELEMENTS --
Katsumi YANO, Yoshinobu HIRANO, Wataru GOJO

0706  AN ABSOLUTE EARTHQUAKE RISK INDEX FOR INSURANCE PURPOSES
Alexander ALLMANN, Sven EHRlicher, Anselm SMOLKA

0733  STUDY ON MUTUAL AID OF LOCAL GOVERNMENTS AFTER THE 1995 HYOGOKEN-NANBU EARTHQUAKE DISASTER
C WATANABE, S OKADA

0777  FROM EARTHQUAKES TO THE CAPITAL MARKETS: RISK TRANSFER SOLUTIONS TO MANAGE THE ECONOMIC CONSEQUENCES OF EARTHQUAKES
Martin Bertogg, Edouard Schmid

1006  LONG-TERM EXPERIENCE OF ACTIVE DISASTER MITIGATION AND OBJECTIVES OF THE 21ST CENTURY
Valery Abarykov, Mark Klyachko

1018  DEVELOPMENT OF A SIMULATION METHOD FOR EVACUATION BY WHEELCHAIR USING DISTINCT ELEMENT METHOD
Koichi Takimoto, Masahiro Kubodera, Fusanori Miura

1029  STUDY OF CASUALTIES DUE TO EARTHQUAKE DISASTERS AND OTHER ACCIDENTS IN JAPAN
RIE NOBUHARA, YUKO SUMIYOSHI, MICHI MIYANO

1036  REAL-TIME ASSESSMENT OF EARTHQUAKE DISASTER IN YOKOHAMA BASED ON DENSE STRONG-MOTION NETWORK
Saburoh MIDORIKAWA, Susuma ABE
09 SOCIAL & ECONOMIC ISSUES

1055 PROBLEMS WITH REBUILDING LIVES AFTER THE GREAT HANSHIN-AWAJI EARTHQUAKE DISASTER. BASED ON SURVEY USING QUESTIONNAIRES AT RESTORATION PUBLIC HOUSING
Hiroyuki KITAMOTO, Michio MIYANO, Ryoko IJIMA

1102 EARTHQUAKE INSURANCE RATES FOR RC HIGH-RISE COMMERCIAL BUILDINGS IN TAIWAN
Maw-Skyong SHEU, Yi-Hsuan TU, Pai-Mei LIU

1104 HUMAN CASUALTY ESTIMATION DUE TO URBAN EARTHQUAKE
Norio MAKI, Hengjian LU, Masayuki KOHIYAMA, Satoshi TANAKA, Haruo HAYASHI

1196 SEISMIC RISK ANALYSIS OF BUILDINGS USING SFEM
Achintya Halder, Sang-Guen Seo, Jungwon Huh

1202 CONSTRUCTION OF A DATA BASE SYSTEM FOR IRRIGATION DAMS
TANI SHIGERU

1253 A BALANCED APPROACH TO EARTHQUAKE RISK USING MODERN ANALYSIS METHODS
Craig Tillman

1288 ETHNOGRAPHIC ANALYSIS OF INDIVIDUAL BEHAVIOR FOLLOWING THE HANSHIN-AWAJI EARTHQUAKE DISASTER
Kishie SHIGEKAWA, Haruo HAYASHI, Satoshi TANAKA, Humie AONO

1308 INDIRECT LOSS ESTIMATION USING ELECTRICITY CONSUMPTION INDEX
Masasuke TAKASHIMA, Haruo HAYASHI

1401 ASSESSMENT OF CASUALTIES' STATES DURING DESTRUCTIVE EARTHQUAKES
Zhendong ZHAO, Xiangyuan Zheng

1423 MEASURES AGAINST EARTHQUAKES AND FUTURE PLANS ON THE STRUCTURES BASED ON "THE SHIZUOKA PREF. ACTION PROGRAM AGAINST EARTHQUAKES"
Kinji NAGATA, Kyoko YOKOTA, Hiromichi NAKAMURA, Fujo SAKAKIBARA, Harumichi HINO, Tosho SHIBATA, Youichi AOKI

