

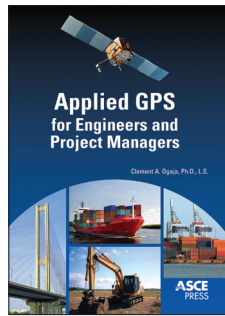
## HIGHLIGHTS

### APPLIED GPS FOR ENGINEERS AND PROJECT MANAGERS

*Clement A. Ogaja*

Oct 2011 256pp

978-0-7844-1150-6 Paperback £68.95 / €75.00



Introduces civil engineers - especially those who are not already licensed surveyors - to the fundamental principles of global positioning technology (GPS). This book covers GPS basics, including positioning and measuring principles, techniques to improve accuracy, and an analysis of low-cost versus high-precision systems. Subsequent chapters explain the considerations for selecting and implementing a GPS system and then demonstrate specific applications of GPS in a variety of engineering situations, including monitoring the health of structures, robotics and machine control, maritime operations, material tracking in large construction sites, site control and design, and monitoring geohazards.

ASCE Press

### Coming Soon

### BLAST PROTECTION OF BUILDINGS

Dec 2011 128pp

978-0-7844-1188-9 Paperback £110.00 / €120.00

Standard ASCE/SEI 59-11



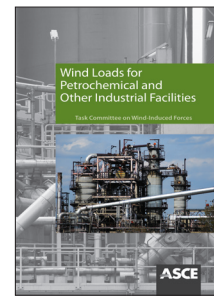
Provides minimum requirements for planning, design, construction, and assessment of new and existing buildings subject to the effects of accidental or malicious explosions. The Standard includes principles for establishing appropriate threat parameters, levels of protection, loadings, analysis methodologies, materials, detailing, and test procedures. It provides a comprehensive presentation of current practice in the analysis and design of structures for blast resistance. Commentaries on the requirements are also included. The Standard supplements existing building codes, standards, and laws, but is not intended to replace them.

### WIND LOADS FOR PETROCHEMICAL AND OTHER INDUSTRIAL FACILITIES

*Task Committee on Wind-Induced Forces of the Petrochemical Committee*

Oct 2011 176pp

978-0-7844-1180-3 Paperback £77.50 / €85.00



Provides state-of-the-practice guidelines for the computation of wind-induced forces on industrial facilities with structural features outside the scope of current codes and standards. Without adequate standards, companies and their engineers developed techniques to calculate the wind loads for their facilities. The result is a wide variation in practice and inconsistent structural reliability. To encourage uniform wind load calculations, this report first reviews existing design practices for pipe racks and bridges, open and partially clad frame structures, vessels, tanks, steel stacks, cooling towers, and air coolers. Then, recommended guidelines are presented for design methods and the analytical determination of wind loads. Worked calculations for six example situations are included to illustrate the application of the recommended guidelines.

### CORS AND OPUS FOR ENGINEERS

*Tools for Surveying and Mapping*

*Edited by Tomas Soler*

Aug 2011 186pp

978-0-7844-1164-3 Paperback £77.50 / €85.00

Describes new global positioning system (GPS) technologies and procedures that are immediately relevant to civil engineering professionals engaged in high-accuracy positioning. This collection of 22 articles, half new and half previously published in peer-reviewed journals, assembles the latest thinking on the use of two advanced services-CORS and OPUS-for obtaining accurate positional coordinates.

### DESIGN GUIDE FOR FRP COMPOSITE CONNECTIONS

*Edited by Ayman S. Mosallam*

Aug 2011 624pp

978-0-7844-0612-0 Paperback £155.00 / €170.00

Manual of Practice 102

Covers major issues related to the analysis and design of composite joints and frame connections manufactured from fibre-reinforced polymer (FRP) composites in general and pultruded (PFRP) composites in particular. MOP 102 addresses issues that are lacking in other national and international standards, design manuals, and technical publications. It will be valuable to structural engineers designing with FRP or PFRP composites.

### GEOTECHNICAL CHARACTERIZATION, FIELD MEASUREMENT, AND LABORATORY TESTING OF MUNICIPAL SOLID WASTE

*Edited by Dimitrios Zekkos*

Feb 2011 248pp

978-0-7844-1146-9 Paperback £64.50 / €71.00

Geotechnical Special Publications 209

Integrates current knowledge of the properties of municipal solid waste and the challenges it presents with adequate guidance for researchers and practitioners who work directly with issues related to waste behaviour. This collection broadens understanding of waste mechanics and improves waste disposal practices both domestically and internationally.

