

## Publications

### PUBLICATIONS IN INTERNATIONAL JOURNALS WITH REFEREES

- M. Papadrakakis and **V. Papadopoulos**, A computationally efficient method for the limit analysis of space frames, *Journal of Computational Mechanics*, 16(2), 132-141, 1995.
- M. Papadrakakis, **V. Papadopoulos** and N. Lagaros, Structural reliability Analysis of elastoplastic structures using neural networks and Monte Carlo simulation, *Computer Methods in Applied Mechanics and Engineering*, 136, 145-163, 1996.
- M. Papadrakakis, **V. Papadopoulos**, Robust and efficient solution techniques for the stochastic finite element analysis of space frames, *Computer Methods in Applied Mechanics and Engineering*, 134, 325-340, 1996.
- **V. Papadopoulos** and M. Papadrakakis, Stochastic finite element-based reliability analysis of space frames, *Probabilistic Engineering Mechanics*, 13 (1), 53 – 65, 1998.
- **V. Papadopoulos** and M. Papadrakakis, Finite element Analysis of cylindrical panels with random initial imperfections, *Journal of Engineering Mechanics* 130, (8), 867-876, 2004.
- **V. Papadopoulos** and M. Papadrakakis, The effect of material and thickness imperfections on the buckling load of shells with random initial imperfections, *Computer Methods in Applied Mechanics and Engineering*, 194, (12-16), 1405-1426, 2005.
- **V. Papadopoulos**, G. Deodatis and M. Papadrakakis, Flexibility-based upper bounds on the response variability of simple beams, *Computer Methods in Applied Mechanics and Engineering*, 194, (12-16), 1385-1404, 2005.
- **V. Papadopoulos** and G. Deodatis, Response variability of stochastic frame structures using evolutionary field theory, *Computer Methods in Applied Mechanics and Engineering*, 195 (9-12), 1050-1074, 2006.
- **V. Papadopoulos**, M. Papadrakakis and G. Deodatis, Analysis of mean response and response variability of stochastic finite element systems *Computer Methods in Applied Mechanics and Engineering*, 195 (41-43), pp. 5454-5471, 2006.
- N. Lagaros and **V. Papadopoulos**, Optimum design of shell structures with random geometric, material and thickness imperfections, *International Journal of Solids and Structures*, 43 (22-23), 6948-6964, 2006.
- **V. Papadopoulos** and P. Inglessis, The effect of imperfect boundary conditions on the buckling analysis of cylindrical shells with random geometric material and thickness imperfections, *International Journal of Solids and Structures*, 44 (18-19), 6299-6317, 2007.
- M. Papadrakakis, **V. Papadopoulos**, N. Lagaros, J. Oliver, A. E. Huespe, and P. Sánchez, Vulnerability Analysis of Large Concrete Dams using the Continuum Strong Discontinuity Approach and Neural Networks, *Structural Safety*, 30 (3), 217-235, 2008.

- I.F. Moschonas, A.J. Kappos, P. Panetsos, **V. Papadopoulos**, T. Makarios and P. Thanopoulos, Seismic fragility curves for greek bridges: methodology and case studies, *Bulletin of Earthquake Engineering*, 7(2), 439-468, 2009.
- **V. Papadopoulos**, D.C Charmpis, and M. Papadrakakis, A computationally efficient method for the buckling analysis of shells with stochastic imperfections, *Computational Mechanics*, 43 (5), 687-700, 2009.
- **V. Papadopoulos**, G. Stefanou and M. Papadrakakis, Buckling analysis of imperfect shells with stochastic non-Gaussian material and thickness properties, *International Journal of Solids and Structures*, 46(14-15), 2800- 2808, 2009.
- **V. Papadopoulos** and N. Lagaros, Vulnerability-based robust design optimization of imperfect shell structures, *Structural Safety*, 31(6), 475-482, 2009.
- D. Schillinger and **V. Papadopoulos**, Accurate Estimation of Evolutionary Power Spectra for Strongly Narrow-Band Random Fields, *Computer Methods in Applied Mechanics and Engineering*, 199 (17-20), 947-960, 2010.
- D. Schillinger, **V. Papadopoulos**, M. Papadrakakis and M. Bishoff, Buckling Analysis of Imperfect I-Section Beam-Columns with Stochastic Shell Finite Elements, *Computational Mechanics*, 46(3), 495-510, 2010.
- **V. Papadopoulos**, G. Stefanou and M. Papadrakakis, Buckling load variability of cylindrical shells with stochastic imperfections, *International Journal for Reliability and Safety*, 5 (2), 191-208, 2011.
- **V. Papadopoulos** and O. Kokkinos, Variability response functions for stochastic systems under dynamic excitations, *Probabilistic Engineering Mechanics*, 28 , pp. 176-184, (2012).
- **V. Papadopoulos**, D. Giovanis and N. Lagaros and M. Papadrakakis, Accelerated subset simulation for reliability analysis using neural networks, *Computer Methods in Applied Mechanics and Engineering*, 223-224 , pp. 70-80 (2012).
- D. Savvas, **V. Papadopoulos** and M. Papadrakakis, The effect of interfacial shear strength on damping behavior of carbon nanotube reinforced composites, *International Journal of Solids and Structures*, 49(26), 3823-3937, 2012.
- **V. Papadopoulos**, G. Soimiris and M. Papadrakakis, Buckling analysis of I-section portal frames with stochastic imperfections, *Engineering Structures*, 47 , pp. 54-66 2013.
- **V. Papadopoulos** and N. Lagaros, Performance-Based Optimum Design of Structures with Vulnerability Objectives, *International Journal for Reliability and Safety*, 7 (1) , pp. 75-94, 2013.
- Vryzides, I., Stefanou, G., **Papadopoulos V.**, “Stochastic stability analysis of steel tubes with random initial imperfections”, *Finite Elements in Analysis and Design*, 77, pp. 31-39, 2013
- Savvas, D. and **Papadopoulos V.**, “Nonlinear multiscale homogenization of carbon nanotube reinforced composites with interfacial slippage, *J. Multiscale Computational Engineering*, 12 (4), pp. 271-289, 2014.
- Stavroulakis, G., Giovanis, D.G., Papadrakakis, M., **Papadopoulos, V.** “A new perspective on the solution of uncertainty quantification and reliability analysis

of large-scale problems”, *Computer Methods in Applied Mechanics and Engineering*, 276, pp. 627-658 2014.

