CURRICULUM VITÆ

Christophe DESCELIERS

(March 2024)

Table of content

1 Personnal Data **1**

2 Highest academic degree **1**

3 Professional experience **1**

4 Teaching **1**

5 Research interests **2**

6 Publications **2**

7 Visiting position **15**

8 Advising **15**
8.1 Supervised Doctoral students 15
8.2 Supervised Master students 16
8.3 Supervised Bachelor students 17

9 Professional activities **17**
9.1 Reviewer and jury of Thesis 17
9.2 Reviewers of International Journals 19
9.3 University service academic activities 19
9.4 Other University service activities 20

10 Contrats (funded) **20**

1 Personnal Data

First name	Christophe
Last name	Desceliers
Date of birth	July 1, 1974
Place of birth	Montreuil-sous-bois, 93, France
Nationality	French
Organization Address	Université Paris-Est Marne-la-Vallée, 77454 Marne-la-Vallée, Cedex 2, France
Tel	(331) 60 95 77 79
Fax	(331) 60 95 77 99
E-mail	christophe.desceliers@univ-eiffel.fr

2 Highest academic degree

Habilitation à Diriger les Recherches ès Mécanique obtained in 2012 at University Paris-Est, France

3 Professional experience

2001	Engineer, MEDISYS, consulting for PSA Peugeot-Citroen.
2001 – 2002	Researcher, EDF R&D.
2002 – 2004	Assistant Professor, Université Paris-Est Marne-la-Vallée.
2004 – 2013	Associate Professor, Université Paris-Est Marne-la-Vallée.
2013 - Present	Professor, Université Paris-Est Marne-la-Vallée.

4 Teaching

- Machine Learning ad Statistics
- Probability and Mechanics
- Mechanics of Solids
- Finite Element Method
- Vibration and Wave propagation in Complex structures

5 Research interests

- Stochastic modeling of uncertainties in computational mechanics, their propagation and their quantification solving stochastic inverse problems.
- Stochastic multi-scale modeling and application to microstructures of heterogeneous materials.
- Computational mechanics, linear and nonlinear structural dynamics
- Computational stochastic dynamics for linear and nonlinear dynamical systems

6 Publications

Thesis and Habilitation

[1] C. Desceliers, Dynamique non-linéaire en déplacements finis des structures tridimensionnelles viscoélastiques en rotation , sous la direction de C. Soize, bourse ONERA, soutenue à l'Ecole Centrale Paris le 26 janvier 2001

[2] C. Desceliers, Quantification des incertitudes en calcul mécanique des solides, Univ. Paris-Est MLV, Paris, 10 Décembre 2012

Papers in refereed journals

[3] C. Desceliers, C. Soize, S. Cambier, Non-parametric – parametric model for random uncertainties in nonlinear structural dynamics – Application to earthquake engineering, Earthquake Engineering and Structural Dynamics, 33(3) (2004) 315-327.

[4] C. Desceliers, C. Soize, Nonlinear viscoelastodynamic equations of three-dimensional rotating structures in finite displacement and finite element discretization, International Journal of Nonlinear Mechanics, 39(3) (2004) 343-368.

[5] C. Desceliers, R. Ghanem, C. Soize, Polynomial chaos representation of a Stochastic preconditioner, International Journal of Numerical Engineering in Mechanics, 64(5), (2005) 618-634.

[6] C. Desceliers, R. Ghanem, C. Soize, Maximum likelihood estimation of stochastic chaos representations from experimental data, International Journal for Numerical Methods in Engineering, 66(6) (2006) 978-1001.

[7] C. Desceliers, C. Soize, R. Ghanem, Identification of chaos representations of elastic properties of random media using experimental vibration tests, Computational Mechanics, 39(6) (2007) 831-838.

[8] C. Desceliers, C. Soize, Q. Grimal, G. Haiat, S. Naili, A time-domain method to solve transient elastic wave propagation in a multilayer medium with a hybrid spectral-finite element space approximation, Wave Motion, 45(4) (2008) 383-399.

[9] E. Cataldo, C. Soize, R. Sampaio, C. Desceliers, Probabilistic modeling of a nonlinear dynamical system used for producing voice, Computational Mechanics, 43(2) (2009) 265-275.

[10] C. Desceliers, C. Soize, Q. Grimal, M. Talmant, S. Naili, Determination of the random anisotropic elasticity layer using transient wave propagation in a fluid-solid multilayer: Model and experiments, Journal of the Acoustical Society of America, 125(4) (2009) 2027-2034.

