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I- TRAVAUX, OUVRAGES, ARTICLES, RÉALISATIONS

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PROFIL DE RECHERCHE

Les travaux de recherche s'inscrivent dans le domaine des mathématiques appliquées, à l'interface de la théorie des probabilités et des statistiques mathématiques, de la modélisation stochastique et de la simulation numérique pour les sciences de l'ingénieur, en particulier en mécanique théorique et numérique. Ils portent sur la modélisation mathématique de phénomènes aléatoires et de systèmes dynamiques stochastiques, la théorie des champs stochastiques et la modélisation probabiliste des incertitudes dans les systèmes complexes, incluant la modélisation multi-échelle, la quantification des incertitudes et les problèmes inverses statistiques. En particulier, une approche probabiliste non paramétrique des incertitudes pour la modélisation des opérateurs aléatoires, basée sur la théorie des matrices aléatoires a été dévéloppée. Plus récemment, les recherches ont abordé l'apprentissage probabiliste et statistique ainsi que l'apprentissage automatique pour des problèmes en grande dimension avec des jeux de données limités, tout en explorant des formulations d'apprentissage probabiliste adaptées aux ordinateurs quantiques.

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[9] - C. Soize, Medium frequency linear vibrations of anisotropic elastic structures, *La Recherche Aérospatiale* (English edition), **5**, 65–87 (1982).

[8] - C. Soize, Middle frequency linear vibrations of anisotropic elastic structures, *Comptes Rendus à l'Académie des Sciences de Paris - Série II*, **294**(15), 895–898 (1982).

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[7] - C. Soize, Oscillators submitted to squared gaussian processes, *Journal of Mathematical Physics*, doi:10.1063/1.524356, **21**(10), 2500–2507, American Institute of Physics (1980).

[6] - C. Soize, Fatigue failure analysis under random loading [Cumul de fatigue sous sollicitation aléatoire], *Revue Construction Métallique*, CTICM, **16**(4), 3–22 (1979).

[5] - C. Soize, Gust loading factors with nonlinear pressure terms, *Journal of Structural Division - ASCE*, doi: 10.1061/JSDEAG.0004948, **104**(6), 991–1007 (1978).

[4] - C. Soize, Design of lattice structures subjected to gusty wind loads [Calcul des structures à barres soumises au vent aléatoire], *Revue Construction Métallique*, CTICM, **14**(1), 44–58 (1977).

[3] - C. Soize, Stochastic dynamics of slender structures subjected to random wind loading [Dynamique stochastique des structures élancées soumises aux charges de vent], *Revue Française de Mécanique*, **60**, 57–65 (1976).

[2] - C. Soize, Quadratic transformation of a Gaussian process and its application to stochastic dynamics [Transformation quadratique d'un processus Gaussien et application à la dynamique stochastique], *Journal de Mécanique*, **15**(5), 857–875 (1976).

[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).

I.4. Doctorats

[1] - C. Soize, *Dynamique stochastique des structures élastiques soumises aux charges de vent*, Thèse de Doctorat de 3ème Cycle, Université Pierre et Marie Curie, Paris VI, 1975.

[2] - C. Soize, *Résolution de deux problèmes de mécanique aléatoire*, Thèse de Doctorat d'État ès Sciences Physiques, Université Pierre et Marie Curie, Paris VI, Directeur de thèse Prof. Paul Krée, 1979.

I.5. Liste des Conférences Plénières, Semi-Plénières et des "Keynote Lectures"

Cette liste est extraite du paragraphe I.6.

[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, Paris, 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.

I.6. Liste des Communications dans les Conférences Internationales et Nationales

2026

[476] - O. Ezvan, C. Desceliers, C. Soize, E. Capiez-Lernout, Neural network hyperreduction for parameterized reduced models in nonlinear stochastic dynamics, 32nd edition of ISMA and 11th edition of USD, KU Leuven, Belgium, 7-9 September 2026.

[475] - G. La Valle, C. Soize, Nonlocal elastic modeling and stochastic analysis of particle-based materials with wave-based identification, 10th ECCOMAS and 17th WCCM, Munich, Germany, 19-24 July 2026.

[474] - G. La Valle, C. Soize, D.J. Steigmann, A micromorphic continuum based on Cauchy-Piola kinematics for energetically equivalent micro- and mesoscale analysis, 20th US National Congress on Theoretical and Applied Mechanics, USNCTAM'26, Pasadena, CA, June 21-26, 2026.

[473] - Q.-D. To, C. Léonard, C. Soize, Helium transport in silicon channels: a coupled study using DFT, molecular dynamics, machine learning and monte carlo simulations, 51st Vietnam Conference on Theoretical Physics, VCTP-51, Nha Trang, 3-6 August, 2026.

2025

[472] - E. Capiez-Lernout, O. Ezvan, C. Soize, Stochastic dynamics and surrogate modeling for nonlinear aerospace nozzle systems with partial observations, IMAC-XLIII 2025, Orlando, USA, 10-13 February 2025. A Conference and Exposition on Structural Dynamics 2025, Society for Experimental Mechanics Annual Conference and Exposition, SEM/IMAC, Springer (2025).

[471] - O. Ezvan, C. Desceliers, C. Soize, E. Capiez-Lernout, Neural network hyperreduction for parameterized reduced-order models in nonlinear stochastic dynamics, UNCECOMP 2025, Rhodes-Island, Greece, June 15-18, 2025.

[470] - E. Jewell, C. Farhat, C. Soize, A Tractable nonparametric probabilistic approach for modeling and quantifying model-form uncertainty in CFD computations with turbulence modeling , AIAA SciTech 2025 Forum, Orlando, Florida, January 6-10, 2025. roceedings published in AIAA Journal, doi: 10.2514/6.2025-2301, pp. 1-25 (2025).

[469] - G. La Valle, C. Soize, Particle-based materials: nonlocal elasticity, stochastic analysis, and wave propagation-based identification, Methods in Metamaterials design: mathematical modelling, numerical techniques, experiments, Meta-Meeting MEMOCS 2025, Arpino, Italy, 30 March - 4 April 2025.

[468] - R. Jorge Do Maroc, G. Perrin, C. Funfschilling, C. Soize, Bayesian calibration of a non-linear controlled dynamic system with missing data: application to high speed-train, UNCECOMP 2025, ECCOMAS Thematic Conference on Uncertainty Quantification in Computational Sciences and Engineering, Rhodes-Island, Greece, June 15-18, 2025.

[467] - C. Soize, Potentially useful probabilistic approaches to uncertainty quantification and statistical surrogate models for metamaterials design, Methods in Metamaterials design: mathematical modelling, numerical techniques, experiments, Meta-Meeting MEMOCS 2025, Arpino, Italy, 30 March - 4 April 2025.

[466] - C. Soize, L. Joubert-Doriol, A. Izmaylov, Quantum computer formulation of the FKP-operator eigenvalue problem for probabilistic learning on manifolds, 18th U.S. National Congress on Computational Mechanics, USNCCM 2025, Chicago, Illinois, July 20-24, 2025.

[465] - Q.-D. To, C. Soize, Probabilistic learning of gas wall interaction from Molecular Dynamics simulations and application to gas transport problems in nano micropores, InterPore2025, 17th Annual Meeting, Albuquerque, New Mexico, USA 18-23 May 2025.

2024

[464] - 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.

[463] - 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.

[462] - 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.

[461] - 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.

[460] - 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.

[459] - 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.

[458] - R. Jorge Do Marco, G. Perrin, C. Funfschilling, C. Soize, Constrained optimization of driver control to limit energy consumption, Railways 2024, The Sixth International Conference on Railway Technology: Research, Development and Maintenance , Prague, Czech Republic, 1-5 September 2024. Proceedings published by Civil-Comp Press, pp. 1-12, doi:10.4203/ccc.7.21.3, 2024.

[457] - G. Perrin, C. Soize, Reconstruction of random fields concentrated on one-dimensional manifold using irregularly sampled data, USD2024 conference on Uncertainty in Structural Dynamics, Leuven, Belgium, 9-11 September 2024, Proceeding USD 2024, pp. 1-6

[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, 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.

2022

[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 punctuality 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 Railways 2022, pp. 1-5(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, doi: 10.4271/2020-01-1583, 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 liquidevavec 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.

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I.7. Liste des Communications dans des Workshops, Séminaires, Conférences, Journées Thématiques, Divers

2026

[128] - Invited Seminar, C. Soize, Probabilistic approaches to uncertainty quantification: tensor-valued random fields, linear and nonlinear random operators, statistical surrogates with probabilistic learning on manifolds for small-data regimes, VinUniversity, Hanoi, Vietnam, 6 March 2026.

[128] - Invited Seminar, C. Soize, Uncertainty quantification: from tensor-valued random fields and linear and nonlinear random operators to statistical surrogates with probabilistic learning on manifolds for small-data regimes, Van Lang University, Ho Chi Minh City, Vietnam, 9 March 2026.

2024-2025

[127] - C. Soize, Some examples of probabilistic models for uncertainty quantification and statistical metamodels in the computational mechanics of materials and structures, Department of Civil Engineering and Architecture, University of Catania, Catania, Italy, May 27, 2025.

[126] - C. Soize, L. Joubert-Doriol, A.F. Izmaylov, Quantum computer formulation of the FKP-operator eigenvalue problem for probabilistic learning on manifolds, Scientific MECA Day of MSME, Université Gustave Eiffel, June 13, 2025.

[125] - C. Soize, Statistical surrogates for uncertain systems: from atomistic to macroscale, and updating from small and incomplete datasets using probabilistic learning, Mechanical Engineering department, Universidade do Estado do Rio de Janeiro (UERJ), Rio de Janeiro, Brazil, September 24, 2024.

[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.

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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.

[108] - Invited Seminar, C. Soize, Modélisation probabiliste et identification statistique inverse du champ d'élasticité apparent aux échelles mésoscopiques et nanoscopiques de matériaux composites. Séminaire de la branche MAS (Matériaux & Structure), ONERA, 30 septembre 2016.

[107] - C. Soize, Probabilistic learning on manifold for optimization under uncertainties, Journée Scientifique Mécanique du laboratoire Modélisation et Simulation Multi-Echelle (MSME), Université Paris-Est Marne-la-Vallée (UPEM), 18 novembre 2016.

2015-2014

[106] - Invited Seminar, J. Guilleminot, C. Soize (presented by J. Guilleminot), Stochastic multiscale modeling and inverse identification of complex heterogeneous materials. Computational multiphysics systems laboratory, Center for computational material science, Naval Research Laboratory, Washington DC, USA, April 9, 2015.

[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.

[102] - G. Perrin, D. Duhamel, C. Funfschilling, N. Ouhbi, J.N. Roux, C. Soize, C. Voivret, Statistical inverse problems for non-Gaussian non-stationary stochastic processes defined by a set of realizations, Workshop "Propagation of Uncertainty", Institut Henti Poincaré, Paris, December 11, 2015.