- Giovanis, D., **Papadopoulos V.**, Stavroulakis, George, “An Adaptive spectral Galerkin stochastic finite element method using variability response functions”, *International Journal of Numerical Methods in Engineering*, 104(3), pp185–208 2015.
- Giovanis, D., **Papadopoulos V.**, “Spectral representation-based neural network assisted stochastic structural mechanics”, *Engineering Structures*, 84, pp. 382-394 2015.
- **Papadopoulos, V.**, Kokkinos, O., “Transient response of stochastic finite element systems using Dynamic Variability Response Functions”, *Structural Safety*, 52 (PA), pp. 100-112, 2015.
- **Papadopoulos, V.**, Tavlaki, M., “The impact of interfacial properties on the macroscopic performance of carbon nanotube composites. A FE2-based multiscale study”, *Composite Structures*, 136, pp. 582-682, 2016.
- M. Fragiadakis, Giovanis, D., **Papadopoulos V.**, “Epistemic uncertainty assessment using Incremental Dynamic Analysis and Neural Networks”, *Bulletin of Earthquake Engineering*, 14(2), pp. 529-547, 2016.
- Kokkinos, O., **Papadopoulos, V.**, “Robust design with Variability Response Functions; an alternative approach”, *Structural Safety*, 59, pp. 1-8, 2016.
- **Papadopoulos, V.**, Kalogeris, I., “A Galerkin-based formulation of the probability density evolution method for general stochastic finite element systems”, *Computational Mechanics*, 57, pp. 701-716, 2016.
- Savvas, D., Stefanou, G., **Papadopoulos, V.**, Papadrakakis, M., "Effect of waviness and orientation of carbon nanotubes on random apparent material properties and RVE size of CNT reinforced composites”, *Composite Structures*, 152, pp. 870-882
- **Papadopoulos, V.**, Seventekidis, I., “Stochastic multiscale modeling of graphene reinforced composites”, *Engineering Structures*, 145, pp. 176-189, 2017.
- Manitaras, T-I., **Papadopoulos, V.**, Papadrakakis, M., “Dynamic variability response functions for stochastic wave propagation in soils”, *Soil Dynamics and Earthquake Engineering*, 97, pp. 60-73, 2017.
- Giovanis G, Stavroulakis, I, **Papadopoulos V.**, Papadrakakis, M., “A GPU domain decomposition solution for spectral stochastic finite element method”, *Comp. Meth. Appl. Mech. Eng.*, 327, pp. 392-410, 2017.
- Giovanis G, Papaioannou, I, **Papadopoulos, V.**, Straub, D., “Bayesian updating with subset simulation using artificial neural networks”, *Computer Methods in Applied Mechanics and Engineering*, 319, pp. 124-145, 2017.
- **Papadopoulos, V.**, Impraimakis, M., “Multiscale modeling of carbon nanotube reinforced concrete”, *Composite Structures*, 182, pp. 251-260, 2017.
- Kalogeris, I., **Papadopoulos, V.**, “Limit analysis of stochastic structures in the framework of the probability density evolution method”, *Engineering Structures*, 160, pp. 204-313, 2018.

- **Papadopoulos, V.**, Soimiris, G., Giovanis, D.G., Papadrakakis, M., “A neural network-based surrogate model for carbon nanotubes with geometric nonlinearities”, *Comp. Meth. Appl. Mech. Eng.*, 328, pp. 411-430, 2018.
- **Papadopoulos, V.**, Kalogeris, I., Giovanis, D.G., “A spectral stochastic formulation for nonlinear framed structures”, *Probabilistic Eng. Mechanics*, 55, pp. 90-102, 2018.
- Lu, X., Giovanis, D.G., Yvonnet, J., **Papadopoulos, V.**, Detrez, F., Bai, J. “A data-driven computational homogenization method based on neural networks for the nonlinear anisotropic electrical response of graphene/polymer nanocomposites”, *Computational Mechanics*, 64 (2), pp. 307-321, 2019.
- Kalogeris, I., **Papadopoulos, V.** “A diffusion maps –based surrogate modeling - An alternative machine learning approach”, *International Journal on Numerical Methods and Engineering IJNME*, 121 (4), 602-620, 2019.
- Bakalakos S., Kalogeris, I., **Papadopoulos, V.** “An XFEM formulation for modeling heat transfer boundary interactions of multi-phase materials”, *Composite Structures*, accepted, 2020.
- Kalogeris, I., **Papadopoulos, V.** “Diffusion maps-aided Neural Networks for the solution of parametrized PDEs”, *Comp. Meth. Appl. Mech. Eng., Invited submission in Special Issue on Artificial Intelligence*, accepted 2020.
- Tavlaki, M., **Papadopoulos, V.** “Concurrent optimization of the topology and material orientation of a carbon-nanotube reinforced structure using a multiscale technique”, *International Journal on Numerical Methods and Engineering*, submitted, 2020.
- Tsapetis, D., Sotiropoulos, G., Stavroulakis, G., **Papadopoulos, V.**, Papadrakakis, V., “A Stochastic Multiscale formulation for Isogeometric Composite Kirchhoff-Love shells”, *Comp. Meth. Appl. Mech. Eng.*, accepted, 2020.
- Soimiris, G., Sotiropoulos, G., Kokkinos, O., Papadopoulos, V., “An efficient multiscale FEM approach for stochastic nonlinear homogenization of carbon nanotube reinforced composites”, *Composite Structures*, submitted, 2020.

Δημοσιεύσεις σε πρακτικά διεθνών επιστημονικών συνεδρίων

- J. Milios, **V. Papadopoulos** and G.C. Papanicolaou, The effect of rubber content on dynamic crack propagation in rubber toughened P.M.M.A., Advanced composites in emerging technologies COMP'90, in S.A Paipetis and T.P. Philippidis (eds.), Patras, Greece, 1990.
- M. Papadrakakis and **V. Papadopoulos** and N. Lagaros, Reliability analysis of elastic-plastic structures using neural networks, Proc. of the fourth International Conference on Computational Plasticity, in D.R.J. Owen, E. Onate, E. Hinton (eds.), COMPLAS '95, Barcelona, Spain. 1995.
- M. Papadrakakis and **V. Papadopoulos**, A computationally efficient method for limit elastoplastic analysis of space frames, 1st European Conference on Steel Structures, EUROSTEEL, Athens, Greece, 1995.
- **V. Papadopoulos** and M. Papadrakakis, Efficient solution procedures for the stochastic finite analysis of space frames using the Monte Carlo Simulation, Computational Structures Technology CST'95, in B.H.V.

Topping (Ed.) Developments in Computational Techniques for Structural Engineering, Civil Comp Press, 61-70,1995.

- Y. Tsompanakis, **V. Papadopoulos**, N. Lagaros and M. Papadrakakis, Reliability analysis of structures under seismic loading. Proceedings of World Congress on Computational Mechanics WCCM-V, July 7-12, Vienna, Austria, 2002.
- **V. Papadopoulos**, M. Papadrakakis and G. Stefanou, Stochastic Finite Element Analysis of Imperfect cylindrical panels. Proceedings of World Congress on Computational Mechanics WCCM-V, July 7-12, 2002, Vienna, Austria, 2002.
- **V. Papadopoulos**, M. Papadrakakis and G.S. Stefanou, Stochastic finite element analysis of imperfect cylindrical shells with random initial imperfections, 4<sup>th</sup> Int. Conf. on Computational Stochastic Mechanics CSM-4, Corfu, Greece June 9-12, 2002.
- **V. Papadopoulos** and M. Papadrakakis, Non-linear stochastic finite element analysis of shells with random imperfections, 7<sup>th</sup> National Congress on Mechanics HSTAM-2004, June 24-26, Chania, Crete, Greece, 2004.
- **V. Papadopoulos**, G. Deodatis and M. Papadrakakis, Bounds on response variability of simple beams using a flexibility-based formulation, 9th ASCE Specialty Conference on Probabilistic Mechanics and Structural Reliability PMC2004, July 25-28, Albuquerque, USA, 2004.
- **V. Papadopoulos** and M. Papadrakakis, Non-linear stochastic finite element analysis of shells with non-homogeneous random imperfections, 7TH International Conference on Computational Structures Technology CST 2004, 7-9 September, Lisbon, Portugal, 2004.
- M. Papadrakakis, V. Plevris, N.D. Lagaros and **V. Papadopoulos**, Robust design optimization of 3D truss structures using evolutionary computation, Proceedings of 6th World Congress on Computational Mechanics WCCM in conjunction with APCOM'04, Beijing, China, Sept., 5-10, 2004.
- **V. Papadopoulos** and G. Deodatis, Response variability of stochastic statically indeterminate frame structures based on closed-form expressions of the variability response function, Ninth International Conference on Structural Safety and Reliability – ICOSSAR'05, Rome, Italy, June 19-23, 2005.
- M. Papadrakakis, **V. Papadopoulos**, D. Charbis, Random eigenvalue analysis of uncertain systems, 6th European Conference on Computational Mechanics ECCM, Lisbon, 5-9 September, 2006.
- **V. Papadopoulos**, P. Inghlessis and M. Papadrakakis, Buckling analysis of shells with random boundary imperfections, 1st South-East European Conference on Computational Mechanics SEECCM, Kragujevac, June 28-30, 2006.
- G. Deodatis, M. Miranda, **V. Papadopoulos** and M. Papadrakakis, A methodology for systematically studying the effect of system uncertainty on system response, 15th US National Conference on Theoretical and applied Mechanics USCCTAM 06, 25-30 June, University of Colorado at Boulder, 2006.

