September 4, 2024

CURRICULUM VITAE

1. PERSONAL DATA

First Name: Christian
Last name: SOIZE

Organization: Université Gustave Eiffel
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2. HIGHEST DEGREE

Thèse de Doctorat d'Etat ès Sciences Physiques obtained in 1979 at Pierre et Marie Curie (Paris VI) University, Paris, France.

3. PROFESSIONAL EXPERIENCE

. Professor Emeritus, Université Gustave Eiffel, 2016 - present.
. Professor, Université Paris-Est Marne-la-Vallée (become Université Gustave Eiffel) , 2001 - 2016.
. Researcher, ONERA (French Aeronautical & Aerospace Research Center), 1981 - 2001.

4. TEACHING (until September 2016).

. Uncertainty Modeling and Uncertainty Quantification in Computational Mechanics - Applications to Structural Dynamics, Vibrations and Vibroacoustics of Complex Mechanical Systems.
. Structural dynamics and vibration
. Probability and Stochastic Modeling in Mechanics.

5. RESEARCH AREAS.

. Statistical Learning, Probabilistic Learning, Machine Learning, and Nonconvex Optimization Problem.
. Uncertainty Quantification, stochastic modeling of uncertainties in computational sciences and engineering, their propagation and their quantification solving stochastic inverse problems.
. Stochastic multi-scale modeling and application to microstructures of heterogeneous materials.
. Computational science, computational mechanics, linear and nonlinear structural dynamics, structural acoustics, vibroacoustics, and coupled systems.
. Computational stochastic dynamics for linear and nonlinear dynamical systems.

6. AWARDS AND HONORS

. 1985 "Madame Victor Noury" Prize awarded by the French Academy of Sciences in Paris.
. 2001 "Research Award" in the area of Stochastic Dynamics awarded by IASSAR (International Association for Structural Safety and Reliability) at ICOSSAR 2001 at Newport Beach, California, USA, June 17-22, 2001.
. 2011 "Senior Research Prize" for his leadership and most outstanding scientific work in the areas of modeling in linear and non linear dynamics, structural acoustics, vibroacoustics and coupled systems, awarded by EASD (European Association of Structural Dynamics) at EURODYN 2011, Leuven, July 4-6, 2011.
. 2018 "IACM Award Computational Mechanics" delivered by the International Association for Computational Mechanics (IACM) at the 13th World Congress in Computational Mechanics, New York, USA, 22-27 July 2018.
. 2022 "Alfred M. Freudenthal Medal" delivered by the American Society of Civil Engineers (ASCE) for "fundamental contributions to computational stochastic mechanics and its application to emerging problems in engineering" at the EMI 2022 Conference in Baltimore, MD, USA, May 31- June 3, 2022.

. 2001 "Fellow of the Acoustical Society of America".

. 1995 "Chevalier dans l'ordre des Palmes Académiques" awarded by the French Ministry of Education.

. 2015 "Chevalier dans l'ordre National du Mérite" awarded by the French Ministry of Education.

. 2016 "Officier dans l'ordre des Palmes Académiques" awarded by the French Ministry of Education.

. Plenary speaker, ICCM 2024, 15th International Conference of Computational Methods, Paris, Virtual Conference, July 15-18, 2024.

. General lecturer, CMDS 14, 14th International Symposium on Continuum Models and Discrete Systems, Paris, France – June 26-30, 2023.

. Plenary speaker, UNCECOMP 2019, 3nd International Conference on Uncertainty Quantification in Computational Sciences and Engineering and COMPDYN 2019, 7th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Island of Crete, Greece, June 24-26, 2019.

. Plenary speaker, UNCECOMP 2017, 2nd International Conference on Uncertainty Quantification in Computational Sciences and Engineering and COMPDYN 2017, 6th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Rhodes Island, Greece, June 15-17, 2017.

. Semi-Plenary Speaker, ECCOMAS Congress 2016, European Congress on Computational Methods in Applied Sciences and Engineering, the Island of Crete, Greece, June 5-10, 2016.

. Plenary Speaker, UNCECOMP 2015, 1st ECCOMAS Thematic International Conference on Uncertainty Quantification in Computational Sciences and Engineering, the Island of Crete, Greece, May 25-27, 2015.

. Semi-Plenary Speaker, COMPDYN 2009, Computational Methods in Structural Dynamics and Earthquake Engineering, Island of Rhodes, Greece, June 22-24, 2009.

. Plenary Speaker, EM08, The Inaugural International Conference of the Engineering Mechanics Institute, University of Minnesota, Minneapolis, Minnesota, USA, May 16-21, 2008.

. Semi-Plenary Speaker, COMPDYN 2007, Computational Methods in Structural Dynamics and Earthquake Engineering, Rethymno, Crete, Greece, June 13–15, 2007.

. Plenary Speaker, ICOSSAR 2005, 9th International Conference on Structural Safety and Reliability, Roma, Italy, June 19-22, 2005.

. Plenary Speaker, EURODYN 2002, 4th European Conference on Structural Dynamics, Munich, September 2-5, 2002.

. Plenary Speaker, 16th International Congress on Acoustics and 135th meeting Acoustical Society of America, Seattle, Washington, USA, June 20-26, 1998.

7. PUBLICATIONS

Preprints of papers and communications can be found in Multidisciplinary Open Archive, HAL, go to the link
https://pagespro.univ-gustave-eiffel.fr/christian-soize

Published papers and communications can be found in Scholar Google, go to the link
https://scholar.google.fr Christian Soize

7.1. Books

[9] - C. Soize, *Uncertainty Quantification. An Accelerated Course with Advanced Applications in Computational Engineering*, Interdisciplinary Applied Mathematics, Springer, New York, **2017**.

[8] - R. Ohayon and C. Soize, *Advanced Computational Vibroacoustics - Reduced-Order Models and Uncertainty Quantification*, doi: 10.1017/CBO9781107785328, Cambridge University Press, New York, **2014**.

[7] - C. Soize, *Stochastic Models of Uncertainties in Computational Mechanics*, doi: 10.1061/9780784412237, American Society of Civil Engineers (ASCE), Reston, **2012**.

[6] - C. Soize, *Dynamique des structures, Eléments de base et concepts fondamentaux*, Ellipse, Paris, **2001**.

[5] - R. Ohayon and C. Soize, *Structural Acoustics and Vibration*, doi: 10.1016/B978-0-12-524945-4.X5000-2, Academic Press, San Diego, London, **1998**.

[4] - C. Soize, *The Fokker-Planck Equation for Stochastic Dynamical Systems and its Explicit Steady State Solutions*, doi: 10.1142/2347, World Scientific Publishing Co Pte Ltd, Singapore, **1994**.

[3] - C. Soize, *Méthodes mathématiques en analyse du signal*, Masson, Paris, **1993**.

[2] - P. Krée and C. Soize, *Mathematics of Random Phenomena*, D. Reidel Publishing Company, Dordrecht, **1986**, doi: 10.1007/978-94-009-4770-2 (version Anglaise revue et augmentée de *Mécanique aléatoire*).

[1] - P. Krée et C. Soize, *Mécanique aléatoire*, Dunod, Paris, **1983**.

7.2. Chapters of books

[16] - C. Soize, Probabilistic learning inference constrained by an uncertain model and a target: A general method with application to elasticity homogenization without scale separation. In *Continuum Models and Discrete Systems*, Springer Proceedings in Mathematics and Statistics 457, F. Willot, J. Dirrenberger, S. Forest, D. Jeulin, A. Cherkaev (eds), pp. 1-14, Springer Nature Switzerland, Berlin, Heidelberg, 2024.

[15] - J. Guilleminot, C. Soize, Non-Gaussian Random Fields in Multiscale Mechanics of Heterogeneous Materials. In H. Altenbach and A. Ochsner (eds), *Encyclopedia of Continuum Mechanics*, pp. 1826-1834 , doi:10.1007/978-3-662-55771-6_68, Springer, Berlin, Heidelberg, 2020.

[14] - R. Ohayon, C. Soize, Computational vibroacoustics in low- and medium- frequency bands: damping, ROM, and UQ modeling , pp. 134-172, in *Advances in Vibroacoustics and Aeroacoustics of Aerospace and Automotive Systems*, edited by R. Citarella and L. Federico, pp.134-172, doi: 10.3390/books978-3-03842-852-7, ISBN 978-3-03842-852-7, Applied Sciences, MDPI, Basel, Switzerland, 2018.

[13] - C. Soize, Random matrix models and nonparametric method for uncertainty quantification, Vol. 1, pp. 219-287, in *Handbook of Uncertainty Quantification*, edited by R. Ghanem, D. Higdon, and H. Owhadi, doi:10.1007/978-3-319-11259-6_5-1, Springer International Publishing Switzerland, 2017.

[12] - C. Soize, Random vectors and random fields in high dimension - Parametric model-based representation, identification from data, and inverse problems, Vol. 2, pp. 883-935, in *Handbook of Uncertainty Quantification*, edited by R. Ghanem, D. Higdon, and H. Owhadi, doi:10.1007/978-3-319-11259-6_30-1, Springer International Publishing Switzerland, 2017.

[11] - R. Ohayon, C. Soize, Structural dynamics, pp. 1424–1429, in *Encyclopedia of Applied and Computational Mathematics (EACM)*, edited by B. Engquist, doi:10.1007/978-3-540-70529-1, Springer-Verlag Berlin Heidelberg, 2015.

[10] - J. Yvonnet, Q. C. He, E. Monteiro, A. Binh Tran, C. Toulemonde, J.Sanahuja, A. Clément, C. Soize, Non-concurrent computational homogenization of nonlinear, stochastic and viscoelastic materials, pp. 1157–1196, in *Handbook of Micromechanics and Nanomechanics*, edited by Shaofan Li (UC Berkeley) and Prof. Xin-Lin Gao (Univesity Texas), Pan Stanford Publishing Pte Ltd, http://www.panstanford.com, 2013.

[9] - A. Batou, C. Soize, Random dynamical response of a multibody system with uncertain rigid bodies, pp.1-14, in *Computational Methods in Stochastic Dynamics, Volume 2*, edited by M. Papadrakakis, M. Fragiadakis, and V. Plevris, Computational Methods in Applied Sciences Series, Volume 26, DOI $10.1007/978-94-007-5134-7-1$, Springer, Dordrecht, 2012.

[8] - C. Soize, Stochastic models of uncertainties in computational structural dynamics and structural acoustics, pp. 61–113, in *Nondeterministic Mechanics*, edited by I. Elishakoff and C. Soize, CISM Courses and Lectures (Udine), International Centre for Mechanical Sciences, vol. 539, doi: 10.1007/978-3-7091-1306-6_2, Springer Wien, New York, 2012.

[7] - C. Soize, Random matrices in structural acoustics, pp. 206–230, in *New Directions in Linear Acoustics: Random Matrix Theory, Quantum Chaos and Complexity*, edited by M. Wright and R. Weaver, Cambridge University Press, Cambridge, 2010.

[6] - C. Soize, C. Chen, J.-F. Durand, D. Duhamel, L. Gagliardini, Computational elastoacoustics of uncertain complex systems and experimental validation, pp. 71-84, in *Computational Structural Dynamics and Earthquake Engineering*, edited by M. Papadrakakis, D.C. Charmpis, N.D. Lagaros, and Y. Tsompanakis, Structures and Infrastructures Series, Volume 2, Published by CRC Press / Balkema, Taylor and Francis Group, London, UK, 2009.

[5] - F. Poirion, C. Soize, Numerical methods and mathematical aspects for simulation of homogeneous and non homogeneous Gaussian vector fields, pp. 17–53, in *Probabilistic Methods in Applied Physics*, edited by P. Krée and W. Wedig, doi: 10.1007/3-540-60214-3_50, Springer-Verlag, Berlin, 1995.

[4] - C. Soize, Exact steady-state solution of FKP equation in higher dimension for a class of non-linear Hamiltonian dissipative dynamical systems excited by Gaussian white noise, pp. 284–309, in *Probabilistic Methods in Applied Physics*, edited by P. Krée and W. Wedig, doi: 10.1007/3-540-60214-3_61, Springer-Verlag, Berlin, 1995.

[3] - C. Soize, Prediction of the high-frequency behavior of coupled fluid structure systems by the SEA method and applications, pp. 55–77, in *Computational Methods for Fluid-Structure Interaction*, edited by J.M. Crolet and R. Ohayon , Longman Scientific and Technical, 1994.

[2] - C. Soize, *Problèmes classiques de dynamique stochastique : méthodes d'étude*, Collection Mathématiques Appliquées, Numéro **11**, Fascicule **A1 346**, pp. 1–61, Techniques de l'Ingénieur, traité Sciences Fondamentales, Edition Périodique TI, Paris, 1988.

[1] - C. Soize, The local effects in the linear dynamic analysis of structures in the medium frequency range, pp. 253–275, in *Local Effects in the Analysis of Structures*, edited by P. Ladevèze, Elsevier, Amsterdam, 1985.

7.3. Editor of Books, Proceedings, and Guest Editor of Special Issues of International Journals

[9] - A.H. Gandomi, M. Mignolet, C. Soize,Y. Wang, Guest Editors of the Special Issue "Machine Intelligence for Engineering Under Uncertainties" in *Journal of Computing and Information Science in Engineering, ASME*, **23**(1)010201, 2023, doi:10.1115/1.4056396.

[8] - A.H. Gandomi, C. Soize, J.R. Stewart, Guest Editors of the Special Issue "AI in Computational Mechanics and Engineering Sciences" in *Computer Methods in Applied Mechanics and Engineering*, doi:10.1016/j.cma.2023.115935, **407**, 115935, 2023.

[7] - J.L. Beck, W. Graf, C. Soize, Guest Editors of the Special Issue: "Computational Intelligence in Structural Engineering and Mechanics" of *Computer-Aided Civil and Infrastructure Engineering*, doi:10.1111/mice.12150, **30**(5), pp. 329-411, 2015.

[6] - J.L. Beck, W. Graf, C. Soize, Guest Editors of the Special Issue: "Computational Intelligence in Structural Engineering and Mechanics" of *Computer-Aided Civil and Infrastructure Engineering*, doi:10.1111/mice.12070, **29**(3), pp. 159-233, 2014.

[5] - J.L. Beck, W. Graf, C. Soize, Guest Editors of the Special Issue: "Computational Intelligence in Structural Engineering and Mechanics" of *Computer-Aided Civil and Infrastructure Engineering*, doi: 10.1111/j.1467-8667.2012.00784.x, **27**(9), pp. 639-730, 2012.

[4] - I. Elishakoff and C. Soize (Eds), *Nondeterministic Mechanics*, International Centre for Mechanical Sciences (CISM - Udine) book, ISBN 978-3-7091-1305-9, Springer Wien, New York, 2012.

[3] - M. Ichchou, C. Soize, M. Haddar (Guest Eds), Dynamics of Materials, Structures and Systems, *European Journal of Computational Mechanics*, **20**(1-4) 7-245 (2011).

[2] - C. Soize and G.I. Schueller (Eds), *Structural Dynamics EURODYN 2005*, ISBN 90 5966 033 1, Millpress, Rotterdam, Netherlands, Vol. 1 pp. 1-758, Vol. 2 pp 761-1528, Vol. 3 pp. 1533-2250 (2005).

[1] - R. Bouc and C. Soize (Eds), *Progress in stochastic structural dynamics*, Publications du LMA-CNRS, ISBN 2-909669-16-5, **152** (1999).

7.4. Papers in Refereed Journals

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[271] - C. Soize, Quy-Dong To, Polynomial-chaos-based conditional statistics for probabilistic learning with heterogeneous data applied to atomic collisions of Helium on graphite substrate, it Journal of Computational Physics, on line 25 October 2023, doi:10.1016/j.jcp.2023.112582, **496**, 112582, pp. 1-20 (2024).

[270] - C. Soize, R. Ghanem, Probabilistic-learning-based stochastic surrogate model from small incomplete datasets for nonlinear dynamical systems, *Computer Methods in Applied Mechanics and Engineering*, online 12 October 2023, doi:10.1016/j.cma.2023.116498, **418**, 116498, pp.1-25 (2024).

[269] - A. Sinha, C. Desceliers, C. Soize, G. Cunha, Statistical metamodel of liner acoustic impedance based on neural network and probabilistic learning for small datasets, *Aerospace*, MDPI, doi:10.3390/aerospace11090717, **11**(717),1-14, (2024).

[268] - G. Perrin, C. Soize, Reconstruction of random fields concentrated on an unknown curve using irregularly sampled data *Methodology and Computing in Applied Probability*, doi:10.1007/s11009-024-10079-w, **26**(9),1-20 (2024).

[267] - J. Nespoulous, G. Perrin, C. Funfschilling, C. Soize, Measurements-based constrained control optimization in presence of uncertainties with application to the driver commands for high-speed trains, *Physica D*, online 07 November 2023, doi:10.1016/j.physd.2023.133977, **457**, 133977, 1-14 (2024).

[266] - G. La Valle, C. Soize, Stochastic second-gradient continuum theory for particle-based materials. Part II, ZAMP - Journal of Applied Mathematics and Physics (Zeitschrift fur Angewandte Mathematik und Physik), doi:10.1007/s00033-024-02232-9, **75**(3), 93-112 (2024).

[265] - G. La Valle, C. Soize, Identifying second-gradient continuum models in particle-based materials with pairwise interactions using acoustic tensor methodology, *Journal of Elasticity*, doi:10.1007/s10659-024-10067-8, **156**, 623-639 (2024).

[264] - G. La Valle, C. Soize, A higher-order nonlocal elasticity continuum model for deterministic and stochastic particle-based materials, ZAMP - Journal of Applied Mathematics and Physics (Zeitschrift fur Angewandte Mathematik und Physik), doi:10.1007/s00033-024-02196-w, 75(2), 49, 1-15 (2024).

[263] - P. Chen, J. Guilleminot, C. Soize, Concurrent multiscale simulations of nonlinear random materials using probabilistic learning, *Computer Methods in Applied Mechanics and Engineering*, doi:10.1016/j.cma.2024.116837, **422**, pp. 116837 (2024).

[262] - E. Capiez-Lernout, O. Ezvan, C. Soize, Updating nonlinear stochastic dynamics of an uncertain nozzle model using probabilistic learning with partial observability and incomplete dataset, *ASME Journal of Computing and Information Science in Engineering*, doi:10.1115/1.4065312, **24**(6), 061006, pp.1-17 (2024).

2023

[261] - C. Soize, An overview on uncertainty quantification and probabilistic learning on manifolds in multiscale mechanics of materials, *Mathematics and Mechanics of Complex Systems*, doi:10.2140/memocs.2023.11.87, **11**(1), 87-174 (2023).

[260] - C. Soize, Probabilistic learning constrained by realizations using a weak formulation of Fourier transform of probability measures, *Computational Statistics*, online 23 December 2022, doi:10.1007/s00180-022-01300-w, **38**(4),1879–1925 (2023).
Also in arXiv:2205.03078[stat.ML], 6 May 2022, https://doi.org/10.48550/arXiv.2205.03078.

[259] - A. Sinha, C. Soize, C. Desceliers, G. Cunha, Aeroacoustic liner impedance metamodel from simulation and experimental data using probabilistic learning, *AIAA Journal*, doi:10.2514/1.J062991, **61**(11), 4926-4934 (2023).

[258] - G. La Valle, B. E. Abali, G. Falsone, C. Soize, Sensitivity of a homogeneous and isotropic second-gradient continuum model for particle-based materials with respect to uncertainties, *ZAMM - Journal of Applied Mathematics and Mechanics (Zeitschrift fur Angewandte Mathematik und Mechanik)*, doi:10.1002/zamm.202300068, **103**(10), e202300068 (2023).

[257] - O. Ezvan, C. Soize, C. Desceliers, R. Ghanem, Updating an uncertain and expensive computational model in structural dynamics based on one single target FRF using a probabilistic learning tool, *Computational Mechanics*, doi: 10.1007/s00466-023-02301-2, **71**, 1161-1177 (2023).

[256] - E. Cataldo, L. Monteiro, C. Soize, A novel source-filter stochastic model for voice production, *Journal of Voice*, doi:10.1016/j.jvoice.2020.11.015, **37**(1), 1-8 (2023).

