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Titolo	Dynamics of Gambling: Origins of Randomness in Mechanical Systems [[electronic resource] /] / by Jaroslaw Strzalko, Juliusz Grabski, Przemyslaw Perlikowski, Andrzej Stefanski, Tomasz Kapitaniak
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Disciplina	530.15923
Soggetti	Mathematical physics Vibration Dynamical systems Dynamics Mechanics Ergodic theory Statistics Game theory Theoretical, Mathematical and Computational Physics Vibration, Dynamical Systems, Control Classical Mechanics Dynamical Systems and Ergodic Theory Statistics for Engineering, Physics, Computer Science, Chemistry and Earth Sciences Game Theory, Economics, Social and Behav. Sciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Predictability in deterministic and random dynamical systems -- Mechanical randomizers - history, type of games, how fair they are -- Dynamical models -- Simulation results -- Why are mechanical randomizers predictable? -- Why can mechanical

randomizers approximate random processes?- Nature of randomness in mechanical systems.

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## Sommario/riassunto

This monograph presents a concise discussion of the dynamics of mechanical randomizers (coin tossing, die throw and roulette). The authors derive the equations of motion, also describing collisions and body contacts. It is shown and emphasized that, from the dynamical point of view, outcomes are predictable, i.e. if an experienced player can reproduce initial conditions with a small finite uncertainty, there is a good chance that the desired final state will be obtained. Finally, readers learn why mechanical randomizers can approximate random processes and benefit from a discussion of the nature of randomness in mechanical systems. In summary, the book not only provides a general analysis of random effects in mechanical (engineering) systems, but addresses deep questions concerning the nature of randomness, and gives potentially useful tips for gamblers and the gaming industry.

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