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Titolo	Synergetics and Fractals in Tribology / / by Ahad Kh Janahmadov, Maksim Y Javadov
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ISBN	3-319-28189-5
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (391 p.)
Collana	Materials Forming, Machining and Tribology, , 2195-0911
Disciplina	621.89
Soggetti	Statistical physics Dynamical systems Tribology Corrosion and anti-corrosives Coatings Machinery Complex Systems Tribology, Corrosion and Coatings Machinery and Machine Elements Statistical Physics and Dynamical Systems
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Key Features and Operating Conditions of Tribocontacts -- Scientific Foundations of Stochastic Tribomodeling -- Synergetic Model of Fracture and Mechanics of Fatigue Cracks During Friction -- Fractal Kinetics of Fracture -- Multifractal Analysis of Fatigue Failure -- Fractal Analysis of Fatigue Failure of Kinematic Pair (Oil-Gas X-Mas Tree Valve) -- Fractal Fatigue Analysis of Valved Units of Submersible Pumps -- Flicker-Noise Spectroscopy (Fns) of Dynamics Sygnals and Its Application In Wear of Oil-Field Compressor Units (ofcu).
Sommario/riassunto	This book examines the theoretical and practical aspects of tribological process using synergy, fractal and multifractal methods, and the fractal and multifractal models of self-similar tribosystems developed on their basis. It provides a comprehensive analysis of their effectiveness, and also considers the method of flicker noise spectroscopy with detailed

parameterization of surface roughness friction. All models, problems and solutions are taken and tested on the set of real-life examples of oil-gas industry. The book is intended for researchers, graduate students and engineers specialising in the field of tribology, and also for senior students of technical colleges.