[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 élasto-dynamique. 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.

I.8. Editeur Scientifique de Livres, Actes de Congrès et Numéros Spéciaux de Revues

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

[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).

[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).

[4] - I. Elishakoff, C. Soize Editors, it Nondeterministic Mechanics, CISM Courses and Lectures (Udine), International Centre for Mechanical Sciences, vol. 539, Springer Wien, New York, 2012.

[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.

[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.

[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.

[8] - A.H. Gandomi, C. Soize, J.R. Stewart, Guest Editors of the Special Issue on "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.

[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*, doi:10.1115/1.4056396, Volume 23, Issue 1, 010201, 2023.

[10] - V. Papadopoulos, E.M. Chatzi, R. Ghanem, C. Soize, Guest Editors of the Special Issue "Advanced Machine Learning for Uncertainty Quantification" in *Computer Methods in Applied Mechanics and Engineering*, **442**, 118061 (2025), doi:10.1016/j.cma.2025.118061.

I.9. Polycopiés d'Enseignement

[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**.

I.10. Contrats de recherche

De 1981 à 2000, à l'Onera, auteur ou coauteur de 62 rapports de recherche.
De 2001 à 2019 à l'Université Paris-Est Marne-la-Vallée.
Depuis 2020 à l'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 CIFRE 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 2016-2019 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 2021, 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 2021, 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, DGAC, 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.

II- ACTIVITÉS DE RECHERCHE

Les activités de recherche ont été menées :

- à l'UER 47 de Mathématiques de l'Université Pierre et Marie Curie (Paris VI) et au Centre Technique Industriel de la Construction Métallique (CTICM) de 1974 à 1981.
- à l'Office National d'Etudes et de Recherches Aérospatiales (ONERA). de 1981 à 2000.
- à l'Université Paris-Est de Marne-la-Vallée de 2001 à ce jour (devenue Université Gustave Eiffel au 1 Janvier 2020).

Les recherches menées peuvent être regroupées au travers de cinq grands axes :

1. Apprentissage statistique, apprentissage probabiliste , machine learning, applications aux problèmes d'optimisation stochastique non convexe, aux problèmes statistiques inverses, formulation d'ordinateur quantique pour l'apprentissage probabiliste.
2. Quantification des incertitudes, modélisation stochastique des incertitudes en mecanique numérique, analyse de leur propagation et leur quantification par résolution de problèmes stochastiques inverses et par utilisation des méthodes statistiques inverses. Applications à la mécanique des matériaux, des biomatériaux, des structures, des systèmes complexes, en particulier en dynamique, en élastoacoustique et en vibroacoustique.
3. Modélisation stochastique multi-échelle et applications aux microstructures de matériaux hétérogènes. Approche stochastique en micromécanique et mécanique multi-échelle des matériaux hétérogènes.
4. Recalage robuste et conception robuste des modèles numériques de dynamique, de vibration et de vibroacoustique

des systèmes complexes avec modélisation probabiliste des incertitudes.

5. Modélisation et simulation numérique en dynamique linéaire et non linéaire, en vibration basse, moyenne et haute fréquence, des systèmes mécaniques complexes, aspects déterministes et probabilistes.
6. Modélisation et simulation numérique en élastoacoustique, vibroacoustique et acoustique - Aspects déterministes et probabilistes.

III- ENCADREMENT DE DOCTORANTS, RAPPORTS DE THESE ET HDR

Encadrement direct de stagiaires de fin d'études et de stagiaires de DEA et de Master. La liste ci-dessous est limitée uniquement à l'encadrement des doctorants.

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 août 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, soutenue le 14 Octobre 2004. Lauréate du Prix de Thèse CSMA (Computational Structural Mechanics Association) en 2005.

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, soutenue le 18 janvier 2007. Lauréat du Prix de Thèse CSMA (Computational Structural Mechanics Association) en 2008.

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%), soutenue le 15 avril 2010. Lauréat du Prix de Thèse CSMA (Computational Structural Mechanics Association) en 2011.

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", soutenue le 24 septembre 2013. Lauréat du Prix de Thèse 2014 de l'Ecole des Ponts ParisTech et Lauréat du Prix de Thèse 2014 de l'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", soutenue le 8 Octobre 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%), soutenue le 11 mars 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%), soutenue le 13 mai 2015. Lauréate d'un Prix de Thèse 2015 de ABCM-EMBRAER (Associação Brasileira de Engenharia e Ciências Mecânicas (ABCM) e pela Empresa Brasileira de Aeronáutica (Embraer)) et d'un prix de Thèse 2016 de la 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", soutenue le 16 octobre 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", soutenue le 21 octobre 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", soutenue le 23 septembre 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", soutenue le 10 Décembre 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", soutenue le 7 septembre 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", soutenue le 21 Décembre 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", soutenue le 30 Novembre 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", soutenue le 4 Octobre 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", soutenue le 25 Octobre 2019.

2016 - 2019 Thèse de Anthony PICOU. Thèse CIFRE SafranTech, 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", soutenue le 16 décembre 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", soutenue le 11 Septembre 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", soutenue le 5 novembre 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 com-

putational stochastic nonlinear dynamics and statistics", soutenue le 23 novembre 2022, Prix de Thèse Paris-Est Sup 2023.

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", soutenue le 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, using information provided by on-board sensors", soutenue le 26 novembre 2025.

Rapporteur des Thèses de Doctorat et des Habilitations à Diriger les Recherches (HDR)) :

Thèse P. Fayol, Université Paris VI, 18 décembre 1989.
Thèse N. Pican, Université Paris XI, 28 septembre 1989.
Thèse P. Bernard, Université Blaise Pascal, Clermont-Ferrand, 20 octobre 1990.
Thèse A. Sbai, Ecole Nation. Sup. de l'Aéronau. et de l'Espace, 17 décembre 1990.
Thèse H-P. Boissière, Ecole Centrale Paris, 7 septembre 1992.
Thèse E. Friot, Université d'Aix-Marseille II, 5 mai 1993.
Thèse A. Lebot, Ecole Centrale de Lyon, 20 avril 1994.
Thèse D. Trentin, INSA de Lyon, 21 décembre 1995.
Thèse A. Gallet, Université de Provence (Aix-Marseille I), 12 janvier 1996.
HDR de S. Bellizzi, Université de la Méditerranée, Aix-Marseille II, 3 novembre 1997.
Thèse O. Richoux, Université du Maine, 7 décembre 1999.
Thèse O. Dessombz, Ecole Centrale de Lyon, 19 décembre 2000.
HDR de D. Clouteau, INP Grenoble, Ecole Centrale Paris, 19 octobre 2001.
Thèse J.-M. Mencik, Faculté de Génie, Université de Sherbrooke (Cadana) et INSA Lyon, 12 décembre 2002.
Thèse P. Darcis, Université Blaise Pascal - Clermont II, 9 décembre 2002.
HDR de A. Le Bot, Ecole Centrale de Lyon, 16 décembre 2002.
Thèse P. Neple, Université de Bourgogne, 5 décembre 2003.
Thèse F. Sui, Ecole Centrale de Lyon, 27 janvier 2004.
HDR de M. N. Ichchou, Ecole Centrale de Lyon, 6 décembre 2004.
Thèse J. Delbove, Ecole Supérieure de l'Aéronautique et de l'Espace, 7 juin 2005.
HDR de O. Le Maître, Université d'Evry, 23 Mars 2006.
Thèse S. Besset, Ecole Centale de Lyon, 24 Novembre 2006.
HDR de B. Sudret, Université Blaise Pascal, 12 Octobre 2007.
Thèse X. Zhong, Ecole Centale de Lyon, 14 octobre 2010.
Thèse P. du Cauzé de Nazelle, Ecole Centrale de Lyon, 27 mars 2013.
Thèse P. Froment, Ecole Centrale de Lyon, 24 Avril 2014.
Thèse L. Alimonti, Université de Sherbrooke, Canada, 18 Décembre 2014.
HDR de F. Schmidt, Université Paris-Est, 19 Décembre 2017.
Thèse G. Brogna, INSA Lyon, 18 Décembre 2018.
Thèse K. Bulthuis, Université Libre de Bruxelles le 13 janvier 2020 et Université de Liège le 29 janvier 2020.

IV- ACTIVITES INTERNATIONALES

IV.1. Visiteurs scientifiques venant de l'étranger

• Accords France-Brésil CAPES-COFECUB, **1993-1996**, sur la dynamique des structures et des systèmes couplés entre le département de Mécanique de l'Université de la PUC-Rio au Brésil, le laboratoire de Dynamique des Systèmes Couplés du CNAM et le département de Dynamique des Structures et des Systèmes Couplés de l'Onera. Participants : Prof. R. Sampaio, Prof. F. Rochinha (Brésil) et R. Ohayon, C. Soize (France).

• PAI PICASSO Program of Scientific Cooperation between Spain and France , **1996-1998**, sur l'interaction fluide-structure, entre département de Mathématiques Appliquées de l'Université de Saint Jacques de Compostelle en Espagne, le laboratoire de Dynamique des Systèmes Couplés du CNAM et le département de Dynamique des Structures et des Systèmes Couplés de l'Onera. Participants : Prof. Alfredo Bermudez (Espagne), R. Ohayon et C. Soize (France).

• PAI AMADEUS Program of Scientific Cooperation between Austria and France, **2003-2004**, sur une nouvelle méthode de calcul numérique en dynamique stochastique pour l'ingénierie, entre l'Institute of Engineering Mechanics de

l'université d'Innsbruck en Autriche et le laboratoire de mécanique de l'université de Marne-la-Vallée. Participants: C. Soize et E. Capiez-Lernout (équipe française), G.I. Schueller , M. Pellissetti, C. Shenck (équipe autrichienne). Visites scientifiques de G.I. Schueller (27-11-2004 au 29-11-2004), de M. Pellissetti (13-09-2004 au 17-09-2004), C. Shenck (09-08-2003 au 16-08-2003).

• Collaboration scientifique dans le cadre d'une convention entre le Department of Civil Engineering of The Johns Hopkins University, Baltimore, USA et le Laboratoire de Mécanique de l'université de Marne la Vallée, **2003-2004**, sur la Modélisation probabiliste des incertitudes dans les systèmes mécaniques complexes. Participants : R. Ghanem R. (USA), C. Soize, C. Desceliers (France). Visites scientifiquesde R. Ghanem (02-06-2003 au 18-06-2003, 11-06-2004 au 25-06-2004).

• Accord programme algéro-français MDU de recherche et de coopération, **2003-2005**, sur la modélisation non paramétrique des incertitudes de modèle en dynamique des systèmes complexes, entre l'Ecole Nationale Polytechnique d'Algérie à Alger et le laboratoire de Mécanique de l'université de Marne-la-Vallée. Participants: Tiliouine B., Zermout S.A. (Algérie), A. Mébarki, C. Soize (France).