### Δημοσιεύσεις στη βαθμίδα του λέκτορα

- **V. Papadopoulos**, G. Stefanou and M. Papadrakakis, The effect of Non Gaussian material and Thickness Variability on the buckling load of imperfect cylindrical shells, COMPDYN, ECCOMAS thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Rethymno, June 13-16, 2007.
- M. Papadrakakis, **V. Papadopoulos**, M. Kokolakis and S. Kostantis, Seismic vulnerability analysis of bridges with random material properties, COMDYN, ECCOMAS thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Rethymno, June 13-16, 2007.
- **V. Papadopoulos**, M. Papadrakakis and G. Deodatis, Closed form expressions for the mean and mean square response of linear stochastic finite element systems, 8TH National Congress on Mechanics HSTAM, Patras, July 9-14, 2007.
- **V. Papadopoulos**, D. Charbis and M. Papadrakakis, A computationally efficient method for the buckling analysis of shells with random imperfections, 9TH US National Conference on Computational Mechanics USNCCCM9, San Francisco, July 23-26, 2007.
- **V. Papadopoulos**, N.D. Lagaros and M. Papadrakakis, Robust Design of Shells with Stochastic Properties, 8th WCCM and 5th ECCOMAS, Venice, Italy, June 30 – July 4, 2008 (Keynote).
- **V. Papadopoulos**, G. Stefanou, M. Papadrakakis, Stochastic stability analysis of shells with non-Gaussian geometric, material and thickness imperfections, 8th WCCM and 5th ECCOMAS, Venice, Italy, June 30 – July 4, 2008.
- G. Stefanou, **V. Papadopoulos** and N. Lagaros, Enhanced hybrid simulation of non-homogeneous non-Gaussian stochastic fields, 8th WCCM and 5th ECCOMAS, Venice, Italy, June 30 – July 4, 2008.
- G. Stefanou, **V. Papadopoulos** and M. Papadrakakis, Stochastic Finite Element Stability Analysis of Shells with Non-Gaussian Material and Thickness Properties, Computational Structures Technology Conference, CST-2009, Athens, Greece, Sept.2-5, 2008.
- D. Schillinger, **V. Papadopoulos** and M. Papadrakakis, Evolutionary power spectrum estimation of strongly narrow-band random fields, COMPDYN, Rhodos, Greece, June 22-24, 2009.
- **V. Papadopoulos**, M. Papadrakakis and D. Schillinger, Stochastic FEM Based Buckling Analysis of I-Beams with Random Imperfections, SEECCM 2009, Rhodos, Greece, June 22-24, 2009.
- D. Giovanis, **V. Papadopoulos**, N. Lagaros and M. Papadrakakis, Neural Network based Subset Simulation for Reliability analysis, SEECCM 2009, Rhodos, Greece, September 15-17, 2009.
- D. Giovanis, **V. Papadopoulos**, N. Lagaros and M. Papadrakakis, Structural Reliability Analysis using Subset Simulation and Neural Networks, ICOSSAR 2009, Osaka, Japan, June 15-17, 2009.

- G. Stefanou, **V. Papadopoulos**, N.D. Lagaros and M. Papadrakakis, A novel hybrid method for the simulation of non-homogeneous non-Gaussian stochastic processes and fields, Proc. of the 10th International Conference on Structural Safety and Reliability (ICOSSAR 2009), Osaka, Japan, 13-17 September 2009.
- **V. Papadopoulos**, O. Kokkinos and M. Papadrakakis, “Variability response functions for stochastic dynamic systems”, 10th World Congress on Computational Mechanics, WCCM 10, 19-23 July, Sydney, Australia, 2010.
- **V. Papadopoulos**, O. Kokkinos and M. Papadrakakis, “Response variability of stochastic systems under dynamic excitations”, 6<sup>th</sup> Computational Stochastic Mechanics Conference CSM-2010, Rhodes, Greece, 2010.
- O. Kokkinos and **V. Papadopoulos**, Dynamic response of single degree of freedom oscillators with stochastic material properties, 7<sup>th</sup> GRACM International Congress on Computational Mechanics, Athens, June 30 - July 2, 2011.
- **V. Papadopoulos** and O. Kokkinos, Mean and variability response functions for stochastic systems under dynamic excitation, COMDYN, Corfu, Greece, 2011.
- A. Christofi and **V. Papadopoulos**, Performance based earthquake design of structures using vulnerability criteria, COMDYN, Corfu, Greece, 2011.
- **V. Papadopoulos**, D. Giovanis, N. Lagaros and M. Papadrakakis, Reliability analysis using Subset Simulation and Neural Networks, 7<sup>th</sup> GRACM International Congress on Computational Mechanics, Athens, June 30 - July 2, 2011.
- **V. Papadopoulos**, Soimoiris, G, M. Papadrakakis and D. Schillinger, Stochastic FEM Based Buckling Analysis of I-Beams and Shells with Random Imperfections, Third International Symposium on Computational Mechanics ISCM III, Taipei, Taiwan, 2011.
- D. Giovanis, **V. Papadopoulos**, N.D. Lagaros, M. Papadrakakis, “Accelerated Subset Simulation with neural networks for reliability analysis”, 10th Aniversario posgrado ingenieria estructural in Univesridad Autonoma Metropolitana (UAM) in Mexico city, Mexico, 29 November, 2011.

#### Δημοσιεύσεις στη βαθμίδα του Επίκουρου

- Stefanou, G., **Papadopoulos, V.**, Papadrakakis, M., Buckling load and displacement variability of cylindrical shell with stochastic material and geometric properties, ECCOMAS 2012, Wien, Vienna, Austria, 2012.
- **V. Papadopoulos**, D. Savas, M. Papadrakakis “The effect of random CNT waviness on the mechanical properties of CNT-RCS”, September 9-13, ECCOMAS 2012, Wien, Austria, 2012.