[11] G. Haiat, S. Naili, Q. Grimal, M. Talmant, C. Desceliers, C. Soize, Influence of a gradient of material properties on ultrasonic wave propagation in cortical bone: Application to axial transmission, Journal of the Acoustical Society of America, 125(5) (2009) 4043-4052

[12] S. Naili, M.B .Vu , Q. Grimal, M. Talmant, C. Desceliers, C. Soize, G. Haiat, Influence of viscoelastic and viscous absorption on ultrasonic wave propagation in cortical bone: Application to axial transmission, Journal of the Acoustical Society of America, 127(4) (2010) 2622-2634.

[13] C. Desceliers, G. Bonnet, S. Hamza, P. Delmotte, Mixed nonparametric-parametric probabilistic model for earthquake reliability of an inelastic reinforced concrete frame structure, Bulletin of Earthquake Engineering, 8(4) (2010) 921-935

[14] C. Soize, C. Desceliers, Computational aspects for constructing realizations of polynomial chaos in high dimension, SIAM Journal on Scientific Computing, 32(5) (2010) 2820-2831.

[15] L. Mathelin, C. Desceliers, M. Hussaini, Stochastic data assimilation of the random shallow water model loads with uncertain experimental measurements, Computational Mechanics, 47(6) (2011) 603-616.

[16] G. Haiat, S. Naili, M.B. Vu , C. Desceliers, C. Soize, Equivalent contributing depth investigated by a lateral wave with axial transmission in viscoelastic cortical bone, Journal of the Acoustical Society of America, 129(4) (2011) 114-120.

[17] C. Desceliers, C. Soize, S. Naili, G. Haiat, Probabilistic model of the human cortical bone with mechanical alterations in ultrasonic range, Mechanical Systems and Signal Processing, 32 (2012) 170-177.

[18] F. Laudarin, C. Desceliers, G. Bonnet, Pierre Argoul, A non-parametric probabilistic model for soil-structure interaction. Computational Mechanics, 52(1) (2013) 53-64

[19] C. Desceliers, C. Soize, H. Yanez-Godoy, Robustness analysis of an uncertain computational model to predict well integrity for geologic CO2 sequestration, Computational Geosciences, 17(2) (2013) 307-323

[20] C. Desceliers, C. Soize, M. Zarroug, Computational strategy for the crash design analysis using an uncertain computational mechanical model. Computational Mechanics, 52(2) (2013) 453-46

[21] V. Sansalone, S. Naili, C. Desceliers, A stochastic homogenization approach to estimate bone elastic properties. Comptes Rendus - Mecanique, 342(5) (2014) 326-333

[22] M. T. Nguyen, C. Desceliers, C. Soize, J.M. Allain, H. Gharbi, Multiscale Identification of the random elasticity field at mesoscale of a heterogeneous microsctructure using multiscale experimental observations. International Journal for Multiscale Computational Engineering, 13(4) (2015) 281-295

[23] S. Naili, V.H. Nguyen, M.B. Vu, C. Desceliers, C. Soize, Modeling of transient wave propagation in a heterogeneous solid layer coupled with fluid: Application to long bones. Journal of the Acoustical Society of America, 137(2) (2015) 668-678

[24] P. Ropars, C. Desceliers, A modal strategy devoted to the hidden state variables method with large interfaces. Computational Mechanics, 55(5) (2015) 805-818

[25] V. Sansalone, D. Gagliardi, C. Desceliers, G. Haiat, S. Naili, On the uncertainty propagation in multiscale modeling of cortical bone elasticity. Computer Methods in Biomechanics and Biomedical Engineering, 18 (special issue) (2015) 2054-2055

[26] A. Abdoulatuf, V.H Nuguyen, C. Desceliers, S. Naili, A probabilistic study of the ultrasonic reflection coefficient from cortical bones, Computer Methods in Biomechanics and Biomedical Engineering, 18 (special issue) (2015) 1864-1865

[27] V. Sansalone, D. Gagliardi, C. Desceliers, V. Bousson, J.D. Laredo, F. Peyrin, G. Haiat, S. Naili, Stochastic multiscale modelling of cortical bone elasticity based on high-resolution imaging. Biomechanics and modeling in mechanobiology, 15(11) (2016) 111-131

