

Table of Contents

Bulletin of the New Zealand Society for Earthquake Engineering, June 2007, v.40, n.2	2
Canadian Journal of Civil Engineering, July 2007, v.34, n.7	3
Civil Engineering, September 2007, v.77, no. 9	4
Earthquake Spectra, August 2007, v.23, n.3	5
IEEE Technology and Society Magazine, Fall 2007, v.26, n.3	6
Journal of Intelligent Material Systems and Structures, September 2007, v.18, n.9	7
Seismological Research Letters, September/October 2007, v.78, n.5	8
The Structural Engineer, 21 August 2007, v.85, n.16	9
The Structural Engineer, 4 September 2007, v.85, n.17	10
Tsunami Newsletter, January-March 2007, v.39, n.1	11

Bulletin of the New Zealand Society for Earthquake Engineering

Volume 40

Number 2

June 2007

Articles

- 35 Experimental Development, Tradeoff Analysis and Design Implementation of High Force-to-Volume Damping Technology**
G.W. Rodgers, J.G. Chase, J.B. Mander, N.C. Leach, C.S. Denmead
- 49 Seismic strengthening of Columns by Adding New Concrete**
S.E. Dritsos
- 69 Proposed Macro-Model for the Analysis of Infilled Frame Structures**
F.J. Crisafulli, A.J. Carr
- 78 Letter to the Editor**
R.C. Fenwick
- 79 General Information**

Construction engineering

ARTICLES

Irem Dikmen, M. Talat Birgonul,
and Beliz Ozorhon 786–792

Rifat Sonmez 803–808

Thomas Froese, Zonghai Han,
and Michael Alldritt 817–829

Engineering materials

ARTICLES

Said Laldji and Arezki Tagnit-Hamou 793–802

H. El Naggar, E.N. Allouche,
and M.H. El Naggar 870–884

NOTE

H. El Naggar, E.N. Allouche,
and M.H. El Naggar 885–889

Hydrotechnical engineering

NOTE

A. El Amri et J.L. Verrette 890–894

Structural engineering

ARTICLES

Y. Liu and Q. Tang 777–785

S.S. Banik, H.P. Hong, and G.A. Kopp 830–842

Tae-Hoon Kim, Young-Jin Kim,
Hyeong-Taek Kang, and Hyun Mock Shin 843–855

Hong Liang, Terje Haukaas,
and Johannes O. Royset 856–869

Transportation engineering

ARTICLE

Sungho Mun, Dae Seung Cho,
and Tae Muk Choi 809–816

Ingénierie de la construction

ARTICLES

Project appraisal and selection using the analytic network process

Impact of occasional overtime on construction labor productivity: quantitative analysis

Study of information technology development for the Canadian construction industry

Matériaux d'ingénierie

ARTICLES

Glass frit for concrete structures: a new, alternative cementitious material

Development of a new class of precast concrete pipes — a numerical evaluation

NOTE

Development of a new class of precast concrete pipes — an experimental evaluation

Hydraulique

NOTE

Variations des efforts hydrodynamiques sur radiers horizontal et affouillé en aval d'un dissipateur d'énergie de type auge

Ingénierie des structures

ARTICLES

Web bearing resistance of W-shape beams framing over columns

Tornado hazard assessment for southern Ontario

Performance assessment of reinforced concrete bridge columns using a damage index

Reliability-based optimal design software for earthquake engineering applications

Ingénierie des transports

ARTICLE

Influence of pavement surface noise: the Korea Highway Corporation test road

CIVIL ENGINEERING

VOLUME 77

NUMBER 9

September 2007

FEATURES

- 48 Grand Inspiration**
Once ranked among the most impressive transportation structures in Europe, the main railway station in Dresden, Germany, was heavily damaged during World War II bombing raids. In the postwar period, nearly 40 years of poorly implemented repairs and inadequate maintenance only worsened the structure's problems. Now, a team of British and German architects and engineers has refurbished the station, capping the project with a 30,000 m² prestressed membrane roof that is significantly lighter than its predecessor. But the horizontal forces imposed by the new roof presented formidable design challenges.
By Robert L. Reid
- 56 Center Stage**
The First Regiment Armory Annex, in Portland, Oregon, has been transformed into a theatrical venue that preserves the structure's medieval exterior and old-growth timber roof trusses while making room belowground for an additional stage. The project preserved a community icon that is listed in the National Register of Historic Places and won a first-of-its-kind certification for environmental stewardship.
By Blake Patsy, P.E., S.E., Bryan Starr, P.E., S.E., and Josh Lighthipe, P.E.
- 64 Preparing the Civil Engineer of Tomorrow By 'Raising the Bar'**
Since 1998, when ASCE's Board of Direction adopted Policy 465, which "supports the attainment of a body of knowledge for entry into the practice of civil engineering at the professional level," the Society has aggressively advocated elevating educational standards for engineers. Through the work of its Committee on the Academic Prerequisites for Professional Practice (CAP³), ASCE has sought to develop the body of knowledge required for entry into civil engineering practice at the professional level. In January 2004 the Body of Knowledge Committee, a group set up by CAP³, published the report *Civil Engineering Body of Knowledge for the 21st Century: Preparing the Civil Engineer for the Future*. In response to the expanding use of this document by various stakeholders and to questions that have been raised and suggestions that have been offered, CAP³ formed a new committee in late 2005—known formally as the Second Edition of the Body of Knowledge Committee. This second committee has refined the body of knowledge and is now seeking comments on its draft. This article is a distillation of the draft of the revised body of knowledge and was prepared by the new committee.
- 72 When Less Is More**
If desalination of brackish water is to continue to help meet the growing demand for drinking water, new technologies will be needed that enhance the amount of water recovered during treatment and minimize the resulting concentrate. Fortunately, a number of emerging technologies show promise for doing just that.
By Sandeep Sethi, Ph.D., P.E., Pei Xu, Ph.D., and Jörg Drewes, Ph.D.