- Soimoiris, G, **V. Papadopoulos**, M. Papadrakakis “I-section steel frames with random imperfections”, September 9-13, ECCOMAS 2012, Wien, Austria, 2012.
- Stefanou G., Vryzidis I., **Papadopoulos V.** “Buckling analysis of steel tubes with random geometric imperfections”, COMPDYN 2013, Kos island, 12-14 June, Greece, 2013.
- **Papadopoulos V.**, Kokkinos O., Papadrakakis M. “Stochastic dynamic response of structures”, COMPDYN 2013, Kos island, 12-14 June, Greece, 2013.
- Vathi M., Soimoiris G., Karamanos S., **Papadopoulos V.**, “A stochastic approach for assessing imperfection sensitivity of liquid storage tanks”, COMPDYN 2013, Kos island, 12-14 June, Greece, 2013.
- **Papadopoulos V.**, “Characterization of carbon nanotube reinforced thermoplastics using hierarchical multiscale”, Semi plenary lecture, HSTAM 2013, Crete island, Greece.
- **Papadopoulos V.**, Savvas D., “Multiscale modeling of damping in carbon nanotube reinforced composites”, HSTAM 2013, Crete island, Greece.
- **Papadopoulos V.**, Savvas D., “Viscoplastic multiscale modeling of carbon nanotube reinforced composites”, IUTAM 2013, Crete island, Greece.
- Giovanis D., **Papadopoulos V.**, “A variability response functions-based adaptive spectral stochastic finite element method”, IUTAM 2013, Crete Island, Greece.
- Stavroulakis, G. Giovanis D., Papadrakakis, M., **Papadopoulos V.**, “Monte Carlo simulation vs. polynomial chaos in structural analysis: a numerical performance study”, IUTAM 2013, Crete island, Greece.
- Tavlaki, M., **Papadopoulos V.**, “Multiscale material non-linear analysis of carbon nanotube reinforced composites in the framework of a FE2 approach”, IUTAM 2013, Crete island, Greece, 2013.
- Soimoiris, G., **Papadopoulos V.**, Papadrakakis, M., “Multiscale modeling of carbon nanotube reinforced composites with geometric nonlinearities”, IUTAM 2013, Crete island, Greece, 2013.
- Kokkinos, O., **Papadopoulos V.**, “Dynamic response variability of general fe-systems”, IUTAM 2013, Crete island, Greece, 2013.
- Giovanis D., **Papadopoulos V.**, “Stochastic finite element analysis using Monte Carlo simulation and neural networks”, ICOSSAR 2013, New York, USA, 2013.
- Stefanou, G., Vryzides, I., **Papadopoulos V.**, Papadrakakis, M., “Stability analysis of cylindrical shells with stochastic imperfections”, ICOSSAR 2013, NY, USA, 2013.
- Stavroulakis, G., Giovanis, D. Papadrakakis, M., **Papadopoulos, V.**, “Solution of Large-Scale Problems in Structural Analysis: Monte Carlo Simulation vs. Spectral Stochastic Finite Element Method” 13th US Conference on Computational Mechanics USNCCM 2013, 26-30 July, San Diego, USA, 2013.



- Stavroulakis, G., Giovanis, D. Papadrakakis, M., **Papadopoulos, V.**, “Assessing the numerical efficiency of Monte Carlo and Spectral Stochastic FEM in structural problems”, 11th World Congress on Computational Mechanics, WCCM 11, 20-25 July, Barcelona, Spain, 2014.
- **Papadopoulos, V.**, Stavroulakis, G., Giovanis, D. Papadrakakis, M., “An adaptive polynomial chaos expansion for accelerating the solution of Spectral Stochastic FEM problems”, 11th World Congress on Computational Mechanics, WCCM 11, 20-25 July, Barcelona, Spain, 2014.
- **Papadopoulos, V.**, Soimoiris, G., Papadrakakis, M., “FE2 multiscale approach of geometrically nonlinear carbon nanotube reinforced composites” 11th World Congress on Computational Mechanics, WCCM 11, 20-25 July, Barcelona, Spain, 2014.
- **Papadopoulos, V.**, Tavlaki, M., “Multiscale modelling of carbon nanotube reinforced composites in the framework of a nested solution scheme” 11th World Congress on Computational Mechanics, WCCM 11, 20-25 July, Barcelona, Spain, 2014.
- **Papadopoulos, V.**, Stavroulakis, G., Giovanis, D. Papadrakakis, M “Monte Carlo simulation vs Spectral Galerkin method: a numerical performance study, 1<sup>st</sup> Panamerican Congress on Computational Mechanics, PANACM 2015, Buenos Aires, Argentina, 27-29 April 2015.
- Giovanis, D. **Papadopoulos, V.**, “Neural network-based reliability analysis using subset simulation: application in random fields”, 1st Panamerican Congress on Computational Mechanics, PANACM 2015, Buenos Aires, Argentina, 27-29 April 2015.
- Giovanis, D. **Papadopoulos, V.**, Stavroulakis, G., “Sparse polynomial chaos representation using variability response functions”, Symposium on Reliability of Engineering Systems, SRES 2015, Hangzhou China, 15-17 October 2015.
- **Papadopoulos, V.**, Kalogeris, Y., “A StreamlineUpwind/Petrov-Galerkin solution of the Probability Density Evolution Method for static systems”, Symposium on Reliability of Engineering Systems, SRES 2015, Hangzhou China, 15-17 October 2015.
- Giovanis, D., Papaioannou, I., **Papadopoulos, V.**, Straub. D., “StraubBayesian updating with subset simulation and neural networks”, 8th International Congress on Computational Mechanics GRACM, Volos, 12-15 July 2, 2015.
- K.C. Meza Fajardo, **V. Papadopoulos**, A. Papageorgiou, “Earthquake response of liquid storage tanks, accounting for rocking excitation, caused by basin induced surface waves”, COMPDYN 2015, Crete island, 25-27 May, Greece, 2015.
- M. Fragiadakis, D. Giovanis, **V. Papadopoulos**, “Quick seismic reliability assessment of liquid storage tanks using neural networks”, COMPDYN 2015, Crete island, 25-27 May, Greece, 2015.

- E. Skoulikari, **V. Papadopoulos**, N. Lagaros “Assesment of optimum strengthening design of a reinforced concrete building with vulnerability criteria”, COMPDYN 2015, Crete island, 25-27 May, Greece, 2015.
- **Papadopoulos, V.**, Kalogeris, “Galerkin-based probability density evolution formulation for static problems, UNCECOMP 2015, Crete island, 25-27 May, Greece, 2015.
- O. Kokkinos, **V. Papadopoulos**, “Stochastic optimization with variability response functions”, UNCECOMP 2015, Crete island, 25-27 May, Greece, 2015.
- **V. Papadopoulos**, M. Tavlaki, “Influence of the interface on the macroscopic behavior of carbon-nanotube reinforced composites using a multiscale technique”, UNCECOMP 2015, Crete island, 25-27 May, Greece, 2015.
- Giovanis, D., Papaioannou, I., **Papadopoulos, V.**, Straub. D., “Neural network-based bayesian updating with subset simulation”, UNCECOMP 2015, Crete island, 25-27 May, Greece, 2015.
- Stavroulakis, G., Giovanis, D., **Papadopoulos, V.**, Papadrakakis, M., “Accelerating the solution of stochastic soil-structure interaction problems with domain decomposition methods”, UNCECOMP 2015, Crete island, 25-27 May, Greece, 2015.
- **Papadopoulos V.**, Seventekidis D., “Stochastic Multiscale modeling of graphene reinforced composites”, 11th HSTAM International Congress on Mechanics HSTAM 2016, Athens, 27-30 May, Greece 2016.
- Fasoulakis, Z., Raftoyiannis<sup>1</sup>, Avraam, T., **Papadopoulos, V.**, “Stability investigation of single bolted members from cold formed angle sections with random imperfections”, 11th HSTAM International Congress on Mechanics HSTAM 2016, Athens, 27-30 May, Greece 2016.
- **V. Papadopoulos**, M. Tavlaki, Odysseas Kokkinos, “Multiscale optimization of a carbon nanotube/polymer structure Vissarion Papadopoulos, ECCOMAS 2016 Congress, Crete island, 5-10 June, 2016.
- **Papadopoulos, V.**, Kalogeris, I, “Probability density evolution method for buckling analysis of stochastic systems”, ECCOMAS 2016 Congress, Crete island, 5-10 June, 2016.
- Stavroulakis, G., Giovanis, D., **Papadopoulos, V.**, Papadrakakis, M., “Parallel and scalable solution schemes for metaheuristic optimization algorithms considering uncertainties, in the context of structural analysis”, ECCOMAS 2016 Congress, Crete island, 5-10 June, 2016.
- Dimitrios Savvas, George Stefanou, **Vissarion Papadopoulos**, Manolis Papadrakakis “Determination of RVE size for random CNT reinforced composites”, ECCOMAS 2016 Congress, Crete island, 5-10 June, 2016.