2022

[255] - C. Soize, Probabilistic learning inference of boundary value problem with uncertainties based on Kullback-Leibler divergence under implicit constraints, *Computer Methods in Applied Mechanics and Engineering*, **395**, 115078 (2022), doi:10.1016/j.cma.2022.115078.
Also in arXiv:2202.05112 [stat.ML], 10 Feb 2022, https://arXiv.org/abs/2202.05112.

[254] - C. Soize, R. Ghanem, Probabilistic learning on manifolds (PLoM) with partition, *International Journal for Numerical Methods in Engineering*, doi: 10.1002/nme.6856, **123**(1), 268-290 (2022).
Also in arXiv:2102.10894 [stat.ME], 22 Feb 2021, https://arXiv.org/abs/2102.10894.

[253] - J. Reyes, C. Desceliers, C. Soize, G. Gagliardini, Multi-frequency model reduction for uncertainty quantification in computational vibroacoutics, *Computational Mechanics*, doi:10.1007/s00466-021-02109-y, **69**, 661-682 (2022).

[252] - J. Nespoulous, C. Soize, C. Funfschilling, G. Perrin, Optimisation of train speed to limit energy consumption, *Vehicle System Dynamics*, doi:10.1080/00423114.2021.1965628, **60**(10), 3540-3557, (2022)

[251] - R. Ghanem, C. Soize, L. Mehrez, V. Aitharaju, Probabilistic learning and updating of a digital twin for composite material systems, *International Journal for Numerical Methods in Engineering*, doi:10.1002/nme.6430, **123**(13), 3004-3020 (2022).

[250] - E. Capiez-Lernout, C. Soize, Nonlinear stochastic dynamics of detuned bladed disks with uncertain mistuning and detuning optimization using a probabilistic machine learning tool, *International Journal of Non-Linear Mechanics*, doi:10.1016/j.ijnonlinmec.2022.104023, **143**, 104023, 1-28 (2022).

2021

[249] - C. Soize, Stochastic elliptic operators defined by non-Gaussian random fields with uncertain spectrum, *The American Mathematical Society Journal Theory of Probability and Mathematical Statistics*, doi: 10.1090/tpms/1159, **105**, 113-136 (2021).
Also in arXiv 2106.07706 [math.PR], 14 June 2021, https://arXiv.org/abs/2106.07706.

[248] - C. Soize, Computational stochastic homogenization of heterogeneous media from an elasticity random field having an uncertain spectral measure, *Computational Mechanics*, doi: 10.1007/s00466-021-02056-8, **68**, 1003-1021 (2021).

[247] - C. Soize, R. Ghanem, Probabilistic learning on manifolds constrained by nonlinear partial differential equations for small datasets, *Computer Methods in Applied Mechanics and Engineering*, doi:10.1016/j.cma.2021.113777, **380**, 113777 (2021).
Also in arXiv:2010.14324 [stat.ML], 27 Oct 2020, https://arXiv.org/abs/2010.14324.

[246] - C. Soize, A. Orcesi, Machine learning for detecting structural changes from dynamic monitoring using the probabilistic learning on manifolds, *Structure and Infrastructure Engineering*, doi:10.1080/15732479.2020.1811991, **17** (10), 1418-1430 (2021).

[245] - R. Ohayon, C. Soize, Q. Akkaoui, E. Capiez-Lernout, Novel formulation for the effects of sloshing with capillarity on elastic structures in linear dynamics, *International Journal for Numerical Methods in Engineering*, **122**(19), 5313-5330 (2021), doi:10.1002/nme.6290.

[244] - V. Dangla, C. Soize, G. Cunha, A. Mosson, M. Kassem, Robust 3D acoustic performance model for nacelle liners, *AIAA Journal*, https://doi.org/10.2514/1.J060299, **59**(10), 4195-4211 (2021).

[243] - E. Cataldo, C. Soize, A stochastic model of voice generation and the corresponding solution for the inverse problem using Artificial Neural Network for case with pathology in the vocal folds, *Biomedical Signal Processing and Control* (BSPC), doi: 10.1016/j.bspc.2021.102623, **68**, 102623 (2021).

[242] - M. Arnst, C. Soize, K. Bulthies, Computation of Sobol indices in global sensitivity analysis from small data sets by probabilistic learning on manifolds, *International Journal for Uncertainty Quantification*, doi: 10.1615/Int.J.UncertaintyQuantification.2020032674, **11** (2), 1-23 (2021).

2020

[241] - X.Q. Wang, M.P. Mignolet, C. Soize, Structural uncertainty modeling for nonlinear geometric response using non-intrusive reduced order models, *Probabilistic Engineering Mechanics*, doi: 10.1016/j.probengmech.2020.103033, **60** 103033, 1-9 (2020).

[240] - C. Soize, R. Ghanem, Probabilistic learning on manifolds, *Foundations of Data Science, American Institute of Mathematical Sciences (AIMS)*, doi: 10.3934/fods.2020013, **2** (3), 279-307 (2020).
Also in arXiv:2002.12653 [math.ST], 28 Feb 2020, https://arXiv.org/abs/2002.12653.

[239] - C. Soize, R. Ghanem, Physics-constrained non-Gaussian probabilistic learning on manifolds, *International Journal for Numerical Methods in Engineering*, doi: 10.1002/nme.6202, **121** (1), 110-145 (2020).

[238] - C. Soize, R. Ghanem, C. Desceliers, Sampling of Bayesian posteriors with a non-Gaussian probabilistic learning on manifolds from a small dataset, *Statistics and Computing*, doi: 10.1007/s11222-020-09954-6, **30**(5), 1433-1457 (2020).
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[237] - A. Picou, E. Capiez-Lernout, C. Soize, M. Mbaye, Robust dynamic analysis of detuned-mistuned rotating bladed disks with geometric nonlinearities, *Computational Mechanics*, doi:10.1007/s00466-019-01790-4, **65**(3), 711-730 (2020).

[236] - G. Perrin, C. Soize, Adaptive method for indirect identification of the statistical properties of random fields in a Bayesian framework, *Computational Statistics*, doi: 10.1007/s00180-019-00936-5, **35**, 111-133 (2020).

[235] - M. Nesterova, F. Schmidt, C. Soize, Fatigue analysis of a bridge deck using the peaks-over-threshold approach with application to the Millau viaduct, *SN Applied Sciences*, doi:10.1007/s42452-020-3117-1,**2:1416**, 1-12 (2020).

[234] - M. Mignolet, C. Soize, Compressed principal component analysis of non-Gaussian vectors, *SIAM-ASA Journal on Uncertainty Quantification*, doi:10.1137/20M1322029, **8**(4), 1261-1286 (2020).

[233] - D. Lebel, C. Soize, C. Funfschilling, G. Perrin, High-speed train suspension health monitoring using computational dynamics and acceleration measurements, *Vehicle Systems Dynamics*, doi: 10.1080/00423114.2019.1601744, **58**(6), 911-932 (2020).

[232] - Q. Akkaoui, E. Capiez-Lernout, C. Soize, R. Ohayon, Uncertainty quantification for dynamics of geometrically nonlinear structures coupled with internal acoustic fluids in presence of sloshing and capillarity, *Journal of Fluids and Structures*, doi: 10.1016/j.jfluidstructs.2020.102966, **94** 102966, 1-15 (2020).

2019

[231] - H. Wang, J. Guilleminot, C. Soize, Modeling uncertainties in molecular dynamics simulations using a stochastic reduced-order basis, *Computer Methods in Applied Mechanics and Engineering*, doi:10.1016/j.cma.2019.05.020, **354**, 37-55 (2019).

[230] - B. Staber, J. Guilleminot, C. Soize, J. Michopoulos, A. Iliopoulos, Stochastic modeling and identification of an hyperelastic constitutive model for laminated composites, *Computer Methods in Applied Mechanics and Engineering*, doi: 10.1016/j.cma.2018.12.036, **347**, 425-444 (2019).

[229] - C. Soize, R. Ghanem, Probabilistic Machine Learning for the small-data challenge in computational science, IACM Expressions, **44**(19), 3-9 (2019).

[228] - C. Soize, R. Ghanem, C. Safta, X. Huan, Z. P. Vane, J. Oefelein, G. Lacaze, H. N. Najm, Q. Tang, X. Chen, Entropy-based closure for probabilistic learning on manifolds, *Journal of Computational Physics*, **388**, 528-533 (2019), doi: 10.1016/j.jcp.2018.12.029.
Also in arXiv:1803.08161 [math.PR], 28 Feb 2020, https://arXiv.org/abs/1803.08161.

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[1] - C. Soize, Comments on stochastic dynamics of elastic structures [Sur la dynamique stochastique des structures élastiques], *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences - Série A*, **280**(25), 1765–1768 (1975).

7.5. Invited Lectures (Plenary, Semi-plenary, Keynote)

[22] - C. Soize (Plenary lecture), Probabilistic Learning on Manifolds (PLoM) for statistical surrogates of stochastic nano-to-macro systems with uncertainties, and updating from small and incomplete datasets, ICCM 2024, The 15th International Conference of Computational Methods, Virtual Conference, July 15-18, 2024.

[21] - C. Soize (Keynote lecture), Predictive statistical surrogate model constructed using constrained probabilistic learning from small datasets for under-observed nonlinear stochastic computational models, 17th U.S. National Congress on Computational Mechanics, USNCCM 2023, Albuquerque, New Mexico, July 23-27, 2023.

[20] - C. Soize (General lecture), High-dimension probabilistic learning inference constrained by a stochastic computational model and by target statistical moments in the framework of a small training dataset, 14th International Symposium on Continuum Models and Discrete Systems, CMDS 14, Paris, CNAM, France – 26-30 June 2023

[19] - C. Soize (Plenary lecture), A probabilistic learning on manifolds as a new tool in machine learning and data science with applications in computational mechanics, UNCECOMP 2019, 3nd International Conference on Uncertainty Quantification in Computational Sciences and Engineering, and COMPDYN 2019, 7th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Island of Crete, Greece, June 24-26, 2019.

[18] - C. Soize (Keynote lecture), Probabilistic learning on manifolds for the small-data challenge in Uncertainty Quantification, International Conference on Uncertainty Quantification and Optimization (UQOP), Conference organized by The European research and training network UTOPIAE, Sorbonne University, Paris, 18-20 March 2019.

[17] - C. Soize (Plenary lecture) in collaboration with R. Ghanem, Probabilistic learning on manifold for optimization under uncertainties, UNCECOMP 2017, 2nd International Conference on Uncertainty Quantification in Computational Sciences and Engineering and COMPDYN 2017, 6th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Rhodes Island, Greece on June 15-17, 2017. Proceeding of UNCECOMP 2017, M. Papadrakakis, V. Papadopoulos, G. Stefanou (eds.), pp. 1-15, (2017).

[16] - C. Soize (Semi-plenary lecture) in collaboration with C. Farhat, Nonparametric probabilistic approach of model uncertainties introduced by a projection-based nonlinear reduced-order model, 7th European Congress on Computational Methods in Applied Sciences and Engineering, ECCOMAS Congress 2016, the Island of Crete, Greece, June 5-10, 2016. Proceeding of ECCOMAS 2016, M. Papadrakakis, V. Papadopoulos, G. Stefanou, V. Plevris (eds.), ISBN: 978-618-82844-0-1, Vol. 1, pp. 1-25, (2016).

[15] - C. Soize (Plenary lecture) in collaboration with C. Desceliers, J. Guilleminot, T.T. Le, M.T. Nguyen, G. Perrin, J.M. Allain, H. Gharbi, D. Duhamel, C. Funfschilling, Stochastic representations and statistical inverse identification for uncertainty quantification in computational mechanics, UNCECOMP 2015, 1st ECCOMAS Thematic International Conference on Uncertainty Quantification in Computational Sciences and Engineering, the Island of Crete, Greece, May 25-27, 2015. Proceedings of UNCECOMP2105, M. Papadrakakis, V. Papadopoulos, G. Stefanou (eds.), e-book, ISBN: 978-960-99994-9-6, pp. 1-26 (2015).

[14] - C. Soize, (Keynote lecture), Advanced methodologies for the identification of stochastic models in computational mechanics. Case of uncertainty quantification for dynamical systems and case of mesoscale elasticity random fields for heterogeneous microstructures, Uncertainties 2012, Maresias, Brazil, February 27 - March 02, 2012.

[13] - C. Soize, (Keynote lecture), Identification of high-dimension polynomial chaos expansions of tensor-valued random fields from limited observed responses of boundary value problems, ECCOMAS Conference on Computational Mechanics, Solids, Structures and Coupled Problems in Engineering (ECCM-2010), Paris, May 16-21, 2010.

[12] - C. Soize, (Opening Keynote lecture), Generalized probabilistic approach of uncertainties in computational dynamics, First International Symposium IMPACT 2010 on "Dynamic of Systems, materials and structures", Djerba, Tunisie, 22-24 March, 2010.

[11] - C. Soize, (Semi-Plenary lecture), Information Theory for Stochastic Modeling of uncertainties in high dimension. Application to a new construction of the challenging inverse problem relative to the generation of accelerograms

associated with SRS. COMPDYN 2009, Computational Methods in Structural Dynamics and Earthquake Engineering, Island of Rhodes, Greece, June 22-24, 2009.

[10] - C. Soize (Plenary lecture), Modélisation probabiliste, identification et propagation des incertitudes dans les modèles numériques des systèmes mécaniques complexes, Actes du 9e Colloque National en Calcul des Structures, Presqu'île de Giens (Var) Giens (Var), 25-29 Mai 2009.

[9] - C. Soize (Plenary lecture), Maximum entropy principle for stochastic models in computational sciences. EM08, The Inaugural International Conference of the Engineering Mechanics Institute,University of Minnesota, Minneapolis, Minnesota, USA, May 16-21, 2008.

[8] - C. Soize (Keynote lecture), Nonparametric probabilistic approach of uncertainties in computational elastoacoustics of complex systems. Experimental identification and validation. LSAME 08, Leuven Symposium on Applied Mechanics in Engineering, Katholieke Univ Leuven, March 31 - April 2, 2008. Proceedings of LSAME.08: Leuven Symposium on Applied Mechanics in Engineering,edited by B. Bergen, M. De Munck, M. Desmet et al., Pts 1 and 2, pp. 463-472, 2008.

[7] - C. Soize (Semi-Plenary lecture), C. Chen, J.-F. Durand, D. Duhamel, L. Gagliardini, Computational Elastoacoustics of Uncertain Complex Systems and Experimental Validation, COMPDYN 2007, Computational Methods in Structural Dynamics and Earthquake Engineering, Rethymno, Crete, Greece, June 13-15, 2007.

[6] - C. Soize (Keynote lecture), Stochastic modeling of uncertainties in computational dynamics and applications, pp. 1-19, 2nd LNCC Meeting on Computational Modelling, Petropolis, RJ, Brazil, August 8-11, 2006.

[5] - C. Soize (Plenary lecture), Probabilistic models for computational stochastic mechanics and applications, 9th International Conference on Structural Safety and Reliability ICOSSAR'05, Rome, Italy, June 19-23, 2005.

[4] - C. Soize (Keynote lecture), Model uncertainty issues for predictive models. Elements of Predictability Workshop, organized by The Johns Hopkins University and Sandia National Laboratory, The Johns Hopkins University on November 13-14, 2003.

[3] - C. Soize (Keynote lecture), Modélisation probabiliste des incertitudes de modélisation en dynamique des structures soumises aux seismes, pp. 1-11, International Conference "Risk, Vulnerability and Reliability in Construction: towards a reduction of disasters", Alger, October 11-12, 2003.

[2] - C. Soize (Plenary lecture), Random uncertainties modeling in dynamical systems, EURODYN 2002, Fifth European Conference on Structural Dynamics, Munich, Germany, September 2-5, 2002.

[1] - C. Soize (Plenary lecture), Trends in modeling of structural-acoustics systems with structural complexity in low- and medium-frequency ranges, 16th International Congress on Acoustics and 135th meeting Acoustical Society of America, Seattle, Washington, USA, June 20-26, 1998.

7.6. Communications in International and National Conferences

2024

[463] - E. Capiez-Lernout, O. Ezvan, C. Soize, Computational update of a statistical surrogate model for nonlinear stochastic dynamics using partial target dataset in the context of aerospace nozzle analysis, The 9th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2024), Lisboa, Portugal, 3-7 June 2024.

[462] - P. Chen, J. Guilleminot, C. Soize, Concurrent multiscale simulations of nonlinear random materials: a probabilistic learning perspective, 16th World Congress on Computational Mechanics (WCCM16), Vancouver, Canada, 21-26 July, 2024.

[461] - O. Ezvan, Capiez-Lernout, C. Soize, Probabilistic learning in nonlinear computational stochastic dynamics: investigating a partially observed uncertain nozzle model, 16th World Congress on Computational Mechanics (WCCM16), Vancouver, Canada, 21-26 July, 2024.

[460] - E. Jewell, C. Farhat, C. Soize, A nonparametric probabilistic approach for modeling and quantifying model-form uncertainty in CFD with turbulence modeling, USACM Thematic conference on "Uncertainty Quantification for Machine Learning Integrated Physics modeling (UQ-MLIP 2024)", Crystal City, Arlington, VA, August 12-14, 2024.

[459] - R. Jorge Do Marco, G. Perrin, C. Funfschilling, C. Soize, Real-time optimisation of speed control to limit train energy consumption using manifold learning, SIAM Conference on Uncertainty Quantification (SIAM-UQ24), Trieste, Italy, February 27 - March 1,2024.

[458] - R. Jorge Do Marco, G. Perrin, C. Funfschilling, C. Soize, Bayesian calibration of a model for predicting the energy consumption of high-speed trains, MASCOT-NUM 2024, Hyères, France, 3-5 April 2024.

[457] - R. Jorge Do Marco, G. Perrin, C. Funfschilling, C. Soize, Constrained optimization of driver control to limit energy consumption, Railways 2024, The 10th International Symposium on Speed-up and Sustainable Technology for Railway and Maglev Systems, Prague, Czech Republic, 1-5 September 2024. Proceedings published by Civil-Comp Press, pp. 1-12

[456] - A. Sinha, C. Desceliers, C. Soize, G. Cunha, Statistical surrogate models on small datasets for aeroacoustic computational modeling in liners of turbofan engines, EMI 2024 International Conference, Vienna, Austria, September 11-13, 2024.

[455] - C. Soize (Plenary lecture), Probabilistic Learning on Manifolds (PLoM) for statistical surrogates of stochastic nano-to-macro systems with uncertainties, and updating from small and incomplete datasets, ICCM 2024, The 15th International Conference of Computational Methods, Virtual Conference, July 15-18, 2024.

2023

[454] - M.-J. Azzi, C. Farhat, C. Soize (Plenary lecture given by C. Farhat), Recent enhancements of the nonparametric probabilistic method for UQ and digital twinning, 17th U.S. National Congress on Computational Mechanics, USNCCM 2023, Albuquerque, New Mexico, July 23-27, 2023.

[453] - E. Capiez-Lernout, C. Soize, Formulation of a high-dimensional optimization problem combined with probabilistic learning in a turbomachinery detuning context, 5th International Conference on Uncertainty Quantification in Computational Sciences and Engineering, UNCECOMP 2023, 12-14 June 2023, Athens, Greece.

[452] - E. Capiez-Lernout, C. Soize, Detuning optimization of nonlinear mistuned bladed disks using a probabilistic learning tool. In: Platz, R., Flynn, G., Neal, K., Ouellette, S. (eds) Model Validation and Uncertainty Quantification, Volume 3, pp. 169-171, SEM 2023. Conference Proceedings of the 41st IMAC, Society for Experimental Mechanics Series. Springer, 2024, doi:10.1007/978-3-031-37003-8_26.

[451] - E. Capiez-Lernout, C. Soize, Computational validation of a robust design methodology using probabilistic learning (PLoM) for the detuning optimization of nonlinear bladed-disks, XII International Conference on Structural Dynamics, EURODYN 2023, 2-5 July 2023, Delft, Netherlands.

[450] - O. Ezvan, C. Soize, C. Desceliers, R. Ghanem, Probabilistic learning inference for model updating in stochastic structural dynamics with a single target and limited data, 5th International Conference on Uncertainty Quantification in Computational Sciences and Engineering, UNCECOMP 2023, 12-14 June 2023, Athens, Greece.

[449] - O.Ezvan, C. Soize, C. Desceliers, Model updating in stochastic structural dynamics with a single target and limited data using probabilistic learning on manifold, XII International Conference on Structural Dynamics, EURODYN 2023, 2-5 July 2023, Delft, Netherlands.

