

Table of contents

<b>Preface</b>	3
<b>Table of contents</b>	5
<b>S. Arwade</b> , <i>Pattern recognition and statistical learning in stochastic mechanics.</i>	7
<b>G. A. Athanassoulis, I.-S. C. Tsantili, and T.P. Sapsis</b> , <i>Generalized FPK equations for non-linear dynamical systems under general stochastic excitation.</i>	9
<b>C. Bucher</b> , <i>Solution of the first passage problem by asymptotic sampling.</i>	11
<b>M. F. Dimentberg</b> , <i>Stochastic rotordynamics: direct and inverse problems.</i>	13
<b>M. Di Paola</b> , <i>Fractional calculus and path integral method for nonlinear systems under white noise processes.</i>	15
<b>O. D. Ditlevsen and P. D. Ditlevsen</b> , <i>Statistics of waiting times between sudden climate changes as a tool for identifying possible causes.</i>	17
<b>G. Falsone</b> , <i>Stochastic homogenization for chaotic and quasi-periodic masonry structures.</i>	19
<b>P. Holobut</b> , <i>Random hydrogen-assisted fatigue crack growth in steel plates.</i>	21
<b>R. Iwankiewicz</b> , <i>Integro-differential Chapman-Kolmogorov equation for continuous-jump Markov processes and its use in problems of multi-component renewal impulse process excitations.</i>	23
<b>Z. Kotulski</b> , <i>Reputation as optimality measure in Wireless Sensors Networks (WSN)-based monitoring systems.</i>	25
<b>A. Kovaleva</b> , <i>Approximate and exact solutions of the first-passage problem for stochastic oscillators.</i>	27
<b>S. Krenk</b> , <i>The influence of statistical frequency scatter of pedestrian design loads for footbridges.</i>	29
<b>M. Lachowicz</b> , <i>From microscopic to macroscopic descriptions of complex systems.</i>	31
<b>J. Miękiś</b> , <i>Stochasticity and time delays in gene expression and evolutionary game theory.</i>	33
<b>G. Muscolino and P. Cacciola</b> , <i>Reanalysis techniques in stochastic mechanics.</i>	35
<b>A. Naess, D. Iourtchenko, and O. Batsevych</b> , <i>First passage failure of a linear oscillator under additive and multiplicative random excitations.</i>	37
<b>N. Sri Namachchivaya, K. Onu, J. H. Park, and R. B. Sowers</b> , <i>Multiscale dynamics and information: some mathematical challenges.</i>	39
<b>S. R. K. Nielsen</b> , <i>Stochastic and chaotic analysis of shallow cables due to chord length elongations.</i>	41
<b>C. Papadimitriou</b> , <i>Fatigue lifetime predictions in metallic structures using limited number of vibration measurements.</i>	43
<b>A. Pirrotta</b> , <i>Probabilistic response of nonlinear systems via PI: normal, Poissonian and combined white noises.</i>	45

<b>I. Rychlik</b> , <i>Space time modelling of significant wave heights variability for fatigue routing.</i>	47
<b>G. I. Schuëller, H. J. Pradlwarter, and E. Patelli</b> , <i>Global sensitivity of structural variability by random sampling.</i>	49
<b>P. D. Spanos, Y. Kougiumtzoglou, and C. Soize</b> , <i>On the determination of the power spectrum of randomly excited oscillators via stochastic averaging: an alternative perspective.</i>	51
<b>B. Spencer</b> , <i>Challenges and opportunities for structural identification and monitoring using smart sensors.</i>	53
<b>J. Trębicki</b> , <i>Multidimensional stochastic systems with stiffness degradation due to damage accumulation.</i>	55
<b>A. Tylikowski</b> , <i>Stochastic instability of carbon nanotubes via nonlocal continuum mechanics.</i>	57
<b>K. Sobczyk</b> , <i>On my adventures with stochastic mechanics</i>	59
<b>K. Sobczyk</b> , <i>O moich przygodach z mechaniką stochastyczną</i>	63
Publications by Professor <b>Kazimierz Sobczyk</b>	67