Δημοσιεύσεις στη βαθμίδα του Αναπληρωτή

- **Vissarion Papadopoulos**, Gerasimos Sotiropoulos, Computational stochastic homogenization of graphene polymer nanocomposites, UNCECOMP 2017, Rhodos, June 15-17, Greece, 2017.
- George Soimiris, **Vissarion Papadopoulos**, Dimitris G. Giovanis, USING Artificial neural networks for the simulation of carbon nanotubes with geometrical nonlinearities, UNCECOMP 2017, Rhodos, June 15-17, Greece, 2017.
- **Vissarion Papadopoulos**, Odysseas Kokkinos, Maria Tavlaki, Optimization of carbon-nanotube reinforced polymer structures using genetic algorithms, UNCECOMP 2017, Rhodos, June 15-17, Greece, 2017.
- **Vissarion Papadopoulos**, Ioannis Kalogeris, Dimitris Giovanis, An SSFEM formulation for the stochastic analysis of nonlinear framed structures, UNCECOMP 2017, Rhodos, June 15-17, Greece, 2017.
- M. Tavlaki, O. Kokkinos, **V. Papadopoulos**, M. Papadrakaki, “Multiscale Optimization of Carbon-Nanotube Reinforced Polymer Structures”, 14th U.S. National Congress on Computational Mechanics USNCCM July 17-20, 2017, Montreal, Quebec, Canada.
- G. Soimiris, **V. Papadopoulos**, D. Giovanis, “Geometrically Nonlinear Simulation of Carbon Nanotubes Using a Neural Network-Based Surrogate Modelling Technique”, 14<sup>th</sup> U.S. National Congress on Computational Mechanics USNCCM July 17-20, 2017, Montreal, Quebec, Canada.
- T. Manitaras, **V. Papadopoulos**, M. Papadrakakis, “Consistent bayesian update for multiscale analysis using subset simulation”, ICCOSAR, Vienna, 6-10 August 2017.
- **Vissarion Papadopoulos** and Maria Tavlaki, Multiscale material and topology optimization of a carbon-nanotube reinforced composite structure, 9<sup>th</sup> GRACM International Congress on Computational Mechanics, Athens, June 4-6, 2018.
- **Vissarion Papadopoulos** and Gerasimos Sotiropoulos, Multiscale modeling of the mechanical behavior of graphene at finite strains 9<sup>th</sup> GRACM International Congress on Computational Mechanics, Athens, June 4-6, 2018.
- Ioannis Kalogeris, **Vissarion Papadopoulos** and Dimitris Giovanis, A spectral stochastic finite element formulation for nonlinear analysis of stochastic structures, 9<sup>th</sup> GRACM International Congress on Computational Mechanics, Athens, June 4-6, 2018.
- G. Stefanou, **V. Papadopoulos**, M. Papadrakakis, “Multiscale Analysis and Design of Random heterogeneous Media”, WCCM 2018, 22-28 June, New York, 2018.
- G. Soimiris, **V. Papadopoulos**, O. Kokkinos and M. Papadrakakis, “Consistent bayesian update for multiscale analysis using subset simulation”, Ms. In honor of Prof. Soize 70<sup>th</sup> birthday, WCCM 2018, 22-28 June, 2018.

- **V.Papadopoulos**, I. Kalogeris, “A diffusion maps-based surrogate model for uncertainty quantification”, UNCECOMP 2019, Crete 24-26 June, 2019.
- G. Stavroulakis D. Tsapetis, S. Bakalakos, G. Sotiropoulos, O. Kokkinos, V. Merevis, G. Soimoiris, M. Tavlaki, D. Giovanis, **V. Papadopoulos**, M. Papadrakakis, “MSOLVE: an open source computational mechanics solution platform”, UNCECOMP 2019, Crete 24-26 June, 2019.
- O. Kokkinos, **V. Papadopoulos**, “An efficient Markov chain algorithm for subset simulation with diffusion maps”, UNCECOMP 2019, Crete 24-26 June, 2019.
- D. Tsapetis, G. Sotiropoulos, G. Stavroulakis, **V. Papadopoulos**, M. Papadrakakis, “Application of domain decomposition solution schemes in isogeometric kirchhoff-love shells with stochastically distributed graphene inclusions”, UNCECOMP 2019, Crete 24-26 June, 2019.
- S. Bakalakos, I. Kalogeris, and **V. Papadopoulos**, “Assessment of the effective thermal conductivity of nano-reinforced polymer composites using the embedded FEM method”, UNCECOMP 2019, Crete 24-26 June, 2019.
- G. Soimoiris, **V. Papadopoulos**, O. Kokkinos and M. Papadrakakis, “Geometrically reinforced composites with stochastic initial imperfections using neural network-based surrogate modeling technique nonlinear analysis of carbon nanotube”, UNCECOMP 2019, Crete 24-26 June, 2019.
- I. Kalogeris, **V. Papadopoulos**, “Diffusion Maps-based surrogate modeling”, IUTAM Workshop in Multiscale Analysis, 2019, Baltimore 15-17 January, 2019.

#### PUBLICATIONS IN INTERNATIONAL CONFERENCE PROCEEDINGS

- J. Milios, **V. Papadopoulos** and G.C. Papanicolaou, The effect of rubber content on dynamic crack propagation in rubber toughened P.M.M.A., Advanced composites in emerging technologies COMP’90, in S.A Paipetis and T.P. Philippidis (eds.), Patras, Greece, 1990.
- M. Papadrakakis and **V. Papadopoulos** and N. Lagaros, Reliability analysis of elastic-plastic structures using neural networks, Proc. of the fourth International Conference on Computational Plasticity, in D.R.J. Owen, E. Onate, E. Hinton (eds.), COMPLAS ’95, Barcelona, Spain. 1995.
- M. Papadrakakis and **V. Papadopoulos**, A computationally efficient method for limit elastoplastic analysis of space frames, 1st European Conference on Steel Structures, EUROSTEEL, Athens, Greece, 1995.
- **V. Papadopoulos** and M. Papadrakakis, Efficient solution procedures for the stochastic finite analysis of space frames using the

Monte Carlo Simulation, Computational Structures Technology CST'95, in B.H.V. Topping (Ed.) Developments in Computational Techniques for Structural Engineering, Civil Comp Press, 61-70, 1995.

