

Christian Bucher

List of Publications by Year in descending order

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Version: 2024-02-01

39
papers

1,062
citations

516710

16
h-index

434195

31
g-index

40
all docs

40
docs citations

40
times ranked

855
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | A comparison of approximate response functions in structural reliability analysis. Probabilistic Engineering Mechanics, 2008, 23, 154-163. | 2.7 | 139 |
| 2 | Asymptotic sampling for high-dimensional reliability analysis. Probabilistic Engineering Mechanics, 2009, 24, 504-510. | 2.7 | 116 |
| 3 | Computational Analysis of Randomness in Structural Mechanics. , 0, , . | | 95 |
| 4 | Finite elements for stochastic media problems. Computer Methods in Applied Mechanics and Engineering, 1999, 168, 3-17. | 6.6 | 71 |
| 5 | Optimization of lifetime maintenance strategies for deteriorating structures considering probabilities of violating safety, condition, and cost thresholds. Probabilistic Engineering Mechanics, 2006, 21, 1-8. | 2.7 | 69 |
| 6 | A Moving Least Squares weighting function for the Element-free Galerkin Method which almost fulfills essential boundary conditions. Structural Engineering and Mechanics, 2005, 21, 315-332. | 1.0 | 65 |
| 7 | An automatic mode pairing strategy using an enhanced modal assurance criterion based on modal strain energies. Journal of Sound and Vibration, 2010, 329, 5375-5392. | 3.9 | 63 |
| 8 | Probability-based optimal design of friction-based seismic isolation devices. Structural Safety, 2009, 31, 500-507. | 5.3 | 57 |
| 9 | A contribution to the SFE-based reliability assessment of nonlinear structures under dynamic loading. Probabilistic Engineering Mechanics, 1995, 10, 265-273. | 2.7 | 46 |
| 10 | A new model order reduction strategy adapted to nonlinear problems in earthquake engineering. Earthquake Engineering and Structural Dynamics, 2017, 46, 537-559. | 4.4 | 41 |
| 11 | New concepts for moving least squares: An interpolating non-singular weighting function and weighted nodal least squares. Engineering Analysis With Boundary Elements, 2008, 32, 461-470. | 3.7 | 36 |
| 12 | First-passage problem for nonlinear systems under Lévy white noise through path integral method. Nonlinear Dynamics, 2016, 85, 1445-1456. | 5.2 | 33 |
| 13 | Probabilistic analysis of concrete cracking using neural networks and random fields. Probabilistic Engineering Mechanics, 2007, 22, 219-229. | 2.7 | 28 |
| 14 | Optimal reference sensor positions using output-only vibration test data. Mechanical Systems and Signal Processing, 2013, 41, 196-225. | 8.0 | 23 |
| 15 | Efficient solution of the first passage problem by Path Integration for normal and Poissonian white noise. Probabilistic Engineering Mechanics, 2015, 41, 121-128. | 2.7 | 22 |
| 16 | Ideal and physical barrier problems for non-linear systems driven by normal and Poissonian white noise via path integral method. International Journal of Non-Linear Mechanics, 2016, 81, 274-282. | 2.6 | 22 |
| 17 | Analyses of Thermal Conduction and Stress Induced by Electric Current in an Infinite Thin Plate with an Elliptical Hole. Journal of Thermal Stresses, 2009, 32, 1065-1086. | 2.0 | 17 |
| 18 | Dynamic Finite Element analysis of fractionally damped structural systems in the time domain. Acta Mechanica, 2015, 226, 3977-3990. | 2.1 | 16 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 19 | Metamodels of optimal quality for stochastic structural optimization. Probabilistic Engineering Mechanics, 2018, 54, 131-137. | 2.7 | 13 |
| 20 | Stochastic simulation of cracking in concrete structures using multiparameter random fields. International Journal of Reliability and Safety, 2006, 1, 168. | 0.2 | 11 |
| 21 | Robustness analysis in structural optimization. Structure and Infrastructure Engineering, 2009, 5, 287-293. | 3.7 | 11 |
| 22 | An optimized strategy for using asymptotic sampling for reliability analysis. Structural Safety, 2018, 71, 33-40. | 5.3 | 11 |
| 23 | Asynchronous collision integrators: Explicit treatment of unilateral contact with friction and nodal restraints. International Journal for Numerical Methods in Engineering, 2013, 95, 562-586. | 2.8 | 10 |
| 24 | Selective sensitive finite element model updating: an improved approach. Structural Control and Health Monitoring, 2014, 21, 1170-1192. | 4.0 | 8 |
| 25 | On model updating of existing structures utilizing measured dynamic responses. Structure and Infrastructure Engineering, 2005, 1, 135-143. | 3.7 | 7 |
| 26 | Distance fields on unstructured grids: Stable interpolation, assumed gradients, collision detection and gap function. Computer Methods in Applied Mechanics and Engineering, 2013, 259, 77-92. | 6.6 | 7 |
| 27 | Identification of critical samples of stochastic processes towards feasible structural reliability applications. Structural Safety, 2014, 47, 39-47. | 5.3 | 7 |
| 28 | Asynchronous variational integration using continuous assumed gradient elements. Computer Methods in Applied Mechanics and Engineering, 2013, 255, 158-166. | 6.6 | 4 |
| 29 | Asymptotic sampling – a tool for efficient reliability computation in high dimensions. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 549-550. | 0.2 | 4 |
| 30 | Applications Of Random Field Models In Stochastic Structural Mechanics. , 2006, , 471-484. | | 2 |
| 31 | Local finite element model updating with forced vibration measurements. Structure and Infrastructure Engineering, 2014, 10, 1573-1594. | 3.7 | 2 |
| 32 | Seismic Fragility Curves of an Arch Dam With Special Regard to Ultimate Limit State. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, 2019, 5, . | 1.1 | 2 |
| 33 | Time-variant reliability analysis utilizing results from non-destructive testing. , 2009, , . | | 1 |
| 34 | Some Aspects when Applying Continuous Assumed Gradient Methods to Explicit Dynamics. Journal of Engineering Mechanics - ASCE, 2012, 138, 910-913. | 2.9 | 1 |
| 35 | Analysis and Design of Sliding Isolation Pendulum Systems. IABSE Symposium Report, 2015, , . | 0.0 | 1 |
| 36 | Structural Optimization Under Random Dynamic Seismic Excitation. , 2015, , 3617-3626. | | 1 |

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|----|--|----|-----------|
| 37 | Response Surfaces for Reliability Assessment. , 2004, , . | | 0 |
| 38 | Structural Optimization Under Random Dynamic Seismic Excitation. , 2014, , 1-12. | | 0 |
| 39 | Structural Reassessment for Lifetime Extension. , 2015, , 141-152. | | 0 |