• Collaboration scientifique entre Prof. Pol. D. Spanos (department of Engineering Mechanics, Rice University, Houston, USA) et C. Soize (Laboratoire de Mécanique de l'université de Marne la Vallée), **2004-2006**, sur l'élastoacoustique des systèmes complexes et sur la dynamique stochastique non linéaire des systèmes mécaniques. Visite scientifique de Pol D. Spanos (26-06-2006 au 21-07-2006).

• Accords France-Brésil CAPES-COFECUB, **2004-2006**, avec extension de la collaboration en **2007-2008**, sur la modélisation, la simulation, l'identification et le contrôle en dynamique, entre le département de Mécanique l'Université de la PUC Rio, Rio de Janeiro, Brésil et le laboratoire de Mécanique de l'université de Marne-la-Vallée. Participants: Prof. R. Sampaio, Prof. A. Weber, Prof. F. Rochinha, Post-doc C. Edson (Brésil) et C. Soize, C. Desceliers (France). Visites scientifiques de R. Sampaio (14-01-2005 au 16-02-2005, 06-01-2006 au 06-02-2006, 02-01-2008 au 22-02-2008), de A. Weber (24-01-2005 au 11-02-2005), de F. Rochinha (02-05-2006 au 10-05-2006), de E. Cataldo (post-doc brésilien au Laboratoire de Mécanique du 15-03-2006 au 15-03-2007), de T. Ritto (doctorant Brésilien en co-tutelle dans l'équipe de Mécanique du 01-10-2007 au 30-06-2008).

• Collaboration scientifique entre Prof. M. Arnst (Université de Liège, Belgique) et C. Soize (Laboratoire Modélisation et Simulation Multi-Echelle), **2011-2018**. Visite scientifique de M. Arnst: (16-01-2012 au 18-02-2012) sur "Random field identification and hybrid method: spectral sampling for coupled stochastic problems" et (04-03-2018 au 30-03-2018) sur "Updating nonparametric probabilistic models in structural dynamics by bayesian statistical inversion of symmetric positive definite matrices in high dimension".

• Accords France-Brésil CAPES-COFECUB, **2010-2013**, sur les modélisations stochastiques des incertitudes dans les modèles numériques de la mécanique, entre le département de Mécanique l'Université de la PUC Rio, Rio de Janeiro, Brésil et le laboratoire de Modélisation et simulation Multi-Echelle. Visites scientifiques du Prof. R. Sampaio (12-01-2011 au 11-02-2011 et 14-01-2013 au 13-02-2013), du Prof. F. Rochinha (31-01-2011 au 12-02-2011), du prof. E. Cataldo (31-01-2011 au 13-02-2011).

• Collaboration scientifique entre Prof. I.E. Poloskov (Faculty of Mechanics and Mathematics, Perm State National Research University, Russia) et C. Soize (Laboratoire Modélisation et Simulation Multi-Echelle), **2011-2013** sur les équations intégro-différentielles stochastiques. Visite scientifique de I.E. Poloskov (24-10-2011 au 04-11-2011, 21-10-2013 au 02-11-2013).

• Collaboration scientifique entre Prof. M. Ostoja-Starzewski (University of Illinois at Urbana-Champaign, USA) et, C. Soize / J. Guilleminot (Laboratoire Modélisation et Simulation Multi-Echelle), **2012**, sur la modélisation stochastique par la mécanique des milieux continus des milieux à géométrie fractale. Visite scientifique de M. Ostoja-Starzewski (09-04-2012 au 26-04-2012).

• Collaboration scientifique entre le Prof. M. Mignolet (Department of Mechanical and Aerospace Engineering, Arizona State University, USA) et C. Soize (Laboratoire Modélisation et Simulation Multi-Echelle), **2004-2026**, sur les approches probabilistes paramétriques et non paramétriques des incertitudes en dynamique linéaire et non linéaire des structures, sur les méthodes de réduction des modèles, et sur l'apprentissage probabiliste sur les variétés. Visite scientifique de M. Mignolet en année sabbatique du 13-10-2004 au 30-07-2005. Visites scientifiques du 26-06-2006 au 21-07 2006, du 10-12-2007 au 15-12-2007, du 22-10-2015 au 29-10-2015, du 13-12-2016 au 27-12-2016, du 02-06-2017 au 09-06-2017, du 04-06-2018 au 07-06-2018) et de A. Adu (post-doc du 20-02-05 au 30-06-2005). Visite scientifique de M. Mignolet en année sabbatique du 02-09-2019 au 30-06-2020 et du 14-09-2026 au 02-10-2026.

• Collaboration scientifique entre le Prof. Edson Cataldo (Université Fédérale de Fluminense du Brésil) et C. Soize (Laboratoire Modélisation et Simulation Multi-Echelle), **2004-2026**, sur la "modélisation stochastique et les modèles réduits statistiques de la production de la voix, incluant le Jitter, le chant lyrique, ". Visites scientifiques du Prof. Edson

Cataldo (18-06-2009 au 01-07-2009, 20-06-2011 au 06-07-2011, 16-01-2012 au 18-02-2012, 18-06-2012 au 12-07-2012, 08-09-2012 au 10-09-2012, 01-09-2015 au 30-09-2015, 15-06-2017 au 15-07-2017, 19-06-2026 au 02-07-2026).

• Collaboration scientifique entre le Prof. Amir Gandomi (Stevens University,New Jersey, USA) et C. Soize (Laboratoire Modélisation et Simulation Multi-Echelle), **2017-2018**, sur l'analyse des big data et des algorithmes de machine learning pour les problèmes d'optimization avec les grands modèles numériques. Visite scientifique du Prof. Gandomi (14-05-2018 au 13-06-2018).

• Collaboration scientifique entre le Prof. Charbel Farhat (Stanford University, USA) et C. Soize (Laboratoire Modélisation et Simulation Multi-Echelle), **2015-2024** sur "Uncertainty Quantification in Computational Mechanics". Visites scientifiques du Prof. Farhat (07-09-2017 au 08-09-2017, 25-05-2018 au 28-05-2018, 03-09-2018, 02-12-2018, 22-03-2022, 29-08-2022).

• Visite scientifique du Prof. Ruda Zhang de l'Université de Houston sur "Uncertainty Quantification in Computational Mechanics" (19-06-2023 au 23-06-2023).

• Collaboration scientifique avec le Dr. Americo Barbosa Cunha Junior, Associated Professor à Universidade do Estado do Rio de Janeiro (UERJ) et Chercheur au Laboratório Nacional de Computação Científica (LNCC), sur la "dymaique stochastique des systèmes complexes" (Visite scientifique du 12-02-2025 to 16 -02-2025).

IV.2. Séjours dans des Institutions Académiques à l'Etranger

• Séjour du 20-08-1994 au 17-09-1994 à l'Université de la PUC Rio, Rio de Janeiro, Brésil (Prof. Rubens Sampaio), département de Mécanique, dans le cadre des Accords France-Brésil CAPES-COFECUB sur la dynamique des structures et des systèmes couplés.

• Plusieurs séjours de courte durée entre 1991 et 1995 au Centre de Recherches David Taylor Laboratory (Dr. Gideon Maidanik et Dr. David Feit) et au Naval Research Laboratory de Washington dans le cadre de collaborations sur la modélisation de la complexité structurale pour l'élastoacoustique externe et la vibroacoustique.

• Séjour du 12-08-1995 au 09-09-1995 à l'Université de la PUC Rio, Rio de Janeiro, Brésil (Prof. Rubens Sampaio), département de Mécanique, dans le cadre des Accords France-Brésil CAPES-COFECUB sur la dynamique des structures et des systèmes couplés.

• Séjour du 07-05-1996 au 11-05-1996 à l'Université de Saint Jacques de Compostelle, Espagne (Prof. Alfredo Bermudez), département de Mathématiques Appliquées, dans le cadre du Programme d'Action Intégrée PICASSO (France-Espagne) sur le traitement du signal aléatoire et la dynamique stochastique.

• Séjour du 11-08-1996 au 08-09-1996 à l'Université de la PUC Rio, Rio de Janeiro, Brésil (Prof. Rubens Sampaio), département de Mécanique, dans le cadre des Accords France-Brésil CAPES-COFECUB sur la dynamique des structures et des systèmes couplés.

• Séjour du 25-05-1997 au 01-06-1997 à l'Université de Saint Jacques de Compostelle, Espagne (Prof. Alfredo Bermudez), département de Mathématiques Appliquées, dans le cadre du Programme d'Action Intégrée PICASSO (France-Espagne) sur les formulations par équation intégrale du problème de Neumann extérieur lié à l'équation d'Helmholtz.

• Séjour du 13-04-98 au 17-04-1998 à l'Université de Saint Jacques de Compostelle, Espagne (Prof. Alfredo Bermudez), département de Mathématiques Appliquées, dans le cadre du Programme d'Action Intégrée PICASSO (France-Espagne) sur la vibroacoustique externe et interne en basse et moyenne fréquence.

• Séjour du 15-04-2000 au 20-04-2000 à l'Université Johns Hopkins Baltimore, USA (Professeur Roger Ghanem), department of Civil Engineering, dans le cadre d'une collaboration sur les principales difficultés dans le domaine des moyennes fréquences pour les problèmes de dynamique des structures et de vibroacoustique: modélisation de la complexité structurale, incertitudes aléatoires et modèles matriciels réduits.

• Séjour du 10-02-2001 au 17-02-2001 à l'université de Rice, Houston, USA (Prof. Pol D. Spanos), department of Engineering Mechanics, dans le cadre d'une collaboration en dynamique stochastique non linéaire des systèmes mécaniques.

• Séjour du 02-04-2002 au 06-04-2002 à l'Université d'Innsbruck en Autriche (Prof. Gerhart Schueller), Institute of Engineering Mechanics dans le cadre d'une collaboration sur la modélisation probabiliste des incertitudes en dynamique des systèmes.

• Séjour du 14-07-2002 au 21-07-2002, invité à Sandia Laboratory à Albuquerque, USA, par le Prof. Roger Ghanem de l'Université Johns Hopkins Baltimore, dans le cadre d'une collaboration sur la modélisation probabiliste non paramétrique des incertitudes de modélisation et de données en dynamique des systèmes mécaniques complexes.

• Séjour du 30-08-2003 au 03-09-2003 à l'Université d'Innsbruck en Autriche (Prof. Gerhart Schueller), Institute of Engineering Mechanics dans le cadre d'un Projet d'Action Intégrée AMADEUS (Autriche - France) sur une nouvelle méthode de calcul numérique en dynamique stochastique pour l'ingénierie.