- Y. Tsompanakis, **V. Papadopoulos**, N. Lagaros and M. Papadrakakis, Reliability analysis of structures under seismic loading. Proceedings of World Congress on Computational Mechanics WCCM-V, July 7-12, Vienna, Austria, 2002.
- **V. Papadopoulos**, M. Papadrakakis and G. Stefanou, Stochastic Finite Element Analysis of Imperfect cylindrical panels. Proceedings of World Congress on Computational Mechanics WCCM-V, July 7-12, 2002, Vienna, Austria, 2002.
- **V. Papadopoulos**, M. Papadrakakis and G.S. Stefanou, Stochastic finite element analysis of imperfect cylindrical shells with random initial imperfections, 4<sup>th</sup> Int. Conf. on Computational Stochastic Mechanics CSM-4, Corfu, Greece June 9-12, 2002.
- **V. Papadopoulos** and M. Papadrakakis, Non-linear stochastic finite element analysis of shells with random imperfections, 7<sup>th</sup> National Congress on Mechanics HSTAM-2004, June 24-26, Chania, Crete, Greece, 2004.
- **V. Papadopoulos**, G. Deodatis and M. Papadrakakis, Bounds on response variability of simple beams using a flexibility-based formulation, 9<sup>th</sup> ASCE Specialty Conference on Probabilistic Mechanics and Structural Reliability PMC2004, July 25-28, Albuquerque, USA, 2004.
- **V. Papadopoulos** and M. Papadrakakis, Non-linear stochastic finite element analysis of shells with non-homogeneous random imperfections, 7<sup>th</sup> International Conference on Computational Structures Technology CST 2004, 7-9 September, Lisbon, Portugal, 2004.
- M. Papadrakakis, V. Plevris, N.D. Lagaros and **V. Papadopoulos**, Robust design optimization of 3D truss structures using evolutionary computation, Proceedings of 6th World Congress on Computational Mechanics WCCM in conjunction with APCOM'04, Beijing, China, Sept., 5-10, 2004.
- **V. Papadopoulos** and G. Deodatis, Response variability of stochastic statically indeterminate frame structures based on closed-form expressions of the variability response function, Ninth International Conference on Structural Safety and Reliability – ICOSSAR'05, Rome, Italy, June 19-23, 2005.
- M. Papadrakakis, **V. Papadopoulos**, D. Charbis, Random eigenvalue analysis of uncertain systems, 6th European Conference on Computational Mechanics ECCM, Lisbon, 5-9 September, 2006.
- **V. Papadopoulos**, P. Inglese and M. Papadrakakis, Buckling analysis of shells with random boundary imperfections, 1st South-East European Conference on Computational Mechanics SEECCM, Kragujevac, June 28-30, 2006.

- G. Deodatis, M. Miranda, **V. Papadopoulos** and M. Papadrakakis, A methodology for systematically studying the effect of system uncertainty on system response, 15th US National Conference on Theoretical and applied Mechanics USCCTAM 06, 25-30 June, University of Colorado at Boulder, 2006.
- **V. Papadopoulos**, G. Stefanou and M. Papadrakakis, The effect of Non Gaussian material and Thickness Variability on the buckling load of imperfect cylindrical shells, COMPDYN, ECCOMAS thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Rethymno, June 13-16, 2007.
- M. Papadrakakis, **V. Papadopoulos**, M. Kokolakis and S. Kostantis, Seismic vulnerability analysis of bridges with random material properties, COMDYN, ECCOMAS thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Rethymno, June 13-16, 2007.
- **V. Papadopoulos**, M. Papadrakakis and G. Deodatis, Closed form expressions for the mean and mean square response of linear stochastic finite element systems, 8TH National Congress on Mechanics HSTAM, Patras, July 9-14, 2007.
- **V. Papadopoulos**, D. Charbis and M. Papadrakakis, A computationally efficient method for the buckling analysis of shells with random imperfections, 9<sup>th</sup> US National Conference on Computational Mechanics USNCCCM9, San Francisco, July 23-26, 2007.
- **V. Papadopoulos**, N.D. Lagaros and M. Papadrakakis, Robust Design of Shells with Stochastic Properties, 8th WCCM and 5<sup>th</sup> ECCOMAS, Venice, Italy, June 30 – July 4, 2008 (Keynote).
- **V. Papadopoulos**, G. Stefanou, M. Papadrakakis, Stochastic stability analysis of shells with non-Gaussian geometric, material and thickness imperfections, 8th WCCM and 5th ECCOMAS, Venice, Italy, June 30 – July 4, 2008.
- G. Stefanou, **V. Papadopoulos** and N. Lagaros, Enhanced hybrid simulation of non-homogeneous non-Gaussian stochastic fields, 8th WCCM and 5th ECCOMAS, Venice, Italy, June 30 – July 4, 2008.
- G. Stefanou, **V. Papadopoulos** and M. Papadrakakis, Stochastic Finite Element Stability Analysis of Shells with Non-Gaussian Material and Thickness Properties, Computational Structures Technology Conference, CST-2009, Athens, Greece, Sept.2-5, 2008.
- D. Schillinger, **V. Papadopoulos** and M. Papadrakakis, Evolutionary power spectrum estimation of strongly narrow-band random fields, COMPDYN, Rhodes, Greece, June 22-24, 2009.
- **V. Papadopoulos**, M. Papadrakakis and D. Schillinger, Stochastic FEM Based Buckling Analysis of I-Beams with Random Imperfections, SEECCM 2009, Rhodes, Greece, June 22-24, 2009.
- D. Giovanis, **V. Papadopoulos**, N. Lagaros and M. Papadrakakis, Neural Network based Subset Simulation for Reliability analysis, SEECCM 2009, Rhodes, Greece, September 15-17, 2009.

- D. Giovanis, **V. Papadopoulos**, N. Lagaros and M. Papadrakakis, Structural Reliability Analysis using Subset Simulation and Neural Networks, ICOSSAR 2009, Osaka, Japan, June 15-17, 2009.
- G. Stefanou, **V. Papadopoulos**, N.D. Lagaros and M. Papadrakakis, A novel hybrid method for the simulation of non-homogeneous non-Gaussian stochastic processes and fields, Proc. of the 10th International Conference on Structural Safety and Reliability (ICOSSAR 2009), Osaka, Japan, 13-17 September 2009.
- **V. Papadopoulos**, O. Kokkinos and M. Papadrakakis, “Variability response functions for stochastic dynamic systems”, 10th World Congress on Computational Mechanics, WCCM 10, 19-23 July, Sydney, Australia, 2010.
- **V. Papadopoulos**, O. Kokkinos and M. Papadrakakis, “Response variability of stochastic systems under dynamic excitations”, 6<sup>th</sup> Computational Stochastic Mechanics Conference CSM-2010, Rhodes, Greece, 2010.
- O. Kokkinos and **V. Papadopoulos**, Dynamic response of single degree of freedom oscillators with stochastic material properties, 7TH GRACM International Congress on Computational Mechanics, Athens, June 30 - July 2, 2011.
- **V. Papadopoulos** and O. Kokkinos, Mean and variability response functions for stochastic systems under dynamic excitation, COMDYN, Corfu, Greece, 2011.
- A. Christofi and **V. Papadopoulos**, Performance based earthquake design of structures using vulnerability criteria, COMDYN, Corfu, Greece, 2011.
- **V. Papadopoulos**, D. Giovanis, N. Lagaros and M. Papadrakakis, Reliability analysis using Subset Simulation and Neural Networks, 7TH GRACM International Congress on Computational Mechanics, Athens, June 30 - July 2, 2011.
- **V. Papadopoulos**, Soimoiris, G, M. Papadrakakis and D. Schillinger, Stochastic FEM Based Buckling Analysis of I-Beams and Shells with Random Imperfections, Third International Symposium on Computational Mechanics ISCM III, Taipei, Taiwan, 2011.
- D. Giovanis, **V. Papadopoulos**, N.D. Lagaros, M. Papadrakakis, “Accelerated Subset Simulation with neural networks for reliability analysis”, 10th Aniversario posgrado ingenieria estructural in Univesridad Autonoma Metropolitana (UAM) in Mexico city, Mexico, 29 November, 2011.
- Stefanou, G.; **Papadopoulos, V.**; Papadrakakis, M Buckling load and displacement variability of cylindrical shell with stochastic material and geometric properties, ECCOMAS 2012, Wien, Vienna, Austria, 2012.
- **V. Papadopoulos**, D. Savas, M. Papadrakakis “The effect of random CNT waviness on the mechanical properties of CNT-RCS”, September 9-13, ECCOMAS 2012, Wien, Austria, 2012.