[28] R. Capillon, C. Desceliers, C. Soize, Uncertainty quantification in computational linear structural dynamics for viscoelastic composite structures. Computer Methods in Applied Mechanics and Engineering, 305 (2016) 154-172

[29] V.H. Nguyen, A. Abdoulatuf, C. Desceliers, S. Naili, A probabilistic study of reflection and transmission coefficients of random anisotropic elastic plates, Wave Motion, 64 (2016) 103-118

[30] M.T Nguyen, J.M Allain, H. Gharbi, Experimental multiscale measurements for the mechanical identification of a cortical bone by digital image correlation, Journal of the Mechanical Behavior of Biomedical Materials, 63 (2016) 125-133

[31] F.F. Real, F. Fontanela, T. Ritto, A. Batou, C. Desceliers, A probabilistic model of uncertainties in the substructures and interfaces of a dynamical system: application to the torsional vibration of a drill-string, Archive in Applied Mechanics, 87(4), (2017) 685-698

[32] D. Gagliardi, S. Naili, C. Desceliers, V. Sansalone, Tissue mineral density measured at the submillimetre scale can provide reliable statistics of elastic properties of bone matrix, Biomechanics and Modeling in Mechanobiology, 16(6), (2017) 1885-1910

[33] A. Abdoulatuf, V-H Nguyen, C. Desceliers, S. Naili, A numerical study of ultrasonic response of random cortical bone plates, Vietnam Journal of Mechanics, 39(1), (2017) 79-95

[34] F. F. Real, A. Batou, T.G. Ritto, C. Desceliers, R. R. Aguiar, Hysteretic bit/rock interaction model to analyze the torsional dynamics of a drill string, Mechanical Systems and Signal Processing, 111, (2018) 222-233

[35] D. Gagliardi, V. Sansalone, C. Desceliers, S. Naili, Estimation of the effective bone-elasticity tensor based on μCT imaging by a stochastic model. A multi-method validation, European Journal of Mechanics - A/Solids, 69, (2018) 147-167

[36] F. Real, A. Batou, T. Ritto, C. Desceliers. Stochastic modeling for hysteretic bit-rock interaction of a drill string under torsional vibrations, Journal of Vibration and Control, SAGE Publications, 25 (19), (2019) 1663-1672

[37] H-B. Ly, C. Desceliers, L-L Minh, T-T. Le, B-T Pham, L. Nguyen-Ngoc, V-T Doan, M. Le. Quantification of Uncertainties on the Critical Buckling Load of Columns under Axial Compression with Uncertain Random Materials, Materials (Basel), 12(11), (2019) 1828, doi:10.3390/ma12111828

[38] T. Zhang, F. Pled, C. Desceliers, Robust Multiscale Identification of Apparent Elastic Properties at Mesoscale for Random Heterogeneous Materials with Multiscale Field Measurements, Materials, 13(12) (2020) 2826.

[39] C. Soize, R. Ghanem, C. Desceliers, Sampling of Bayesian posteriors with a non-Gaussian probabilistic learning on manifolds from a small dataset, Statistics and Computing, 30(5) (2020) 1433-1457.

[40] F. Pled, C. Desceliers, T. Zhang, A robust solution of a statistical inverse problem in multiscale computational mechanics using an artificial neural network, Computer Methods in Applied Mechanics and Engineering, 373 (2021) 113540.

[41] F. Pled, C. Desceliers, Review and Recent Developments on the Perfectly Matched Layer (PML) Method for the Numerical Modeling and Simulation of Elastic Wave Propagation in Unbounded Domains, Archives of Computational Methods in Engineering, (2022).

[42] J. Reyes, C. Desceliers, C. Soize, L. Gagliardini, Multi-frequency model reduction for uncertainty quantification in computational vibroacoutics, Computational Mechanics, 69 (2022) 661-682.

[43] A. Sinha, C. Soize, C. Desceliers, G. Coelho-Cunha, Aeroacoustic Liner Impedance Metamodel from Simulation and Experimental Data Using Probabilistic Learning, AIAA Journal, 61(11) (2023) 4926-4934.

[44] O. Ezvan, C. Soize, C. Desceliers, R. Ghanem, Updating an uncertain and expensive computational model in structural dynamics based on one single target FRF using a probabilistic learning tool, Computational Mechanics, 71 (2023) 1161-1177.