[448] - C. Farhat, M.-J. Azzi, M. Pavone, C. Soize, Physics-Based Digital Twinning, 17th U.S. National Congress on Computational Mechanics, USNCCM 2023, Albuquerque, New Mexico, July 23-27, 2023.

[447] - R. Jorge Do Marco, G. Perrin, C. Funfschilling, C. Soize, Real-time optimization of speed control to limit train energy consumption, MASCOT-NUM 2023, Le Croisic, France, 3-6 April 2023.

[446] - G. La Valle, B.E. Abali, G. Falsone, C. Soize, Sensitivity with respect to uncertainties of a particle-based homogeneous and isotropic second-gradient continuum model, International Workshop Mathematical Modelling in Biology and Medecine, Arpino, Italy, 8-12 May 2023.

[445] - G. La Valle, B.E. Abali, G. Falsone, C. Soize, Sensitivity of a granular homogeneous and isotropic second-gradient continuum model with respect to uncertainties, ASCE-EMI 2023 International Conference, Palermo, Italy, August 27-30, 2023.

[444] - J. Nespoulous, C. Funfschilling, G. Perrin, C. Soize, Optimisation de la vitesse de trains sous contraintes de confort et de ponctualité, en présence d'incertitudes, 54èmes Journées de Statistique de la SFdS (JDS 2023), Université Libre de Bruxelles, Belgique, 3 au 7 juillet 2023.

[443] - A. Sinha, C. Desceliers, C. Soize, G. Cunha, Aero-acoustic liner impedance metamodel construction from a small dataset using probabilistic learning and neural networks, 5th International Conference on Uncertainty Quantification in Computational Sciences and Engineering, UNCECOMP 2023, 12-14 June 2023, Athens, Greece.

[442] - A. Sinha, C. Desceliers, C. Soize, G. Cunha, Machine learning methodology for constructing an aero-acoustic liner impedance metamodel from a computationally expensive model, 17th U.S. National Congress on Computational Mechanics, USNCCM 2023, Albuquerque, New Mexico, July 23-27, 2023.

[441] - C. Soize (General lecture), High-dimension probabilistic learning inference constrained by a stochastic computational model and by target statistical moments in the framework of a small training dataset, 14th International Symposium on Continuum Models and Discrete Systems, CMDS 14, Paris, CNAM, France – 26-30 June 2023.

[440] - C. Soize (Keynote Lecture), Predictive statistical surrogate model constructed using constrained probabilistic learning from small datasets for under-observed nonlinear stochastic computational models, 17th U.S. National Congress on Computational Mechanics, USNCCM 2023, Albuquerque, New Mexico, July 23-27, 2023.

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[439] - E. Capiez-Lernout, C. Soize, Detuning optimization of nonlinear mistuned bladed-disks, ASME 2022 Turbomachinery Technical Conference, Turbo Expo 2022, Rotterdam, The Netherlands, 13-17 June 2022. Proceedings of the ASME 2022 Turbomachinery Technical Conference, Turbo Expo 2022, doi: 10.1115/GT2022-84171, Paper GT2021-84171, pp. 1-11, 2022.

[438] - E. Capiez-Lernout, C. Soize, Probabilistic learning based optimization of the detuning of bladed-disks in nonlinear stochastic dynamics in presence of mistuning, The 15th World Congress of Computational Mechanics (WCCM 2022), Virtual Conference, Yokohama, Japan, 31 July - 5 August 2022.

[437] - E. Capiez-Lernout, C. Soize, Intentional mistuning optimization of nonlinear mistuned bladed-disks, 25 ème Congrès Français de Mécanique, Nantes, France, August 29 - September 2, 2022. Proceedings of CFM 2022, pp. 1-6 (2022).

[436] - J. Nespoulous, C. Soize, C. Funfschilling, G. Perrin, Robust adaptation of the train speed for energy saving under punctaulity and security constraints, MASCOT-NUM 2022, Clermont Ferrand, France, 7-9 June 2022.

[435] - J. Nespoulous, C. Soize, C. Funfschilling, G. Perrin, Uncertainty quantification for high-speed train dynamics modeling and optimization under uncertainties to limit energy consumption, The 15th World Congress of Computational Mechanics (WCCM 2022), Virtual Conference, Yokohama, Japan, 31 July 31 - 5 August 2022.

[434] - J. Nespoulous, C. Soize, C. Funfschilling, G. Perrin, Driver's control optimization under uncertainties to reduce energy consumption of high-speed trains, Railways 2022, The fifth international conference of railway technology, Montpellier, 22-25 August 2022. Proceedings of the Fifth International Conference on Railway Technology: Research, Development and Maintenance, J. Pombo (Ed.) , Civil-Comp Conferences, doi: 10.4203/ccc.1.7.6, Volume 1, Paper 7.6,pp; 1-5, Civil-Comp Press, Edinburgh, United Kingdom, 2022.

[433] - J. Nespoulous, C. Soize, C. Funfschilling, G. Perrin, Bayesian inference for high-speed train dynamics and speed optimization under uncertainty for energy saving, The 30th edition of the biennial ISMA conference on Noise and Vibration Engineering (ISMA 2022) and The 9th International Conference on Uncertainty in Structural Dynamics, USD 2022, Leuven, Belgium, September 12-14, 2022. Proceedings of ISMA-USD 2022, KU Leuven, Belgium, pp. 1-6 (2022).

[432] - A. Sinha, C. Desceliers, C. Soize, G. Coelho-Cunha, Probabilistic learning on manifolds for liner impedance for design optimisation, ASCE-EMI 2022, Baltimore, USA, 31 May - 3 June 2022.

[431] - A. Sinha, C. Desceliers, C. Soize, G. Cunha, Probabilistic learning on manifolds for design optimisation of aero-acoustic liner impedance, International Conference on Uncertainty in Structural Dynamics, USD 2022, Leuven, Belgium September 12-14, 2022. Proceedings of ISMA-USD 2022, KU Leuven, Belgium, pp. 1-7 (2022).

[430] - C. Soize (Invited Lecture), Posterior probabilistic learning constrained by stochastic PDE and experimental statistical moments of physics observations. USACM Thematic conference on "Uncertainty Quantification for Machine Learning Integrated Physics modeling (MLIP)", Crystal City, Arlington, VA, August 18-19, 2022.

2021

[429] - E. Cataldo, C. Soize, L. Monteiro, Novel stochastic model for producing voice based on the unification of existing deterministic models and represented by a neural network, The 14th World Congress of Computational Mechanics (WCCM 2020) and ECCOMAS Congress 2020, Paris, Virtual Congress, 11-15 January, 2021.

[428] - R. Ghanem, C. Soize, V. Aithataju, L. Mehrez, Probabilistic learning on manifolds for prognosis and characterization of the digital twin, Mechanistic Machine Learning and Digital Twins for Computational Science, Engineering and

Technology (MMLDT-CSET 2021), IACM Conference, Hyatt Regency Mission Bay, San Diego, CA, United States, 26-29 September 2021.

[427] - M. Mignolet, C. Soize, Non-gaussian vectors modeling by compressed principal component analysis, The 14th World Congress of Computational Mechanics (WCCM 2020) and ECCOMAS Congress 2020, Paris, Virtual Congress, 11-15 January, 2021.

[426] - J. Nespoulous, C. Soize, C. Funfschilling, G. Perrin, Optimization under uncertainties of high-speed train speed to limit energy consumption, UNCECOMP 2021, 4th International Conference on Uncertainty Quantification in Computational Sciences and Engineering, Athens, Greece, 28-30 June 2021.

[425] - J. Nespoulous, C. Soize, C. Funfschilling, G. Perrin, High-speed train speed optimization for limiting energy consumption, IAVSD 2021, the 27th IAVSD Symposium on Dynamics of Vehicles on Roads and Tracks, Saint-Petersburg, Russia, 16-20 August 2021.

[424] - A. Picou, E. Capiez-Lernout, C. Soize, M. Mbaye, A robust analysis of a mistuned-detuned bladed disk with geometrical nonlinearities, The 14th World Congress of Computational Mechanics (WCCM 2020) and ECCOMAS Congress 2020, Paris, Virtual Congress, 11-15 January, 2021.

[423] - A. Picou, E. Capiez-Lernout, C. Soize, M. Mbaye, Robust analysis of a mistuned-detuned bladed disk in finite displacements, IMAC XXXIX Virtual, Next Frontier in Structural Dynamics, Orlando, USA, Virtual Congress, 08-11 February 2021 Paris.

2020

[422] - E. Cataldo, C. Soize, R.L. Silva, J.M.M. Silva, Identification of a stochastic process modeling the stiffness of the vocal folds for a voice production model represented by a neural network, 11th International Conference on Structural Dynamics, EURODYN 2020, Streamed from Athens, Greece, 23-26 November 2020. EASD Procedia EURODYN 2020, doi: 10.47964/1120.9279.18394, M. Papadrakakis, M. Gragiadakis, C. Papadimitriou (eds.), Vol. 1, pp. 3403-3412, 2020.

[421] - V. Dangla, C. Soize, G. Cunha, A. Mosson, M. Kassem, B. Van den Nieuwenhof, Stochastic computational model of 3D acoustic noise predictions for nacelle liners, AIAA Aviation 2020 Forum, Published Online: 8 June 2020, doi: 10.2514/6.2020-2545, Pages 2545, Virtual Event, June 15-19, 2020.

[420] - R. Ghanem, C. Soize, Probabilistic machine learning with intrinsic constraints, SIAM Conference on Mathematics of Data Science (MSD20), Cincinnati, Ohio, USA, May 5-7, 2020.

[419] - R. Ghanem, C. Soize, Probabilistic Learning on Manifolds (PLoM), Machine Learning in Science and Engineering (MISE 2020), Virtual Conference, Columbia University, December 14-15, 2020.

[418] - J. Reyes, L. Gagliardini, C. Desceliers, C. Soize, Multi-frequency model reduction for uncertainty quantification in computational vibroacoustics of automobiles, ISNVH 2020, 11th International Styrian Noise, Vibration & Harshness Congress: The European Automotive Noise Conference, SAE Technical Paper 2020-01-1583, ISSN: 0148-7191, e-ISSN: 2688-3627, online even via MS Teams, 4 November 2020.

2019

[417] - Q. Akkaoui, E. Capiez-Lernout, C. Soize, R. Ohayon, Nonlinear dynamical analysis for coupled fluid-structure systems, IMAC XXXVII, Orlando, Florida, USA, January, 28-31, 2019. Proceedings of the 37th IMAC, A Conference and Exposition on Structural Dynamics 2019, In Nonlinear Structures and Systems, G. Kerschen, M. Brake, and L. Renson (Eds.), doi:10.1007/978-3-030-12391-8_20, Volume 1, pp. 151-153 (2019).

[416] - Q. Akkaoui, E. Capiez-Lernout, C. Soize, R. Ohayon, Analyse d'une exérimentation exhibant une instabilité dans un liquide avec un modèle réduit non linéaire fluide-structure. CSMA 2019, Actes du 14ème Colloque National en Calcul des Structures, 2019, Presqu'île de Giens (Var) Giens (Var), 13-17 Mai, 2019.

[415] - Q. Akkaoui, E. Capiez-Lernout, C. Soize, R. Ohayon, Nonlinear reduced-order model of coupled fluid-structure system with sloshing and capillarity - Revisiting and explaining an experiment, 8th edition of the International Conference on Computational Methods for Coupled Problems in Science and Engineering (Coupled Problems 2019), 3-5 June 2019, Sitges, Catalonia, Spain.

[414] - Q. Akkaoui, E. Capiez-Lernout, C. Soize, R. Ohayon, Uncertainty quantification in reduced-order model for vibrations of geometrical nonlinear structures coupled with acoustic fluids in presence of sloshing and capillarity, UNCECOMP

2019, 3nd International Conference on Uncertainty Quantification in Computational Sciences and Engineering, Island of Crete, Greece, June 24-26, 2019.

[413] - M. Arnst, C. Soize, Bayesian inversion of symmetric positive definite matrices of reduced-order models with application to updating nonparametric probabilistic models in structural dynamics, UNCECOMP 2019, 3nd International Conference on Uncertainty Quantification in Computational Sciences and Engineering, Island of Crete, Greece, June 24-26, 2019. Proceeding of UNCECOMP 2019.

[412] - E. Capiez-Lernout, C. Soize, Nonparametric probabilistic approach for uncertainty quantification of geometrically nonlinear mistuned bladed-disks, RASD 2019, 13th International Conference on Recent Advances in Structural Dynamics, Southampton, 15 - 17 April, 2019. Proceedings of RASD 2019, IOP Conference Series: *Journal of Physics*, doi:10.1088/1742-6596/1264/1/012038, **1264**(12038), 1-10 (2019).

[411] - E. Capiez-Lernout, C. Soize, Computational analysis of a mistuned bladed-disk using a stochastic nonlinear reduced-order model, 26th International Congress on Sound and Vibration (ICSV26), Montreal, Canada, 7–11 July 2019.

[410] - V. Dangla, S. Soize, M. Kassem, Réduction des modèles aéroacoustiques numériques en présence d'un écoulement pour le traitement acoustique des turboréacteurs. CSMA 2019, Actes du 14ème Colloque National en Calcul des Structures, pp. 1-6, 2019, Presqu'île de Giens (Var) Giens (Var), 13-17 Mai, 2019.

[409] - V. Dangla, C. Soize, G. Coelho-Cunha, M. Kassem, A. Mosson, B. Van den Nieuwenhof, Uncertainty quantification in computational models of nacelle acoustic liners for turbofan acoustic noise predictions, UNCECOMP 2019, 3nd International Conference on Uncertainty Quantification in Computational Sciences and Engineering, Island of Crete, Greece, June 24-26, 2019.

[408] - C. Farhat, R. Tezaur, C. Soize, Physics-based and data-driven stochastic modeling for digital twins, NAFEMS New Paradigms in Engineering Simulation-Databest, 2nd International Workshop on Data-Based Engineering Science and Technology, ENSAM Paris-Tech, 20-22 march 2019.

[407] - L. Gagliardini, C. Soize, J. Reyes, Vibroacoustic model's likelihood computation based on a statistical reduction of random FRF matrices, SAE Noise and Vibration Conference and Exhibition, Grand Rapids, Michigan, USA, 10-13 June, 2019. SAE Technical Paper 2019-01-1593, 2019, doi:10.4271/2019-01-1593.

[406] - M. Nesterova, F. Schmidt, C. Soize, Estimation of remaining life of the orthotropic deck of a bridge exposed to extreme traffic and wind actions, 12th International Workshop on Structural Health Monitoring, IWSHM 2019, Stanford University, USA, September 10-12, 2019, Proceedings IWSHM2019,pp.1-7

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7.7. Communications in National and International Workshops, Seminars and Non-Refereed Conferences

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[124] - C. Soize, Webinar on JCISE Youtube channel, spotlight presentation series on ASME Journal of Computing and Information Science in Engineering (JCISE) for the best papers published in June 2024 issue: "Updating nonlinear stochastic dynamics of an uncertain nozzle model using probabilistic learning with partial observability and incomplete dataset" by E. Capiez-Lernout, O. Ezvan, C. Soize, June 18, 2024.

[123] - R. Jorge Do Marco, G. Perrin, C. Funfschilling, C. Soize, Optimization of driver control to limit train energy consumption, F2M Thematic Day on "Dynamics and Control of Coupled Systems", ENSTA, January 29, 2024.

2022-2023

[122] - C. Soize, Probabilistic learning-based statistical metamodel in nonlinear stochastic dynamics for under-observed systems and small data, F2M Thematic Day on Probabilistic Approaches in Mechanics", Université Gustave Eiffel, July 3, 2023.

[121] - C. Soize, Probabilistic learning under constraints for statistical surrogates of under-observed nonlinear stochastic dynamical systems, Scientific Day of MSME, Université Gustave Eiffel, June 2, 2023.

[120] - R. Jorge Do Marco, G. Perrin, C. Funfschilling, C. Soize, Uncertainty model and its identification for real-time optimal speed control for high-speed train under constraints, F2M Thematic Day on Probabilistic Approaches in Mechanics", Université Gustave Eiffel, July 3, 2023.

2019-2018

[119] - C. Soize, Modélisation stochastique des champs, identification statistique inverse, apprentissage probabiliste sur les variétés, optimisation de design sous incertitudes en mécanique numérique, GDR Mecafib, INSA Lyon, 26-27 Mars 2019.

[118] - Invited Seminar, C. Soize, Probabilistic learning on manifolds for the small-data challenge with applications to optimization under uncertainties and statistical inverse problems, University of Liège, Belgium, 3 April 2019.

[117] - G. Perrin, Soize, Oubhi (présenté par G. Perrin), Data-driven kernel representations for sampling with an unknown block dependence, GDR MascotNum 2018, Ecole Centrale de Nantes, March 22, 2018

[116] - Invited Seminar, C. Soize, Data-driven probabilistic learning on manifolds and nonconvex optimization problems with applications, Duke University, Durham, NC, USA 24 April 2018.

[115] - Invited Seminar, C. Soize, Probabilistic learning in computational mechanics, Laboratoire MSSC, Conservatoire National des Arts et Métiers (CNAM), Paris, 31 Mai 2018.

[114] - Invited Seminar, C. Soize, Probabilistic learning for Uncertainty Quantification in computational sciences and engineering, Seminários Arthur Palmeira Ripper Neto, Department of Mechanical Engineering, Universidade Federal do Rio de Janeiro (UFRJ), Rio de Janeiro, Brazil, 24 August 2018.

[113] - Invited Seminar, C. Soize, Probabilistic learning for optimization problems under uncertainties, Department of Telecommunications Engineering, Universidade Federal Fluminense (UFF), Niterói, Brazil, 29 August 2018.

[112] - Invited Seminar, C. Soize, Probabilistic learning on manifolds in computational mechanics, Séminaire de la branche MAS (Matériaux & Structure), ONERA, 26 septembre 2018.

[111] - C. Soize, Approche probabiliste de machine learning pour les grandes simulations numériques, Séminaire transversal du laboratoire Modélisation et Simulation Multi-Echelle (MSME), Université Paris-Est Marne-la-Vallée (UPEM), 16 novembre 2018.

2017-2016

[110] - Invited Seminar, C. Soize, Modélisation probabiliste globale des incertitudes dans les modèles d'ordre réduit non linéaires, Séminaire du laboratoire POEMS, Palaiseau, 2 février 2017.

[109] - Invited Seminar, C. Soize, Une nouvelle approche probabiliste non paramétrique des incertitudes de modélisation dans les modèles d'ordre réduit non linéaires, Séminaire de la Fédération Francilienne de Mécanique, ENSAM, 16 juin 2016.

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2015-2014

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[105] - O. Ezvan, A. Batou, C. Soize, (présenté par O. Ezvan), Modèle réduit stochastique multi-niveau en dynamique des structures. Journée Thématique MSME, Thiais, France, 5 juin 2015.

[104] - Invited Seminar, C. Soize, Remarks on reduced-order models and uncertainty quantification in computational dynamics, Séminaire de l'Equipe "Dynamique des Structures et des Systèmes", Laboratoire de Tribologie et Dynamique des Systèmes, Ecole Centrale Lyon, July 9, 2015.

[103] - Invited Seminar, C. Soize, in collaboration with C. Desceliers, J. Guilleminot, T.T. Le, M.T. Nguyen, G. Perrin, J.M. Allain, H. Gharbi, D. Duhamel, C. Funfschilling, Stochastic representations and statistical inverse identification for uncertainty quantification in computational mechanics, seminar, School for Engineering of Matter, Transport, and Energy (SEMTE), Arizona State University (ASU), Tempe, Arizona, USA, December 4, 2015.

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[101] - I. E. Poloskov, I. I. Poloskov, C. Soize, Parallel computations in the problem of analysis of a mechanical system movement in a thermoviscoelastic medium, *Bulletin of Perm State University. Mathematics. Mechanics. Information Science*, ISSN 1993-0550, **4**(31), 46-57 (2015).

[100] - E. Capiez-Lernout, C. Soize, M. Mbaye, Analyse dynamique du désaccordage non linéaire des roues aubagées en déplacements finis. Application industrielle. Workshop du GdR Dynolin, CNAM, Paris, October 14, 2014

[99] - T.T. Le, J. Guilleminot, C. Soize (presented by J. Guilleminot), Modélisation d'interphases aléatoires dans les polymères nano-renforcés: modèle stochastique, générateur et identification inverse à l'aide de simulations par dynamique moléculaire, Workshop du GdR Polynano 3661 – Arts et Métiers Paristech, Paris, July 3, 2014.