1434 DEVELOPMENT OF THE SIMULATION SYSTEM FOR URBAN DISASTER PREVENTION
Shukyo SEGAWA, Yasushi KOMARU

1472 EARTHQUAKE ENGINEERING AND INSURANCE: PAST, PRESENT AND FUTURE
GEORGE WALKER

1477 WHY WERE OVER 5500 HUMAN LIVES LOST IN KOBE, HOW TO PROTECT IN FUTURE
Minoru YAMADA

1497 OPTIMAL STRATEGY FOR BUSINESS RECOVERY AFTER EARTHQUAKES
Ayhan Iftanoglu, Simon Wilkie, Alfred Mason, James Beck, Yonnes Achkire

1500 BUILDING DAMAGE ASSESSMENT FOR EARTHQUAKE LOSS ESTIMATION IN TAIWAN
Chin-Hsiung LOH, Wen-Yu JEAN, Chin-Hsun YEH

1510 URBAN LOCAL EARTHQUAKE DISASTER RISK INDEX
Lanxiao XIAO, Ting YANG, Yauquing ZHU

1624 INTEGRATED AND INTERACTIVE RISK ASSESSMENT PLATFORM FOR WELLINGTON, NEW ZEALAND
David Heron, Steven Jensen, John Savage, Jim Cousins, Michael Kazach

1676 SEISMIC VULNERABILITY OF THE MEGA CITY OF TEHRAN
Faribor NATEGHIA

1699 TOWARDS EARTHQUAKE SCENARIOS UNDER THE CONDITIONS OF ROMANIA
Horea SANDI, Emil-Sever GEORGESCU

1766 AN INVESTIGATION OF THE RECENT EARTHQUAKE DISASTERS FROM A VIEW POINT OF URBAN ENGINEERING
Hisashi HOKUGO, Shigekatsu KIHIASHI

1800 SIMULATION OF EVACUATION BEHAVIOR FROM AN UNDERGROUND PASSAGEWAY DURING AN EARTHQUAKE
Kenzo TOKI, Fusunori MIURA, Junji KIYONO

1807 ATC-50, SEISMIC GRADING AND RETROFITTING PROJECT FOR DETACHED SINGLE-FAMILY WOOD-FRAME DWELLINGS
Ronald Eguchi, Christopher Rojahn

1912 THE SEISMIC PREVENTION AS A CONTINUOUS PROJECT OF URBAN DEVELOPMENT, SAN JUAN CITY, ARGENTINE
Maria del Pilar ESPINOSA, Nora Elsa NACIF

1968 SEISMIC DAMAGE EVALUATION OF HOUSEHOLD PROPERTY BY USING GEOGRAPHIC INFORMATION SYSTEM (GIS)
Takuma SAEKI, Hiroaki TSUBOKAWA, Saburoh MIDORIKAWA

2024 EARTHQUAKE RISK MANAGEMENT AND EMERGENCY RESPONSE SCENARIO SIMULATOR
Masatake NAGANOH, Masashi TANAI, Jyun-ichi IKEDA
# INDEX BY TOPIC

## 09 SOCIAL & ECONOMIC ISSUES

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>2107</td>
<td>THE GHAEN EARTHQUAKE: PREPAREDNESS AND RESPONSE AMONG RUSTIC PEOPLE</td>
<td>F Parsizadeh</td>
</tr>
<tr>
<td>2252</td>
<td>FLEXIBLE METHOD TO EVALUATE SEISMIC FRAGILITY</td>
<td>S Fukushima, H Katukura, H Yashiro</td>
</tr>
<tr>
<td>2334</td>
<td>SIMULATION OF SPREADS OF FIRE ON CITY SITE BY STOCHASTIC CELLULAR AUTOMATA</td>
<td>Akinnori Tani, Atsushi Takizawa, Hiroshi Kawamura, Atushi Yamada</td>
</tr>
<tr>
<td>2412</td>
<td>SEISMIC AND COMPLEX RISK ASSESSMENT AND MANAGEMENT FOR THE KAMCHATKA REGION</td>
<td>A Ugarov, N Frolova, G Nigmatov, M Shakhramanyan, V Larionov, S Suchshev</td>
</tr>
<tr>
<td>2537</td>
<td>RADIUS PROJECT IN SKOPJE, REPUBLIC OF MACEDONIA</td>
<td>Zoran Milutinovic, Risto Penov, Branka Stanojevska</td>
</tr>
<tr>
<td>2557</td>
<td>NON-REGULATORY APPROACHES TO EARTHQUAKE RISK REDUCTION: THE NEW ZEALAND EXPERIENCE</td>
<td>Neil Britton, Gerard Clark</td>
</tr>
<tr>
<td>2613</td>
<td>SEISMIC AWARENESS TRAINING THROUGH DEMONSTRATION PROJECT</td>
<td>Suvendra Gupta</td>
</tr>
<tr>
<td>2643</td>
<td>HOLISTIC SEISMIC RISK ESTIMATION OF A METROPOLITAN CENTER</td>
<td>Omar Cardona, Jorge Hurtado</td>
</tr>
<tr>
<td>2719</td>
<td>HOUSING RECOVERY AFTER KOBE: THE URBAN PLANNING PROCESS</td>
<td>Jane Preuss</td>
</tr>
<tr>
<td>2728</td>
<td>RECENT DAMAGING EARTHQUAKES OF INDIA AND RELATED SOCIETAL ISSUES</td>
<td>Prabhas Pande</td>
</tr>
<tr>
<td>2729</td>
<td>EARTHQUAKE PROTECTION FOR BUSINESSES</td>
<td>Steven Vukazich, Morio Ino, Gana Selvadurai, Robert Reitherman</td>
</tr>
<tr>
<td>2731</td>
<td>THE APPLICATION OF A US CORPORATE INDUSTRIAL SEISMIC PROGRAM IN JAPAN: A COOPERATIVE APPROACH</td>
<td>Robert Lanning, David Bonneville</td>
</tr>
</tbody>
</table>