• Séjour du 11-11-2003 au 18-11-2003, à l'Université Johns Hopkins Baltimore, USA (Professeur Roger Ghanem), Department of Civil Engineering dans le cadre d'une collaboration sur la quantification des incertitudes dans les systèmes.

• Séjour du 02-02-2004 au 09-02-2004 à l'université de Rice, Houston, USA (Prof. Pol D. Spanos), department of Engineering Mechanics, dans le cadre d'une collaboration en élastoacoustique des systèmes complexes et en dynamique stochastique non linéaire des systèmes mécaniques.

• Séjour du 17-04-2004 au 23-04-2004 à l'Ecole Nationale Polytechnique d'Algérie à Alger dans le cadre d'un accord programme algéro-français MDU de recherche et de coopération sur la modélisation non paramétrique des incertitudes de modèle en dynamique des systèmes complexes.

• Séjour du 14-05-2004 au 16-05-2004 à l'Université A Mira, Béjaia, Algérie. Mise en place d'un accord programme algéro-français de recherche et de coopération entre le département de Génie Mécanique de l'université A Mira de Béjaia et le Laboratoire de Mécanique de l'UMLV.

• Séjour du 17-09-2004 au 21-09-2004 à l'Université d'Innsbruck en Autriche (Prof. Gerhart Schueller), Institute of Engineering Mechanics dans le cadre d'un Projet d'Action Intégrée AMADEUS (Autriche - France) sur une nouvelle méthode de calcul numérique en dynamique stochastique pour l'ingénierie.

• Séjour du 14-08-2004 au 27-08-2004 à l'Université de la PUC Rio, Rio de Janeiro, Brésil (Prof. Rubens Sampaio), département de Mécanique, dans le cadre des Accords France-Brésil CAPES-COFECUB sur la modélisation, la simulation, l'identification et le contrôle en dynamique.

• Séjour du 09-12-2005 au 11-12-2005 à l'Université d'Innsbruck en Autriche (Prof. Gerhart Schueller), Institute of Engineering Mechanics dans le cadre d'une collaboration sur la modélisation des incertitudes dans les systèmes dynamiques complexes.

• Séjour du 30-07-2006 au 20-08-2006 à l'Université de la PUC Rio, Rio de Janeiro, Brésil (Prof. Rubens Sampaio), département de Mécanique, dans le cadre des Accords France-Brésil CAPES-COFECUB sur la modélisation, la simulation, l'identification et le contrôle en dynamique.

• Séjour du 18-10-2007 au 20-10-2007 à l'Université d'Innsbruck en Autriche (Prof. Gerhart Schueller), Institute of Engineering Mechanics dans le cadre d'une collaboration sur Uncertainties in structural dynamics

• Séjour du 28-07-2008 au 17-08-2008 à l'Université de la PUC Rio, Rio de Janeiro, Brésil (Prof. Rubens Sampaio), département de Mécanique, dans le cadre d'un financement par la CAPES Brésilienne sur dynamique non linéaire des structures flexibles avec modélisation probabiliste des incertitudes.

• Séjour du 25-07-2010 au 15-08-2010 à l'Université de la PUC Rio, Rio de Janeiro, Brésil (Prof. Rubens Sampaio), département de Mécanique, dans le cadre d'un financement d'un projet CAPES-COFECUB sur les modélisations stochastiques des incertitudes dans les modèles numériques de la mécanique.

• Séjour du 02-06-2012 au 09-06-2012 à Perm State University, Perm, Russia (Prof. Igor E. Poloskov), Department of Higher Mathematics, dans le cadre d'une collaboration les équations intégro-différentielles stochastiques et application aux structures viscoélastiques avec incertitudes.

• Séjour du 29-07-2012 au 17-08-2012 à l'Université de la PUC Rio, Rio de Janeiro, Brésil (Prof. Rubens Sampaio), département de Mécanique, dans le cadre d'un financement d'un projet CAPES-COFECUB sur les modélisations stochastiques des incertitudes dans les modèles numériques de la mécanique.

• Séjour du 02-02-2015 au 20-02-2015 à l'Université de Stanford, Stanford, USA (Prof. Charbel Farhat), Department of Aeronautics and Astronautics, sur "Uncertainty Quantification in Computational Mechanics".

• Séjour du 15-07-2015 au 12-08-2015 à University of Southern California, Los Angeles, USA (Prof. Roger Ghanem), Department of Aerospace and Mechanical Engineering, sur "Uncertainty Quantification in Computational Sciences and Engineering".

• Séjour du 01-12-2015 au 06-12-2015 à Arizona State University (ASU), Tempe-Phoenix, Arizona, USA (Prof. Marc Mignolet), Mechanical and Aerospace Engineering Aerospace Engineering, Mechanical Engineering, sur "Uncertainty Quantification in Computational Sciences and Engineering".

• Séjours du 07-04-2015 au 10-04-2015 et du 18-04-2016 au 21-04-2016 au Naval Research Laboratory (NRL), Washington DC, USA (Dr. John Michopoulos), sur "Uncertainty quantification in computational mechanics of composite materials".

• Séjour du 02-07-2016 au 15-07-2016 à l'Université de Stanford, Stanford, USA (Prof. Charbel Farhat), Department of Aeronautics and Astronautics, sur "Uncertainty Quantification in Computational Mechanics".

• Séjour du 17-07-2016 au 07-08-2016 à University of Southern California, Los Angeles, USA (Prof. Roger Ghanem), Department of Aerospace and Mechanical Engineering, sur "Uncertainty Quantification in Computational Sciences and Engineering".

• Séjour du 26-02-2017 au 06-03-2017 à l'Université de Stanford, Stanford, USA (Prof. Charbel Farhat), Department of Aeronautics and Astronautics, sur "Uncertainty Quantification in Computational Mechanics".

• Séjour du 29-07-2017 au 20-08-2017 à University of Southern California, Los Angeles, USA (Prof. Roger Ghanem), Department of Aerospace and Mechanical Engineering, sur "Uncertainty Quantification in Computational Sciences and Engineering".

• Séjour du 17-02-2018 au 24-02-2018 à l'Université de Stanford, Stanford, USA (Prof. Charbel Farhat), Department of Aeronautics and Astronautics, sur "Uncertainty Quantification in Computational Mechanics".

• Séjour du 28-07-2018 au 15-08-2018 à University of Southern California, Los Angeles, USA (Prof. Roger Ghanem), Department of Aerospace and Mechanical Engineering, sur "Uncertainty Quantification and Machine Learning in Computational Sciences and Engineering".

• Séjour du 18-08-2018 au 02-09-2018 à Federal University of Fluminense, Rio de Janeiro, Brazil (Prof. Edson Cataldo), Department of Mathematics, sur "Uncertainty Quantification and Machine Learning".

• Séjours du 22-04-2018 au 26-04-2018 et du 01-12-2018 au 08-12-2018 et du 11-11-2019 au 17-11-2019 à Duke University, Durham, North Carolina, USA (Dr. Johann Guilleminot, Assistant Professor), Civil and Environmental Engineering Department, sur "Probabilistic Learning and Uncertainty Quantification in Computational Mechanics".

• Séjour du 24-02-2019 au 02-03-2019 à l'Université de Stanford, Stanford, USA (Prof. Charbel Farhat), Department of Aeronautics and Astronautics, sur "Uncertainty Quantification in Computational Mechanics".

• Séjour du 31-03-2019 au 05-04-2019 à l'Université de Liége, Belgium (Prof. Maarten Arnst), Department of Aerospace and Mechanical Engineering, sur "Uncertainty Quantification in Computational Mechanics".

• Séjour du 04-06-2019 au 10-06-2019 à Tongji University, Shanghai, China (Prof. Jie Li), sur "Data Science in Civil Engineering".

• Séjour du 04-08-2019 au 18-08-2019 à University of Southern California, Los Angeles, USA (Prof. Roger Ghanem), Department of Aerospace and Mechanical Engineering, sur "Machine Learning in Computational Sciences and Engineering".

• Séjours du 21-08-2022 au 27-08-2022 à Duke University, Durham, North Carolina, USA (Assistant Professor Johann Guilleminot), Civil and Environmental Engineering Department and Mechanical Engineering and Materials Science, sur "Probabilistic Learning and Uncertainty Quantification".

• Séjour du 06-11-2022 au 12-11-2022 à l'Université de Stanford, Stanford, USA (Prof. Charbel Farhat), Department of Aeronautics and Astronautics, sur "Uncertainty Quantification in Computational Mechanics".

• Séjour du 03-05-2024 au 20-05-2024 à University of Southern California, Los Angeles, USA (Prof. Roger Ghanem), Department of Aerospace and Mechanical Engineering, sur "Probabilistic Learning on Manifolds in Computational Sciences and Engineering".

• Séjour du 16-09-2024 au 30-09-2024 à Université Fédérale de Fluminense du Brésil (Prof. Edson Cataldo) sur "Modélisation stochastique de la production de voix lyrique pour la détection des pathologies".

• Séjour du 26-04-2025 au 03-05-2025 à l'Université de Stanford, Stanford, USA (Prof. Charbel Farhat), Department of Aeronautics and Astronautics, sur "Uncertainty Quantification in Computational Mechanics".

IV.3. Organisation de Conférences Internationales, de Mini-Symposium dans les Congrès Internationaux, de Workshops

2002 à 2005 : - Organisateur (chairman) de la conférence internationale EURODYN 2005 : 6th European

Conference on Structural Dynamics, Paris, September 4–7, 2005, 400 lectures in 8 parallel sessions, 400 papers of 6 pages edited in proceedings and in CDrom

2005 à 2006 : - Co-organisateurs : R. Ghanem, C. Soize, G.I. Schueller, Minisymposium "Uncertainty Modeling and Quantification in Computational Mechanics" du 7th World Congress on Computational Mechanics, Los Angeles, California, USA, July 16 - 22, 2006

2006 à 2007 : - Co-organisateurs : 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, California, USA, July 22 - 26, 2007

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

2007 à 2008 : - Co-organisateurs : R. Ghanem, G.I. Schueller, C. Soize, Joint IACM-IUTAM minisymposium "Uncertainty Modeling and Quantification in Computational Mechanics" du 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

2008 à 2009 : - Co-organisateurs : C. Soize, G.I. Schueller, Minisymposium "Uncertainty and reliability in computational structural dynamics" de la conférence internationale COMPDYN 2009 : Computational Methods in Structural Dynamics and Earthquake Engineering, Island of Rhodes, Greece, 22-24 June 2009

2008 à 2009 : - Co-organisateurs : R. Ghanem, C. Soize, G.I. Schueller, W.K. Liu, Minisymposium "Uncertainty Quantification in Computational Science and Engineering" du 10th U.S. National Congress on Computational Mechanics (USNCCM X), Columbus, Ohio, USA, July 16 - 19, 2009

