

## 建築・防災の先端技術と伝統技術の確立を目指して

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**要旨:** 建築物の地震防災に関連して行ってきた建築構造物の耐震安全性を評価する耐震信頼性解析法, 制震構造システムの開発や構造物の健全度を調べるヘルスマonitoringの研究について述べる。また阪神・淡路大震災以後に取り組んだ伝統構法木造建築物の耐震設計法や耐震補強法の開発, 歴史的・文化財的建築物の耐震補強と保存修復の技術開発に関する研究について述べる。前半は, 確率微分方程式を駆使した先端的な信頼性理論や制御理論に基づく手法・技術の開発であり, 後半は, 木造建築物における伝統技術の科学的な解明を目指した研究である。

**キーワード:** 確率微分方程式, 耐震信頼性, 木造建築物, 伝統技術

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## With the Aim for Establishing Advanced and Traditional Technologies in Architecture and Disaster Prevention

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**Synopsis:** The present paper describes my research works in association with earthquake disaster prevention of buildings. First, analytical methods of seismic reliability evaluating the seismic safety of buildings and the development of structural control systems and structural health monitoring are presented. My research works after Great Hanshin-Awaji Earthquake are also described, particularly on seismic design methods and seismic reinforcement methods of traditional wooden buildings and the development of seismic reinforcement and restoration techniques for historical and cultural buildings. In the former topics, advanced technologies of reliability and control theories using stochastic differential equations are developed. In the latter topics, traditional technologies included in wooden buildings are clarified scientifically.

**Keyword:** stochastic differential equation, seismic reliability, wooden building, traditional technology