

Session 1

Monday, 28 September

11:30 – 13:00, Chair: **P. Spanos**

1. **O. D. Ditlevsen** and **P. D. Ditlevsen**, *Statistics of waiting times between sudden climate changes as a tool for identifying possible causes.*
2. **B. Spencer**, *Challenges and opportunities for structural identification and monitoring using smart sensors*
3. **M. Lachowicz**, *From microscopic to macroscopic descriptions of complex systems*

Session 2

Monday, 28 September

14:30 – 16:00, Chair: **N. Sri Namachchivaya**

1. **P. D. Spanos**, **Y. Kougioumtzoglou**, and **C. Soize**, *On the determination of the power spectrum of randomly excited oscillators via stochastic averaging: an alternative perspective*
2. **G. I. Schuëller**, **H. J. Pradlwarter**, and **E. Patelli**, *Global sensitivity of structural variability by random sampling*
3. **S. Krenk**, *The influence of statistical frequency scatter of pedestrian design loads for footbridges*

Session 3

Monday, 28 September

16:30 – 18:00, Chair: **B. Spencer**

1. **N. Sri Namachchivaya**, **K. Onu**, **J. H. Park**, and **R. B. Sowers**, *Multiscale dynamics and information: some mathematical challenges*
2. **J. Miękisz**, *Stochasticity and time delays in gene expression and evolutionary game theory*
3. **S. Arwade**, *Pattern recognition and statistical learning in stochastic mechanics.*

Session 4

Tuesday, 29 September

9:00 – 10:30, Chair: **M. Lachowicz**

1. **M. F. Dimentberg**, *Stochastic rotordynamics: direct and inverse problems*
2. **C. Papadimitriou**, *Fatigue lifetime predictions in metallic structures using limited number of vibration measurements*
3. **S. R. K. Nielsen**, *Stochastic and chaotic analysis of shallow cables due to chord length elongations*

Session 5

Tuesday, 29 September

11:00 – 13:00, Chair: **M. Di Paola**

1. **A. Tylikowski**, *Stochastic instability of carbon nanotubes via nonlocal continuum mechanics*
2. **A. Kovaleva**, *Approximate and exact solutions of the first-passage problem for stochastic oscillators*
3. **A. Naess, D. Iourtchenko, and O. Batsevych**, *First passage failure of a linear oscillator under additive and multiplicative random excitations*
4. **C. Bucher**, *Solution of the first passage problem by asymptotic sampling.*

Session 6

Tuesday, 29 September

14:30 – 16:00, Chair: **C. Papadimitriou**

1. **G. A. Athanassoulis, I.-S. C. Tsantili, and T.P. Sapsis**, *Generalized FPK equations for non-linear dynamical systems under general stochastic excitation*
2. **A. Pirrotta**, *Probabilistic response of nonlinear systems via PI: normal, Poissonian and combined white noises*
3. **M. Di Paola**, *Fractional calculus and path integral method for nonlinear systems under white noise processes*

Session 7

Wednesday, 30 September

9:00 – 10:30, Chair: **A. Naess**

1. **I. Rychlik**, *Space time modelling of significant wave heights variability for fatigue routing*
2. **G. Falsone**, *Stochastic homogenization for chaotic and quasi-periodic masonry structures*
3. **Z. Kotulski**, *Reputation as optimality measure in Wireless Sensors Networks (WSN)-based monitoring systems*

Session 8

Wednesday, 30 September

11:00 – 12:30, Chair: **A. Kovaleva**

1. **J. Trębicki**, *Multidimensional stochastic systems with stiffness degradation due to damage accumulation*
2. **P. Hołobut**, *Random hydrogen-assisted fatigue crack growth in steel plates*
3. **R. Iwankiewicz**, *Integro-differential Chapman-Kolmogorov equation for continuous-jump Markov processes and its use in problems of multi-component renewal impulse process excitations*