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   Nota di contenuto Sensitivity Analysis on Migration Parameters of Parallel Harmony Search
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                     Particle Swarm Optimization and its Application in Constrained
                     Engineering Problems -- Metaheuristic based Optimization for Tuned
                     Mass Dampers using Frequency Domain Responses.

   Sommario/riassunto This book presents state-of-the-art technical contributions based
                     around one of the most successful evolutionary optimization
                     algorithms published to date: Harmony Search. Contributions span
                     from novel technical derivations of this algorithm to applications in the
                     broad fields of civil engineering, energy, transportation & mobility and
                     health, among many others and focus not only on its cross-domain
                     applicability, but also on its core evolutionary operators, including
                     elements inspired from other meta-heuristics. The global scientific
                     community is witnessing an upsurge in groundbreaking, new advances

in all areas of computational intelligence, with a particular flurry of research focusing on evolutionary computation and bio-inspired optimization. Observed processes in nature and sociology have provided the basis for innovative algorithmic developments aimed at leveraging the inherent capability to adapt characterized by various animals, including ants, fireflies, wolves and humans. However, it is the behavioral patterns observed in music composition that motivated the advent of the Harmony Search algorithm, a meta-heuristic optimization algorithm that over the last decade has been shown to dominate other solvers in a plethora of application scenarios. The book consists of a selection of the best contributions presented at ICHSA, a major biannual event where leading global experts on meta-heuristic optimization present their latest findings and discuss the past, present, and future of the exciting field of Harmony Search optimization. It provides a valuable reference resource for researchersworking in the field of optimization meta-heuristics, and a solid technical base for frontline investigations around this algorithm.