[98] - A. Nouy (joint work with C. Soize), Tensor structured parametrization of random fields and reduced order methods for statistical inverse boundary value problems, Workshop on Model Order Reduction and Data, Laboratoire Jacques-Louis Lions, UPMC, Paris, January, 2014

[97] - G. Perrin, C. Soize, PCE identification from a set of realizations, Workshop on Numerical Methods for High-Dimensional Problems, Ecole des Ponts ParisTech, Champs-sur-Marne, Marne-la-Vallée, France, April 14-18, 2014.

[96] - Invited Lecture, C. Soize, C. Desceliers, J. Guilleminot, A. Nouy, G. Perrin, Representations of non-Gaussian positive-definite matrix-valued random fields for elliptic BVP and statistical inverse identification in high dimension using partial and limited experimental data, Workshop on Numerical Methods for High-Dimensional Problems, Ecole des Ponts ParisTech, Champs-sur-Marne, Marne-la-Vallée, France, April 14-18, 2014.

[95] - Invited lecture, C. Soize, Identification statistique inverse de modèles probabilistes en Grande Dimension Stochastique (GDS): Quantification des incertitudes en dynamique et en vibroacoustique. Champ d'élasticité stochastique mésoscopique des microstructures hétérogènes, Forum CEA, CEA/DAM/DIF, Bruyères-le-Châtel, October 1, 2014.

[94] - Invited Lecture, C. Soize, C. Desceliers, J. Guilleminot, M. T. Nguyen, J. M. Allain, H. Gharbi, Statistical inverse method for the multiscale identification of the apparent random elasticity field of heterogeneous microstructures, Workshop on Inverse problems for multiscale and stochastic problems, Ecole des Ponts ParisTech, Champs-sur-Marne, Marne-la-Vallée, France, October 2-3, 2014.

[93] - Invited Seminar, C. Soize, Statistical inverse problems in high stochastic dimension - Application to uncertainty quantification in structural dynamics, in vibroacoustics, and for random elasticity fields of microstructures. Université de Sherbrooke, Sherbrooke, Quebec, Canada, December 19, 2014.

2013-2012

[92] - A. Nouy (joint work with C. Soize), Random fields representations for stochastic elliptic boundary value problem and statistical inverse problems, Workshop Interplay of Theory and Numerics for Deterministic and Stochastic Homogenization, Oberwolfach, Germany, March 17-23, 2013.

[91] - A. Nouy (joint work with C. Soize), Random fields representations for stochastic elliptic boundary value problems and high-dimensional statistical inverse problems, Workshop on Partial Differential Equations with Random Coefficients, Weierstraß-Institut für Angewandte Analysis and Stochastik, Berlin, Germany, November 13-15, 2013.

[90] - G. Perrin, D. Duhamel, C. Soize, C. Funfschilling, Modeling and identification of non Gaussian multivariate random fields and application to the excitation of trains by the track irregularities, Premières Journées des Jeunes Chercheurs en Vibrations, Ecole des Ponts ParisTech, Marne-la-Vallée, April 11-12, 2013.

[89] - Invited Seminar, C. Soize, Modélisation probabiliste et quantification des incertitudes en dynamique des structures. LAMCOS Seminar, Insa de Lyon, January 26, 2012.

[88] - Invited Seminars, C. Soize, Uncertainty quantification in computational mechanics. Series of 4 seminars, Department of Higher Mathematics, Perm University, Perm, Russia, June 4-8, 2012.

[87] - J. Guilleminot J., C. Soize, On the construction of Prior Algebraic Stochastic Models for mesoscale elasticity tensor random fields; Beijing-Paris Workshop on Nano and Micro Mechanics, Université Paris-Est Marne-la-Vallée, Paris, September 6-7, 2012.

[86] - C. Soize, Identification of Bayesian posteriors of high-dimension polynomial chaos expansions of random fields and application to micromechanics, Workshop du projet "Advanced methods using stochastic modeling in high dimension for uncertainty modeling, quantification and propagation in computational mechanics of solids and fluids" (TYCHE, ANR- 10-BLAN-904), Institut Curie, Paris, December 6-7, 2012.

[85] - R. Cottereau, D. Clouteau, C. Soize, A coupling method for stochastic continuum models at different scales, Workshop du projet "Advanced methods using stochastic modeling in high dimension for uncertainty modeling, quantification and propagation in computational mechanics of solids and fluids" (TYCHE, ANR- 10-BLAN-904), Institut Curie, Paris, December 6-7, 2012.

[84] - J. Guilleminot, C. Soize, Prior stochastic models and numerical algorithms for the modeling of non-Gaussian tensor-valued random fields, Workshop du projet "Advanced methods using stochastic modeling in high dimension for uncertainty modeling, quantification and propagation in computational mechanics of solids and fluids" (TYCHE, ANR-10-BLAN-904), Institut Curie, Paris, December 6-7, 2012.

[83] - M.T. Nguyen, C. Desceliers, C. Soize, Identification of an elasticity-tensor random field at mesoscale using experimental measurements at mesoscale and at macroscale, Workshop du projet "Advanced methods using stochastic modeling in high dimension for uncertainty modeling, quantification and propagation in computational mechanics of solids and fluids" (TYCHE, ANR- 10-BLAN-904), Institut Curie, Paris, December 6-7, 2012.

2011-2009

[82] - Invited Seminar, C. Soize, Maximum entropy principle for stochastic models in computational sciences, Tongji University, Shanghai, China, October 26, 2010.

[81] - Invited Seminar, C. Soize, Identification of high-dimension polynomial chaos expansions of tensor-valued random fields from limited observed responses of boundary value problem. Tsinghua University, Bejing, China, October 28, 2010.

[80] - Invited Seminar, C. Soize, A short overview on the generalized probabilistic approach of uncertainties in computational dynamics. Tsinghua University, Bejing, China, October 28, 2010.

[79] - Invited Seminar, C. Soize, Stochastic reduced order models for uncertain infinite-dimensional geometrically nonlinear dynamical systems. Peking University, Bejing, China, October 29, 2010.

[78] - Invited Seminar, C. Soize, Generalized probabilistic approach of uncertainties in computational dynamics. Xi'an Jiatong University, Xi'an, China, November 4, 2010.

[77] - Invited Seminar, C. Soize, Mise en oeuvre du principe du maximum d'entropie pour la construction de modèles probabilistes en très grande dimension des incertitudes dans les modèles numériques des systèmes mécaniques complexes, Séminaire du LMT Cachan, Cachan, 26 mars, 2009.

[76] - Invited Seminar, C. Soize, Modélisation probabiliste des incertitudes et leurs propagations dans les modèles numériques des systèmes mécaniques complexes, Séminaire long, CNAM, Paris, 29 avril, 2009.

[75] - Invited Lecture, C. Soize, Identification of high dimension polynomial chaos expansion with random coefficients using partial experimental data for non-Gaussian tensor-valued random field . Application to mesoscale probabilistic modeling of non homogeneous anisotropic elastic microstructures. NSF Workshop on "Stochastic Multiscale Methods: Mathematical Analysis and Algorithms", University of Southern California, Los Angeles, August 10-11, 2009.

2008-2006

[74] - Series of Invited Seminars, C. Soize, Uncertainties and Stochastic modeling, Department of Engineering Mechanics, PUC-Rio University, Rio de Janeiro, Brazil, August 4-8, 2008.

[73] - Invited Seminar, C. Soize, Maximum entropy principle for stochastic models in computational mechanics, One-day meeting of the GdR "Modélisations Mathématiques et Simulations Numériques liées aux problèmes de gestion des déchets nucléaires" (MoMaS), Institut Henri Poincarré, Paris, November 13, 2008.

[72] - Invited Seminar, C. Soize, Remarques sur l'efficacité de la méthode POD pour la réduction des modèles en dynamique non linéaire des structures - Modélisation stochastique multiéchelle des milieux élastiques anisotropes ayant une microstructure complexe, Séminaire invité, UMR CNRS 6174 FEMTO-ST, Université de Franche-Comté, Ecole Nationale Supérieure de Mécanique de Belfort, 30 mars, 2007.

[71] - Opening Invited Lecture, C. Soize, Méthodes probabilistes en mécanique numérique et applications industrielles, Journées Mec Proba organisées par la commission "Mécanique probabiliste des matériaux et des structures" (MPMS) de l'Association Française de Mécanique, Université de Marne-la-Vallée, 9-10 janvier, 2006.

[70] - Invited Seminar, C. Soize, Construction des modèles probabilistes, choix des représentations et applications aux modélisations des incertitudes et des milieux aléatoires en mécanique. Séminaire long de formation de la Fédération Francilienne de Mécanique, Polytechnicum de Marne-la-Vallée, 16 Mai, 2006.

[69] - Invited Seminar, C. Soize, Remarques sur les méthodes POD et KL pour la réduction de systèmes dynamiques non linéaires. Journée thématique du GDR CNRS n° 2902 sur l'Interaction Fluide-Structure : "Réduction de modèles en IFS", ENSAM Paris, 18 Mai, 2006.

[68] - Invited Seminar, C. Soize, Approches stochastiques,Identification des modèles stochastiques, Milieux aléatoires, Milieux déterministes avec incertitudes, Journée du Projet Fédératif MIVA "Méthodes d'Indentification et Validation", Fédération CNRS - F2M2SP, ENS Cachan, 29 mai, 2006.

[67] - Invited Seminar, C. Soize, Modélisation probabiliste des incertitudes en simulation numérique des systèmes complexes, 10ème Journée Scientifique "Modélisation stochastique en ingénierie", Ecole Doctorale Sciences pour l'Ingénieur, Université Blaise Pascal, Université d'Auvergne, Institut Français de Mécanique Avancée (IFMA), Clermont Ferrand, 9 juin, 2006.

[66] - Invited Seminar, C. Soize, Uncertainties and their quantification in computational mechanics, Department of Engineering Mechanics, PUC-Rio University, Rio de Janeiro, Brazil, August 12, 2006.

[65] - Invited Lecture, C. Soize, Probabilistic approach and propagation of model and data uncertainties in computational structural dynamics and acoustics in low- and medium-frequency ranges for complex systems. Industrial applications, Technical conference day, CEIS (Compagnie Européenne d'Information Stratégique), Paris, October 3, 2006.

2005-2004

[64] - Opening Invited Lecture, C. Soize, Modèles probabilistes non paramétriques en mécanique, Journée "Mécanique numérique probabiliste" de l'association CSMA (Calcul de Structures et Modélisation), Ecole Centrale Paris, 19 janvier, 2005.

[63] - Invited Seminar, C. Soize, Uncertainties modeling in computational stochastic mechanics and applications. University of Innsbruck, Institute of Engineering Mechanics, Innsbruck, Austria, December 9, 2005.

[62] - Invited Seminar, C. Soize, Modélisation non paramétrique des incertitudes de modèle en dynamique des systèmes complexes I : Probabilités, variables aléatoires et principe du maximum d'entropie. Séminaire à l'Ecole Nationale Polytechnique d'Algérie, Alger, 18 Avril, 2004.

[61] - Invited Seminar, C. Soize, Modélisation non paramétrique des incertitudes de modèle en dynamique des systèmes complexes II : Matrices aléatoires et principe du maximum d'entropie. Applications à la dynamique linéaire et non linéaire. Séminaire à l'Ecole Nationale Polytechnique d'Algérie, Alger, 19 avril, 2004.

[60] - Invited Seminar, C. Soize, Modélisation non paramétrique des incertitudes de modèle en dynamique des systèmes complexes III : Applications aux systèmes dynamiques incertains dans le domaine des moyennes fréquences; Séminaire à l'Ecole Nationale Polytechnique d'Algérie, Alger, 20 avril, 2004.

[59] - Invited Seminar, C. Soize, Modélisation non paramétrique des incertitudes de modèle en dynamique des systèmes complexes IV : Désaccordage dynamique des structures à géométrie cyclique dû aux incertitudes. Application aux turbomachines. Séminaire à l'Ecole Nationale Polytechnique d'Algérie, Alger, 21 avril, 2004.

[58] - Invited Seminar, C. Soize, Modélisation non paramétrique des incertitudes de modèle en dynamique des systèmes complexes V : Application à la dynamique linéaire des structures avec assemblages complexes et applications à la dynamique non linéaire de circuit primaire des réacteurs. Séminaire à l'Ecole Nationale Polytechnique d'Algérie, Alger, 22 avril, 2004.

[57] - Invited Seminar, C. Soize, Modélisation non paramétrique des incertitudes de modèle en dynamique linéaire et non linéaire des systèmes mécaniques complexes. Séminaire à l'Université A Mira de Béjaia, Algérie, 15 mai, 2004.

[56] - Invited Lecture, C. Soize, Une nouvelle classe de champ stochastique non gaussien pour la modélisation des milieux aléatoires élastiques anisotropes non homogènes. Groupes de Travail MECAMAT "Approches probabilistes en Mécanique des Milieux Hétérogènes", Ecole Nationale des Ponts et Chaussées, 1-2 Juin, 2004.

[55] - Invited Seminar, C. Soize, Nonparametric modeling of model uncertainties in linear and nonlinear dynamics for complex mechanical systems, Department of Engineering Mechanics, PUC-Rio University, Rio de Janeiro, Brazil, August 17, 2004.

[54] - Invited Seminar, C. Soize, Non Gaussian matrix-valued random fields for modeling elliptic stochastic partial differential operators. Seminar, University of Innsbruck, Institute of Engineering Mechanics, Innsbruck, Austria, September 20, 2004.

2003-2002

[53] - Invited Seminar, C. Soize, Modélisation probabiliste des incertitudes en dynamique linéaire et non linéaire des systèmes mécaniques . Séminaire du Laboratoire de Mécanique de Rouen ,CNRS UMR 6138, Insa Rouen, 27 Mars, 2003.

[52] - Invited Seminar, C. Soize, Uncertain dynamical systems in the medium-frequency range. Seminar, University of Innsbruck, Institute of Engineering Mechanics, Innsbruck, Austria, September 1, 2003.

[51] - Invited Lecture, C. Soize, Model uncertainty issues for predictive models. Workshop on Elements of Predictability, The Johns Hopkins University, November 13-14, 2003.

[50] - Invited Seminar, C. Soize, Random uncertainties modeling in dynamical system using a nonparametric approach. Seminar, University of Innsbruck, Institute of Engineering Mechanics, Innsbruck, Austria, April 4, 2002.

[49] - Invited Seminar, C. Soize, Théorie des matrices aléatoires et modélisation probabiliste des incertitudes en élastodynamique. Séminaire Probabilités-Statistiques, Université de Marne la Vallée, 17 Mai, 2002.

[48] - E. Capiez-Lernout et C. Soize, Une approche probabiliste non paramétrique du phénomène de désaccordage des structures à géométrie cyclique, Journée "Jeunes Chercheurs" organisée par l'Ecole Doctorale MODES de l'Université de Marne-la-Vallée et de l'Ecole Nationale des Ponts et Chaussées, Université de Marne-la-Vallée, 13 Juin, 2002.

[47] - Invited Seminar, C. Soize, Nonparametric model of random uncertainties in dynamical systems: an overview. Seminar, Sandia Laboratory, Albuquerque, New Mexico, USA, July 16, 2002.

2001-2000

[46] - C. Soize editeur, Actes de la Journée Nationale sur La modélisation du comportement et de la résistance des liaisons et des assemblages mécaniques : Etat de l'art et perspectives. Journée organisée par la commission Structures de l'AAAF, Onera, Châtillon, 22 Mars, 2001.

[45] - Invited Seminar, C. Soize, Théorie des matrices aléatoires et modélisation non paramétrique des incertitudes aléatoires en élastodynamique transitoire. Séminaire Descartes, Polytechnicum de Marne la Vallée, 13 Décembre, 2001.

[44] - Invited Seminar, C. Soize, Un Modèle non paramétrique des incertitudes aléatoires pour les modèles matriciels réduits en dynamique des structures. Séminaire de Mécanique Ile-de-France Sud, Ecole Polytechnique, 2 Mars, 2000.

[43] - Invited Seminar, C. Soize, Main difficulties in the mid-frequency range for structural-dynamics and structural-acoustics problems: Structural complexity modeling, random uncertainties, reduced matrix models. Seminar, Johns Hopkins University, Baltimore, USA, April 18, 2000.

[42] - Invited Lecture, C. Soize, Modélisation et méthodes probabilistes en dynamique et vibration des structures. Journée AAAF sur les Approches probabilistes en calcul des structures, Chatillon, 18 Mai, 2000.

[41] - Invited Seminar, C. Soize, Modèle non paramétrique des incertitudes aléatoires en dynamique des structures. Séminaire du laboratoire LMGC, Université de Montpellier II, 26 Mai, 2000.

[40] - Invited Lecture, C. Soize, Modèle probabiliste non paramétrique des incertitudes de modélisation en dynamique transitoire des structures. Journée MV2 sur les Approches robustes en dynamique des structures, Pôle universitaire Léonard de Vinci, Paris la Défense, 14 Décembre, 2000.

1999-1997

[39] - Invited Seminar, C. Soize, Modélisation des systèmes vibroacoustiques ayant une complexité structurale en basse et moyenne fréquence. Séminaire de Mécanique CNAM-Onera, Cnam Paris, 12 Mars, 1999.

[38] - Invited Lecture, C. Soize, Modélisation en vibration et vibroacoustique des structures ayant une complexité structurale en basse et moyenne fréquence. Journées Scientifiques GAMNI-SMAI sur la Modélisation numérique en acoustique, aéroacoustique et vibrations, Institut Henri Poincaré, Paris, 10 et 11 Juin, 1999.

[37] - Invited Lecture, C. Soize, Identification dynamique modale des structures non linéaires par une méthode de linéarisation stochastique avec paramètres aléatoires. Table Ronde MV2 sur la Modélisation et identification des structures et des systèmes vibrants non linéaires, Pôle universitaire Léonard de Vinci, Paris, 2 Décembre, 1999.

[36] - Invited Lecture, C. Soize, Modélisation vibroacoustique en moyenne fréquence pour les structures complexes. Table Ronde MV2 sur la Modélisation vibroacoustique des structures en hautes et moyennes fréquences, Pôle universitaire Léonard de Vinci, Paris, 26 Mars, 1998.

[35] - Invited Seminar, C. Soize, Dynamique des structures et élastoacoustique en moyenne fréquence. Séminaire, Département de Mathématiques Appliquées, Université de Saint Jacques de Compostelle, Espagne, 13-17 Avril, 1998.

[34] - Invited Lecture, C. Soize, Dynamique des structures: Rôle et modélisation du flou structural en basse et moyenne fréquence, Colloque ONERA, Centre des Congrès de la Villette, Paris, 2-3 Avril, 1997.

[33] - Invited Seminar, C. Soize, Problème de Neumann extérieur lié à l'équation d'Helmholtz pour l'élastoacoustique externe; formulation par équations intégrales. Séminaire, Département de Mathématiques Appliquées, Université de Saint Jacques de Compostelle, Espagne, 25 Mai - 1 Juin, 1997.

1996-1995

[32] - Invited Lecture, C. Soize, Identification modale des systèmes dynamiques faiblement non linéaires en utilisant une méthode de linéarisation stochastique à paramètres aléatoires. Sixième Séminaire Scientifique du C.E.M.I.F. sur l'Analyse Stochastique des Systèmes Non-Linéaires, EDF/DER, Clamart, 2 Mai 1996.

[31] - Invited Seminar, C. Soize, Introduction à la théorie des processus stochastiques, à la théorie du signal aléatoire et à la dynamique stochastique. Séminaires, Département de Mathématiques Appliquées, Université de Saint Jacques de Compostelle, Espagne, 8-10 mai, 1996.

[30] - Invited Lecture, C. Soize et O. Lefur, Modal identification of weakly nonlinear multidimensional dynamical systems using a stochastic linearization method with random coefficients, Ninth Workshop on Dynamics and Control, Rio de Janeiro, Brazil, August 12-14, 1996.

[29] - Invited Seminars, C. Soize, *Fundamentals of Random Signal Analysis, Application to Modal Identification in Structural Dynamics*, Course of the School on "Structural Dynamics and Structural Acoustics", Department of Engineering Mechanics, PUC-Rio University, Rio de Janeiro, Brazil, August 19-23, 1996.