### GROUNDWATER QUANTITY AND QUALITY MANAGEMENT

*Edited by Mustafa M. Aral & Stewart W. Taylor*

Aug 2011 592pp

978-0-7844-1176-6 Paperback £94.50 / €105.00

Presents the best of current thinking on managing groundwater resources, focusing on the interrelationship between quantity and quality. Groundwater is an essential resource, yet it is subject to overuse and contamination. Effective management of groundwater is imperative to ensure continued access to clean, accessible, and plentiful water supplies. This volume presents state-of-the-art essays on modelling groundwater flow and solute transport for purposes of forecasting; developing groundwater resources with consideration of groundwater-surface water interaction and saltwater intrusion; and remediating groundwater resources by physical, chemical, and biological means.

### GUIDELINES FOR SEISMIC EVALUATION AND DESIGN OF PETROCHEMICAL FACILITIES

*Task Committee on Seismic Evaluation and Design*

Jan 2011 372pp

978-0-7844-1140-7 Paperback £94.50 / €105.00

Offers practical recommendations regarding the design and safety of petrochemical facilities during and following an earthquake. For new facilities, the recommendations focus on interpreting of the intent of building codes as applied to petrochemical facilities; the report also gives practical guidance on design details and considerations that are not included in building codes. For existing facilities, the guidelines offer evaluation methodologies that rely heavily on experience from past earthquakes, coupled with focused analyses.

### GUIDELINES FOR THE PHYSICAL SECURITY OF WATER UTILITIES (56-10) AND GUIDELINES FOR THE PHYSICAL SECURITY OF WASTEWATER/STORMWATER UTILITIES (57-10)

May 2011 126pp

978-0-7844-1126-1 Paperback £110.00 / €120.00

Standards ASCE/EWRI 56-10 & 57-10

Offers guidelines that apply to the physical security of facilities with potable water source, treatment, and distribution systems, as well as with wastewater collection and treatment systems and storm water systems. Taken together, these standards can provide direction for utilities as they design or retrofit their infrastructure to ensure the physical security of water and wastewater/storm water systems.

### INDO-U.S. FORENSIC PRACTICES

*Investigation Techniques and Technology*

*Edited by Shen-en Chen*

May 2011 166pp

978-0-7844-1149-0 Paperback £55.95 / €61.00

Contains 13 papers exemplifying the international collaboration between India and the United States to improve the quality and safety of constructed facilities. Even though cultural and judicial frameworks can differ widely, the needs for professionalism and technical accuracy in forensic engineering investigations remains universal. These papers promote the exchange of technical information and case studies between engineers in the United States and India.

### MORAY

*Inca Engineering Mystery*

*Kenneth R. Wright et al*

Jun 2011 228pp

978-0-7844-1079-0 Paperback £50.95 / €56.00

Halfway between Machu Picchu and the city of Cuzco, Peru, lies a civil engineering wonder that has captivated and puzzled researchers and travellers since it was first photographed in 1931. Situated on a plateau, the ancient Inca site of Moray consists of many terraced circular depressions in the earth, the largest of which is 30 metres (98 feet) deep. *Moray: Inca Engineering Mystery* reports the results of an exhaustive investigation into the surveying work underlying the site's construction, as well as the engineered systems for collecting and delivering water.

### MULTIDISCIPLINARY ASSESSMENT OF CRITICAL FACILITY RESPONSE TO NATURAL DISASTERS

*The Case of Hurricane Katrina*

*Edited by Adam W. Hapig*

May 2011 124pp

978-0-7844-1134-6 Paperback £51.50 / €57.00

Assesses the performance of essential buildings in New Orleans during and after Hurricane Katrina. Essential buildings are expected to be minimally damaged and remain operational during extreme events, yet of five facilities inspected, only one performed successfully as a storm shelter during Hurricane Katrina. This report presents the findings of a team from ASCE's Architectural Engineering Institute whose members examined five facilities in New Orleans.