## 10 LESSONS FROM RECENT EARTHQUAKES

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>0054</td>
<td>CHANGING PERCEPTIONS OF THE EXTENT OF DAMAGE TO WELDED STEEL MOMENT FRAMES IN THE NORTH RIDGE EARTHQUAKE</td>
<td>Mourad Attalla, Terrence Paret</td>
</tr>
<tr>
<td>0084</td>
<td>CRITERIA FOR A SEISMIC MICROZONING OF A LARGE AREA IN CENTRAL ITALY</td>
<td>L Luzi, V Petrini, T Sano, F Pergalani, A Fugleise, R Romeo</td>
</tr>
<tr>
<td>0121</td>
<td>PROBLEMS ON EARTHQUAKE DISASTERS IN RURAL AREAS, CONSIDERATION FROM THE RECENT DAMAGING EARTHQUAKES IN HOKKAIDO, NORTHERN JAPAN</td>
<td>Hiroshi Kagami</td>
</tr>
<tr>
<td>0137</td>
<td>THE SEISMIC DESIGN MARGINS FOR SPHERICAL GAS TANKS</td>
<td>Akira Takiguchi</td>
</tr>
<tr>
<td>0217</td>
<td>LEARNING FROM STRUCTURAL AND NONSTRUCTURAL SEISMIC PERFORMANCE OF 20 EXTENSIVELY INSTRUMENTED BUILDINGS</td>
<td>Farzad Naeim</td>
</tr>
<tr>
<td>0318</td>
<td>AN ANALYSIS OF DAMAGE TO HANSIN ELEVATED EXPRESSWAY DURING 1995 KOBE EARTHQUAKE</td>
<td>Yohei Fujino, Satoko Abe, Masato Abe</td>
</tr>
<tr>
<td>0447</td>
<td>A SURVEY OF DAMAGE CAUSED BY 1998 EARTHQUAKE IN THE SOCA VALLEY (SLOVENIA)</td>
<td>Renato Vidrigh, Matja Godec, Mihael Ribicic</td>
</tr>
<tr>
<td>0479</td>
<td>INFLUENCE OF LOCAL SOIL CONDITIONS ON INTENSITY DISTRIBUTION IN CESI (ITALY) DURING THE UMBRIA EARTHQUAKES (SEPTEMBER 1997)</td>
<td>Ethymios Lekkas, Ioannis Foukoulis</td>
</tr>
<tr>
<td>0480</td>
<td>THE ADANA EARTHQUAKE (TURKEY) - SEISMOTECTONIC FRAMEWORK, GEODYNAMIC PHENOMENA, IMPACT ON THE STRUCTURED ENVIRONMENT</td>
<td>Ethymios Lekkas, Emmanuel Vassilakis</td>
</tr>
<tr>
<td>0510</td>
<td>BEHAVIOR OF LIGHTING SYSTEM IN THE HANSIN-AWAJI EARTHQUAKE DISASTER</td>
<td>Michio Miyano, Tadashi Doi, Hirotsuki Kitamoto</td>
</tr>
</tbody>
</table>
INDEX BY TOPIC