[28] - Invited Seminar, C. Soize, (1) Boundary integral formulation for the exterior Neumann problem related to the Helmholtz equation. (2) Structural acoustics for external problems in LF range. Seminars, Department of Engineering Mechanics, PUC-Rio University, Rio de Janeiro, Brazil, August 27, September 2-6, 1996.

[27] - Invited Seminar, C. Soize, Random vibration and application to structures submitted to turbulent boundary layer excitations. Seminar, Department of Engineering Mechanics, PUC-Rio University, Rio de Janeiro, Brazil, September 4, 1996.

[26] - Invited Lecture, C. Soize, Méthodes de prévision en élastoacoustique. Journée de pésentation des travaux de la Commission de Validation des Prologiciels Vibroacoustiques, SFM, Cetim-Senlis, 29 Novembre, 1996.

[25] - Invited Lecture, C. Soize, Structural acoustics: Advanced formulations and numerical methods in the MF range, noise reduction using active control, XVIII Congresso Nacional de Matemática Aplicada e Computacional, CNMAC 95, Curitiba, PR, Brazil, August 28 - September 1, 1995.

[24] - Invited Seminars, C. Soize, (1) Random signal processing and modal identification of dynamical systems. (2) Formulation and numerical methods in structural acoustics for the medium-frequency range. (3) Reduction of radiated noises by using distributed active control of structural vibration. Seminars, Department of Engineering Mechanics, PUC-Rio University, Rio de Janeiro, Brazil, September 2-8, 1995.

1994-1989

[23] - Invited Lecture, C. Soize, An explicit steady state solution of the FKP equation for nonlinear stochastic dynamical systems. A uniqueness theorem, XVII Congresso de Matematica Aplicada e Computacional, CNMAC 94, Vitoria, ES, Brazil, August 29 - September 2, 1994.

[22] - Invited Seminar, C. Soize, Random signal analysis and linear stochastic dynamics. Seminar, Department of Engineering Mechanics, PUC-Rio University, Rio de Janeiro, Brazil, September 6, 1994.

[21] - D.A. Russel, V.W. Sparrow, C. Soize, A Penn State/Onera exchange: Mathematical formulation for modeling the type 1 fuzzy law parameters for a continuous line fuzzy attachment, Presentation at U.S./France Exchange Meeting, Airlie House Conference Center, November 17, 1993.

[20] - A. Desanti, C. Soize, Modèle de prévision hydro-élastoacoustique moyenne fréquence de Milady, Journée de Cadarache sur la Discrétion Acoustique, 12-14 Juin, 1990.

[19] - C. Soize, J.M. David, A. Desanti, Méthodes numériques prévisionnelles en élastoacoustique BF, MF et HF, Journée sur la vibroacoustique: résulats et perspectives, Onera, Châtillon, 15 Juin, 1990.

[18] - Invited Lecture, C. Soize, Couplage direct fluide-structure en aéroélasticité transsonique, Colloque Onera, Châtillon, 25 et 26 Avril, 1989.

[17] - J.M. David, A. Desanti, C. Soize, Etude par modèle numérique du comportement hydro-élastoacoustique de la pompe hélice échelle 0.15 en basses fréquences et comparaisons expérimentales, Journée de Cadarache sur la Discrétion Acoustique, 25-27 Avril, 1989.

1988-1987

[16] - C. Soize, Couplage fluide structure MF - HF, évolution vers les hautes fréquences, Journée Thématique DRET sur l'*Intéraction fluide-structure*, Paris, 21 Avril, 1988.

[15] - J.M. David, A. Desanti, C. Soize, Calcul de la réponse hydro-élastique à la couche limite en moyenne fréquence du dome sonar Dauphin, Journée de Cadarache sur la Discrétion Acoustique, 26-28 Avril, 1988.

[14] - D. Felix, F. Chabas, C. Soize, Influence de la complexité structurale sur le rayonnement de la coque forte du MN2, Journée de Cadarache sur la Discrétion Acoustique, 26-28 Avril, 1988.

[13] - J.M. David, A. Desanti, C. Soize, Etude du transfert hydro-élastoacoustique de la pompe hélice Agosta en basses fréquences, Journée de Cadarache sur la Discrétion Acoustique, 26-28 Avril, 1988.

[12] - Invited Lecture, C. Soize, Exact steady state solution of FKP equation in higher dimension for a class of non-linear Hamiltonian dissipative dynamical system excited by a Gaussian white noise, First European Seminar on *Effective Stochastics*, Delphi, Greece, October 3-7, 1988.

[11] - F. Poirion, C. Soize, Numerical methods and mathematical aspects for simulation of homogeneous and non homogeneous Gaussian vector fields, First European Seminar on *Effective Stochastics*, Delphi, Greece, October 3-7, 1988.

[10] - C. Soize, F. Chabas, A. Desanti, Prise en compte dans la méthode des éléments finis de sous-systèmes mécaniques identifiés par leur impédance de frontière, Journée de Cadarache sur la Discrétion Acoustique, Mai 1987.

[9] - C. Soize, A. Desanti, Couplage fréquentiel moyen entre sous-systèmes, Journée de Cadarache sur la Discrétion Acoustique, Mai 1987.

[8] - C. Soize, F. Chabas, Loi de comportement de flou probabiliste à mémoire spatiale, Journée de Cadarache sur la Discrétion Acoustique, Mai 1987.

[7] - J.M. David, C. Soize, Effets sur le rayonnement de l'ovalisation d'une tranche 3D dans les vibrations poutre basses fréquences de MN2, Journée de Cadarache sur la Discrétion Acoustique, Mai 1987.

[6] - C. Soize, Steady state solution of the Fokker-Planck equation in higher dimension, Publication de la R.C.P de Mécanique Aléatoire, LMT Cachan, Décembre 1987.

1986-1979

[5] - A. Desanti, C. Soize, Calculs hydro-élastoacoustiques, Journée de Cadarache sur la Discrétion Acoustique, 22-24 Avril, 1986.

[4] - C. Soize, Modélisation probabiliste du flou structural en dynamique linéaire des systèmes mécaniques complexes, Journée de Cadarache sur la Discrétion Acoustique, 22-24 Avril, 1986.

[3] - C. Soize, J.M. David, A. Desanti, Réponse aléatoire stationnaire des systèmes mécaniques linéaires excités par un champ stochastique, Journée de Cadarache sur la Discrétion Acoustique, 22-24 Avril, 1986.

[2] - C. Soize, Quelques applications de la mécanique aléatoire à l'étude des ouvrages, Journées sur l'Approche Probabiliste de la Sécurité pour les Etudes de Mécanique des Sols-Structures, École Centrale des Arts et Manufactures, 20-22 Juin, 1979.

[1] - E. Sfintesco, C. Soize, ECCS recommendations for the calculation of wind effects on building and structures, Fifth International Conference on Wind Engineering, Colorado State University, Fort Collins, Colorado USA, July 8-14, 1979.

7.8. Courses and Lecture Notes

[1] - C. Soize, *Éléments de la théorie des probabilités, des processus stochastiques et d'analyse spectrale. Applications à la mécanique*. Cours du Centre des Hautes Études de la Construction, CHEM, Paris, **1978**.

[2] - C. Soize, *Mécanique aléatoire et applications à la dynamique des structures*, 287 pages, cours de 3ème année de l'École Centrale des Arts et Manufactures, département Génie Civil, Chatenay Malabry, **1978**.

[3] - C. Soize, *Eléments mathématiques de la théorie du signal*, 311 pages, cours de 3ème année de l'ENSTA, département Mathématiques Appliquées, édition de l'ENSTA, Paris, **1981**.

[4] - C. Soize, *Mécanique aléatoire*, 1ère Édition, 220 pages, cours de 3ème année de l'École Centrale des Arts et Manufactures, département Énergétique, Chatenay Malabry, **1982**.

[5] - C. Soize, *Eléments mathématiques de la théorie déterministe et aléatoire du signal*, 380 pages, cours de tronc commun de 2ème année de l'ENSTA, département Mathématiques Appliquées, publication numéro **703**, édition de l'ENSTA, Paris, **1983**.

[6] - C. Soize, *Mécanique aléatoire*, 2ème édition, 360 pages, cours de 3ème année de l'École Centrale des Arts et Manufactures, département Énergétique, Chatenay Malabry, **1985**.

[7] - C. Soize, *Eléments mathématiques de la théorie déterministe et aléatoire du signal*, 2ème édition revue et modifiée, 370 pages, cours de tronc commun de 2ème année de l'ENSTA, département Mathématiques Appliquées, publication numéro **739**, édition de l'ENSTA, Paris, **1985**.

[8] - C. Soize, *Signaux aléatoires, travaux dirigés*, 80 pages, travaux dirigés de tronc commun de 2ème Année de l'ENSTA, département Mathématiques Appliquées, publication numéro **742**, édition de l'ENSTA, Paris, **1985**.

[9] - C. Soize et al., *Problèmes d'hydrodynamiques navale et méthodes numériques associées*, (en collaboration), cours de 3ème année de l'ENSTA, département Mathématiques Appliquées, publication numéro **749**, édition de l'ENSTA, Paris, **1985**.

[10] - C. Soize, *Processus stochastique et méthodes de résolution des problèmes aléatoires*, 390 pages, cours de 3ème année de l'Ecole Centrale des Arts et Manufactures, département Énergétique, options Océan et Modélisation Mécanique des Structures, Chatenay Malabry, **1986**.

[11] - C. Soize, *Signaux aléatoires, travaux dirigés avec corrigés*, 106 pages, travaux dirigés de tronc commun de 2ème année de l'ENSTA, département Mathématiques Appliquées, publication numéro **786**, édition de l'ENSTA, Paris, **1988**.

[12] - C. Soize, *Méthodes mathématiques de la théorie et du traitement du signal*, 598 pages, cours de tronc commun de 2ème année de l'ENSTA, département Mathématiques Appliquées, publication numéro **824**, édition de l'ENSTA, Paris, **1991**.

[13] - C. Soize, *Signaux aléatoires*, 85 pages, cours de 3ème année de l'Ecole Centrale des Arts et Manufactures, département Mécanique et Matériaux, option Modélisation Mécanique des Structures (MMS), Chatenay Malabry, **1994**.

[14] - C. Soize, *Méthodes d'études des problèmes classiques de dynamiques stochastiques*, séminaire *Sécurité probabiliste des structures*, X Collège de Polytechnique, Ecole Polytechnique, Palaiseau, bf 1994.

[15] - C. Soize, *Basic notions of random signal theory and modal parameter estimation from the frequency response functions*, 85 pages, Minicurso : *Modelagem em Engenharia*, Congresso Nacional de Matemática Aplicada e Computacional, CNMAC 95, De 28 de agosto a 01 de septembro de 1995, Curitiba - PR, Brésil (Edité par Universidade Federal do Paranà - UFPR, Sociedade Brasileira de Matemàtica Aplicade e Computacional - SBMAC), **1995**.

[16] - C. Soize, *Signaux aléatoires, cours et travaux dirigés*, 103 pages, cours de tronc commun de 1ère année de l'ENSTA, département Mathématiques, publication numéro **886**, édition de l'ENSTA, ISBN 2-7225-0886-9, Paris, **1996**.

[17] - C. Soize, *Fundamentals of Random Signal Analysis, Application to Modal Identification in Structural Dynamics*, Université Paris-Est-Marne-la-Vallée (UPEM), Paris, France, **1997**. Course given in the School on "Structural Dynamics and Structural Acoustics", Department of Engineering Mechanics, PUC-Rio University, Rio de Janeiro, Brazil, August 19-23, **1996**.

[18] - C. Soize, *Processus stochastiques et réponses dynamiques des structures*, séminaire *Sécurité probabiliste des structures et systèmes*, X Collège de Polytechnique, Ecole Polytechnique, Palaiseau, **1998**.

[19] - R. Ohayon et C. Soize, *Interaction fluide-structure et vibroacoustique*, cours de DEA "Dynamique des structures et des systèmes couplés (DS2C)", ECP, CNAM, ENPC, ENSTA, université Paris XII, Ecole Polytechnique, **2000**.

[20] - C. Soize, *Dynamique des structures* : Cours de maîtrise de Génie des Systèmes Industriels, université de Marne la Vallée (**2000**), cours de l'UFR Ingénieurs 2000 de l'université de Marne la Vallée : 2-ème année de la filière Génie Mécanique (**2001**), 3-ème année de la filière Maintenance et Fiabilité des Processus Industriels (**2001**).

[21] - C. Soize, *Probabilités et modélisation des incertitudes, Eléments de base et concepts fondamentaux*, cours de l'école doctorale MODES, *Probabilité et Mécanique - I*, Polytechnicum de Marne-la-Vallée, Mai **2003**.

[22] - C. Soize, *Problématique et méthodologie des modélisations probabilistes en mécanique numérique*, cours de l'école doctorale MODES, *Méthodes numériques avancées*, Université Paris-Est, Avril **2008**.

[23] - C. Soize, *Approche probabiliste non paramétrique des incertitudes sur les paramètres des modèles et des incertitudes induites par les erreurs de modélisation, dans les modèles de simulation numériques de systèmes complexes*. Cours de formation *Propagation des incertitudes dans les systèmes - Une approche probabiliste* X Collège de Polytechnique, Paris, **2011** et **2014**.

7.9. International courses

[1] - Sequence of 24 hours of a course in the School on "Structural Dynamics and Structural Acoustics", Department of Engineering Mechanics, PUC-Rio University, Rio de Janeiro, Brazil, August 19-23, **1996**. Edited as: C. Soize, *Fundamentals of Random Signal Analysis, Application to Modal Identification in Structural Dynamics*, Université Paris-Est-Marne-la-Vallée (UPEM), Paris, France, 1997.

[2] - Sequence of 24 hours of a course entitled *Uncertainties modeling in mechanics*, PUC Rio university, Rio de Janeiro, Brazil, August 18-26, **2004**.

[3] - Sequence of 18 hours of a course entitled *Uncertainties modeling and uncertainties propagation in computational mechanics*, PUC Rio university, Rio de Janeiro, Brazil, July 31 - August 2, **2006**.

[4] - Short course of 8 hours on *Uncertainty Quantification in Mechanics: Theoretical and Computational Aspects* organized in collaboration with R. Ghanem, 9th U.S. National Congress on Computational Mechanics (9th USNCCM), San Francisco, California, USA, July 22 - 26, **2007**

[5] - Sequence of 15 hours of a course entitled *Uncertainties and stochastic modeling*, PUC Rio university, Rio de Janeiro, Brazil, August 4-7, **2008**.

[6] - Short course of 8 hours on *Uncertainty Quantification in Mechanics: Theoretical and Computational Aspects* organized in collaboration with R. Ghanem, 10th U.S. National Congress on Computational Mechanics (10th USNCCM), Columbus, Ohio, USA, July 15, **2009**.

[7] - Sequence of 15 hours of a course entitled *Stochastic models in computational mechanics*, PUC Rio university, Rio de Janeiro, Brazil, August 2-6, **2010**.

[8] - Sequence of 6 hours of a course entitled *Probabilistic modeling of uncertainties in computational mechanics and their propagation in complex dynamical systems; industrial applications; recent novel methods of analysis*, in the Advanced School on "Nondeterministics Mechanics" coordinated by I. Elishakoff and C. Soize, International Centre for Mechanical Sciences, CISM, Udine, Italy, May 9-13, **2011**.

[9] - Sequence of 8 hours of a course entitled *Stochastic models of uncertainties in computational mechanics and nonparametric probabilistic approaches*, Oberwolfach Seminar on "Spectral Methods of Uncertainty Quantification" organized by Omar M. Knio (JHU, Baltimore) and Olivier P. Le Maitre (LIMSI, Paris). Mathematisches Forschungsinstitut Oberwolfach Schwarzwaldstr (Lorenzenhof), Oberwolfach-Walke, Germany, June 12-18, **2011**.

[10] - Short course of 6 hours on *Uncertainty Quantification in Mechanics: Theoretical and Computational Aspects* organized in collaboration with R. Ghanem, 11th U.S. National Congress on Computational Mechanics (11th USNCCM), University of Minnesota, Minneapolis, Minnesota, USA, July 24, **2011**.

[11] - Course of 36 hours on *Uncertainty Quantification in Computational Mechanics*, invited by Prof. Charbel Farhat, Army High Performance Computing Research Center (AHPCRC) at Stanford University, Stanford, USA, February 02-20, **2015**.

[12] - Course of 18 hours on *Uncertainty Quantification in Computational Mechanics*, invited by Prof. Charbel Farhat, Army High Performance Computing Research Center (AHPCRC) at Stanford University, Army Research Laboratory (ARL), location of the Course: Aberdeen Proving Ground (APG), Aberdeen, Maryland, USA, June 21-24, **2016**.

[13] - Course of 4 hours on *Probabilistic Learning on Manifolds* in Uncertainty Quantification Summer School, organized by R. Ghanem (USC) and Habib Najm (Sandia), University of Southern California, August 8-10, **2018**.

[14] - Course of 5 lectures given in the *INI Workshop: Introduction to Uncertainty Quantification in Mechanics of Materials (USMW01)*, Isaac Newton Institute, Cambridge University, July 10-14, **2023**.

8. CONTRACTS AND TECHNICAL REPORTS

From 1981 to 2000 at Onera, author or co-author of 62 technical reports with contracts.

From 2001 to 2019 at the Université Paris-Est Marne-la-Vallée.

From 2020 at Université Gustave Eiffel:

[1] - C. Soize, Modèle probabiliste mixte non paramétrique - paramétrique des incertitudes en dynamique non linéaire des structures, Contrat d'association EDF R&D / Département Acoustique et Mécanique Vibratoire et Université de Marne la Vallée / Laboratoire de Mécanique, Contrat EDF/R&D : T62/E28858, Contrat UMLV : 182 APS, Lot 1, Décembre 2001.

[2] - C. Desceliers et C. Soize, Modèle probabiliste mixte non paramétrique - paramétrique des incertitudes en dynamique non linéaire transitoire d'un circuit primaire principal, Contrat d'association EDF R&D / Département Acoustique et Mécanique Vibratoire et Université de Marne la Vallée / Laboratoire de Mécanique, Contrat EDF/R&D : T62/E28858, Contrat UMLV : 182 APS, Lot 2, Décembre 2002.

[3] - C. Soize, Bruit propre d'un dôme sonar lié à la turbulence de la couche limite. Contrat 2003 DCN/ Bassin d'Essais des Carènes et l'Université de Marne la Vallée / Laboratoire de Mécanique.

[4] - Soize C., Capiez-Lernout E. (équipe française), Schueller G.I., Pellissetti M. (équipe étrangère), Une nouvelle méthode de calcul numérique en dynamique stochastique pour l'ingénierie. PAI AMADEUS Program of Scientific Cooperation between Austria and France 2003-2004.

[5] - C. Soize, Modélisation de véhicules automobiles en vibroacoustique numérique avec incertitudes et validation expérimentale, Contrat PSA /département DPTA/DMFV/ACV et l'Université de Marne la Vallée / Laboratoire de Mécanique, 31 octobre 2003 pour 3 ans 2003-2006 correspondant à la thèse CIFRE de Jean-François DURAND.

[6] - C. Soize, Simulation numérique des cloisons légères soumises à des chargements thermiques en présence d'incertitudes de modélisation - validation expérimentale. Application : tenue au feu des cloisons en plaques de plâtre assujetties à une ossature légère métallique, Contrat CSTB /département Structure au feu et l'Université de Marne la Vallée / Laboratoire de Mécanique, 14 février 2003 pour 3 ans 2003-2006 correspondant à la thèse de Seddik SAKJI.

[7] - C. Soize, Modélisation réduite probabiliste de structures complexes pour la prévision des fonctions de transfert vibroacoustiques de carrosseries automobiles, Contrat PSA / département DPTA/DMFV/ACV et l'Université de Marne la Vallée / Laboratoire de Mécanique, Décembre 2005 - Décembre 2008 correspondant à la thèse CIFRE de Charles FERNANDEZ.

[8] - C. Soize, Prise en compte des incertitudes dans les calculs couplés fluide-structure d'assemblages combustible nucléaire, Contrat EDF R&D / Clamart et l'Université de Marne la Vallée / Laboratoire de Mécanique, Octobre 2005 - Septembre 2008 correspondant à la thèse CIFRE de Anas BATOU.