Communications in International Conferences

[45] C. Desceliers, C. Soize, Nonlinear Structural Dynamics Equation in Finite Displacements for Three-Dimensional Viscoelastic Rotating Structures for Small Geometrical Perturbations, 15th Brazilian Congress of Mechanical Engineering, 22-26 November 1999, Aguas de Lindoia, Sao Paulo, Brazil (1999).

[46] C. Desceliers, C. Soize, S. Cambier, Uncertain nonlinear dynamical systems subjected to seismic loads, 9th International Conference on Applications of Statistics and Probability in Civil Engineering, ICASP9, July 6-9, 2003, Berkeley, San Francisco, California, USA (2003).

[47] C. Desceliers, C. Soize, Cambier S., Nonlinear dynamical systems with data and model uncertainties subjected to seismic loads, 17th International Conference on Structural Mechanics in Reactor Techynology, SMiRT 17, August 17-22, 2003, Prague, Czech Republic (2003)

[48] C. Desceliers, R. Ghanem, C. Soize Construction of a Stochastic conditioner for accelerating the Monte Carlo Simulations , 9th ASCE, August 2004, Albuqerque, New Mexico (2004).

[49] C. Desceliers, C. Soize, Identification of a random elastic medium by vibration test, 18th International Congress of Mechanical Engineering, November 2005, Ouro Preto, Belo Horizonte, Brazil (2005).

[50] C. Desceliers, Grimal Q., G. Haiat, S. Naili, C. Soize, Numerical simulation of the axial transmission technique for bone evaluation: A probabilistic approach. Journal of Biomechanics, 39 (Supplement 1): p. S463. (Word Congress of Biomechanics (WCB), Munich) (2006).

[51] C. Desceliers, C. Soize, R. Ghanem, Inverse problem for the identification of Chaos representations of random fields using experimental vibrational tests, International Conference on Noise and Vibration Engineering, September 18-20, 2006, Katholieke Universiteit Leuven, (2006).

[52] C. Desceliers, Grimal Q., G. Haiat, S. Naili, C. Soize, 1D-Space finite element approximation with 2D-space Fourier transform and with time-domain formulation for 3D-transient elastic waves in multilayer semi-infinite media, ICSV13, July 2-6, 2006, The thirteenth International Congress on Sound and Vibration, Vienna, Austria, (2006).

[53] C. Desceliers, C. Soize, Grimal Q., G. Haiat, S. Naili, Transient elastic waves in fluid-structure multilayer systems with a probabilistic model of structural uncertainties, Conference on Uncertainties in Structural Dynamics (USD2007), 11th - 13th June 2007, University of Sheffield, UK (2007).

[54] G. Haiat, Grimal Q., S. Naili, C. Desceliers, C. Soize, How does a gradient of material properties due to endosteal resorption affect wave propagation in the axial transmission technique, 2nD European symposium on ultrasonic characterization of bone (ESUCB 2007), July 19-20, 2007, Halle, Germany (2007).

[55] Grimal, Q., Talmant, M., Haiat, G., Naili, S., Desceliers, C., Soize, C., Modeling with uncertain parameters : Application to the ultrasonic assessment of bone quality. International Society of Biomechanics (ISB) XXI congress, Taipei, Taiwan (2007).

[56] G. Haiat, Grimal Q., S. Naili, C. Desceliers, C. Soize, Effect of a material properties spatial gradient on wave propagation: application to the axial transmission technique, 2007 ICU Vienna, April 9 - 12, 2007. The international congress on ultrasonics is a merger of the conference series WCU World Congress on Ultrasonics and UI Ultrasonics International, Vienna, Austria (2007).

[57] Q. Grimal, M. Talmant, G. Haiat, S. Naili, C. Desceliers, C. Soize, Stochastic modeling of the interaction of acoustic waves with a solid plate of random thickness: Application to cortical bone assessment with the axial transmission technique, 2007 ICU Vienna, April 9 - 12, 2007. The international congress on ultrasonics is a merger of the conference seriesWCUWorld Congress on Ultrasonics and UI Ultrasonics International, Vienna, Austria (2007).

[58] Q. Grima, K. Raum, C. Desceliers, C. Soize, G. Haiat, S. Naili, M. Talmant, P. Laugier, Stochastic simulation of the axial transmission technique based on a multi-scale model of bone material properties, 2nd European Symposium on Ultrasonic Characterization of Bone (ESUCB). Halle, Germany (2007).