- Soimoiris, G, **V. Papadopoulos**, M. Papadrakakis “I-section steel frames with random imperfections”, September 9-13, ECCOMAS 2012, Wien, Austria, 2012.
- Stefanou G., Vryzidis I., **Papadopoulos V.** “Buckling analysis of steel tubes with random geometric imperfections”, COMPDYN 2013, Kos island, 12-14 June, Greece, 2013.
- **Papadopoulos V.**, Kokkinos O., Papadrakakis M. “Stochastic dynamic response of structures”, COMPDYN 2013, Kos island, 12-14 June, Greece, 2013.
- Vathi M., Soimoiris G., Karamanos S., **Papadopoulos V.**, “A stochastic approach for assessing imperfection sensitivity of liquid storage tanks”, COMPDYN 2013, Kos island, 12-14 June, Greece, 2013.
- **Papadopoulos V.**, “Characterization of carbon nanotube reinforced thermoplastics using hierarchical multiscale”, Semi plenary lecture, HSTAM 2013, Crete island, Greece.
- **Papadopoulos V.**, Savvas D., “Multiscale modeling of damping in carbon nanotube reinforced composites”, HSTAM 2013, Crete island, Greece.
- **Papadopoulos V.**, Savvas D., “Viscoplastic multiscale modeling of carbon nanotube reinforced composites”, IUTAM 2013, Crete island, Greece.
- Giovanis D., **Papadopoulos V.**, “A variability response functions-based adaptive spectral stochastic finite element method”, IUTAM 2013, Crete island, Greece.
- Stavroulakis, G. Giovanis D., Papadrakakis, M., **Papadopoulos V.**, “Monte Carlo simulation vs. polynomial chaos in structural analysis: a numerical performance study”, IUTAM 2013, Crete island, Greece.
- Tavlaki, M., **Papadopoulos V.**, “Multiscale material non-linear analysis of carbon nanotube reinforced composites in the framework of a FE2 approach”, IUTAM 2013, Crete island, Greece, 2013.
- Soimoiris, G., **Papadopoulos V.**, Papadrakakis, M., “Multiscale modeling of carbon nanotube reinforced composites with geometric nonlinearities”, IUTAM 2013, Crete island, Greece, 2013.
- Kokkinos, O., **Papadopoulos V.**, “Dynamic response variability of general fe-systems”, IUTAM 2013, Crete island, Greece, 2013.
- Giovanis D., **Papadopoulos V.**, “Stochastic finite element analysis using Monte Carlo simulation and neural networks”, ICOSSAR 2013, New York, USA, 2013.
- Stefanou, G., Vryzides, I., **Papadopoulos V.**, Papadrakakis, M., “Stability analysis of cylindrical shells with stochastic imperfections”, ICOSSAR 2013, NY, USA, 2013.
- Stavroulakis, G., Giovanis, D. Papadrakakis, M., **Papadopoulos, V.**, “Solution of Large-Scale Problems in Structural Analysis: Monte Carlo Simulation vs. Spectral Stochastic Finite Element Method” 13<sup>th</sup> US Conference on Computational Mechanics USNCCM 2013, 26-30 July, San Diego, USA, 2013.



- Stavroulakis, G., Giovanis, D. Papadrakakis, M., **Papadopoulos, V.**, “Assessing the numerical efficiency of Monte Carlo and Spectral Stochastic FEM in structural problems”, 11th World Congress on Computational Mechanics, WCCM 11, 20-25 July, Barcelona, Spain, 2014.
- **Papadopoulos, V.**, Stavroulakis, G., Giovanis, D. Papadrakakis, M., “An adaptive polynomial chaos expansion for accelerating the solution of Spectral Stochastic FEM problems”, 11th World Congress on Computational Mechanics, WCCM 11, 20-25 July, Barcelona, Spain, 2014.
- **Papadopoulos, V.**, Soimoiris, Papadrakakis, M., “FE2 multiscale approach of geometrically nonlinear carbon nanotube reinforced composites” 11th World Congress on Computational Mechanics, WCCM 11, 20-25 July, Barcelona, Spain, 2014.
- **Papadopoulos, V.**, Tavlaki, M., “Multiscale modelling of carbon nanotube reinforced composites in the framework of a nested solution scheme” 11th World Congress on Computational Mechanics, WCCM 11, 20-25 July, Barcelona, Spain, 2014.
- **Papadopoulos, V.**, Stavroulakis, G., Giovanis, D. Papadrakakis, M “Monte Carlo simulation vs Spectral Galerkin method: a numerical performance study, 1<sup>st</sup> Panamerican Congress on Computational Mechanics, PANACM 2015, Buenos Aires, Argentina, 27-29 April 2015.
- Giovanis, D. **Papadopoulos, V.**, “Neural network-based reliability analysis using subset simulation: application in random fields”, 1st Panamerican Congress on Computational Mechanics, PANACM 2015, Buenos Aires, Argentina, 27-29 April 2015.
- Giovanis, D. **Papadopoulos, V.**, Stavroulakis, G., “Sparse polynomial chaos representation using variability response functions”, Symposium on Reliability of Engineering Systems, SRES 2015, Hangzhou China, 15-17 October 2015.
- **Papadopoulos, V.**, Kalogeris, Y., “A StreamlineUpwind/Petrov-Galerkin solution of the Probability Density Evolution Method for static systems”, ymposium on Reliability of Engineering Systems, SRES 2015, Hangzhou China, 15-17 October 2015.
- Giovanis, D., Papaioannou, I., **Papadopoulos, V.**, Straub. D., “StraubBayesian updating with subset simulation and neural networks”, 8<sup>th</sup> International Congress on Computational Mechanics GRACM, Volos, 12-15 July 2, 2015.
- K.C. Meza Fajardo, **V. Papadopoulos**, A. Papageorgiou, “Earthquake response of liquid storage tanks, accounting for rocking excitation, caused by basin induced surface waves”, COMPDYN 2015, Crete island, 25-27 May, Greece, 2015.
- M. Fragiadakis, D. Giovanis, **V. Papadopoulos**, “Quick seismic reliability assessment of liquid storage tanks using neural networks”, COMPDYN 2015, Crete island, 25-27 May, Greece, 2015.