[9] - C. Soize, E. Capiez-Lernout, Conception robuste en dynamique des systèmes mécaniques complexes incertains (CORODYNA), Contrat ANR 2005, Projet : NT05-2-41777, Coordinateur scientifique du projet C. Soize, Janvier 2006 - Décembre 2008.

[10] - C. Soize, Conception robuste en vibrations des roues aubagées, Contrat Turmomeca, Groupe Safran et l'Université de Marne la Vallée / Laboratoire de Mécanique, Octobre 2006 - Décembre 2009 correspondant à la thèse CIFRE de Moustapha MBAYE.

[11] - C. Soize, C. Desceliers, Model and experimental validation for the biomechanical ultrasonic characterization in presence of uncertainties: application to bone (BONECHAR), Contrat 2007-2009 ANR 2006, Projet : BLAN06-2-144777, Partenaires : Paris 12 (laboratoire de biomécanique et biomatériaux ostéo-articulaires, responsable scientifique, S. Naili), Paris 6 (Laboratoire d'imagerie paramétrique, responsable scientifique Q. Grimal) et Université de Marne la Vallée (laboratoire de Mécanique, responsable scientifique C. Soize). Coordinateur du projet S. Naili (Paris 12).

[12] - C. Soize, Structuration automatique et robuste pour le dimensionnement vibroacoustique des structures de véhicules en basses fréquences. Contrat PSA / département DPTA/DMFV/ACV et l'Université de Marne la Vallée / Laboratoire de Mécanique, Décembre 2006 - Décembre 2009 correspondant à la thèse CIFRE de Morad KASSEM.

[13] - C. Soize, Nonlinear wave propagation in complex media. Application to sound propagation in urban environments (Propagation d'ondes non linéaires en milieu complexe. Application à la propagation en environnement urbain). Contrat CSTB /département Acoustique de Grenoble et l'Université Paris-Est Marne la Vallée / Laboratoire de Mécanique, octobre 2006 pour 3 ans 2006-2009 correspondant à la thèse CIFRE de Thomas LEISSING.

[14] - C. Soize, C. Desceliers, Méthodologie d'implémentation des modèles probabilistes des incertitudes dans les modèles numériques de crash. Contrat de recherche 07CTR141 entre PSA Peugeot Citroen et l'Université Paris-Est Marne la Vallée / Laboratoire de Mécanique, juin 2007 - février 2008.

[15] - C. Soize, Modélisation probabiliste et validation expérimentale de la stabilité d'une cloison de grande hauteur en plaques de plâtre sur ossature métallique soumise à un incendie naturel, Contrat CSTB /département Structure au feu et l'Université Paris-Est Marne la Vallée / Laboratoire de Mécanique, octobre 2007 pour 3 ans 2007-2010 correspondant à la thèse de Thanh Trung DO.

[16] - C. Soize, C. Desceliers, Solveur stochastique pour l'analyse robuste du Crash avec modèle numérique incertain. Contrat de recherche 09CTR483 entre PSA Peugeot Citroen et l'Université Paris-Est Marne la Vallée / Laboratoire Modélisation et Simulation Multi-Echelle, Université Paris-Est Marne-la-Vallée, 2009.

[17] - C. Soize, C. Desceliers, Analyse de la performance et du risque associés à l'intégrité du puits dans le contexte du stockage géologique du CO2 : approche prédictive et probabiliste. Contrat de recherche 08CTR303 avec le Conseil Général de Seine-et-Marne, et contrat de recherche 09CTR192 avec la Société OXAND S.A., Université Paris-Est Marne la Vallée / Laboratoire Modélisation et Simulation Multi-Echelle, 2008 - 2010, Université Paris-Est Marne-la-Vallée, décembre 2009.

[19] - C. Soize, Réduction modale basée sur une séparation des modes structuraux globaux et locaux imbriqués en vibroacoustique numérique pour la réponse statistique basse et moyenne fréquence de systèmes complexes incertains. Application à l'Avance de Phase en synthèse automobile. Contrat de recherche 09CTR418 entre PSA / département DPTA/DMFV/ACV et l'Université de Marne la Vallée / Laboratoire Modélisation et Simulation Multi-Echelle, Octobre 2009 - Octobre 2012 correspondant à la thèse CIFRE de Adrien ARNOUX.

[20] - C. Soize, Modélisation spatiale et temporelle de la variabilité géométrique des voies ferroviaires françaises, Contrat de recherche 10CTR437 entre la SNCF, l'ENPC et l'UPEMLV, octobre 2010 pour 3 ans 2010-2013 correspondant à la thèse de Guillaume PERRIN.

[21] - C. Soize, A. Batou, C. Desceliers, J. Guilleminot, J. Yvonnet, Méthodes avancées utilisant les modélisations stochastiques en grande dimension pour la modélisation, la quantification et la propagation des incertitudes en mécanique numérique des solides et des fluides (TYCHE), Contrat ANR 2010 BLAN 090401, Coordinateur scientifique du projet C. Soize, Décembre 2010 - Août 2013.

[22] - A. Batou, C. Soize, Pour des simulations crédibles via la corrélation calcul-essai et l'estimation des incertitudes en dynamique des structures (SYCODYN), Contrat ANR 2012 FUI12, Janvier 2012 - Décembre 2014.

[23] - C. Soize, Identification stochastique inverse de modèles cinétiques d'évolution de la géometrie de la voie sous l'effet de la dynamique du train, Contrat de recherche 2012-00223 entre la SNCF et l'UPEMLV, octobre 2012 pour 3 ans 2012-2015 correspondant à la thèse de Nicolas LESTOILLE.

[24] - A. Batou, E. Capiez-Lernout, J.-F. Deu, C. Soize, Réduction de modèle pour les structures dynamiques à forte densité modale en basses fréquences (HIMODE), Contrat ANR 2013, Janvier 2013 - Décembre 2015.

[25] - A. Batou, C. Soize, Uncertainty quantification for multibody dynamical systems, Korea-France STAR Program, Prof. Hong Hee Yoo and Mr. Chankyu Choi (Hanyang University, Seoul), Prof. C. Soize and Dr. A. Batou (Université Paris-Est Marne-la-Vallée), April 2013 - March 2015.

[26] - C. Soize, Action du vent sur les structures de grandes dimensions, simplification et optimisation du chargement aérodynamique sur les toitures de stade. Contrat de recherche entre le CSTB (établissement de Nantes) et l'UPEM (MSME), 1 janvier 2015 - 1 février 2018, correspondant à la thèse de Wafaa KASSIR.

[27] - C. Soize, Diagnostic de sous-systèmes de matériel roulant ferroviaires à l'aide de modèles stochastiques inverses, Contrat de recherche 2012-00223 entre la SNCF et l'UPEM, 01 janvier 2016 au 31 janvier 2019, correspondant à la thèse CIFRE de David LEBEL.

[28] - C. Soize, E. Capiez-Lernout, la modélisation du désaccordage des roues aubagées en dynamique non linéaire, Contrat de recherche 2017-2020 entre SAFRAN TECH et l'UPEM, 01 février 2017 au 31 janvier 2020, correspondant à la thèse CIFRE de Anthony PICOU.

[29] - C. Soize, Robust design of nacelle noise reduction technologies, Contrat de recherche 2017-2020 entre Airbus et l'UPEM, 01 janvier 2017 au 31 janvier 2020, correspondant à la thèse CIFRE de Vincent DANGLA.

[30] - C. Soize, C. Desceliers, Modélisation vibro-acoustique multi-fréquentielle, Contrat de recherche 2017-2020 entre PSA et l'UPEM, 01 janvier 2017 au 31 janvier 2020, correspondant à la thèse CIFRE de Justin REYES.

[31] - C. Soize, Optimisation de la vitesse des trains vis-à-vis de leur comportement dynamique sur les voies, Contrat de recherche 2019-2023 entre la SNCF et l'UPEM, 01 décembre 2019 au 31 mars 2023, correspondant à la thèse CIFRE de Julien NESPOULOUS.

[32] - C. Desceliers, C. Soize, Méthodes avancées pour la modélisation du bruit moteur et avion (MAMBO) , Contrat de recherche 2021-2024, Airbus, DGA, correspondant à la thèse de Amritesh SINHA.

[33] - G. Perrin, C. Soize, Optimisation en temps réel des commandes de vitesse de trains pour limiter la consommation énergétique, tenant compte des informations fournies par des capteurs embarqués, Contrat de recherche 2022-2026 entre la SNCF et l'Université Gustave Eiffel, 01 décembre 20122 au 31 mars 2026, correspondant à la thèse CIFRE de Romain Jorge Do MARCO.

9. VISITING SCIENTIST AND VISITING PROFESSOR

. Visiting Professor, University of Southern California, Los Angeles, USA, 2024.
. Visiting Professor, Federal University of Fluminense, Rio de Janeiro, Brazil, 2024.
. Visiting Professor, Stanford University, Stanford, USA, 2022
. Visiting Professor, Duke University, Durham, USA, 2022.
. Visiting Professor, University of Southern California, Los Angeles, USA, 2019.
. Visiting Professor, Duke University, Durham, USA, 2019.
. Visiting Professor, University of Liege, Belgium, 2019
. Visiting Professor, Tongji University, Shanghai, China, 2019.
. Visiting Professor, Stanford University, Stanford, USA, 2019
. Visiting Professor, University of Southern California, Los Angeles, USA, 2018.
. Visiting Professor, Duke University, Durham, USA, 2018.
. Visiting Professor, Stanford University, Stanford, USA, 2018.
. Visiting Professor, Federal University of Fluminense, Rio de Janeiro, Brazil, 2018.

. Visiting Professor, University of Southern California, Los Angeles, USA, 2017.
. Visiting Professor, Stanford University, Stanford, USA, 2017.
. Visiting Professor, University of Southern California, Los Angeles, USA, 2016.
. Visiting Professor, Stanford University, Stanford, USA, 2016.
. Visiting Professor, Naval Research Laboratory (NRL), Washington DC, USA, 2016.
. Visiting Professor, Arizona State University, Tempe-Phoenix, Arizona, USA, 2015.
. Visiting Professor, Stanford University, Stanford, USA, 2015.
. Visiting Professor, University of Southern California, Los Angeles, USA, 2015.
. Visiting Professor, Perm State University, Perm, Russia, 2012.
. Visiting Professor, PUC University, Rio de Janeiro, Brazil, 2004, 2006, 2008, 2010, 2012.
. Visiting Professor, Ecole Nationale Polytechnique of Algeria, 2004
. Visiting Professor, University of Innsbruch, Austria, 2002, 2003, 2004, 2005, 2007.
. Visiting Professor, Rice University, 2004.
. Visiting Professor, The Johns Hopkins University, 2002, 2003.
. Visiting Scientist, Rice University, 2001.
. Visiting Scientist, The Johns Hopkins University, 2000.
. Visiting Scientist, University of Saint Jacques de Compostelle, Spain, 1996, 1997, 1998.
. Visiting Scientist, PUC University, Rio de Janeiro, Brazil, 1994, 1995, 1996.

10. SUPERVISED DOCTORAL STUDENTS

1977 - 1979 Thèse C. TREZOS. (Participation à 20% de l'encadrement, Directeur de thèse P. Krée). Bourse CTICM. Thèse de docteur ingénieur, Approche probabiliste de la sécurité des constructions , université Pierre et Marie Curie, Paris VI, soutenue le 21 septembre 1979.

1978 - 1980 Thèse N. AKA. (Participation à 20% de l'encadrement, Directeur de thèse P. Krée). Bourse CTICM. Thèse de docteur 3ème Cycle, Calcul d'indices probabilistes de sécurité pour les structures, université Pierre et Marie Curie, Paris VI, soutenue le 1 juillet 1980.

1979 - 1981 Thèse V. HACHEMI. (Participation à 20% de l'encadrement, Directeur de thèse P. Krée). Bourse CTICM. Thèse de docteur ingénieur, Etude du comportement dynamique non linéaire des risers pour les grandes profondeurs soumis au courant et à la houle, Ecole Nationale des Ponts et Chaussées, Paris, soutenue le 25 juin 1981.

1981 - 1983 Thèse F. POIRION. (Participation à 20% de l'encadrement, Directeur de thèse P. Krée). Bourse Onera. Thèse de docteur 3ème Cycle, Etude numérique de la mécanique aléatoire des systèmes à nombre variable de liaisons, université Pierre et Marie Curie, Paris VI, soutenue le 19 décembre 1983.

1989 - 1991 Thèse de O. FILLATRE. Bourse Onera. Thèse de doctorat de l'Ecole Centrale Paris sur l' Identification des systèmes dynamiques faiblement non linéaires à partir d'excitations aléatoires, soutenue le 26 juin 1991.

1993 - 1995 Thèse de P. SOUDAIS. Bourse Onera. Thèse de doctorat de l'Ecole Centrale Paris sur la Résolution des équations de Maxwell harmonique par une méthode numérique hybride, soutenue le 15 décembre 1995.

1992 - 1995 PhD de D. A. RUSSEL (Encadrement d'une partie de son travail de PhD en 1993). PhD de Pennsylvania State University, in Acoustics, on The theory of fuzzy structures and its application to waves in plates and shells, soutenue le 15 aôut 1995.

1993 - 1995 Thèse de O. LEFUR. Bourse Onera. Thèse de doctorat de l'université Pierre et Marie Curie, Paris VI, sur l'Identification modale des systèmes dynamiques multidimensionnels faiblement non linéaires par une méthode de linéarisation stochastique à paramètres aléatoires, soutenue le 7 novembre 1995.

1996 - 1998 Thèse de J.C. MICHELUCCI. Bourse Onera. Thèse de doctorat de l'Ecole Centrale Paris sur l' Optimisation de forme structurale axisymetrique en vibroacoustique interne dans les domaines des basses et moyennes fréquences, soutenue le 22 octobre 1998.

1996 - 1999 Thèse de K. BJAOUI. Bourse Onera. Thèse de doctorat du CNAM Paris sur une Estimation des paramètres d'une structure floue pour des jonctions continues, soutenue le 2 avril 1999.

1997 - 2001 Thèse de C. DESCELIERS. Bourse Onera. Thèse de doctorat de l'Ecole Centrale Paris sur la Dynamique non linéaire en déplacements finis des structures tridimensionnelles viscoélastiques en rotation, soutenue le 26 janvier 2001.

1998 - 2001 Thèse de S. MZIOU. Bourse Onera. Thèse de doctorat du CNAM Paris sur la Sous-structuration dynamique dans le domaine des moyennes fréquences en analyse des structures, soutenue le 28 novembre 2001.

1999 - 2002 Thèse de H. CHEBLI. Bourse Onera. Thèse de doctorat du CNAM Paris sur la Modélisation des incertitudes aléatoires non homogènes en dynamique des structures pour le domaine des basses fréquences, soutenue le 22 Novembre 2002.

1999 - 2002 Thèse de B. FAVERJON. Bourse Onera. Thèse de doctorat du CNAM Paris, directeur de thèse C. Soize (95%), co-directeur R. Ohayon (5%), sur la Modélisation et validation expérimentale d'un modèle d'impédance acoustique dans le domaine des moyennes et des hautes fréquences pour un système multicouche composé d'un matériau poreux épais inséré entre deux plaques minces, soutenue le 13 Décembre 2002.

2000 - 2003 Thèse de J. DUCHEREAU. Bourse Onera. Thèse de doctorat du CNAM Paris sur la Modélisation non paramétrique des incertitudes en dynamique transitoire des systèmes complexes avec incertitudes non homogènes, soutenue le 21 Janvier 2004.

2001 - 2004 Thèse de E. CAPIEZ. Allocation Recherche. Thèse de doctorat de l'université de Marne la Vallée, Dynamique des structures tournantes à symétrie cyclique en présence d'incertitudes aléatoires. Application au désaccordage des roues aubagées, defended on 14 October 2004. Thesis prize 2005 awarded by CSMA (Computational Structural Mechanics Association).

2002 - 2005 Thèse de S. SAKJI. Bourse CSTB. Thèse de doctorat de l'université de Marne la Vallée, sur la Modélisation probabiliste et validation expérimentale du transfert thermique et du comportement thermomécanique avec endommagement d'une plaque multicouche carton-plâtre-carton soumise au feu, soutenue le 10 juillet 2006.

2002 - 2006 Thèse de C. CHEN. Allocation Recherche. Thèse de doctorat de l'université de Marne la Vallée, directeur de thèse C. Soize (80%), co-directeur D. Duhamel (20%), Vibration et vibroacoustique des panneaux composites sandwich en présence d'incertitudes - Expérimentation et validation du modèle, soutenue le 21 décembre 2006.

2004 - 2006 Thèse de R. COTTEREAU. Bourse Ecole Centrale Paris. Thèse de doctorat de l'Ecole Centrale Paris, directeur de thèse D. Clouteau (90%), co-directeur C. Soize (10%), Etude stochastique de l'interaction dynamique sol-structure, defended on 18 January 2007. Thesis prize 2008 awarded by CSMA (Computational Structural Mechanics Association).

2002 - 2006 Thèse de J.-F. DURAND. Thèse CIFRE PSA. Thèse de doctorat de l'université de Marne la Vallée,Modélisation de véhicules automobiles en vibroacoustique numérique avec incertitudes et validation expérimentale, soutenue le 10 mai 2007.

2005 - 2008 Thèse de Charles FERNANDEZ. Thèse CIFRE PSA. Thèse de doctorat de l'Université Paris-Est sur la Modélisation et validation expérimentale des complexes insonorisants pour la prévision vibroacoustique numérique basse et moyenne fréquences des automobiles, soutenue le 11 décembre 2008.

2005 - 2008 Thèse de Anas BATOU. Thèse CIFRE EDF R&D. Thèse de doctorat de l'Université Paris-Est sur l'identification de forces stochastiques appliquées à un système dynamique non linéaire en utilisant un modèle numérique incertain et des réponses expérimentales, soutenue le 18 décembre 2008.

2006 - 2008 Thèse de Johann GUILLEMINOT. Bourse Ecole des Mines de Douai. Thèse de doctorat de l'Université des Sciences et Technologies de Lille 1 sur la Modélisation stochastique mésoscopique de milieux aléatoires : application à un polymère renforcé de fibres longues, Directeurs de thèse D. Kondo (Université des Sciences et Technologies de Lille 1) et C. Binétruy (Mines Douai), co-encadrement C. Soize (20%), soutenue le 9 décembre 2008.

2006 - 2009 Thèse de Moustapha MBAYE. Thèse CIFRE Turbomeca. Directeur de thèse Soize C. (80%), co-encadrement Capiez-Lernout E. (20%). Thèse de doctorat de l'Université Paris-Est sur la Conception robuste en vibration et aéroélasticité des roues aubagées de turbomachines, soutenue le 3 novembre 2009.

2006 - 2009 Thèse de Mourad KASSEM. Thèse CIFRE PSA. Thèse de doctorat de l'Université Paris-Est sur le Champ de densité d'énergie pour la vibroacoustique basse et moyenne fréquence des structures complexes utilisant un modèle numérique stochastique. Application à la partition structurale des automobiles, soutenue le 10 décembre 2009.

2007 - 2009 Thèse de Thomas LEISSING. Thèse CIFRE CSTB. Directeur de thèse C. Soize (50%), co-directeur au CSTB, P. Jean (50%) Thèse de doctorat de l'Université Paris-Est sur la Propagation d'ondes non linéaires en milieu complexe. Application à la propagation en environnement urbain, soutenue le 30 novembre 2009.

2007 - 2010 Thèse de Thiago RITTO. Bourse Brésilienne CAPES. Thèse de doctorat en co-tutelle entre l'université de la PUC-Rio au Brésil et l'Université Paris-Est sur Numerical analysis of the nonlinear dynamics of a drill-string with uncertainty modeling, directeur de thèse coté Brésil R. Sampaio (50%), directeur de thèse coté Français C. Soize (50%), defended on 15 April 2010. Thesis prize 2011 awarded by CSMA (Computational Structural Mechanics Association).

2007 - 2011 Thèse de Thanh Trung DO. Thèse bourse CSTB. Thèse de doctorat de l'Université Paris-Est sur l'Analyse expérimentale et modélisation du comportement non linéaire thermomécanique de cloison en plaques carton-plâtre-carton, vissées et soumises à des charges thermiques et mécaniques, soutenue le 8 décembre 2011.