DEPARTMENTS

12	Civil Engineering News	44	History Lesson
8	Letters	47	Editor's Note
10	Policy Briefing	76	Books
42	Technology	100	The Law

EARTHQUAKE SPECTRA

Volume 23

Number 3

August 2007

Contents

Earthquake Engineering Practice

- 493 Update to ASCE/SEI 41 Concrete Provisions
Kenneth J. Elwood, Adolfo B. Matamoros, John W. Wallace, Dawn E. Lehman, Jon A. Heintz, Andrew D. Mitchell, Mark A. Moore, Michael T. Valley, Laura N. Lowes, Craig D. Comartin, and Jack P. Moehle

Manuscripts

- 525 Forecasting Probabilistic Seismic Shaking for Greater Tokyo from 400 Years of Intensity Observations
Serkan B. Bozkurt, Ross S. Stein, and Shinji Toda
- 547 A Seismic Design Lateral Force Distribution Based on Inelastic State of Structures
Shih-Ho Chao, Subhash C. Geol, and Soon-Sik Lee
- 571 Elasto-Plastic Model of a Seismic Energy—Dissipating Device
Ricardo Chicurel
- 585 Ground Motion Attenuation Model for Peak Horizontal Acceleration from Shallow Crustal Earthquakes
Vladimir Graizer and Erol Kalkan
- 615 Analytical Seismic Fragility Curves for Typical Bridges in the Central and Southeastern United States
Bryant G. Nielson and Reginald DesRoches
- 635 Seismic Strengthening of Reinforced-Concrete Multicolumn Bridge Piers
Chris P. Pantelides, Jeffrey B. Duffin, and Lawrence D. Reaveley
- 665 A New Approach to Estimate a Mixed Model—Based Ground Motion Prediction Equation
Behrooz Tavakoli and Shahram Pezeshk
- 685 Performance-Based Optimization Considering Both Structural and Nonstructural Components
Hugo A Rojas, Shahram Pezeshk, and Christopher M. Foley
- 711 Shallow *P*- and *S*-Wave Velocities and Site Resonances in the St. Louis Region, Missouri-Illinois
Robert A. Williams, Jack K. Odum, William J. Stephenson, and Robert B. Herrmann

Discussion

- 727 Discussion of "Istanbul at the Threshold: An Evaluation of the Seismic Risk in Istanbul"
Mustafa Erdik
- 731 Response to M. Erdik's Discussion of "Istanbul at the Threshold: An Evaluation of the Seismic Risk in Istanbul"
Jacob H. Pyper Griffiths, Ayhan Irfanoglu, and Santiago Pujol

IEEE Technology and Society Magazine

Volume 26

Number 3

Fall 2007

Contents

Special Issue: ISTAS '06 – Disaster Preparedness and Recovery
Guest Editor: Roberta Brody

Departments

- 3 Call for Papers – ISTAS '08
- 4 President's Message
- 5 Engineering Ethics
- 6 Living with Technology
- 7 News
- 8 Letter
- 9 Book Review
- 11 Guest Editor's Introduction

Special Issue Features

- 13 Devising Post-Disaster Continuity Plans that Meet Actual Recovery Needs*
Timothy J. Cousins
- 24 Engineering Disaster Relief*
Eng Seng Chia
- 30 Vulnerability Reduction through Local Seismic Culture*
Faye S. Karababa and Peter M. Guthrie
- 42 We've Got to Talk: Emergency Communications and Engineering Ethics*
Karl D. Stephan

Feature

- 49 Information Technology Access: Cybercafé Diffusion in Sub-Saharan Africa*
Victor W.A. Mbarika, Muhammadou Kah, Kibily Samake, and Jeffrey G. Sumrall

*Refereed articles.