10 LESSONS FROM RECENT EARTHQUAKES

0533 SOCIAL WELFARE FACILITIES' DAMAGE AND THEIR CORRESPONDENCE ON 1995 GREAT HANSIN-H-AWII EARTHQUAKE
   Keishi SHIONO, Shunkichi KOSAKA, Michio MIYANO

0590 DAMAGE AND NUMERICAL SIMULATION OF ACCIANO (ITALY) EARTH DAM DURING 1997 UMBRIA-MARCHE EARTHQUAKE
   B BRIGERDLA, L BRIGERDLA

0628 EARTHQUAKE DAMAGE TO HISTORIC AND OLDER ADOBE BUILDINGS DURING THE 1994 NORTHRIEGE, CALIFORNIA EARTHQUAKE
   Frederick WEBSTER, E.Leroy TOLLES

0653 GEOTECHNICAL ISSUES OF THE JUNE 27, 1998 ADANA-CYHAN EARTHQUAKE
   Korhan ADALI, Ogur AYDINGUN

0780 DAMAGE IN ANCIENT CHURCHES DURING THE 9TH OF JULY, 1998 AZORES EARTHQUAKE
   João Azevedo, Mário Lopes, Jorge Porrença, Luís Guerreiro, Rita Bento

0959 STRONG MOTION CHARACTERISTICS NEAR THE SOURCE REGION OF THE HYOGOKEN-NANBU EARTHQUAKE FROM ANALYSES OF THE DIRECTIONS OF STRUCTURAL FAILURES
   Kazuoh Seo, Kentaro Motoki

1046 LOCAL AMPLIFICATION EFFECTS RECORDED BY A LOCAL STRONG MOTION NETWORK DURING THE 1997 UMBRIA-MARCHE EARTHQUAKE
   A PUGLIESE, T SANO, G MILANA, P MARAN

1065 CONSIDERATIONS OF VERTICAL ACCELERATION ON STRUCTURAL RESPONSE
   Brian Kehoe, Mourad Aitalla

1127 ANALYSIS OF DAMAGE OF STEEL REINFORCED CONCRETE BUILDING FRAMES BY 1995 HYOGO-KEN-NANBU EARTHQUAKE
   Kouchi MINAMI, Junichi SAKAI, Chiaki MATSU, Chiaki MATSU

1134 STRUCTURAL BEHAVIOR OF "RAIMUNDO MARTINEZ CENTENO" HIGH SCHOOL ON 07/09/1997 CARIACO EARTHQUAKE
   A MARINILLI, E CASTILLA

1213 INVESTIGATION AND ELASTO-PLASTIC ANALYSIS OF AN RC BUILDING IN WHICH MAJOR SLIPPAGE OCCURRED ON THE 1ST FLOOR-SLAB DURING THE 1995 HYOGO-KEN-NANBU EARTHQUAKE
   Wataru SHINAGAWA, Akira MIZUKAMI, Eiji MAKITANI, Tomoko ONODERA

1349 LESSONS FROM RECENT EARTHQUAKES – FIELD MISSIONS OF GERMAN TASK FORCE
   G Schmidt, M Raschke, J Schwarz, J Zechau, M Baumbach, F Watte, D Lang

1366 THE PERFORMANCE OF STRENGTHENED MASONRY BUILDINGS IN RECENT EUROPEAN EARTHQUAKES.
   Robin SPENCER, Filomena PAPA, Carlos OLIVEIRA, Dina D’AYALA, Giacomo ZUCARO

1375 A PROPOSITION ON PREDICTING EARTHQUAKE DAMAGE
   Leslie SATO, Masashi SATO, Takashi SATO, Hiroomi URAKAWA, Takakichi KANEKO

1453 UMBRIA-MARCHE EARTHQUAKE OF 26 SEPTEMBER 1997: DAMAGE SCENARIOS AND VULNERABILITY SOURCES IN THE NOT-ASEISMIC MASONRY BUILDINGS
   S Viti, R Nudo, G Sarà, A Boni, G Barbetto, F Marielli