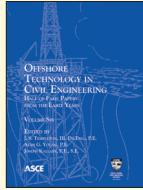
## OFFSHORE TECHNOLOGY IN CIVIL ENGINEERING, VOLUME 6

Hall of Fame Papers from the Early Years

Edited by J.S. Templeton et al

May 2011 104pp

978-0-7844-1178-0 Paperback £64.50 / €71.00



This series presents classic papers from the early years of the Offshore Technology Conference (OTC), the world's leading event for the development of offshore resources in the fields of exploration, drilling, production, and environmental protection. Since the OTC began in 1969, some of the civil engineering papers presented there have provided innovation in, vision for, and lasting impact on the design, construction, or installation of offshore infrastructure. Many papers have been adopted by design standards worldwide or have become an integral part of design software. Others have had influence far beyond the offshore industry, and some have become integral to the design process of onshore structures such as buildings and bridges.

Coming Soon

## PUBLIC-PRIVATE PARTNERSHIPS

Case Studies on Infrastructure Development

Sidney M. Levy

Nov 2011 416pp

978-0-7844-1013-4 Hardback £105.00 / €115.00



Sidney Levy brings a balanced perspective to the history and development of the PPP movement. He outlines different approaches to defining and planning a PPP, supplemented by a history of PPP toll roads in the United States. He describes the key players in a PPP deal and provides case studies of the projects in Virginia, Illinois, Florida, Canada, and Mexico.

This compendium is essential reading for civil engineers, engineering managers, construction contractors, developers, and government officials involved in or contemplating a major infrastructure project.

ASCE Press

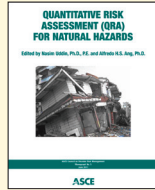
## QUANTITATIVE RISK ASSESSMENT FOR NATURAL HAZARDS

Edited by Nasim Uddin & Alfred H.S. Ang

Oct 2011 84pp

978-0-7844-1153-7 Paperback £42.50 / €46.00

CDRM Monographs 5



Explains the practical aspects of using quantitative risk assessment (QRA) to develop optimal engineering designs that mitigate the effects of natural hazards, especially on civil infrastructure. Risk analysis of any asset cannot be considered complete without consideration of natural hazards. QRA involves determining the probability of a hazard occurring and estimating the consequences. This monograph demonstrates methods for calculating the vulnerability of infrastructure assets to the common natural hazards—earthquakes, hurricanes, tornadoes, and floods—as well as less-frequent events, such as ice storms, extreme cold, wildfires, avalanches, landslides, mud slides, and tsunamis.

## SEDIMENT DYNAMICS UPON DAM REMOVAL

Athanasios N. Papanicolaou & Brian D. Barkdoll

May 2011 192pp

978-0-7844-1136-0 Paperback £110.00 / €120.00

Manual of Practice 122

Provides guidance, documentation, and field results for the numerical and physical modelling of sediment movement when dams are removed from waterways. Dams alter ecology, block fish passage, increase downstream scour, and displace residents. As awareness grows regarding the adverse environmental impacts of dams on ecosystems and fish populations, interest in dam removal is gaining momentum. However, the impounded sediment collected behind many dams poses another set of environmental and technical problems. This manual addresses issues such as the behaviour of stored sediment and overall stream geomorphology after a dam is removed.

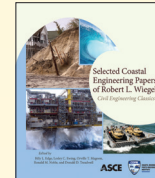
## SELECTED COASTAL ENGINEERING PAPERS OF ROBERT L. WIEGEL

Civil Engineering Classics

Edited by Billy L. Edge et al

Oct 2011 936pp

978-0-7844-1191-9 Paperback £125.00 / €140.00



The papers selected for this volume, in consultation with Professor Wiegel, offer a sampling of the breadth and depth of his work and form a tribute to his long-lasting accomplishments. Presented in chronological order, these papers trace the evolution of not only his career, but of coastal engineering itself. Coastal engineers—but also engineers working with wind, water, structures, and sedimentation issues—continue to benefit from Wiegel's generosity as a researcher, colleague, and teacher.

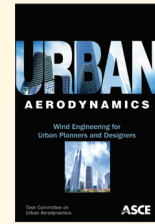
## URBAN AERODYNAMICS

Wind Engineering for Urban Planners and Designers

Task Committee on Urban Aerodynamics

Oct 2011 76pp

978-0-7844-1179-7 Paperback £47.50 / €51.50



Introduces the basic tools and technology used by engineers to determine the effects of wind on city streets and structures. Familiarity with the fundamentals of urban aerodynamics offers many advantages to city planners and urban designers, most especially the opportunity to incorporate quantitative techniques into the design and development process. This volume traces the historical development of wind engineering techniques leading up to today's use of boundary layer wind tunnel studies and computational fluid dynamics assessments.

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