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FOURTH INTERNATIONAL CONFERENCE ON GEOMORPHOLOGY - Italy 1997
28th Binghamton Symposium

Convenors: J.R. GIARDINO (**) & R.A. MARSTON (*)

CHANGING THE FACE OF THE EARTH: ENGINEERING GEOMORPHOLOGY

The 28th Annual Binghamton Symposium was held in conjunction with the 4th International Conference on Geomorphology at the University of Bologna in Italy, 29-30 August 1997. Organized by J.R. Giardino, R.A. Marston and the late Marie Morisawa, the basic theme of the Symposium was to address the contributions and challenges of engineering geomorphology. The symposium focused on past accomplishments, current opportunities and future directions in the role of geomorphologists and engineers in addressing resource management problems. A diverse group of invited speakers provided an international perspective on concepts and techniques in engineering geomorphology in fluvial, hillslope, arid, perigiacial, glacial, tropical coastal, and urban environments. Elsevier will publish a volume in 1998 with 20 manuscripts (the speakers plus additional invited papers), and the papers will also appear in Geomorphology.

Rather, than discuss the details of all the papers, we take this opportunity to stress the larger overall message the symposium delivered. A number of common themes seemed to come out of the wide-ranging discussion of the challenges and opportunities for geomorphologists involved in real-world management problems with a strong engineering component.

1. Speakers addressing work done in ali types of geomorphic environments showed how a science-based understanding of geomorphic processes and boundary conditions provides a critical part of the information required to come up with an appropriate, cost-effective approach to resource management.
2. Given #1, there are many important and exciting new research directions geomorphologisits could be pursuing to provide the information necessary for wise resource management.
3. Geomorphologists and engineers often approach problems differently, each with preconceived notions and standard approaches that may or may not be appropriate in a specific case.
4. Collaborative work across the disciplinary boundary has frustrations, but often yields solutions and insights that neither side would have come up with individually.
5. Geomorphologists main contributions include a good understanding of processes, spatial and temporal scale and variability, and interactions between people and processes. Their common failings include a lack of understanding of regulatory and decision making processes, and a tendency to suggest solutions that are great in theory but unworkable in practical terms. However, there are good examples of geomorphologists taking active roles in the development of new regulatory approaches.

Overall, this was an excellent and inspiring symposium that will hopefully serve to focus attention on both research and applied work in the critical area of engineering geomorphology.

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