1569 BUILDING DESIGN FOR FIRE AFTER EARTHQUAKE
   Andy BUCHANAN, Russ BOTTING

1630 THE 1997 UMBRIA-MARCHE EARTHQUAKE: ANALYSIS OF THE RECORDS OBTAINED AT THE ENEA ARRAY STATIONS
   Dario RINALDI, Giovanni BONGIOVANNI, Paolo CLEMENTE

1635 APPROXIMATE STABILITY BOUNDS ON THE PRECISE FORCE REDUCTION FACTOR
   M DE STEFANO, A RUTENBERG

1722 DETERMINATION OF BUILDING DAMAGE DUE TO EARTHQUAKES USING AERIAL TELEVISION IMAGES
   Hiroshige HASEGAWA, Fumiyo YAMAZAKI, Isamu SEKIMOTO, Masashi MATSUOKA

1731 DAMAGE CHARACTERISTICS OF WOODEN HOUSES IN NEAR FAULT CAUSED BY KOBE EARTHQUAKE AND RELATED GROUND MOTIONS
   Yoshinori IWASAKI

1753 THE ADANA-CYHAN EARTHQUAKE OF 27 JUNE 1998: SEISMIC RETROFIT OF 120 R/C BUILDINGS
   Haluk SUCUOGLU, Türel GÜR, Polat GÜLKAN

1906 PHOTO-INTERPRETATION OF BUILDING DAMAGE DUE TO EARTHQUAKES USING AERIAL PHOTGRAPHS
   Fumiyo YAMAZAKI, Naoki OGAWA

2038 ESTIMATION OF STRONG GOUND MOTION AND BUILDING DAMAGE IN THE 1995 HYOGO-KEN-NANBU EARTHQUAKE
   Hiroshi KAWASE, Yoshihaki KITAGAWA, Masaomi TESHIGAWARA, Masato USAMI
INDEX BY TOPIC

10 LESSONS FROM RECENT EARTHQUAKES

2056 POST-EVENT DATA COLLECTION USING MOBILE GIS/GPS AND DEVELOPMENT OF SEISMIC EVALUATION TECHNIQUE FOR DAMAGE
Satoshi IWAI, Hiroyuki KAMEDA

2178 A STUDY ON DAMAGED BUILDING DATA OF THE 1995 HYOGO-KEN-NANBU EARTHQUAKE
Hirosi ISHIDA, Kazuaki TORISAWA, Masayuki KOHIYAMA, Kaoru MIZUKOSHI, Tsunehisa TSUGAWA

2201 COLFIORITO 1997 EARTHQUAKES: DAMAGES, SEVERITY, OBSERVATION AND SITE EFFECTS
Andrea TERTULLIANI

2236 ENGINEERING, STATE & INSURANCE EFFORTS FOR REDUCTION OF SEISMIC RISK IN ROMANIA
Alexandra ALDEA, Dan Lungu

2237 ESTABLISHING CORRELATION BETWEEN VULNERABILITY AND DAMAGE SURVEY FOR CHURCHES
Dina D'Ayala

2312 RISK EVALUATION METHOD OF BUILDING COLLAPSE FROM THE EXPERIENCE OF THE KOBE EARTHQUAKE
Osamu MURAO, Hiroyuki TANAKA, Fumio YAMAZAKI

2339 STRUCTURAL BEHAVIOR DURING THREE MODERATE MEXICAN EARTHQUAKES.
Terán-Gilmore Amador, Juárez-García Hugón, Sordo-Zabai Emilio, Gómez-Bernal Alonso

2451 FRAGILITY CURVES FOR BUILDINGS IN JAPAN BASED ON DAMAGE SURVEYS AFTER THE 1995 KOBE EARTHQUAKE
Naoya YAMAGUCHI, Fumio YAMAZAKI

2454 PERFORMANCE OF WOOD-FRAME CONSTRUCTION IN EARTHQUAKES
Erol Karacabeyli, J. Hans Rainer

2494 GROUND EFFECTS IN THE SEPTEMBER-OCTOBER 1997 UMBRIA-MARCHE (CENTRAL ITALY) SEISMIC SEQUENCE AND THEIR SIGNIFICANCE FOR SEISMIC HAZARD ASSESSMENT
A SIMONELLI, E VITTORI, L SERVA, S PORFIDO, A MICHETTI, G MASTROLORENZO, E ESPOSITO, L FERRILI

