

Forensic Engineering 2015

Performance of the
Built Environment



EDITED BY

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Michael P. Lester, P.E.

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FORENSIC ENGINEERING 2015

Performance of the Built Environment

PROCEEDINGS OF THE SEVENTH CONGRESS ON FORENSIC
ENGINEERING

November 15-18, 2015
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Forensic Engineering Division
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Preface

Forensic Engineering 2015: Performance of The Built Environment is a collection of 89 peer-reviewed technical papers presented at the 7th Congress on Forensic Engineering, sponsored by the Forensic Engineering Division (FED) of the American Society of Civil Engineers (ASCE). The Congress was held from November 15 to 18, 2015, at the Hilton Miami Downtown Hotel in Miami, Florida. The goals of the Congress were to provide a forum for the development of practices and procedures to reduce the number of failures, to disseminate information on failures, and to promote the development of guidelines for conducting failure investigations and for ethical conduct. Failures are not all catastrophic, such as when a building or bridge collapses, but also include structures and components that do not perform as intended. The congress included topics of local interest, such as presentations in hurricane damage assessment, special sessions on the new ACI Code Requirements for Evaluation, Repair, and Rehabilitation of Concrete Buildings, and on the practices of forensic engineering in Latin America.

Workshops were also held on Sunday, November 15 prior to the official start of the Congress. There were a total of three workshops, two half-day and one full-day. The half-day workshops were: Standard of Care, presented by Joshua B. Kardon, Ph.D., P.E., F.ASCE in the morning, and Investigation of Hurricane Damage: Wind vs. Water hosted by David Peraza, P.E., M.ASCE in the afternoon. The full day workshop was The Practice of Forensic Engineering, presented by Clemens J. Rossell, P.E., M.ASCE, Ronald W. Anthony, Aff.M.ASCE, Leonard J Morse-Fortier, P.E., M.ASCE, James Cohen, P.E., M.ASCE, and Kimball J. Beasley, P.E., F.ASCE.

The Congress opened with a featured keynote presentation by renowned author James R. Chiles titled MINE THE ICE: SYSTEM FRACTURES AND THE IMMINENT CATASTROPHIC EVENT. Mr. Chiles has been writing about science and history since 1979, and lecturing since 2001. Among his published works, "Inviting Disaster: Lessons from the Edge of Technology"(HarperCollins), his first book, and "The God Machine, a social history of helicopters" (Bantam Dell). Mr. Chiles was the featured commentator for a four-part History Channel television series based on his book, and also appeared in History's Life After People and National Geographic Channel's Seconds from Disaster series. He has been interviewed on National Public Radio, CBS-TV, Coast to Coast AM, and Voice of America.

In addition to the presented papers, the Congress also included panel discussions, technical tours, a welcoming reception, an awards luncheon, an Order of the Engineer ceremony, committee meetings, and exhibits. Last but not least, a student paper competition was held that included poster presentations from a number of our future professional forensic engineers.

It has been our pleasure and privilege to be part of this Congress. Happy reading!

Alicia E. Díaz de León, P.E., S.E., AIA, M.ASCE
Proceedings Editor-In-Chief

Clemens J. Rossell, P.E., M.ASCE
The Boeing Company
Congress Chair

Acknowledgments

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