Preface

The joint conference of 2012 Global Conference on Civil, Structural and Environmental

Engineering and the 3rd International Symposium on Multi-field Coupling Theory of Rock

and Soil Media and Its Applications was taken place in Yichang, China, in October, 2012. The

combined conference is organized by China Three Gorges University, Geoenviornmental

Engineering Branch of Chinese Society for Rock Mechanics and Engineering, The Ground

Rock Engineering Committee of Chinese Society for Rock mechanics and Engineering, The

Fluid Mechanics Committee of the Chinese Society of Mechanics, and Hubei Society for

Rock Mechanics & Engineering. The aim of the conference is to create a venue where

researchers from around the world can reflect on progress made in the scientific study in civil

and environment field.

All papers included in this book have been peer reviewed through processes administered by

the scientific committee before accepted for publication. These papers recorded valuable

explorations of the authors in relative fields of environmental chemistry, biology and

technology, environmental analysis: planning, management and assessment, environmental

cleaner production, pollution control and ecological restoration, waste disposal and recycling,

hydrology and water resources engineering, soil and water conservation and desertification

control, ecological and environmental protection, land resources environment and planning.

We are grateful to all the authors, referees and organizations who have made these volumes

possible and hope that it becomes an invaluable reference both for the civil and environmental

engineering profession.

The editors

The 2012 Global Conference on Civil, Structural and Environmental Engineering

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The 3rd International Symposium on Multi-field Coupling Theory of Rock and Soil Media and Its Applications

Organized by:

China Three Gorges University

Geoenviornmental Engineering Branch, Chinese Society for Rock Mechanics and Engineering

The Ground Rock Engineering Committee, Chinese Society for Rock mechanics and Engineering

The Fluid Mechanics Committee of the Chinese Society of Mechanics

The Hubei Society for Rock Mechanics & Engineering

Hosted by:

China Three Gorges University

Key Laboratory of Geological Hazards on Three Gorges Reservoir Area,

Ministry of Education

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Southwest Petroleum University

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