2009 - 2012 Thèse de Adrien ARNOUX. Thèse CIFRE PSA. Directeur de thèse C. Soize (50%), co-encadrement A. Batou (50%). Thèse de doctorat de l'Université Paris-Est sur la Réduction des modèles numériques en dynamique linéaire basse fréquence des automobiles, soutenue le 3 octobre 2012.

2010 - 2013 Thèse de Guillaume PERRIN. Bourse SNCF. Directeur de thèse A. Duhamel (50%), co-directeur C. Soize (50%) Thèse de doctorat de l'Université Paris-Est : "Random fields and associated statistical inverse problems for uncertainty quantification. Application to railway track geometries for high-speed trains dynamical responses and risk assessment", defended on 24 september 2013. Thesis prize 2014 awarded by Ecole des Ponts ParisTech and Thesis prize 2014 awarded by Université Paris-Est (École Doctorale Sciences, Ingénierie, Environnement).

2010 - 2013 Thèse de Manh-Tu NGUYEN. Contrat Doctoral. Directeur de thèse C. Soize (50%), co-encadrement C. Desceliers (50%) Thèse de doctorat de l'Université Paris-Est : "Identification multi-échelle du champ d'élasticité apparent stochastique de microstructures hétérogènes. Application à un tissu biologique", defended on 6 October 2013.

2012 - 2015 Thèse de Americo CUNHA JUNIOR. Bourse Brésilienne CAPES. Thèse de doctorat en co-tutelle entre l'université de la PUC-Rio au Brésil et l'Université Paris-Est : "Modeling and uncertainty quantification in the nonlinear stochastic dynamics of horizontal drillstrings", directeur de thèse Brésil R. Sampaio (50%), directeur de thèse France C. Soize (50%), defended on 11 March 2015.

2012 - 2015 Thèse de Roberta DE QUEIROZ LIMA. Bourse Brésilienne CAPES. Thèse de doctorat en co-tutelle entre l'université de la PUC-Rio au Brésil et l'Université Paris-Est : "Modeling and simulation in nonlinear stochastic dynamics of coupled systems and impacts", directeur de thèse Brésil R. Sampaio (50%), directeur de thèse France C. Soize (50%), defended on 13 May 2015. Thesis prize 2015 awarded by ABCM-EMBRAER (Associação Brasileira de Engenharia e Ciências Mecânicas (ABCM) e pela Empresa Brasileira de Aeronáutica (Embraer)) et Thesis prize 2016 awarded by CAPES (Coordenadoria de Aperfeiçoamento de Pessoal de Nível Superiorla).

2012 - 2015 Thèse de Nicolas LESTOILLE. Thèse CIFRE SNCF. Thèse de doctorat de l'Université Paris-Est : "Stochastic model of high-speed train dynamics for the prediction of long-time evolution of the track irregularities", defended on 16 October 2015.

2012 - 2015 Thèse de Thinh Tien LE. Thèse projet ANR. Directeur de thèse C. Soize (30%), co-encadrement J. Guilleminot (70%). Thèse de doctorat de l'Université Paris-Est : "Modélisation stochastique en mécanique des milieux continus de l'interphase inclusion-matrice à partir de simulations en dynamique moléculaire", defended on 21 October 2015.

2013 - 2016 Thèse de Olivier EZVAN. Thèse projet ANR. Directeur de thèse C. Soize (30%), co-encadrement A. Batou (70%). Thèse de doctorat de l'Université Paris-Est : "Multilevel model reduction for uncertainty quantification in computational structural dynamics", defended on 23 September 2016.

2014 - 2020 Thèse de Rémi CAPILLON. Thèse Contrat Doctoral. Directeur de thèse C. Desceliers (90%), co-encadrement C. Soize (10%). Thèse de doctorat de l'Université Paris-Est: "Modélisation non paramétrique des incertitudes dans les modèles numériques de calcul linéaires et causaux", defended on 10 December 2020.

2014 - 2017 Thèse de Wafaa KASSIR. Bourse CSTB. Thèse de doctorat de l'Université Paris-Est : "A non-Gaussian probabilistic approach for the equivalent static loads of wind effects in structural dynamics from wind tunnel measurements", defended on 7 September 2017.

2014 - 2017 Thèse de Déborah LAVAZEC. Contrat Doctoral, Labex MMCD. Directeur de thèse A. Duhamel (50%), co-Directeur C. Soize (30%), co-encadrement A. Batou (20%). Thèse de doctorat de l'Université Paris-Est : "Experimental evaluation and modeling of a nonlinear absorber for vibration attenuation. Design, identification, and analysis", defended on 21 December 2017.

2015 - 2018 Thèse de David LEBEL. Thèse CIFRE SNCF. Thèse de doctorat de l'Université Paris-Est : "Statistical inverse problem in nonlinear high-speed train dynamics", defended on 30 November 2018.

2016 - 2019 Thèse de Quentin AKKAOUI. Thèse DGA. Directeur de thèse C. Soize (10%), co-encadrement R. Ohayon du CNAM Paris (10%), E. Capiez-Lernout (80%). Thèse de doctorat de l'Université Paris-Est : "Computational dynamics of geometrically nonlinear structures coupled with acoustic fluids in presence of sloshing and capillarity. Uncertainty quantification", defended on 4 October 2019.

2016 - 2019 Thèse de Mariia NESTEROVA. Thèse financée par le projet européen Marie Curie Infrastar, Directeur de thèse C. Soize (10%), co-encadrement Franziska Schmidt de l'IFSTTAR (90%). Thèse de doctorat de l'Université Paris-Est : "Reliability of structures exposed to traffic and environmental loads", defended on 25 October 2019.

2016 - 2019 Thèse de Anthony PICOU. Thèse CIFRE Safran, Directeur de thèse C. Soize (10%), co-encadrement E. Capiez-Lernout (90%). Thèse de doctorat de l'Université Paris-Est : "Robust analysis under uncertainties of bladed disk vibration with geometrical nonlinearities and detuning", defended on 16 December 2019.

2017 - 2020 Thèse de Vincent DANGLA. Thèse CIFRE Airbus. Thèse de doctorat de l'Université Gustave Eiffel :"Robust design of nacelle noise reduction technologies", defended on 11 September 2020.

2017 - 2020 Thèse de Justin REYES. Thèse CIFRE PSA, Directeur de thèse C. Soize (50%), co-encadrement C. Desceliers (50%). Thèse de doctorat de l'Université Paris-Est : "Multi-scale stochastic reduced-order model in computational vibroacoustics applied to automobiles", defended on 5 November 2020. The paper "Vehicle model likelihood computation using a probabilistic complex FRF matrix statistical reduction" that has been presented during the ISMA/USD conference has been awarded as the USD Best Student Paper.

2019 - 2022 Thèse de Julien NESPOULOUS. Thèse CIFRE SNCF. Thèse de doctorat de l'Université Gustave Eiffel : "Constrained optimization under uncertainty of the driver's command for energy saving of high-speed trains using computational stochastic nonlinear dynamics and statistics", soutenue le 23 Novembre 2022. Thesis prize 2023 awarded by Paris-Est Sup.

2021 - 2024 Thèse de Amritesh SINHA. Thèse Airbus - DGAC. Directeur de thèse C. Desceliers (70%), co-encadrement C. Soize (30%). Thèse de doctorat de l'Université Gustave Eiffel : "Probabilistic learning and neural networks for statistical metamodel of liner acoustic impedance", defended on 31 May 2024.

2022 - 2025 Thèse de Romain Jorge Do MARCO. Thèse CIFRE SNCF, Directeur de thèse G. Perrin (90%), co-encadrement C. Soize (10%). Thèse de doctorat de l'Université Gustave Eiffel : "Real-time optimization of train speed controls to limit energy consumption, taking into account information provided by on-board sensors", defense scheduled on December 2025.

11. PROFESSIONAL ACTIVITIES

11.1. University Services

. Director of the Engineering Mechanics Laboratory, 2002 - 2004.
. Vice-President for the Research of the PRES Université Paris-Est, 2008 - March 2009.
. Vice-President for the Research of the Université Paris-Est Marne-la-Vallée, 2002 - January 2012.
. Director of the laboratory "Modélisation et Simulation Multi-Echelle (MSME UMR 8208 CNRS)", 2008 - February 2013.

11.2. Reviewer of Thesis and HDR (Habilitation Thesis)

P. Fayol, Thesis, Paris VI University (Pierre et Marie Curie), December 18, 1989.
N. Pican, Thesis, Paris XI University, September 28, 1989.
P. Bernard, Thesis, Blaise Pascal University, Clermont-Ferrand, October 20, 1990.
A. Sbai, Thesis, Ecole Nation. Sup. de l'Aéronau. et de l'Espace, December 17, 1990.
H-P. Boissière, Thesis, Ecole Centrale Paris, September 7, 1992.
E. Friot, Thesis, University of Aix-Marseille II, May 5, 1993.
A. Lebot, Thesis, Ecole Centrale Lyon, April 20, 1994.
D. Trentin, Thesis, INSA Lyon, December 21, 1995.
A. Gallet, Thesis, University of Provence (Aix-Marseille I), January 12, 1996.
S. Bellizzi, HDR (Habilitation Thesis), University of Méditerranée, Aix-Marseille II, November 3, 1997.
O. Richoux, Thesis, University of Maine, December 7, 1999.
O. Dessombz, Thesis, Ecole Centrale Lyon, December 19, 2000.
D. Clouteau, HDR (Habilitation Thesis), INP Grenoble, Ecole Centrale Paris, October 19, 2001.
J.-M. Mencik, Thesis, Sherbrooke University (Cadana) and INSA Lyon, December 12, 2002.
P. Darcis, Thesis, Blaise Pascal University - Clermont II, December 9, 2002.
A. Le Bot, HDR (Habilitation Thesis), Ecole Centrale Lyon, December 16, 2002.
P. Neple, Thesis, University of Bourgogne, December 5, 2003.
F. Sui, Thesis, Ecole Centrale Lyon, January 27, 2004.
M. N. Ichchou, HDR (Habilitation Thesis), Ecole Centrale Lyon, December 6, 2004.
J. Delbove, Thesis, Ecole Supérieure de l'Aéronautique et de l'Espace, June 7, 2005.
O. Le Maître, HDR (Habilitation Thesis), University of Evry, March 23, 2006.
S. Besset, Thesis, Ecole Centale Lyon, November 24, 2006.
B. Sudret, HDR (Habilitation Thesis), Blaise Pascal University, October 12, 2007.
X. Zhong, Thesis, Ecole Centale de Lyon, October 14, 2010.
P. du Cauzé de Nazelle, Thesis, Ecole Centrale de Lyon, March 27, 2013.

P. Froment, Thesis, Ecole Centrale de Lyon, April 24, 2014.
L. Alimonti, Thesis, Université de Sherbrooke, Canada, December 18, 2014.
F. Schmidt, HDR (Habilitation Thesis), Université Paris-Est, December 19, 2017.
G. Brogna, Thesis, INSA Lyon, December 18, 2018.
K. Bulthuis, Thesis, Université Libre de Bruxelles, January 13, 2020, and Université de Liège, January 29, 2020.

11.3. Reviewers of International Journals

297 reviews performed between 1990 and 2024:

Academic Press, books (2) Springer, book and chapters of book (5)
Aerospace Science and Technology (4)
AIAA Journal (14)
ASCE Journal of Aerospace Engineering (1)
CACAIE Journal (10)
Computational Fluid Dynamics (1)
Computational Material Sciences (1)
Computational Mechanics (5)
Computational Methods in Applied Mechanics and Engineering (21)
Computers and Structures (37)
CRAS, Paris (5)
Engineering Structures (1)
European Journal of Mechanics (5)
IEEE Transactions on Signal Processing (1)
International Journal for Numerical Methods in Engineering (18)
International Journal for Numerical Methods in Fluids (1)
International Journal for Uncertainty Quantification (5)
International Journal of Engineering Science (1)
International Journal of Earthquake Engineering Structural Dynamics (1)
International Journal of Fracture (1)
International Journal of Non-Linear Mechanics (27)
International Journal of Solids and Structures (1)
ISRN Applied Mathematics (1)
Integrated Computer-Aided Engineering, an International Journal (1)
Journal Acoustical Society of America (26)
Journal of Aerospace Engineering ASCE (1)
Journal of Aircraft (1)
Journal of Applied Mechanics - Transactions of the ASME (3)
Journal of Computational Physics (3)
Journal of Engineering Mechanics ASCE (2)
Journal of Fluids and Structures (1)
Journal of Intelligent Material Systems and Structures (2)
Journal of Offshore Mechanics and Arctic Engineering (1)
Journal of Nonlinear Dynamics (1)
Journal of Sound and Vibration (35)
Journal of Vibration and Acoustics (4)
La Recherche Aérospatiale (4)
Mechanical Systems and Signal Processing (3)
Physica-D (2)
Probabilistic Engineering Mechanics (30)
Probability Surveys (1)
Proceedings of the Royal Society A (1)
SIAM Journal on Scientific Computing (6)
SIAM-ASA Journal on Uncertainty Quantification (JUQ) (3)
Structural Engineering and Mechanics (1)
Theory of Probability and Mathematical Statistics (1)

11.4. Membership of Committees, Scientific Committees of Laboratories and Institutions.

. Member of the Senior Advisory Board of the European Association for Structural Dynamics (EASD), 2015 - present.
. Officer of the "Uncertainty Quantification" Speciality Committee of United States Association of Computational Mechanics (USACM), 2013 - present.
. Member of the Scientific Committee of the FCBA Institute of Technology, 2012 - 2018.
. Member of the Scientific Committee of the Laboratory Tribology and Systems Dynamics(LTDS), 2013 - 2016.
. Elected member of the Board of the PRES Université Paris-Est, 2012 - 2015.
. Elected member of the Board of the Université Paris-Est Marne-la-Vallée, 2012 - 2015.
. Member of the Executive Board of the European Association for Structural Dynamics (EASD), 2011 - 2014.
. Chairman of the Executive Board of the European Association for Structural Dynamics (EASD), 2008 - 2011.
. Member of the Executive Board of the European Association for Structural Dynamics (EASD), 2006 - 2008.
. Member of the Board of the PRES Université Paris-Est, 2007 - 2011.
. Permanent invited member of the Board of the Université Paris-Est Marne-la-Vallée, 2002 - 2011.
. Permanent invited member of the Scientific Committee of the Université Paris-Est Marne-la-Vallée, 2002 - 2011.
. Member of the Scientific Committee of CSTB (French Research Center in Civil Engineering), 2002 - 2006.
. Chairman, European Association for Structural Dynamics (EADS), 2002 - 2005.
. Chairman, *Structure Committee* of the Association Aéronautique et Astronautique de France, 2002 - 2003.
. Expert member in the Orbital System Committee of CNES (French Space Agency), 1992 - 1999.
. Member of the Scientific Committee of the Acoustic and Mechanics Laboratory (CNRS), 1992 - 1999.
. Member of the Scientific Committee of the "Bassin des Carènes" of the French Navy, 1994 - 1998.
. Chairman, Spatial Mechanisms Experts Committee of CNES (French Space Agency), 1994.

11.5. Membership of Scientific Committees or Organizing Committees of International Conferences.

. EURODYN 2026, 13th International Conference on Structural Dynamics, Hannover, Germany, 27 September - 1 October, 2026.
. CM3P 2025, 5th ECCOMAS Thematic Conference on Computational Methods for Multi-scale, Multi-uncertainty, and Multi-physics Problems, Porto, Portugal, 2-4 July 2025.
. COMPDYN, 10th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Rhodes Island, Greece, 15-18 June 2025.
. UNCECOMP 2025, Uncertainty Quantification in Computational Sciences and Engineering, Rhodes Island, Greece, 15-18 June 2025.
. ICOSSAR 2025, 14th International Conference on Structural Safety and Reliability, University of Southern California, Los Angeles, United States, June 1-6, 2025.
. ISMA 2024 - USD 2024, International Conference on Noise and Vibration Engineering Conference (ISMA) and on Uncertainty in Structural Dynamics (USD), Leuven, Belgium, September 9-11, 2024
. CSMA 2024, 16th National Conference on Structural Calculation, Giens (Var), France, 13-17 May 2024.
. ASCE-ICVRAM-ISUMA 2024, organized by ASCE and Tongji University, Shanghai, China, 25-28 April 2024.
. UNCECOMP 2023, Uncertainty Quantification in Computational Sciences and Engineering, Athens, Greece, 12-14 June 2023.
. COMPDYN 2023, Computational Methods in Structural Dynamics and Earthquake Engineering, Athens, Greece, 12-14 June 2023.
. ICAV 2022, The Fourth International Conference on Acoustics and Vibration, Sousse, Tunisia, December 19-21, 2022
. ICOSSAR 2021-2022, 13th International Conference on Structural Safety & Reliability, Virtual Conference, Shanghai, China, 13-17 September 2022.
. ISMA 2022 - USD 2022, International Conference on Noise and Vibration Engineering Conference (ISMA) and on Uncertainty in Structural Dynamics (USD), Leuven, Belgium, September 12-14, 2022
. UNCECOMP 2021, Uncertainty Quantification in Computational Sciences and Engineering, Virtual conference, 28-30 June 2021.
. COMPDYN 2021, Computational Methods in Structural Dynamics and Earthquake Engineering, Virtual conference, 28-30 June 2021.
. REC 2020, 9th International Workshop on Reliable Engineering Computing, Taormina, Italy, 17-20 May, 2020.
. EURODYN 2020, 11th International Conference on Structural Dynamics, Streamed from Athens, Greece, 23-26 November, 2020.

. EMI 2020 and PMC 2020, Engineering Mechanics Institute conference and the 13th ASCE Specialty Conference on Probabilistic Mechanics New York, May 26-29, 2020.
. ISMA 2020, International Conference on Noise and Vibration Engineering Conference (ISMA) and on Uncertainty in Structural Dynamics (USD), Leuven, Belgium, September 7-9, 2020
. CMSM 2019, 8th edition of the International Congress on Design and Modelling of Mechanical Systems, Hammamet, Tunisia, March 18-20, 2020.
. UNCECOMP 2019, Uncertainty Quantification in Computational Sciences and Engineering, Crete, Greece, 22-24 June 2019.
. COMPDYN 2019, Computational Methods in Structural Dynamics and Earthquake Engineering, Crete, Greece, 22-24 June 2019.
. CSMA 2019, 4ème Colloque National en Calcul des Structures, Giens (Var), 13-17 Mai 2019.
. REC 2018, 8th International Workshop on Reliable Engineering Computing, Computing with Confidence, Institute for Risk, Liverpool, July 16 - 18, 2018
. ISMA 2018, International Conference on Noise and Vibration Engineering Conference (ISMA) and on Uncertainty in Structural Dynamics (USD), Leuven, Belgium, September 17-19, 2018
. ICAV 2018, International Conference on Acoustics and Vibration, Tunisia, March 19-21, 2018
. COMUS 2017, Modeling of Multi-Uncertainty and Multi-Scale Problems, Porto, Portugal, September 12-14, 2017
. EURODYN 2017, 10th International Conference on Structural Dynamics, Roma, Italy, September 10-13, 2017
. ICOSSAR 2017, 12th International Conference on Structural Safety & Reliability, Vienna, Austria, 6-10 August 2017.
. COMPDYN 2017, Computational Methods in Structural Dynamics and Earthquake Engineering, Rhodes Island, Greece, 15-17 June, 2017.
. UNCECOMP 2017, Uncertainty Quantification in Computational Sciences and Engineering, Rhodes Island, Greece, 15-17 June, 2017.
. CMSM 2017, 7th edition of the International Congress on Design and Modelling of Mechanical Systems, Hammamet, Tunisia, March 27-29, 2017.
. ICAV 2016, International conference on Acoustics and Vibration (ICAV), Hammamet, Tunisia, March 21-23, 2016.
. EUROMECH 2016, International Conference on Multi-Uncertainty and Multi-Scale Methods and Related Euromech Colloquium 584, Porto, Portugal, September 13-17, 2016.
. ISMA 2016 - USD 2016, Noise and Vibration Engineering Conference (ISMA), International Conference on Uncertainty in Structural Dynamics (USD), Leuven, Belgium, September 19-21, 2016.
. REC 2016, 7th International Workshop on Reliable Engineering Computing, Bochum, Germany June 15 – 17, 2016.
. COMPDYN 2015, Computational Methods in Structural Dynamics and Earthquake Engineering, Island of Crete, Greece, 23-25 May, 2015.
. CMSM 2015, The Sixth International Congress on Design and Modelling of Mechanical Systems, Hammamet, Tunisia, March 23 - 25, 2015.
. DYNCOMP 2015, International Conference on Composites Materials and Structures Dynamic Behaviour, Arles in Provence, France, June 2-4, 2015.
. MSF 2015, ECCOMAS Thematic Conference on Multi-scale Computational Methods for Solids and Fluids, Sarajevo, Bosnia and Herzegovina, July 20-23, 2015.
. UNCECOMP 2015, Uncertainty Quantification in Computational Sciences and Engineering, Island of Crete, Greece, May 25-27, 2015.
. ISMA 2014 - USD 2014, Noise and Vibration Engineering Conference (ISMA), International Conference on Uncertainty in Structural Dynamics (USD), Leuven, Belgium, September 15-17, 2014.
. IUTAM Symposium 2014, Dynamical Analysis of Multibody Systems with Design Uncertainties, Stuttgart, Germany, June 23-27, 2014.
. EURODYN 2014, 9th International Conference on Structural Dynamics, Porto, Portugal, 30 June - 2 July 2014.
. REC 2014, 6th International Workshop on Reliable Engineering Computing - REC 2014 - Reliability and Computations of Infrastructures, Illinois Institute of Technology, Chicago, May 25-28, 2014.
. ICOSSAR 2013, 11th International Conference on Structural Safety and Reliability (ICOSSAR 2013) (Member of the International Advisory Committee), Columbia University, New York City, June 16-20, 2013.
. COMPDYN 2013, Computational Methods in Structural Dynamics and Earthquake Engineering, in conjunction with SEECCM III, Island of Kos, Greece, June 12-14, 2013.
. 11ème Colloque National en Calcul des Structures, Giens (Var), May 13 - 17, 2013.