2497 NUMERICAL SIMULATION OF THE REFERENCE GROUND MOTION IN FABRIANO (MARCHE, ITALY)
Enrico PRIOLI

2498 SEISMOGENETIC MODELS BASED ON KELVIN-MAXWELL VISCOSITIES
Giovanni FINZI-CONTINI

2499 INFLUENCE OF SOIL DYNAMIC PARAMETERS ON SEISMIC RESPONSE OF A SITE AT FABRIANO, ITALY
Giovanni VANNUCCHI, Claudia MADDAI, Diego LO PRESTI, Teresa CRESPELLAN

2400 MODELLING OF THE SEISMIC GROUND MOTION FOR THE UMBRIA-MARCHE EARTHQUAKE SEQUENCE (SEPTEMBER 1997)
Giordano CHIMERA, Peter SUHADOLC, Angela SARAÒ, Fabio ROMANELLI, Giuliano PANZA, Concettina SUNZIATA, Giovanni COSTA, Abdelkrim AOUIDJA, Franco VACCARI

2506 AN EMERGENCY TECHNICAL OPERATION HANDBOOK FOR CIVIL PROTECTION OPERATIVE CENTERS BORN OF THE ITALIAN EXPERIENCE IN UMBRIA-MARCHE AND POLLINO EARTHQUAKES
Aurelio PETRACCA, Livio CORAZZA, Filomena PAPA, Giovanni CIALONE, Antonio MARTINELLI, Carlo MUTIGNANI, Angelo PIZZA, Mario BELLIIZZI, Giancarlo MARINI, Riccardo COLOZZA, Giandomenico CIFANI

2514 HOSPITALS’ BEHAVIOR DURING THE SEPTEMBER 1997 EARTHQUAKE IN UMBRIA AND MARCHE (ITALY)
S BIONDI, T SANO, A DE SORTIS, G DI PASQUALE, L VANZI, G ORSINI, C NUTI

2517 CRITERIA FOR RETROFITTING BUILDINGS IN UMBRIA-MARCHE EARTHQUAKE
Alberto CHERUBINI, Paolo ANGELETTI

2518 VARIATION OF TOURIST FLOWS IN THE UMBRIA REGION AFTER THE SEPTEMBER 26, 1997, COLFIORITO (CENTRAL ITALY) EARTHQUAKE
Fabrizio MERONI, Anna MONTINI, Gaetano ZONNO, Mariella CALEFFI, Roberto ZOBOLI

2520 LOCAL INTENSITY VARIATIONS IN THE CITY OF ROME DURING THE 1997-1998 UMBRIA-MARCHE (ITALY) SEISMIC SEQUENCE AS INFERRED BY SCHOOL QUESTIONNAIRE SURVEYS
A SIMONELLI, F CIFELLI, F FUNICIELLO, S DONATI

2593 ENGINEERING INVOLVEMENT IN POST-NORTHRIDGE DAMAGE ASSESSMENT AND REPAIR OF WOOD-FRAME DWELLINGS
Brian McDonald, John Osteraas, Lisa Shusto

2804 THE JANUARY 25TH, 1999, EARTHQUAKE IN THE COFFEE GROWING REGION OF COLOMBIA
Omar CARDONA, Luis GARCIA

2805 THE JANUARY 25TH, 1999 EARTHQUAKE IN THE COFFEE GROWING REGION OF COLOMBIA: TECTONIC AND SEISMOLOGICAL ASPECTS
JULIÁN ESCALLÓN, ADOLFO ALARCÓN
INDEX BY TOPIC

10 LESSONS FROM RECENT EARTHQUAKES

2806 EVALUATION OF THE DYNAMIC SUBSOIL RESPONSE OF THE VOLCANIC DEPOSITS AND MAN-MADE FILLS AND IMPLICATIONS FOR SITE STUDIES AND DESIGN
Luis YAMIN, Bernardo CAICEDO, Erick SOLANO

2807 JANUARY 25TH 1999 EARTHQUAKE IN THE COFFEE GROWING REGION OF COLOMBIA DAMAGE DESCRIPTION IN THE AREA AND EMERGENCY RESPONSE
Omar CARDONA

Ana CAMPOS

2809 THE JANUARY 25, 1999, EARTHQUAKE IN THE COFFEE GROWING REGION OF COLOMBIA: ACCELEROGRAPHIC RECORDS, STRUCTURAL RESPONSE AND DAMAGE, CODE COMPLIANCE AND ENFORCEMENT
Luis GARCÍA