2009 à 2010 : - Co-organisateurs : R. Ghanem, W.K. Liu, G.I. Schueller, C. Soize, Minisymposium "Uncertainty quantification in computational mechanics and engineering sciences" de la 4th European Conference on Computational Mechanics (Solids, Structures and Coupled Problems in Engineering), ECCM 2010, Paris, France, May 17–21, 2010

2009 à 2010 : - Co-organisateurs : R. Ghanem, W.K. Liu, G.I. Schueller, C. Soize, Minisymposium "Uncertainty quantification in computational science and engineering" de la 9th World Congress on Computational Mechanics and 4th Asian Pacific Congress on Computational Mechanics, WCCM/APCOM 2010, Sydney, Australia, 19 — 23 July, 2010

2010 à 2011 : - Co-organisateurs : R. Ghanem, G.I. Schueller, C. Soize, W.K. Liu, Minisymposium "Uncertainty quantification, robustness and computational stochastic mechanics", Sixth M.I.T. Conference on Computational Fluid and Solid Mechanics; Advances in Solids and Structures Massachusetts Institute of Technology, USA, June 15–17, 2011

2010 à 2011 : - Co-organisateurs : R. Ghanem, C. Soize, G.I. Schueller, W.K. Liu, Minisymposium "Uncertainty Quantification in Computational Science and Engineering" du 11th U.S. National Congress on Computational Mechanics (USNCCM XI), Minneapolis, Minnesota, USA, July 25 - 29, 2011

2011 à 2012 : - Co-organisateurs : G.I. Schueller, R. Ghanem, C. Soize, W.K. Liu, Minisymposium "Uncertainty Quantification in Computational Mechanics" du 7th International Conference on Computational Mechanics for Spatial Structures (IASS-IACM 2012), Sarajevo, Bosnia and Herzegovina, April 2 - 4, 2012

2011 à 2012 : - Co-organisateurs : R. Ghanem, R. Sampaio, C. Soize, G.I. Schueller, W.K. Liu, Minisymposium "Uncertainty quantification in computational science and engineering" du 10th World Congress on Computational Mechanics, (WCCM10), São Paulo, Brazil, 8–13 July, 2012

2011 à 2012 : - Co-organisateurs : G.I. Schueller, C. Soize, R. Ghanem, W.K. Liu, Minisymposium "Uncertainty quantification in computational mechanics and engineering sciences" du 6th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2012), Vienna, Austria, September 10-14, 2012

2012 à 2013 : - Co-organisateurs : C. Soize, R. Ghanem, Minisymposium "Uncertainty quantification in computational dynamics" de la conférence internationale 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

2012 à 2013 : - Co-organisateurs : R. Ghanem, C. Soize, W.K. Liu, minisymposium "Probabilistic modeling, analysis and simulation for large scale and complex engineered systems" de la 11th International Conference on Structural Safety and Reliability (ICOSSAR 2013), Columbia University, New York City, June 16-20, 2013

2012 à 2013 : - Co-organisateurs : R. Ghanem, J. Stewart, C. Soize, Minisymposium "Uncertainty Quantification (UQ) Challenge Benchmarks" du 12th U.S. National Congress on

Computational Mechanics (USNCCM XII), Raleigh, NC, USA, July 22-25, 2013

2013 à 2014 : - Co-organisateurs : J. Stewart, R. Ghanem, C. Soize, Minisymposium "Uncertainty Quantification (UQ) challenge benchmarks " du SIAM Conference on Uncertainty Quantification, Savannah, Georgia, USA, March 31, April 3, 2014

2012 à 2014 : - Co-organisateurs : C. Soize, R. Ghanem, Minisymposium "Uncertainty quantification in computational structural dynamics and coupled systems" de la conférence internationale EURODYN 2014, 9th International Conference on Structural Dynamics, Porto, Portugal, 30 June - 2 July 2014

2014 à 2015 : - Co-organisateurs: 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

2015 à 2016 : - Co-organisateurs : J. Guilleminot, M. Arnst, C. Soize, Minisymposium "Stochastic modeling and identification of uncertainties in computational mechanics" du 7th European Congress on Computational Methods in Applied Sciences and Engineering (ECCM 2016), Crete Island, Greece, June 05-10, 2016

2015 à 2016 : - Co-organisateurs : E. Capiez-Lernout, M. Mignolet, C. Soize, Minisymposium "Nonlinear dynamics of rotating structures " du 7th European Congress on Computational Methods in Applied Sciences and Engineering (ECCM 2016), Crete Island, Greece, June 05-10, 2016

2015 à 2016 : - Co-organisateurs : J. Guilleminot, R. Ghanem, C. Soize, Minisymposium "Stochastic modeling, identification and propagation of uncertainties in computational mechanics of materials" du 12th World Congress on Computational Mechanics, (WCCM12), Seoul, Korean, July 24–29, 2016

2015 à 2016 : - Co-organisateurs : 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

2016 à 2017 : - Co-organisateurs : 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

2016 à 2017 : - Co-organisateurs : 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

2019 à 2020 : - Co-organisateurs : M. Arnst, R. Ghanem, C. Soize, Minisymposium "UQ and probabilistic learning in computational dynamics", XI International Conference on Structural Dynamics, EURODYN 2020, Streamed from Athens, Greece, 23-26 November, 2020

2019 à 2021 : - Co-organisateurs : 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

2020 à 2021 : - Co-organisateurs : 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

2020 à 2021 : - Co-organisateurs : J. Stewart, K. Garikipati, R. Ghanem, M. Bessa, C. Desceliers, A. Figueroa, M. Mignolet, F. Pled, C. Soize, Minisymposium "Data-driven science with uncertainty quantification, machine learning, and optimization",16th U.S National Congress on Computational Mechanics (USNCCM16) Chicago, USA, Virtual Conference, July 25-29, 2021

2021 à 2022 : - Co-organisateurs : R. Ghanem, C. Soize, Minisymposium "Probabilistic learning: fundamentals and computational challenges", 13th International Conference on Structural Safety & Reliability, ICOSSAR 2022, Shanghai, China, 20-24 June 2022

2021 à 2022 : - Co-organisateurs : E. Capiez-Lernout, C. Soize, C. Desceliers, M. Mignolet, Minisymposium "Nonlinear computational structural dynamics in rotating turbomachinery", 15th World Congress on Computational Mechanics,(WCCM15) Yokohama, Japan, July 31st - August 5, 2022

2021 à 2022 : - Co-organisateurs : 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

2021 à 2022 : - Co-organisateurs : A. Gandomi, R. Ghanem, C. Soize, Minisymposium "Probabilistic learning, stochastic optimization, and digital twins", ASCE-EMI 2022, Baltimore, USA, 31 May - 3 June , 2022

2022 à 2023 : - Co-organisateurs : 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

2022 à 2023 : - Co-organisateurs : 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, The Netherlands, 23-27 July, 2023

2022 à 2023 : - Co-organisateurs : A. Gandomi, R. Ghanem, C. Soize, Minisymposium "Probabilistic learning, stochastic optimization, and digital twins", ASCE-EMI 2023, Atlanta, USA, June 6-9, 2023

2023 à 2024 : - Co-organisateurs : 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

2023 à 2024 : - Co-organisateurs : 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

2023 à 2024 : - Co-organisateurs : A. Gandomi, R. Ghanem, C. Soize, Minisymposium "Probabilistic learning, stochastic optimization, and digital twins", ASCE-EMI 2024, Chicago, Illinois, May 28-31, 2024

2023 à 2024 : - Co-organisateurs : R. Ghanem, C. Heitzinger, C. Soize, Minisymposium "Machine Learning and Artificial Intelligence for constrained systems", ASCE-EMI 2024, Vienna, Austria, September 11-13, 2024

2024 à 2025 : - Co-organisateurs : C. Desceliers, Jianbing Chen, F. Pled, C. Soize, Minisymposium "Uncertainty quantification, probabilistic and generative models for nonlinear computational mechanics in materials, structures, and coupled systems", ICOSSAR'25,Los Angeles, USA, June 1-6, 2025

2024 à 2025 : - Co-organisateurs : A. Gandomi, R. Ghanem, C. Soize, Minisymposium "Probabilistic learning, stochastic optimization, and digital twins", ASCE-EMI 2025, University of California, Irvine, California, May 27-30, 2025

2025 à 2026 : - Co-organisateurs : F. Pled, G. La Valle, C. Desceliers, C. Soize, Minisymposium "Uncertainty quantification materials science and computational mechanics", WCCM-ECOMAS 2026, Munich, Germany, July 19-24, 2026

2025 à 2026 : - Co-organisateurs : G. La Valle, I. Giorgio, A. Misra, C.Soize, D. Steigmann, M. Shirani, Minisymposium "Generalize continua and particle-based modeling: Theoretical Foundations, uncertainties, and computational approaches", 20th USNCTAM 2026, Pasadena, California, June 21-26, 2026.

2025 à 2026 : - Co-organisateurs : A. Gandomi, R. Ghanem, C. Soize, Minisymposium "Probabilistic learning, stochastic optimization, and digital twins", ASCE-EMI 2026, Engineering Mechanics Institute Conference, Boulder, Colorado, June 2-5, 2026

2025 à 2026 : - Co-organisateurs : G. La Valle, C. Soize, I. Giorgio, D.J. Steigmann, "Discrete-to-continuum modeling: theory, scale effects, uncertainty, and computation", 4th International Conference on Nonlinear Solid Mechanics (ICoNSoM 2026), Alghero, Sardinia, Italy, June 11-18, 2026.