[59] E. Cataldo, C. Soize, C. Desceliers, R. Sampaio, Uncertainties in mechanical models of larynx and vocal tract for voice production, Proceedings of the XII International Symposium on Dynamics Problems of Mechanics (DINAME 2007) - XII International Symposium on Dynamics Problems of Mechanics (DINAME 2007), Ilhabela, SP, Brésil (2007).

[60] G. Haiat, Q. Grimal, M. Talmant, C. Desceliers, C. Soize, S. Naili, Finite element model of the ultrasonic propagation in cortical bone: application to the axial transmission device, Anglo French Physical Acoustics Conference 2009, Arcachon, France, 8 - 10 Decembre, 2008.

[61] G. Haiat, S. Naili, Q. Grimal, M. Talmant, C. Desceliers, C. Soize, Finite element modeling of transient elastic wave propagation in an inhomogeneous anisotropic fluid/solid multilayer medium: a time-domain method, Acoustics'08, 29 Juin - 4 Juillet 2008, Second ASA (Acoustical Society of America) - EAA (European Acoustics Association) joint international conference, Paris, France, in J. Acoust. Soc. Am., 123(5), 3570 (2008).

[62] G. Haiat, Q. Grimal, M. Talmant, C. Desceliers, C. Soize, S. Naili, Time-domain model of the ultrasonic wave propagation in an inhomogeneous anisotropic fluid/solid multilayer medium: application to cortical bone, 2008 IEEE International Ultrasonics Symposium (IUS), Beijing, China, 2-5 November 2008.

[63] C. Desceliers, C. Soize, Q. Grimal, M. Talmant, S. Naili, Experimental identification in the ultrasonic range of a mechanical model for cortical bones, in the proceedings (CD-ROM) of ISMA 2008, the International Conference on Noise and Vibration Engineering, Katholieke Universiteit Leuven, Belgium, 15-17 Septembre 2008.

[64] C. Desceliers, C. Soize, Q. Grimal, M. Talmant, S. Naili, Stochastic inverse problem for the experimental identification in the ultrasonic range of a mechanical model for cortical bones, ICIPE 2008, 6th International Conference on Inverse Problems in Engineering: Theory and Practice, Dourdan, France, 15-19 Juin 2008.

[65] Q. Grimal, M. Talmant, R. Longo, S. Naili, C. Desceliers, C. Soize, P. Laugier, Axial transmission measurements and compact bone heterogeneity. 3rd European Symposium on Ultrasonic Characterization of Bone, ESUCB 2009, Bydgoszcz, Poland., 17-18 Septembre 2009.

[66] G. Haiat, S. Naili, M.-B. Vu, Q. Grimal, M. Talmant, C. Desceliers, C. Soize, Time-domain model of the ultrasonic wave propagation in an inhomogeneous anisotropic viscoelastic fluid/solid multilayer medium: application to cortical bone, 2009 IEEE International Ultrasonics Symposium, Rome, 20-23 September 2009.

[67] G. Haiat, S. Naili, M.-B. Vu, Q. Grimal, M. Talmant, C. Desceliers, C. Soize, Influence of viscoelasticity on the ultrasonic wave propagation in cortical bone: application to the axial transmission technique, 158th Meeting, San Antonio, Texas, 26-30 Octobre 2009.

[68] G. Haiat, S. Naili, Q. Grimal, Talmant, M. C. Desceliers, C. Soize, Modeling wave propagation in an inhomogeneous anisotropic fluid/solid multilayer medium: application to cortical bone ultrasonic characterization with axial transmission. International Congress on Ultrasonics. Santiago, Chili, 11-17 Janvier 2009.

[69] C. Desceliers, C. Soize, Q. Grimal, M. Talmant, S. Naili, Stochastic inverse problem for the identification of the probabilistic model of cortical bone using measurements in ultrasonic range, NOVEM, Noise and Vibration: Emerging Methods, Oxford, United Kingdom, 5-8 Avril 2009.

[70] C. Desceliers, C. Soize, Q. Grimal, M. Talmant, S. Naili, Identification of a probabilistic model of the geometrical and mechanical properties for a nonhomegeneous cortical bone using in vivo measurements in ultrasonic range, ICSV16. The sixteenth International Congress on Sound and Vibration, Krakow, Poland, 5-9 Juillet 2009.