Journal of Intelligent Material Systems and Structures

Volume 18

Number 9

September 2007

Contents

- 893 Modeling of Progressive Damage in the Adhesive Bond Layers of Actuated Plates
D. H. Robbins, Jr and I. Chopra
- 923 Dead Load Based Damage Identification Method for Long-term Structural Health Monitoring
X. Hu and H. W. Shenton III
- 939 Distributed Modal Sensors for Rectangular Plate Structures
K. Jian and M. I. Friswell
- 949 Comparison of Plain Piezoceramics and Inter-digital Transducer for Crack Detection in Plates
S. T. Quek, P. S. Tua and J. Jin
- 963 Numerical Stress Investigation for Piezoelectric Elements with a Circular Cross Section and Interdigitated Electrodes
R. Paradies and M. Melnykowycz
- 973 Hysteretic Behavior of Magnetorheological Fluid and Identification Using Preisach Model
Y.-M. Han, S.-B. Choi and N. M. Wereley
- 983 Micromechanical Modeling of Switching Effects in Piezoelectric Materials – A Robust Coupled Finite Element Approach
A. Arockiarajan, A. Menzel, B. Delibas and W. Seemann

SEISMOLOGICAL RESEARCH LETTERS

Volume 78, Number 5

September/October 2007

ARTICLES

-
- North Korea's Nuclear Test: The Capability for Seismic Monitoring of the North Korean Test Site*** 487
Tormod Kværna, Frode Ringdal, and Ulf Baadshaug
-
- The Sudanese Seismic Network*** 498
Abd Alhadi Ibrahim Alhassan, Amani Elkhidir Belail, Hatim Siddig Hag Elbashir, Indira Abdel Rahman Mohamed, Mustafa Bashir Mohammed, Nada Bushra Eltahir, and Jens Havskov
-
- A Strong-Motion Network in the Lower Rhine Embayment (SeFoNiB), Germany*** 502
Klaus-G. Hinzen and C. Fleischer
-
- Liquefaction beyond the Near Field*** 512
Chi-Yuen Wang
-
- 2007 SSA Annual Meeting Report*** 521
- Annual Meeting Minutes
 - Harry Fielding Reid Medal Citation and Response
 - Distinguished Service Award Citation
 - Charles F. Richter Early Career Award Citation
 - Student Presentation Awards
 - Minutes of the Board of Directors Meeting
 - Secretary's Report
 - Treasurer's Report
 - Auditor's Report
-
- SSA 2008 Meeting Announcement*** 550

EASTERN SECTION
SEISMOLOGICAL
RESEARCH LETTERS

-
- Shallow Seismicity in Stable Continental Regions*** 554
Christian D. Klose and Leonardo Seeber
-
- Eastern Section Meeting Announcement*** 563

THE STRUCTURAL ENGINEER

Volume 85

Number 16

August 21, 2007

Structural news	5
eurocodes briefing Bridge design	13
research update Pontoon-type very large floating structures	15
viewpoint Marketing unmasked Part 2	18
academic study Commonwealth scholarships	21
Verulam	26
paper Bridge engineering: turning problems into possibilities <i>N. Burdette BS (Civ Eng), MS (Struct Eng)</i>	28
paper The appeal of bridge engineering <i>K. Hoang (MA (Cantab))</i>	31
Products & services	36

THE STRUCTURAL ENGINEER

Volume 85

Number 17

September 4, 2007

Structural news	5
report Technician Engineer, IStructE's new grade	15
project Tippet SEN school, Lambeth	20
project Cumbria school's new eco-centre	24
technical update EC5: using the new code	27
project Logging natural history	32
Verulam	34
paper Timber cantilevered staircases <i>P. Begg, BSc, MSc, CEng, MICE, FCI Arb</i>	36
Diary	42
Products & services	45
Standard news	47

TSUNAMI NEWSLETTER

Volume 39

Number 1

January-March 2007

TABLE OF CONTENTS

Cover Story

1, 18-20 Japan Study Tour Wakayama

2 **Events - Summary of Earthquakes**

3-6 15 January, Kuril Islands

6-7 21 January, Molucca Sea

7 25 March, Vanuatu

8-9 25 March, Kanazawa Japan

IOC News

9 IOTWS IV, Kenya, March 2007

10-11 JTIC Website

ICG/PTWS News

11-12 PTWS XXI to be held in Ecuador, August 2007

12-15 PTWS Warning Coordination Meeting, Honolulu, January 2007

ITIC-PTWC News

15-17 PTWC website updated

17 TTT software distributed to governments

Workshop and Meeting Summaries

17 US National Tsunami Hazard Mitigation Program, Seattle, March 2007