IV.4. Membre de Comités Scientifiques de Congrès internationaux et nationaux

1992 à 1993 : - Member of the Scientific Committee of the 6th International Conference on Structural Safety and Reliability ICOSSAR'93, Innsbruck, Austria, August 9-13, 1993

1994 à 1995 : - Member of the Scientific Committee of the 7th International Conference on Applications of Statistics and Probability CERRA – ICASP7, Paris, France, July 10-13, 1995

1993 à 1995 : - Member of the Scientific Committee of the 2nd International Conference on Noise Control EURONOISE'95, Lyon, France, 21-23 March, 1995

1995 à 1997 : - Member of the Scientific Committee of the 7th International Conference on Structural Safety and Reliability ICOSSAR'97, Kyoto, Japan, November 24-28, 1997

1997 à 1998 : - Member of the Scientific Committee of the 3rd International Conference on Computational Stochastic Mechanics, Santorini (Thera), Grèce, June 14-17, 1998

1999 : - Membre du Comité de Programme du Premier colloque européen sur la Technologie des Lanceurs, Vibrations des Lanceurs, Toulouse, 14-16 décembre 1999

1999 : - Membre du Comité Scientifique de la Journée Nationale de Dynamique Stochastique des Structures organisé par le CNRS et l'ONERA, Chatillon, 28 Juin 1999

1999 à 2000 : - Member of the Scientific Committee of NOVEM, Noise and Vibration Pre-Design and Characterisation Using Energy Methods, Lyon, August 31 – September 2, 2000

1999 à 2000 : - Member of the Scientific Committee of the 25th edition of the ISMA Noise and Vibration Engineering Conference, Leuven, Belgium, September 13-15, 2000

2000 à 2001 : - Member of the Scientific Committee of the 8th International Conference on Structural Safety and Reliability ICOSSAR'01, Newport Beach, California, USA, June 17-22, 2001

2001 à 2002 : - Member of the Scientific Committee of the 5th European Conference on Structural Dynamics, EURODYN 2002, Munich, September 2–5, 2002

2001 à 2002 : - Member of the Scientific Committee of the international biennal conference ISMA 2002, Noise and Vibration Engineering Conference, Leuven, Belgium, September 12-14, 2002

2001 à 2002 : - Member of the Scientific Committee of the 5th International Conference on Computational Stochastic Mechanics, Kerkyra, Greece, June 9-12, 2002

2001 à 2003 : - Member of the Scientific Committee of the 5th International Conference on Stochastic Structural Dynamics, SSD'03, Hangzhou, China, May 26-28, 2003

2002 à 2003 : - Membre du Comité Scientifique du 6ème Colloque National en Calcul des Structures, Giens (Var), 20-23 Mai 2003

2003 : - Vice-président du Comité Scientifique du Colloque International "Risque, Vulnérabilité et Fiabilité dans la Construction, Alger, 11-12 Octobre 2003

2003 : - Membre du Comité Scientifique du 2ème Colloque d'Analyse Vibratoire Expérimentale Blois, 13-14 Novembre 2003

2003 à 2004 : - Member of the Scientific Committee of the international biennal conference ISMA 2004, Noise and Vibration Engineering Conference, Leuven, Belgium, September 20-22, 2004

2004 à 2005 : - Membre du Comité Scientifique du 7ème Colloque National en Calcul des Structures, Giens (Var), 17-20 Mai 2005

2003 à 2005 : - Member of the Scientific Committee of the 9th International Conference on Structural Safety and Reliability ICOSSAR'05, Rome, Italie, June 19-22, 2005

2002 à 2005 : - Chairman of the 6th European Conference on Structural Dynamics, EURODYN 2005, Paris, September 4-7, 2005

2004 à 2006 : - Member of the Scientific Committee of the 5th Computational Stochastic Mechanics Conference Rodos, Greece, June 21-23, 2006

2005 à 2006 : - Member of the Scientific Committee of the international biennal conference ISMA 2006, Noise and Vibration Engineering Conference, Leuven, Belgium, September 8-20, 2006

2006 à 2007 : - Member of the Scientific Committee of the International Conference on Uncertainty in Structural Dynamics, the University of Sheffield, UK, June 11-13, 2007

2006 à 2007 : - Member of the International Advisory Board of COMPDYN 2007, Computational Methods in Structural Dynamics and Earthquake Engineering,Rethymnon, Crete, Greece, June 13-15, 2007

2006 à 2008 : - Member of the Scientific Committee of the 7th European Conference on Structural Dynamics, EURODYN 2008 Soutampton, England, July 7-11, 2008

2007 à 2008 : - Member of the Scientific Committee of the international biennal conference ISMA 2008, Noise and Vibration Engineering Conference, Leuven, Belgium, September 15-17, 2008

2007 à 2008 : - Member of the Scientific Committee of the international conference LSAME08-NDM08, Leuven Symposium on Applied Mechanics in Engineering - Non-deterministic numerical modelling, Leuven, March 31 – April 2, 2008

2008 à 2009 : - Membre du Comité Scientifique du 9ème Colloque National en Calcul des Structures, Giens (Var), 25-29 Mai 2009

2008 à 2009 : - Member of the Scientific Committee of the 2nd International Conference on Uncertainty in Structural Dynamics, the University of Sheffield, UK, June 15-17, 2009

2008 à 2009 : - Member of the International Advisory Board of COMPDYN 2009, Computational Methods in Structural Dynamics and Earthquake Engineering, Island of Rhodes, Greece, June 22-24, 2009

2008 à 2009 : - Member of the Scientific Committee of the IUTAM Symposium on The Vibration Analysis of Structures with Uncertainties Saint Petersburg, July 6-10, 2009

2006 à 2009 : - Member of the Scientific Committee of the 10th International Conference on Structural Safety and Reliability ICOSSAR'09, Osaka, Japan, September 13-17, 2009

2009 à 2010 : - Member of the International Scientific Committee of the 4th International Workshop on Reliable Engineering Computing - REC2010, Robust Design - Coping with Hazards, Risk and Uncertainty, National University of Singapore, March 3-5, 2010

2009 à 2010 : - Member of the Scientific Committee of the First International Symposium IMPACT 2010 on "Dynamic of Systems, materials and structures", Djerba, Tunisie, March 22-24, 2010

2009 à 2010 : - Member of the Scientific Committee of the international biennal conference ISMA 2010, Noise and Vibration Engineering Conference, Leuven, Belgium, September 20-22, 2010

2009 à 2010 : - Member of the International Scientific Committee of the International Symposium on Reliability Engineering and Risk Management (ISRERM2010), Tongji University, Shanghai, P.R.China, September 23-26,2010

2009 à 2010 : - Member of the Scientific Committee of the international conference USD 2010, International Conference on Uncertainty in Structural Dynamics, Leuven, September 20-22, 2010

2009 à 2011 : - Member of the Scientific Committee of the international conference EURODYN 2011, 8th International Conference on Structural Dynamics, Leuven, Belgium, July 4-6, 2011

2010 à 2011 : - Member of the International Scientific Committee of COMPDYN 2011, Computational Methods in Structural Dynamics and Earthquake Engineering, Corfu, Greece, May 26-28, 2011

2010 à 2011 : - Membre du Comité Scientifique du 10ème Colloque National en Calcul des Structures, Giens (Var), 9-13 Mai 2011

2011 à 2012 : - Member of the Academic Advisory Committee of the First International Conference on Composites Materials and Structures Dynamic Behaviour, DYNCOMP 2012, Arcachon, France, May 22-24, 2012.

2011 à 2012 : - Member of the Organizing Committee of the SIAM Conference on Uncertainty Quantification Raleigh Marriott Center City, Raleigh, North Carolina, USA, April 2-4, 2012.

2011 à 2012 : - Member of the Scientific Committee of the international biennal conference ISMA 2012 - USD 2012, Noise and Vibration Engineering Conference (ISMA), International Conference on Uncertainty in Structural Dynamics (USD) Leuven, Belgium, September 17-19, 2012

2012 à 2013 : - Member of the International Scientific Committee of CMSM'2013, The 5th edition of the International Congress "Design and Modelling of Mechanical Systems", March 18-20, 2013 in Djerba - Tunisia.

2012 à 2013 : - Membre du Comité Scientifique National du 11ème Colloque National en Calcul des Structures (CSMA 2013), Giens (Var), 13-17 Mai 2013

2012 à 2013 : - Member of the International Scientific Committee of 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

2012 à 2013 : - Member of the International Advisory Committee of ICOSSAR 2013, 11th International Conference on Structural Safety and Reliability (ICOSSAR 2013), Columbia University, New York City, June 16-20, 2013.

2014 à 2014 : - Member of the International Scientific Committee of the 6th International Workshop on Reliable Engineering Computing - REC 2014, Reliability and Computations of Infrastructures, Illinois Institute of Technology, Chicago, May 25-28, 2014

2014 à 2014 : - Member of the International Scientific Committee of the IUTAM Symposium on the Dynamical Analysis of Multibody Systems with Design Uncertainties, Stuttgart, Germany, June 9-13, 2014.

2012 à 2014 : - Member of the International Scientific Committee of EURODYN 2014, 9th International Conference on Structural Dynamics, Porto, Portugal, June 30 – July 2, 2014

2013 à 2014 : - Member of the Scientific Committee of the international biennal conference ISMA 2014 - USD 2014, Noise and Vibration Engineering Conference (ISMA), International Conference on Uncertainty in Structural Dynamics (USD) Leuven, Belgium, September 15-17, 2014

2014 à 2015 : - Member of the Scientific Committee of the international conference COMPDYN 2015, Computational Methods in Structural Dynamics and Earthquake Engineering, Island of Crete, Greece, May 23-25, 2015

2014 à 2015 : - Member of the International Scientific Committee of the ECCOMAS Thematic Conference on Uncertainty Quantification in Computational Sciences and Engineering, UNCECOMP 2015, Island of Crete, Greece, May 25-27, 2015.

2014 à 2015 : - Member of the International Scientific Committee of the Second International Conference on Composites Materials and Structures Dynamic Behaviour, DYNCOMP 2015, Arles in Provence, France, June 2-4, 2015.

2014 à 2015 : - Member of the International Scientific Committee of CMSM 2015, The Sixth International Congress Design and Modelling of Mechanical Systems, Hammamet, Tunisie, March 23-25, 2015.

2014 à 2015 : - Membre du Comité Scientifique National du 12ème Colloque National en Calcul des Structures (CSMA 2015), Giens (Var), 18-22 Mai 2015

2014 à 2015 : - Member of the International Scientific Committee of the ECCOMAS Thematic Conference on Multi-scale Computational Methods for Solids and Fluids, MSF 2015, Sarajevo, Bosnia and Herzegovina, July 20-23, 2015.

2015 à 2016 : - Member of the International Scientific Committee of the 7th International Workshop on Reliable Engineering Computing, REC 2016, Bochum, Germany June 15-17, 2016.

2015 à 2016 : - Member of the Scientific Committee of the international biennal conference ISMA 2016 - USD 2016, Noise and Vibration Engineering Conference (ISMA), International Conference on Uncertainty in Structural Dynamics (USD) Leuven, Belgium, September 19-21, 2016

2015 à 2016 : - Member of the Scientific Committee of the International Conference on Acoustics and Vibration (ICAV), Hammamet, Tunisia, March 21-23, 2016.

2015 à 2016 : - Member of the Scientific Committee of the International Conference on Multi-Uncertainty and Multi-scale Methods and Related Applications, Euromech Colloquium 584, Porto, Portugal, September 13-17, 2016.

2016 à 2017 : - Member of the Scientific Committee of the international conference COMPDYN 2017, Computational

Methods in Structural Dynamics and Earthquake Engineering, Island of Rhodes, Greece on 15-17 June 2017.

2016 à 2017 : - Member of the Scientific Committee of the international conference UNCECOMP 2017, Uncertainty Quantification in Computational Sciences and Engineering, Island of Rhodes, Greece on 15-17 June 2017.

2016 à 2017 : - Member of the Advisory Committee of the 12th International Conference on Structural Safety Reliability, ICOSSAR 2017,Vienna, Austria, 6-10 August 2017.