. CMSM 2013, 5th edition of the International Congress on Design and Modelling of Mechanical Systems, Djerba, Tunisia, March 18 - 20, 2013.
. DYNCOMP 2012, First International Conference on Composites Materials and Structures Dynamic Behaviour, Arcachon, France, May 22 - 24, 2012.
. ISMA 2012 - USD 2012, Noise and Vibration Engineering Conference (ISMA), International Conference on Uncertainty in Structural Dynamics (USD), Leuven, Belgium, September 17-19, 2012.
. SIAM UQ 2012, SIAM Conference on on Uncertainty Quantification, Raleigh, North Carolina, USA, April 2-4, 2012.
. EURODYN 2011, 8th International Conference on Structural Dynamics, Leuven, Belgium, July 4- 6, 2011.
. COMPDYN 2011, Computational Methods in Structural Dynamics and Earthquake Engineering, Corfu, Greece, May 26 -28, 2011.
. 10ème Colloque National en Calcul des Structures, Giens (Var), May 9 - 13, 2011.
. ISRERM 2010, International Symposium on Reliability Engineering and Risk Management, Tongji University, Shanghai, P.R.China, September 23-26, 2010.
. ISMA 2010, 30th Noise and Vibration Engineering Conference, Leuven, Belgique, September 20 - 22, 2010.
. USD 2010, International Conference on Uncertainty in Structural Dynamics, Leuven, September 20–22, 2010.
. IMPACT 2010, First International Symposium on "Dynamic of Systems, materials and structures", Djerba, Tunisie, March 22 - 24, 2010.
. REC 2010, 4th International Workshop on Reliable Engineering Computing Robust Design - Coping with Hazards, Risk and Uncertainty, National University of Singapore, March 3–5, 2010.
. ICOSSAR 2009, 10th International Conference on Structural Safety and Reliability, Osaka, Japan, September 13 - 17, 2009.
. IUTAM Symposium on Vibration Analysis of Structures with Uncertainties, Saint Petersburg, July 6–10, 2009.
. COMPDYN 2009, Computational Methods in Structural Dynamics and Earthquake Engineering, Island of Rhodes, Greece, June 22 - 24, 2009.
. USD 2009, 2nd International Conference on Uncertainty in Structural Dynamics, the University of Sheffield, UK, June 15–17, 2009.
. 9ème Colloque National en Calcul des Structures, Giens (Var), May 25 - 29, 2009.
. ISMA 2008, 29th Noise and Vibration Engineering Conference, Leuven, Belgique, September 15 - 17, 2008.
. EURODYN 2008, 7th European Conference on Structural Dynamics, Soutampton, England, July 7 - 11, 2008.
. LSAME08-NDM08, Leuven Symposium on Applied Mechanics in Engineering - Non-deterministic numerical modeling, Leuven, March 31 - April 2, 2008.
. COMPDYN 2007, Computational Methods in Structural Dynamics and Earthquake Engineering, Rethymnon, Crete, Greece, June 13 - 15, 2007.
. USD 2007, Intern. Conference on Uncertainty in Structural Dynamics, the University of Sheffield, UK, June 11 - 13, 2007.
. ISMA 2006, 28th Noise and Vibration Engineering Conference, Leuven, Belgium, September 18 - 20, 2006.
. CSM 2006, 5th Computational Stochastic Mechanics Conference Rodos, Greece, June 21 - 23, 2006.
. EURODYN 2005, 6th European Conference on Structural Dynamics, Paris, September 4 - 7, 2005.
. ICOSSAR 2005, 9th Intern. Conf. on Structural Safety and Reliability , Rome, June 19 - 22, 2005.
. ISMA 2004, 27th Noise and Vibration Engineering Conference, Leuven, Belgium, September 20 - 22, 2004.
. 2ème Colloque d'Analyse Vibratoire Expérimentale, Blois, November 13 - 14, 2003.
. 1st Intern. Conf. on Risk, Vulnerability and Reliability in Construction, Alger, October 11 - 12, 2003.
. SSD 2003, 5th Intern. Conf. on Stochastic Structural Dynamics, Hangzhou, China, May 26 - 28, 2003.
. 6ème Colloque National en Calcul des Structures, Giens (Var), May 20 - 23, 2003.
. CSM 2002, 5th Intern. Conf. on Computational Stochastic Mechanics, Kerkyra, Greece, June 9 - 12, 2002.
. ISMA 2002, 26th Noise and Vibration Engineering Conference, Leuven, Belgium, September 12 - 14, 2002.
. EURODYN 2002, 5th European Conference on Structural Dynamics, Munich, September 2-5, 2002.
. ICOSSAR 2001, 8th Intern. Conf. on Structural Safety and Reliability, Newport Beach, USA, 17-22 June, 2001.
. ISMA 2000, 25th Noise and Vibration Engineering Conference, Leuven, Belgium, 13-15 September 2000.
. NOVEM 2000, Noise and Vibration Using Energy Methods, Lyon, 31 August - 2 September 2000.
. CSM 1998, 3rd Intern. Conf. on Computational Stochastic Mechanics, Island of Santorini, Greece, June 14-17, 1998.
. ICOSSAR 1997, 7th Intern. Conf. on Structural Safety and Reliability, Kyoto, Japan, November 24–28, 1997;

. EURONOISE 1995, 2nd Intern. Conf. on Noise Control, Lyon, France, March 21–23, 1995;
. ICASP 1995, 7th Intern. Conf. on Applications of Statistics and Probability, Paris, France, July 10-13, 1995;
. ICOSSAR 1993, 6th Intern. Conf. on Structural Safety and Reliability, Innsbruck, Austria, August 9–13, 1993.

11.6. Organization of International Conferences, Minisymposia and Workshop.

. Conference Chairman of the 6th European Conference on Structural Dynamics, EURODYN 2005, Paris, September 4-7, 2005.
. Co-organizers: R. Ghanem, C. Soize, G.I. Schueller, Minisymposium "Uncertainty modeling and quantification in computational mechanics" du 7th World Congress on Computational Mechanics (WCCM7), Los Angeles, USA, July 16 - 22, 2006.
. Co-organizers: R. Ghanem, C. Soize, G.I. Schueller, Minisymposium "Uncertainty modeling and quantification in computational mechanics" du 9th U.S. National Congress on Computational Mechanics (USNCCM IX), San Francisco, USA, July 22 - 26, 2007.
. Scientific advisor with G.I. Schueller of the Workshop "Uncertainties in structural dynamics" organized by M. Pellissitti, IFM, Leopold-Franzens University of Innsbruck, October 19, 2007.
. Co-organizers: R. Ghanem, G.I. Schueller, C. Soize, Joint IACM-IUTAM minisymposium "Uncertainty modeling and quantification in computational mechanics" of the joint WCCM8 and ECCOMAS 2008 Conferences, 8th World Congress on Computational Mechanics (WCCM8) and 5th European Congress on Computational Methods in Applied Sciences, Venice, Italy, 30 June - 5 July 2008.
. Co-organizers: C. Soize, G.I. Schueller, Minisymposium "Uncertainty and reliability in computational structural dynamics" in the international conference COMPDYN 2009 : Computational Methods in Structural Dynamics and Earthquake Engineering, Island of Rhodes, Greece, June 22–24, 2009.
. Co-organizers: R. Ghanem, C. Soize, G.I. Schueller, W.K. Liu, Minisymposium "Uncertainty quantification in computational science and engineering" of the 10th U.S. National Congress on Computational Mechanics (USNCCM X), Columbus, Ohio, USA, July 16 - 19, 2009.
. Co-organizers: R. Ghanem, W.K. Liu, G.I. Schueller, C. Soize, Minisymposium "Uncertainty quantification in computational mechanics and engineering sciences" of the 4th European Conference on Computational Mechanics (Solids, Structures and Coupled Problems in Engineering) - ECCM 2010, Paris, France, May 17–21, 2010.
. Co-organizers: R. Ghanem, W.K. Liu, G.I. Schueller, C. Soize, Minisymposium "Uncertainty modeling and quantification in computational science and engineering" of the 9th World Congress on Computational Mechanics (WCCM 2010), Sydney, Australia, July 19 – 23, 2010.
. Co-organizers: R. Ghanem, G.I. Schueller, C. Soize, W.K. Liu, Minisymposium "Uncertainty quantification, robustness and computational stochastic mechanics" of the 6th M.I.T. Conference on Computational Fluid and Solid Mechanics; Advances in Solids and Structures Massachusetts Institute of Technology, USA, June 15–17, 2011.
. Co-organizers: R. Ghanem, C. Soize, G.I. Schueller, W.K. Liu, Minisymposium "Uncertainty Quantification in Computational Science and Engineering" of the 11th U.S. National Congress on Computational Mechanics (USNCCM XI), Minneapolis, Minnesota, USA, July 25 - 29, 2011.
. Co-organizers: G.I. Schueller, R. Ghanem, C. Soize, W.K. Liu, Minisymposium "Uncertainty Quantification in Computational Mechanics" of the 7th International Conference on Computational Mechanics for Spatial Structures (IASS-IACM 2012), Sarajevo, Bosnia and Herzegovina, April 2 - 4, 2012.
. Co-organizers: R. Ghanem, R. Sampaio, C. Soize, G.I. Schueller, W.K. Liu, Minisymposium "Uncertainty Quantification in Computational Science and Engineering " of the 10th World Congress on Computational Mechanics (WCCM 2012), São Paulo, Brazil, 8–13 July, 2012.
. Co-organizers: G.I. Schueller, C. Soize, R. Ghanem, W.K. Liu, Minisymposium "Uncertainty Quantification in Computational Mechanics and Engineering Sciences" of the 6th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2012), Vienna, Austria, September 10-14, 2012.
. Co-organizers: C. Soize, R. Ghanem, Minisymposium "Uncertainty quantification in computational dynamics" of the international conference COMPDYN 2013: Computational Methods in Structural Dynamics and Earthquake Engineering, in conjunction with the III South-East European Conference on Computational Mechanics (SEECCM III) Island of Kos, Greece, June 12-14, 2013.
. Co-organizers: R. Ghanem, C. Soize, W.K. Liu, Minisymposium "Probabilistic modeling, analysis and simulation for large scale and complex engineered systems" of the 11th International Conference on Structural Safety and Reliability (ICOSSAR 2013), Columbia University, New York City, June 16-20, 2013.
. Co-organizers: R. Ghanem, J. Stewart, C. Soize, Minisymposium "Uncertainty quantification (UQ) challenge

benchmarks" of the 12th U.S. National Congress on Computational Mechanics (USNCCM XII), Raleigh, NC, USA, July 22-25, 2013.

. Co-organizers: J. Stewart, R. Ghanem, C. Soize, Minisymposium "Uncertainty quantification (UQ) challenge benchmarks" of the SIAM Conference on Uncertainty Quantification, Savannah, Georgia, USA, March 31, April 3, 2014.

. Co-organizers: C. Soize, R. Ghanem, Minisymposium "Uncertainty quantification in computational structural dynamics and coupled systems" of the 9th International Conference on Structural Dynamics (EURODYN 2014), Porto, Portugal, 30 June - 2 July 2014.

. Co-organizers: C. Soize, M. Arnst, Minisymposium "Uncertainty quantification in coupled problems and structural dynamics", ECCOMAS Thematic Conference on Uncertainty Quantification in Computational Sciences and Engineering (UNCECOMP 2015), Crete Island, Greece 25-27 May 2015.

. Co-organizers: J. Guilleminot, M. Arnst, C. Soize, Minisymposium "Stochastic modeling and identification of uncertainties in computational mechanics" of the 7th European Congress on Computational Methods in Applied Sciences and Engineering (ECCM 2016), Crete Island, Greece, June 05-10, 2016.

. Co-organizers: E. Capiez-Lernout, M. Mignolet, C. Soize, Minisymposium "Nonlinear dynamics of rotating structures" of the 7th European Congress on Computational Methods in Applied Sciences and Engineering (ECCM 2016), Crete Island, Greece, June 05-10, 2016.

. Co-organizers: J. Guilleminot, R. Ghanem, C. Soize, Minisymposium "Stochastic modeling, identification and propagation of uncertainties in computational mechanics of materials", 12th World Congress on Computational Mechanics, (WCCM12), Seoul, Korea, 24–29 July, 2016.

. Co-organizers: J. Guilleminot, R. Ghanem, C. Soize, Minisymposium "Uncertainty Quantification in Computational Mechanics", 2016 EMI International Conference of ASCE, Engineering Mechanics Institute Conference, Metz, France, 25-27 October, 2016.

. Co-organizers: C. Soize, R. Ghanem, P.D. Spanos, Jie Li, M. Arnst, Minisymposium "Probabilistic and statistical methodologies for uncertainty quantification in computational sciences and engineering, 12th International Conference on Structural Safety & Reliability, ICOSSAR 2017, Vienna, Austria, 6-10 August, 2017.

. Co-organizers: R.Ghanem, M. Mignolet, C. Soize, Minisymposium "Uncertainty Quantification and reliability analysis in structural dynamics and coupled systems", X International Conference on Structural Dynamics, EURODYN 2017, Rome, Italy, 10-13 September, 2017.

. Co-organizers: M. Arnst, R. Ghanem, C. Soize, Minisymposium "UQ and probabilistic learning computational dynamics", XI International Conference on Structural Dynamics, EURODYN 2020, Athens, Greece, 23-25 November, 2020.

. Co-organizers: C. Desceliers, C. Soize, J. Stewart, A.F. Alvarez, K. Garikipati, M. Bessa, M. Mignolet, F. Pled, R. Ghanem, Minisymposium "Data-driven science with uncertainty quantification, machine learning, and optimization", 14th World Congress on Computational Mechanics, (WCCM14) and ECCOMAS 2020, Virtual Conference, Paris, France, January 11-15, 2021.

. Co-organizers: M. Bessa, A.F. Alvarez, K. Garikipati, R. Ghanem, C. Soize, J. Stewart, Minisymposium "Uncertainty Quantification and Machine Learning for Modeling and Optimization, UNCECOMP 2021, 4th International Conference on Uncertainty Quantification in Computational Sciences and Engineering, Virtual Conference, 28-30 June 2021, Athens, Greece.

. Co-organizers: J. Stewart, K. Garikipati, R. Ghanem, M. Bessa, C. Desceliers, A. Figueroa, M. Mignolet, F. Pled, and C. Soize, Minisymposium "Data-driven Science and Uncertainty quantification, machine learning, and optimization", 16th U.S National Congress on Computational Mechanics (USNCCM16), Virtual Conference, Chicago, USA, July 25-29, 2021.

. Co-organizers: R. Ghanem, C. Soize, Minisymposium "Probabilistic learning: fundamentals and computational challenges", 13th International Conference on Structural Safety & Reliability, ICOSSAR 2021-2022, Virtual Conference, Shanghai, China, 13-17 September 2022.

. Co-organizers: E. Capiez-Lernout, M. Mignolet, C. Soize , Minisymposium "Nonlinear computational structural dynamics in rotating turbomachinery fundamentals", 15th World Congress on Computational Mechanics, WCCM 2022, Yokohama, Japan, July 31st - August 5, 2022.

. Co-organizers: F. Pled, C. Desceliers, M. Arnst, C. Soize, Minisymposium "Uncertainty quantification in material sciences", 8th European on Computational Methods in Applied Sciences and Engineering (ECCM 2022), Oslo, Norway, June 5-9, 2022.

. Co-organizers: A. Gandomi, R. Ghanem, C. Soize, Minisymposium "Probabilistic learning, stochastic optimization,

and digital twins", ASCE-EMI 2022, Bamtimore, USA, 31 May - 3 June , 2022.
. Co-organizers: C. Soize, E. Chatzy, R. Ghanem, F.A. Rochinha, S.W. Sun, Minisymposium "Uncertainty quantification and probabilistic learning in computational dynamics", EURODYN 2023, Delft, The Netherlands, 2-5 July, 2023.
. Co-organizers: S. Govindjee, R. Ghanem, J. Guilleminot, C. Safta, M. Shields, C. Soize, C. Farhat, Minisymposium "Probabilistic learning and constrained generative models", 17th U.S. National Congress on Computational Mechanics, USNCCM 2023, Albuquerque, New Mexico, USA, 23-27 July, 2023.
. Co-organizers: A. Gandomi, R. Ghanem, C. Soize, Minisymposium "Probabilistic learning, stochastic optimization, and digital twins", ASCE-EMI 2023, Atlanta, USA, June 6-9, 2023.
. Co-organizers: F. Pled, C. Desceliers, M. Arnst, C. Soize, Minisymposium "Uncertainty quantification in materials science and computational mechanics, 9th European Congress on Computational Methods in Applied Sciences and Engineering, ECCOMAS 2024, Lisbone, Portugal, June 3-7, 2024.
. Co-organizers: C. Farhat, R. Ghanem, S. Govindjee, J. Guilleminot, C. Safta, M. Shields, C. Soize, Minisymposium "Probabilistic learning and constrained generative models", 16th World Congress on Computational Mechanics,(WCCM16) Vancouver, Canada, 21-26 July, 2024.
. Co-organizers: A. Gandomi, R. Ghanem, C. Soize, Minisymposium "Probabilistic learning, stochastic optimization, and digital twins", ASCE-EMI 2024, Chicago, Illinois, May 28-31, 2024.
. Co-organizers: R. Ghanem,C. Heitzinger, C. Soize, Minisymposium "Machine Learning and Artificial Intelligence for constrained cystems", ASCE-EMI 2024, Vienna, Austria, September 11-13, 2024.

11.7. Membership of Editorial Boards.

. International Journal of Non-Linear Mechanics, Elsevier, 1996 - present.
. Advances in Mechanical Engineering, Hindawi Publishing Corporation, 2008 - 2013.
. International Journal for Uncertainty Quantification, Begell House, 2009 - present.
. Lecture Notes in Mechanics, Engineering Mechanics Institute, ASCE, 2010 - present.
. ISRN Applied Mathematics, Hindawi Publishing Corporation, 2013 - 2014.
. Advances in Theoretical and Applied Mechanics, Hikari Ltd, 2013 - 2015.
. Computer-Aided Civil and Infrastructure Engineering, Wiley, 2013 - 2016.
. Computers & Structures, Elsevier, 2016 - 2023.
. Computer Methods in Applied Mechanics and Engineering, Elsevier, 2022 - present.

11.8 Membership of Awards Committee.

. Member of the 2020 Major and General Awards Committee of IACM (International Association for Computational Mechanics).
. Member of the selection committee for the 2022 SIAG/UG Early Career Prize, Society for Industrial and Applied Mathematics (SIAM).
. Member of the 2022 Major and General Awards Committee of IACM (International Association for Computational Mechanics).