- E. Skoulikari, **V. Papadopoulos**, N. Lagaros “Assesment of optimum strengthening design of a reinforced concrete building with vulnerability criteria”, COMPDYN 2015, Crete island, 25-27 May, Greece, 2015.
- **Papadopoulos, V.**, Kalogeris, “Galerkin-based probability density evolution formulation for static problems, UNCECOMP 2015, Crete island, 25-27 May, Greece, 2015.
- O. Kokkinos, **V. Papadopoulos**, “Stochastic optimization with variability response functions”, UNCECOMP 2015, Crete island, 25-27 May, Greece, 2015.
- **V. Papadopoulos**, M. Tavlaki, “Influence of the interface on the macroscopic behavior of carbon-nanotube reinforced composites using a multiscale technique”, UNCECOMP 2015, Crete island, 25-27 May, Greece, 2015.
- Giovanis, D., Papaioannou, I., **Papadopoulos, V.**, Straub. D., “Neural network-based bayesian updating with subset simulation”, UNCECOMP 2015, Crete island, 25-27 May, Greece, 2015.
- Stavroulakis, G., Giovanis, D., **Papadopoulos, V.**, Papadrakakis, M., “Accelerating the solution of stochastic soil-structure interaction problems with domain decomposition methods”, UNCECOMP 2015, Crete island, 25-27 May, Greece, 2015.
- **Papadopoulos V.**, Seventekidis D., “Stochastic Multiscale modeling of graphene reinforced composites”, 11<sup>th</sup> HSTAM International Congress on Mechanics HSTAM 2016, Athens, 27-30 May, Greece 2016.
- Fasoulakis, Z., Raftoyiannis<sup>1</sup>, Avraam, T., **Papadopoulos, V.**, “Stability investigation of single bolted members from cold formed angle sections with random imperfections”, 11<sup>th</sup> HSTAM International Congress on Mechanics HSTAM 2016, Athens, 27-30 May, Greece 2016.
- **V. Papadopoulos**, M. Tavlaki, Odysseas Kokkinos, “Multiscale optimization of a carbon nanotube/polymer structure Vissarion Papadopoulos, ECCOMAS 2016 Congress, Crete island, 5-10 June, 2016.
- **Papadopoulos, V.**, Kalogeris, I, “Probability density evolution method for buckling analysis of stochastic systems”, ECCOMAS 2016 Congress, Crete island, 5-10 June, 2016.
- Stavroulakis, G., Giovanis, D., **Papadopoulos, V.**, Papadrakakis, M., “Parallel and scalable solution schemes for metaheuristic optimization algorithms considering uncertainties, in the context of structural analysis”, ECCOMAS 2016 Congress, Crete island, 5-10 June, 2016.
- Dimitrios Savvas, George Stefanou, **Vissarion Papadopoulos**, Manolis Papadrakakis “Determination of rve size for random cnt reinforced composites”, ECCOMAS 2016 Congress, Crete island, 5-10 June, 2016.
- **Vissarion Papadopoulos** and Maria Tavlaki, Multiscale material and topology optimization of a carbon-nanotube reinforced composite structure, 9<sup>th</sup> GRACM International Congress on Computational Mechanics, Athens, June 4-6, 2018.
- **Vissarion Papadopoulos** and Gerasimos Sotiropoulos Multiscale modeling of the mechanical behavior of graphene at finite strains 9<sup>th</sup>

GRACM International Congress on Computational Mechanics, Athens, June 4-6, 2018.

- Ioannis Kalogeris, **Vissarion Papadopoulos** and Dimitris Giovanis A spectral stochastic finite element formulation for nonlinear analysis of stochastic structures, 9<sup>th</sup> GRACM International Congress on Computational Mechanics, Athens, June 4-6, 2018.
- **Vissarion Papadopoulos**, Gerasimos Sotiropoulos, Computational stochastic homogenization of graphene polymer nanocomposites, UNCECOMP 2017, Rhodos, June 15-17, Greece, 2017.
- George Soimiris, **Vissarion Papadopoulos**, Dimitris G. Giovanis, USING Artificial neural networks for the simulation of carbon nanotubes with geometrical nonlinearities, UNCECOMP 2017, Rhodos, June 15-17, Greece, 2017.
- **Vissarion Papadopoulos**, Odysseas Kokkinos, Maria Tavlaki, Optimization of carbon-nanotube reinforced polymer structures using genetic algorithms, UNCECOMP 2017, Rhodos, June 15-17, Greece, 2017.
- **Vissarion Papadopoulos**, Ioannis Kalogeris, Dimitris Giovanis, An SSFEM formulation for the stochastic analysis of nonlinear framed structures, UNCECOMP 2017, Rhodos, June 15-17, Greece, 2017.
- M. Tavlaki, O. Kokkinos, **V. Papadopoulos**, M. Papadrakaki, “Multiscale Optimization of Carbon-Nanotube Reinforced Polymer Structures”, 14<sup>th</sup> U.S. National Congress on Computational Mechanics July 17-20, 2017, Montreal, Quebec, Canada.
- G. Soimiris, **V. Papadopoulos**, D. Giovanis, “Geometrically Nonlinear Simulation of Carbon Nanotubes Using a Neural Network-Based Surrogate Modelling Technique”, 14<sup>th</sup> U.S. National Congress on Computational Mechanics July 17-20, 2017, Montreal, Quebec, Canada.
- **V. Papadopoulos**, G. Sotiropoulos, G. Stavroulakis, “Stochastic non-linear multiscale FE2 modeling of graphene reinforced nanocomposite structures in hpc environments”, UNCECOMP 2019, Crete 24-26 June, 2019.
- **V. Papadopoulos**, I. Kalogeris, “A diffusion maps-based surrogate model for uncertainty quantification”, UNCECOMP 2019, Crete 24-26 June, 2019.
- G. Stavroulakis D. Tsapetis, S. Bakalacos, G. Sotiropoulos, O. Kokkinos, V. Merevis, G. Soimiris, M. Tavlaki, D. Giovanis, **V. Papadopoulos**, M. Papadrakakis, “MSOLVE: an open source computational mechanics solution platform”, UNCECOMP 2019, Crete 24-26 June, 2019.
- V. Merevis, **V. Papadopoulos**, “Parallelization of dynamic multi body finite element problems including frictionless contact interaction”, COMPDYN 2019, Crete 24-26 June, 2019.
- O. Kokkinos, **V. Papadopoulos**, “An efficient Markov chain algorithm for subset simulation with diffusion maps”, UNCECOMP 2019, Crete 24-26 June, 2019.
- D. Tsapetis, G. Sotiropoulos, G. Stavroulakis, **V. Papadopoulos**, M. Papadrakakis, “Application of domain decomposition solution schemes

in isogeometric Kirchhoff-Love shells with stochastically distributed graphene inclusions”, UNCECOMP 2019, Crete 24-26 June, 2019.

- D. Tsapetis, G. Sotiropoulos, G. Stavroulakis, **V. Papadopoulos**, M. Papadrakakis, “Assessment of the effective thermal conductivity of nano-reinforced polymer composites using the embedded fe method”, UNCECOMP 2019, Crete 24-26 June, 2019.
- G. Soimoiris, **V. Papadopoulos**, O. Kokkinos and M. Papadrakakis, “Geometrically reinforced composites with stochastic initial imperfections using neural network-based surrogate modeling technique nonlinear analysis of carbon nanotube”, UNCECOMP 2019, Crete 24-26 June, 2019.
- T. Manitaras, **V. Papadopoulos**, M. Papadrakakis, “Consistent bayesian update for multiscale analysis using subset simulation”, ICCOSAR, Vienna, 6-10 August, 2017.
- G. Soimoiris, **V. Papadopoulos**, O. Kokkinos and M. Papadrakakis, “Consistent bayesian update for multiscale analysis using subset simulation”, Soize WCCM 2018, 22-28 June, 2018.
- G. Soimoiris, **V. Papadopoulos**, O. Kokkinos and M. Papadrakakis, “Consistent bayesian update for multiscale analysis using subset simulation”, Soize WCCM 2018, 22-28 June, 2018.

#### CONFERENCE PROCEEDINGS

- M. Papadrakakis, M. Kojic and **V. Papadopoulos** (eds) Proc. Second South-East European Conference on Computational Mechanics, SEECM 2009, Rhodes, Greece, June 22-24.
- M. Papadrakakis, **V. Papadopoulos**, G. Stefanou (eds), Proceedings of the 1st International Conference on Uncertainty Quantification in Computational Sciences and Engineering UNCECOMP, Crete, 25-27 May, 2015.
- M. Papadrakakis, **V. Papadopoulos**, V. Plevris and G. Stefanou (eds), Proceedings of the ECCOMAS Congress 2016, Crete, 5-10 June, 2016.
- M. Papadrakakis, **V. Papadopoulos**, G. Stefanou (eds), Proceedings of the 1st International Conference on Uncertainty Quantification in Computational Sciences and Engineering UNCECOMP, Crete, June, 2017.
- M. Papadrakakis, **V. Papadopoulos**, G. Stefanou (eds), Proceedings of the 1st International Conference on Uncertainty Quantification in Computational Sciences and Engineering UNCECOMP, Crete, June, 2019.