2851 PERFORMANCE OF INDUSTRIAL FACILITIES IN THE AUGUST 17, 1999 IZMIT EARTHQUAKE
Mohsen RAHNAMA, Guy MORROW

2857 EVALUATION AND DESIGN CRITERIA FOR RESTORING AND RETROFITTING DAMAGED MASONRY BUILDINGS
F MOLLAIO, G DI PASQUALE, A DE SORTIS, U NASINI

11 OTHER TOPICS

0238 STRENGTH TESTING OF SUSPENDED CEILING SYSTEMS AND CONSTRUCTION DEFECTS IN TAIWAN
George YAO

0275 FUNCTIONALITY OF THE ARCHITECTURAL PROGRAM IN THE REMODELING OF EXISTING HOSPITALS IN SEISMIC ZONES OF VENEZUELA
Teresa GUEVARA, Yolanda ALVAREZ

0858 TOWARDS AN EARTHQUAKE ARCHITECTURE
Mark TAYLOR, Andrew CHARLESON

1112 TSUNAMI SIMULATION USING DYNAMIC GROUND DISPLACEMENT DUE TO SEISMIC FAULTING
Tatsuo OHMACHI, Hiroyuki MATSUMOTO, Hiroshi TSUKIYAMA

1298 DEVELOPMENT OF A PICTOGRAM SYSTEM FOR EARTHQUAKE AND TSUNAMI DISASTER REDUCTION
Kazanori URABE, Satoshi INOUE, Haruo HAYASHI, Satoshi TANAKA, Nobahisa DEKI, Haruhide YOSHIDA

1763 FIRE RESISTANCE OF SEISMIC JOINTS
Michael James, Andy Buchanan

1854 URBAN SPACE DESIGN AND SAFETY EVALUATION FROM THE VIEWPOINT OF EVACUATION BEHAVIOR OF USERS
Kimiro MEGURO, Masaya HARADA

1868 SEISMIC-RESISTANT ARCHITECTURE ON AN URBAN SCALE (A MORPHOLOGICAL ANSWER)
V Rodriguez, H Giuliani

2102 SEISMIC RISK ASSESSMENT AND MITIGATION OF TWO EXISTING HOSPITALS IN ITALY
Camillo NUTI, Ivo VANZI, Maurizio FERRINI

2108 ACCOUNTING FOR FIRE FOLLOWING EARTHQUAKES IN THE DEVELOPMENT OF PERFORMANCE BASED BUILDING CODES
John N ROBERTSON, James R MEHAFFEY

2140 TOWARD DEVELOPMENT OF A PREDICTIVE MODEL FOR DRIFT LIMITS IN ARCHITECTURAL GLASS UNDER SEISMIC LOADINGS
Richard BEHR, Ali MEMARI, Paul KREMER

2456 SEISMIC RESISTANT ARCHITECTURE: A THEORY FOR THE ARCHITECTURAL DESIGN OF BUILDINGS IN SEISMIC ZONES
Hugo GIULIANI

2462 THE DESIGN OF BUILDING SERVICES FOR EARTHQUAKE RESISTANCE
Graeme BEATTIE

2589 1994 NORTHRIDGE EARTHQUAKE: DAMAGE TO A FOUR-STORY STEEL BRACED FRAME BUILDING AND ITS SUBSEQUENT UPGRADE
Stacy Bartoletti, David Bonneville, Dominic Kelly

2590 UPDATING CORPORATE SEISMIC PROGRAMS IN RESPONSE TO RECENT CALIFORNIA EARTHQUAKES
Chris Poland

2591 SEISMIC RESPONSE, EVALUATION, AND RECONSTRUCTION OF THE DVA SEPULVEDA CAMPUS FOLLOWING THE 1994 NORTHRIDGE, CALIFORNIA, EARTHQUAKE
James Malley, Raymond Pugliesi, Jeffrey Soulages

2592 DISTINGUISHING BETWEEN EARTHQUAKE DAMAGE AND OTHER CONDITIONS
Terrence Paret, Kent Sasaki
11 OTHER TOPICS

2596 THE REPAIR OF EARTHQUAKE DAMAGED BUILDINGS

Robert Hanson, Craig Comartin