2016 à 2017 : - Member of the International Scientific Committee of EURODYN 2017, 10th International Conference on Structural Dynamics, Roma, Italy, September 10 – 13, 2017

2016 à 2017 : - Membre du Comité Scientifique National du 13ème Colloque National en Calcul des Structures (CSMA 2017), Giens (Var), 15-19 Mai 2017

2016 à 2017 : - Member of the International Scientific Committee of CMSM'2017, The 7th edition of the International Congress "Design and Modelling of Mechanical Systems", March 27-29, 2017 in Hammamet, Tunisia.

2016 à 2017 : - Member of the Scientific Committee of the International Conference on Computational Modelling of Multi-Uncertainty and Multi-Scale Problems, COMUS 2017, Eccomas Thematic Conference, Porto, Portugal, September 12-14, 2017.

2017 à 2018 : - Member of the Scientific Committee of the International Conference on Acoustics and Vibration (ICAV), Hammamet, Tunisia, March 19-21, 2018.

2017 à 2018 : - Member of the Scientific Committee of the international biennal conference ISMA 2018 - USD 2018, Noise and Vibration Engineering Conference (ISMA), International Conference on Uncertainty in Structural Dynamics (USD) Leuven, Belgium, September 17-19, 2018

2017 à 2018 : - Member of the International Scientific Committee of the 8th International Workshop on Reliable Engineering Computing - REC 2018, Computing with Confidence and Uncertainty, Liverpool, UK, July 16-18, 2018

2018 à 2019 : - Membre du Comité Scientifique National du 14ème Colloque National en Calcul des Structures (CSMA 2019), Giens (Var), 13-17 Mai 2019

2018 à 2019 : - Member of the Scientific Committee of the international conference COMPDYN 2019, Computational Methods in Structural Dynamics and Earthquake Engineering, Crete, Greece, 22-24 June 2019.

2018 à 2019 : - Member of the Scientific Committee of the 3rd international conference UNCECOMP 2019, Uncertainty Quantification in Computational Sciences and Engineering, Crete, Greece, 22-24 June 2019.

2018 à 2019 : - Member of the Scientific Committee of the 8th edition of the International Congress on Design and Modelling of Mechanical Systems CMSM 2019, Hammamet, Tunisia, March 18-20, 2020.

2019 à 2020 : - Member of the International Scientific Committee of the 2020 Engineering Mechanics Institute conference (EMI 2020) and the13th ASCE Specialty Conference on Probabilistic Mechanics and Reliability (PMC 2020), Columbia University, New York, May 26-29, 2020.

2019 à 2020 : - Member of the Scientific Committee of EURODYN 2020, 11th International Conference on Structural Dynamics, Athens, Greece, 23-25 November, 2020

2019 à 2020 : - Member of the International Scientific Committee of the 9th International Workshop on Reliable Engineering Computing - REC 2020, Taormina, Italy, 17-20 May, 2020

2019 à 2020 : - Member of the Scientific Committee of the international biennal conference ISMA 2020 - USD 2020, Noise and Vibration Engineering Conference (ISMA), International Conference on Uncertainty in Structural Dynamics (USD) Leuven, Belgium, September 7-9, 2020

2020 à 2021 : - Member of the Scientific Committee of the international conference COMPDYN 2021, Computational Methods in Structural Dynamics and Earthquake Engineering, Virtual conference, 28-30 June 2021.

2020 à 2021 : - Member of the Scientific Committee of the 4th international conference UNCECOMP 2021, Uncertainty Quantification in Computational Sciences and Engineering, Virtual conference, 28-30 June 2021.

2021 à 2022 : - Member of the Scientific Committee of the international biennal conference ISMA 2020 - USD 2020, Noise and Vibration Engineering Conference (ISMA), International Conference on Uncertainty in Structural Dynamics (USD) Leuven, Belgium, September 12-14, 2022

2019 à 2022 : - Member of the International Advisory Committee of the 13th International Conference on Structural Safety & Reliability, ICOSSAR 2021-2022, Virtual Conference, Shanghai, China, 13-17 September 2022.

2021 à 2022 : - Member of the Scientific Committee of the Fourth International Conference on Acoustics and Vibration (ICAV), Sousse, Tunisia, December 19-21, 2022.

2022 à 2023 : - Member of the Scientific Committee of the international conference COMPDYN 2023, Computational Methods in Structural Dynamics and Earthquake Engineering, Athens, Greec, 12-14 June 2023.

2022 à 2023 : - Member of the Scientific Committee of the 5th international conference UNCECOMP 2023, Uncertainty Quantification in Computational Sciences and Engineering, Athens, Greece, 12-14 June 2023.

2023 : - Member of the Scientific Committee of the ECCOMAS Thematic Conference CM4P, Computational methods in multi-scale, multi-uncertainty and multi-physics problems, Porto, Portugual, 11-13 September 2023.

2023 à 2024 : - Member of the International Scientific Committee of ASCE-ICVRAM-ISUMA, ASCE and Tongji University, Shanghai, China, April 25 - 28, 2024.

2023 à 2024 : - Honorary member of the 16th National Conference on Structural Calculation (CSMA 2024), 13 - 17 May 2024, Giens (Var), France.

2023 à 2024 : - Member of the Scientific Committee of the international biennal conference ISMA 2024 - USD 2024, Noise and Vibration Engineering Conference (ISMA), International Conference on Uncertainty in Structural Dynamics (USD) Leuven, Belgium, September 9-11, 2024

2024 à 2025 : - Member of the Scientific Committee of the 6th international conference UNCECOMP 2025, Uncertainty Quantification in Computational Sciences and Engineering, Rhodes Island, Greece, 15-18 June 2025.

2024 à 2025 : - Member of the Scientific Committee of the 10th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering COMPDYN 2025, Rhodes Island, Greece, 15-18 June 2025.

2024 à 2025 : - Member of the Advisory Board of the 14th International Conference on Structural Safety and Reliability (ICOSSAR'25), University of Southern California, Los Angeles, United States, June 1-6, 2025.

2024 à 2025 : - Member of the Scientific Committee of the 5th ECCOMAS Thematic Conference on Computational Methods for Multi-scale, Multi-uncertainty, and Multi-physics Problems (CM3P 2025) , Porto, Portugal, 2-4 July 2025.

2024 à 2025 : - Member of the Scientific Committee of the 9th International Conference on Vibration Engineering (ICVE 2025) Nanjing, China, October 24-26, 2025.

2025 à 2026 : - Member of the Conference Scientific Committee of EURODYN 2026, 13th International Conference on Structural Dynamics, Hannover, Germany, 27 September - 1 October, 2026

2025 à 2026 : - Member of the International Scientific Committee of CSM9 2026, 9th Computational Stochastic Mechanics Conference, Corfu, Greece, June 21-25, 2026

2025 à 2026 : - Member of the Scientific Committee of the international biennal conference ISMA 2026 - USD 2026, Noise and Vibration Engineering Conference (ISMA), International Conference on Uncertainty in Structural Dynamics (USD) Leuven, Belgium, September 7-9, 2026

2026 à 2027 : - Member of the Scientific Committee of the 11th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering COMPDYN 2027, Crete, Greece, 13-16 June 2027.

2026 à 2027 : - Member of the Scientific Committee of the 7th international conference UNCECOMP 2027, Uncertainty Quantification in Computational Sciences and Engineering, Crete, Greece, 13-16 June 2027.

2026 à 2027 : - Member of the Scientific Committee of the ECCOMAS Conference on Artificial Intelligence and Computational Methods in Applied Science (AICOMAS 2027), Athens, Greece, 9-12 November 2027.

V- ACTIVITÉS D'ENSEIGNEMENTS

V.1. Activités d'Enseignement en tant que Chargé de Conférences

1977 à 1981 : Chargé du cours *Processus stochastiques, analyse spectrale et applications au Centre des Hautes* Études de la Construction (CHEM) Paris.

1980 à 1981 : Chargé du cours de DEA, *Mécanique aléatoire et vibrations des structures* à l'Ecole Nationale des Ponts et Chaussées (ENPC) Paris.

1978 à 1979 et 1983 : Chargé du cours de DEA, *Mécanique aléatoire* à l' université Pierre et Marie Curie, Paris VI.

V.2. Activités d'Enseignement en tant que Professeur Vacataire

- École Nationale Supérieure des Techniques Avancées (ENSTA) Paris

1980 à 1983 : Département de Mathématiques Appliquées. Cours de 3ème année, *Théorie déterministe et aléatoire du signal*.

1983 à 1992 : Département de Mathématiques Appliquées. Cours du Tronc Commun de 2ème année, *Signaux aléatoires*.

1993 à 1998 : Département de Mathématiques Appliquées. Cours du tronc commun de 1ère année, *Signaux aléatoires*.

- École Centrale Paris (ECP)

1977 à 1980 : Département de Génie Civil. Cours de 3ème année, *Mécanique aléatoire*.

1982 à 1985 : Département Énergétique. Cours de 3ème année, option Océan, *Mécanique aléatoire*

1986 à 1992 : Département Énergétique. Cours de 3ème année, options Océan et MMS, *Processus stochastiques et méthodes de résolution des problèmes aléatoires*

1993 à 1995 : DEA de "Mécanique des structures et ouvrages dans leur environnement"
Cours de *Dynamique aléatoire*.
1993 à 1999 : Département Énergétique. Cours de 3ème année, option Océan, *Mécanique aléatoire et structures*.
1993 à 2000 : Département Mécanique et Matériaux. Cours de 3ème année, option Modélisation
Mécanique des Structures (MMS), *Théorie du signal aléatoire et dynamique stochastique*.
1995 à 1999 : DEA "Dynamique des structures et couplages".
Etablissement cohabilités : ECP, CNAM, ENPC, ENSTA et Ecole Polytechnique.
Cours du tronc commun : *Dynamique stochastique*
Cours de la filière "Couplages" : *Elastoacoustique externe en BF, MF et HF*
2000 à 2007 : DEA DSSC "Dynamique des structures et systèmes couplés".
Etablissement cohabilités : ECP, CNAM, ENPC, ENSTA, Université Paris XII et Ecole Polytechnique.
Cours de : *Dynamique stochastique des structures*
Cours de : *Vibration et vibro-acoustique externe en basses et moyennes fréquences*

- **Université de Marne la Vallée et Université Paris-Est Marne-la-Vallée**

1999 - 2000 : Université de Marne la Vallée, cours de maîtrise de Génie
des Systèmes Industriels : *Dynamique des structures*.