[71] C. Desceliers, C. Soize, S. Naili, Q. Grimal, M. Talmant, Probabilistic model of the human cortical bone with mechanical alterations in ultrasonic range, Third International Conference on Uncertainty in Structural Dynamics, USD2010, Katholieke Universiteit Leuven, Belgium, 20-22 Septembre 2010.

[72] C. Desceliers, C. Soize, S. Naili, Q. Grimal, M. Talmant, Identification of the elasticity tensor random field probabilistic model of a cortical bone using in vivo measurements in ultrasonic range, Sixth M.I.T Conference on Computational Fluid and Solid Mechanics Focus: Advances in Solids & Structures, 6thMIT, The Massachusetts Institute of Technology, Cambridge, Massachusetts, USA, 15-17 Juin 2011

[73] C. Desceliers, C. Soize, S. Naili, G. Haiat. Experimental identification of a priori tensor-valued random field for the elasticity properties of cortical bones using in vivo ultrasonic measurements. French Acoustic Association. Joint conference of the 2012 Annual IOA Meeting and the 11th French Congress of Acoustics, Nantes, France, Apr 2012.

[74] M.-T. Nguyen, C. Desceliers, C. Soize. Identification of an elasticity-tensor random field at mesoscopic scale using experimental measurements at mesoscopic and macroscopic scales for complex hierarchical microstructures. Vienna University of Technology, Vienna. Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2012), Vienna, Austria, Sep 2012.

[75] M.-T. Nguyen, C. Desceliers, C. Soize. Méthodologie d'identification du modèle probabiliste mésoscopique du champ de tenseur d'élasticité pour des microstructures complexes avec des mesures aux échelles mésoscopiques et macroscopiques. CSMA 2013, 11e Colloque National en Calcul des Structures, Presqu'île de Giens, Giens (Var), France, May 2013

[76] M.-T. Nguyen, C. Desceliers, C. Soize. Identification of a mesoscale model with multiscale experimental observations. IUTAM Symposium on Multiscale Modeling and Uncertainty Quantification of Materials and Structures, Santorini Island, Greece, Sep 2013.

[77] C. Coguenanff, C. Desceliers, C. Guigou-Carter, P. Jean. Acoustic performance optimization under parameter and model uncertainties of a wood based floor. 42nd International Congress and Exposition on Noise Control Engineering, INTER-NOISE 2013: Noise Control for Quality of Life 3, pp. 1890-1898, 2013

[78] S. Naili, V.-H. Nguyen, M.-B. Vu, C. Desceliers, C. Soize. Ultrasound wave propagation in a stochastic cortical bone plate. The Fifth International Conference on Knowledge and Systems Engineering (KSE 2013), Hanoi, Vietnam. pp.1-8, Oct 2013.

[79] C. Soize, C. Desceliers, J. Guilleminot, T.-T. Le, M.-T. Nguyen, et al.. Stochastic representations and statistical inverse identification for uncertainty quantification in computational mechanics. (Plenary Lecture) UNCECOMP 2015, 1st ECCOMAS Thematic International Conference on Uncertainty Quantification in Computational Sciences and Engineering, The Island of Crete, Greece. pp.1-26, 2015, Proceedings of UNCECOMP 2015, M. Papadrakakis, V. Papadopoulos, G. Stefanou Eds, May 2015.

[80] R. Capillon, C. Desceliers, C. Soize. Uncertainty quantification for viscoelastic composite structures in computational linear structural dynamics. KU Leuven, Belgium. The 6th International Conference on Uncertainty in Structural Dynamics, USD 2016, Sep 2016, Leuven, Belgium. pp.1-5, 2016

[81] R. Capillon, C. Desceliers, C. Soize. Model uncertainties in computational viscoelastic linear structural dynamics. 10th International Conference on Structural Dynamics (EURODYN 2017), Sep 2017, Rome, Italy. Elsevier, 199, pp.1210-1215, Procedia Engineering, 2017.

[82] T. Zhang, F. Pled, C. Desceliers. Multiscale identification of apparent elastic properties at mesoscale for materials with complex microstructure using experimental imaging measurements. 6th European Conference on Computational Mechanics (ECCM VI), Jun 2018, Glasgow, United Kingdom, 2018

[83] Y. Guo, C. Desceliers, C. Coguenanff, C. Guigou-Carter. Acoustic performance prediction for building elements including biobased fibrous materials. Euronoise 2018, May 2018, Hersonissos, Crete, 2018

[84] 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, online event via MS Teams, United States, November 2020.

