

## Call for papers for a special monograph on the topic of **Levees and Dams: Advances in Geophysical Monitoring and Characterization**

This **peer-reviewed volume** will inform policy-makers, engineers and earth scientists about the current and emerging role of **geophysics** in addressing environmental processes, assessments, and policy directions related to **new and existing dams and levees**.

Until recently, much of the focus of geophysicists has been confined to characterization and remediation without consideration of the complex relationship between natural processes (e.g., floods) and human activities associated with the design and ongoing dependence on these structures. It is important to **enhance communications** between **geoscientists, engineers, and policy makers** to improve the way in which these structures are managed.

Over time, unexpected changes in the physical properties of these man-made structures may or may not compromise their integrity, and such questions require creative (and preferably non-invasive) assessment approaches. Monitoring and remediation of existing structures can be challenging because often, failures are a smaller scale and recertification procedures at a larger scale than envisaged during construction or planning. New, efficient, risk-management approaches may benefit greatly from geophysical methods that can address these scaling issues.

We encourage **innovative** and **substantiated** geophysics-related ideas. Potential topics include but are not limited to placement of geophysical tools within the management policies of levees and dams, small and mid-sized laboratory experimental approaches, field characterization studies using electromagnetic, seismic, potential methods and integrated methods, inverse modeling, regional overviews as conditioned by climatic zones, statistical analyses and tools for improved management processes such as age-strengthening or weakening of structures, as well as monitoring of important processes such as piping, fluid flow.

We expect the monograph to include **10-20 book chapters**, each about **8-20 printed pages** in length, containing color and/or B&W color figures and tables.

**Timetable:** Submission deadline: **October 1, 2016**; Reviews and final manuscript: **April 1, 2017** Expected publication: **October, 2017**.

For suggestions with manuscript preparation please see [Springer submission guidelines](#). Upon submission of manuscript (e-mail) please include the contact information for four potential reviewers.

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