V.3. Activités d'Enseignement en tant que Professeur des Universités

- **Université de Marne la Vallée et Université Paris-Est Marne-la-Vallée**

2001 et 2002 : Cours de maîtrise de Génie des Systèmes Industriels : *Dynamique des structures*.
2001 et 2002 : UFR Ingénieurs 2000, cours de 3-ème année de la Filière Maintenance et Fiabilité
des Processus Industriels : *Dynamique des structures et analyse modale*.
2001 et 2002 : UFR Ingénieurs 2000, cours de 2-ème année de la Filière Génie Mécanique : *Dynamique des structures*.
2001 et 2002 : UFR Ingénieurs 2000, cours de 1-ème année de la Filière Génie Mécanique : *Analyse de Fourier*.
2001 et 2002 : DEA DSSC "Dynamique des structures et systèmes couplés". Cours de *Dynamique stochastique des structures* et cours de *Vibration et vibro-acoustique externe en basses et moyennes fréquences*
2003 DEA MSMS "Mécanique des solides, des matériaux et des structures". Cours de *Modélisation probabiliste des incertitudes en mécanique*.
DEA DSSC "Dynamique des structures et systèmes couplés". Cours de *Dynamique stochastique des structures* et cours de *Vibration et vibro-acoustique externe en basses et moyennes fréquences*.
2004 à 2006 Master "Matière, Structures, Fluides, Rayonnement", Spécialité "Dynamique des Structures et des Systèmes Couplés". Cours de *Dynamique stochastique des structures*.
Master "Matière, Structures, Fluides, Rayonnement", Spécialité "Dynamique des Structures et des Systèmes Couplés". Cours de *Vibration et vibro-acoustique externe en basses et moyennes fréquences*.
2003 à 2006 Cours de l'Ecole Doctorale MODES, *Modélisations probabilistes et incertitudes de modélisation en mécanique*.
2008 et 2009 Cours de l'Ecole Doctorale MODES, *Méthodes Numériques Avancées*, Cours : *Méthodes probabilistes pour la mécanique numérique*.
2008 et 2009 Cours de l'Ecole Doctorale MODES, *Probabilité et Mécanique*, Cours C1 : *Construction des modèles probabilistes, choix des représentations et applications aux modélisations des incertitudes et aux milieux aléatoires en mécanique*.
2009 à 2015 Cours de l'Ecole Doctorale SIE du PRES Université Paris-Est, *Méthodes Numériques Avancées*, Cours : *Méthodes probabilistes pour la mécanique numérique*.
2009 à 2015 Cours de l'Ecole Doctorale SIE du PRES Université Paris-Est, *Probabilité et Mécanique*, Cours C1 : *Construction des modèles probabilistes, choix des représentations et applications aux modélisations des incertitudes et aux milieux aléatoires en mécanique*.
2012 à 2016 Master "Mécanique et de Génie Civil", Cours de M1 : *Dynamique des structures*.
2004 à 2017 Master "Mécanique et de Génie Civil", Spécialité "Mécanique des solides, des matériaux et des structures". Cours de M2 *Modélisation probabiliste des incertitudes en mécanique*.

V.4. Cours internationaux donnés à l'étranger

[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**.

VI- FONCTIONS, STATUTS, ADMINISTRATION, ET RESPONSABILITÉS COLLECTIVES

01/05/1981 - 30/04/1982 :	Chercheur à l'ONERA.
01/05/1982 - 30/06/1987 :	Chercheur, Chef de Groupe de Recherches à l'ONERA.
01/07/1987 - 15/10/1989 :	Chercheur, Chef de Division à l'ONERA.
16/10/1989 - 30/06/1991 :	Chercheur, Chef de Division à l'ONERA et Adjoint du Directeur Scientifique de la Direction des Structures de l'ONERA.
01/07/1991 - 30/11/1996 :	Directeur Scientifique Adjoint de la Direction des Structures de l'ONERA.
01/12/1996 - 01/10/1997 :	Directeur de Recherches à l'ONERA et Directeur Scientifique Adjoint de la Direction des Structures de l'ONERA.
01/10/1997 - 27/02/2001 :	Directeur de Recherches à l'ONERA et Directeur du Département de Recherche "Dynamique des Structures et des Systèmes Couplés" de l'ONERA.
01/03/2001 - 31/08/2016 :	Professeur des Universités, Université Paris-Est Marne-la-Vallée.
01/09/2016 - 31/12/2019 :	Professeur Emérite, Université Paris-Est Marne-la-Vallée (devient Gustave Eiffel).

01/01/2020 - **Présent** :	Professeur Emérite, Université Gustave Eiffel.
01/02/2002 - 01/09/2004 :	Directeur du Laboratoire de Mécanique de l'université de Marne-la-Vallée.
01/02/2002 - 31/12/2005 :	Responsable du département de formations et de recherches "Mécanique et Génie Civil" de l'Institut Francilien des Géosciences de l'université de Marne-la-Vallée.
01/07/2002 - 16/01/2012 :	Membre du Bureau et du Bureau restreint du Président de l'université Paris-Est Marne-la-Vallée.
01/09/2002 - 01/09/2004 :	Responsable de la Licence de Mécanique de l'université de Marne-la-Vallée. Responsable du DEA "Mécanique des Solides, des Matériaux et des Structures" de l'université de Marne-la-Vallée.
01/09/2004 - 01/09/2005 :	Responsable de la Licence de Mécanique du LMD de l'université de Marne-la-Vallée.
01/09/2004 - 01/09/2008 :	Responsable du Master de Mécanique et de Génie Civil du LMD de l'université de Marne-la-Vallée (1 M1 et 6 M2 de spécialités).
01/07/2007 - 31/03/2009 :	Vice-Président Recherche du PRES Université Paris-Est et membre du Conseil d'Administration.
01/07/2002 - 16/01/2012 :	Vice-Président Recherche de l'Université Paris-Est Marne-la-Vallée.
01/01/2008 - 31/12/2009 :	Directeur du laboratoire Modélisation et Simulation Multi-échelle (MSME FRE 3160 CNRS)
01/01/2010 - 03/02/2013 :	Directeur du laboratoire Modélisation et Simulation Multi-échelle (MSME UMR 8208 CNRS)

VII- DIVERS

Prix, Distinctions

. 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.

Membre de Commissions d'Experts et Présidence

1978 à 1980 :	-	Délégué Français à la Convention Européenne de la Construction Métallique (CECM)
	-	Membre de la Commission "Charges Climatiques" du Conseil Général des Ponts et Chaussées.
1994 :	-	Président du groupe d'experts "Mécanismes Spatiaux" du CNES.
1992 à 1999 :	-	Membre Expert de la Commission *Systèmes Orbitaux du CNES.*
1999-2001 :	-	Expert auprès de l'Anvar.
2000-2003 :	-	Président de la Commission Structure de l'Association Aéronautique et Astronautique de France(AAAF).
2002-2005 :	-	Président de European Association for Structural Dynamics (EASD)
2006-2008 :	-	Member of the Executive Board of the European Association for Structural Dynamics (EASD)
2008-2011 :	-	Chairman of the Executive Board of the European Association for Structural Dynamics (EASD)
2011-2014 :	-	Member of the Executive Board of the European Association for Structural Dynamics (EASD)
2013- present:	-	Officer of the "Uncertainty Quantification", Speciality Committee of United States Association of Computational Mechanics (USACM)
2015- present:	-	Member of the Senior Advisory Board of the European Association for Structural Dynamics (EASD)
2025 à 2029 :	-	Member of the Advisory Committee of the International Association for Structural Safety and Reliability (IASSAR)

Membre de Comités Scientifiques, de Conseils Scientifiques et de Conseils d'Administration

1984 à 1987 : - Membre du Comité Scientifique de l'Association Française de Recherches et d'Essais sur les Matériaux et les Constructions (AFREM).
1992 à 1995 : - Membre du Comité Scientifique du Bassin des Carènes (BC) de la DCN.
1992 à 1995 : - Membre du Comité Scientifique du Laboratoire de Mécanique et d'Acoustique (LMA) du CNRS.
1996 à 1999 : - Membre renouvelé du Comité Scientifique du Laboratoire de Mécanique et d'Acoustique (LMA) du CNRS.
2002 à 2006 : - Membre du Conseil Scientifique du Centre Scientifique et Technique du Bâtiment (CSTB)
2002 à 2007 : - Membre invité permanent du Conseil Scientifique de l'Université de Marne la Vallée (UMLV)
2002 à 2007 : - Membre invité permanent du Conseil d'Administration de l'Université de Marne la Vallée (UMLV)
2002 à 2007 : - Membre du bureau du président de l'université de Marne-la-Vallée.
2008 à 2011 : - Membre invité permanent du Conseil Scientifique de l'Université Paris-Est Marne la Vallée (UPEMLV)
2008 à 2011 : - Membre invité permanent du Conseil d'Administration de l'Université Paris-Est Marne la Vallée (UPEMLV)
2008 à 2011 : - Membre du Conseil d'Administration du PRES Université Paris-Est (UPE)
2008 à 2011 : - Membre du bureau du président de l'université Paris-Est Marne-la-Vallée.
2009 à 2011 : - Membre du Conseil Scientifique du PRES Université Paris-Est.
2012 à 2015 : - Membre élu du Conseil d'Administration de l'Université Paris-Est Marne-la-Vallée.
2012 à 2015 : - Membre élu du Conseil d'Administration du PRES Université Paris-Est.
2013 à 2016 : - Membre du Conseil Scientifique du Laboratoire de Tribologie et Dynamique des Systèmes (LTDS)
2012 à 2016 : - Membre du Conseil Scientifique du GIS LiRGeC (Institut Ligérien de Recherche en Génie Civil et Construction.
2012 à 2018 : - Membre du Conseil Scientifique de l'institut Technologique FCBA

Membre de Commission de Spécialistes des universités

2002 à 2008 : - Membre élu de la Commission de Spécialiste sections 60, 61, 63 de l'Université Paris 12.
2004 à 2005 : - Membre élu du Conseil des Etudes et de la Vie Universitaire de l'université de Marne-la-Vallée.
2001 à 2007 : - Membre élu de la Commission de Spécialiste section 60 de l'Université de Marne-la-Vallée.
2008 à 2012 : - Membre des Comités de Sélection de la section 60 de l'Université Paris-Est Marne-la-Vallée.
2008 à 2016 : - Membre de la Commission Permanente de la section 60 de l'Université Paris-Est Marne-la-Vallée.

Membre d' "Editorial Board"

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

Membre de comité d'attribution de Prix Scientifique

. 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).

Activité de review dans les journaux internationaux

317 reviews performed between 1990 and 2026:

Academic Press, books (2) Springer, book and chapters of book (5)
Aerospace Science and Technology (4)
AIAA Journal (16)
AIMS Mathematics (1)
ASCE Journal of Aerospace Engineering (1)
CACAIE Journal (10)
Computational Fluid Dynamics (1)
Computational Material Sciences (1)
Computational Mechanics (6)
Computational Methods in Applied Mechanics and Engineering (35)
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 (5)
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)
Mathematics and Mechanics of Complex Systems (1)
Mechanical Systems and Signal Processing (3)
Physica-D (2)
Probabilistic Engineering Mechanics (31)
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)