[85] 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, KU Leuven, Leuven, Belgium, September 2022.

[86] F. Pled, C. Desceliers. A data-driven identification method based on neural networks for solving statistical inverse problems in computational mechanics. 13th International Conference on Structural Safety & Reliability (ICOSSAR 2021-2022), Tongji University, Shanghai (virtual), China, September 2022.

[87] 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, Delft, Netherlands, July 2023.

[88] F. Pled, C. Desceliers. A data-driven statistical inverse identification method for phase field modeling of fracture in random heterogeneous elastic media. Engineering Mechanics Institute Conference 2023 (EMI 2023), Georgia Institute of Technology, Atlanta, United States, June 2023.

Communications in National Conferences

[89] Cambier S., C. Desceliers, C. Soize, Prise en compte probabiliste des incertitudes dans l'estimation du comportement sismique d'un circuit primaire, 6ème colloque AFPS 2003, 1-3 Juillet, 2003, Ecole Polytechnique (2003).

[90] C. Desceliers, R. Ghanem, C. Soize, Problème stochastique inverse et représentation sur les chaos pour l'identification expérimentale des champs stochastiques modélisant le comportement des milieux élastiques tridimensionnelles, 17ème Congrès Français de Mécanique, Août 2005, Troyes (2005)

[91] S. Naïli, M.-B. Vu, Q. Grimal, M. Talmant, C. Desceliers, C. Soize, G. Haiat, Influence de l'absorption viscoélastique et visqueuse sur la propagation ultrasonore dans l'os cortical : application à la transmission axiale, 10ème Congrès Français d'Acoustique Lyon, 12-16 Avril 2010.

[92] C. Desceliers, C. Soize, Naïli S., Identification du modèle probabiliste de l'os cortical en utilisant des mesures expérimentales ultrasoniques in vivo, 20ème Congrès Français d'Acoustique Besançon, 29 Août-2 septembre 2011.

[93] V. Sansalone, S. Naili, C. Soize, C. Desceliers. Stochastic multiscale modeling of elastic properties of bone ultrastructure. 38ème Congrès de la Société Biomécanique (SB 2013), Marseille Luminy, France. 16(S1), pp.334-336, Sep 2013.

[94] C. Coguenanff, C. Guigou-Carter, P. Jean, C. Desceliers. Probabilistic model of the impact force spectrum for the standard ISO tapping machine. 22nd International Congress on Sound and Vibration, ICSV, 2015.

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

[95] Invited Seminar, C. Desceliers, Elastodynamique des structures tournantes en grandes déformations, séminaire de Mécanique CNAM - ONERA, CNAM Paris, 19 mai 2000.

[96] Invited Seminar, C. Desceliers, Approche probabiliste non paramétrique et paramétrique des incertitudes des systèmes non linéaires, Séminaire de Mécanique A.M.A., EDF R&D, Clamart, 18 mars 2003.

[97] Invited Seminar, C. Desceliers, Identification expérimentale des champs aléatoires modélisant le comportement viscoélastique tridimensionnel, Journée CSMA, Mécanique Numérique Probabiliste, Ecole Centrale de Paris, Châtenay-Malabry, 19 Janvier 2005.

[98] Invited Seminar, C. Desceliers, Overview of the probabilistic tools for the experimental identification of the probability model of the mechanical properties of a random medium, 17 Novembre 2005, Pontefica Universidade Catholica (PUC), Rio de Janeiro, Brésil, 2005.

[99] Invited Seminar, C. Desceliers, Identification expérimentale de la représentation chaos des champs stochastiques modélisant les propriétés mécaniques des milieux aléatoires, Séminaire MISS3D, Ecole Centrale de Paris, Châtenay-Malabry, 2006.

[100] C. Desceliers, C. Soize, Identification of Chaos representations of uncertain elastic properties using experimental vibrational tests, 7th World Congress on Computational Mechanics (WCCM), July 16-22, 2006, Los Angeles, California, USA (2006).

[101] S. Hamza, G. Bonnet, P. Delmotte, C. Desceliers, A mixed parametric/non-parametric model for modelling the non-linear response of civil engineering structures submitted to earthquakes, 7th World Congress on Computational Mechanics (WCCM), July 16-22, 2006, Los Angeles, California, USA (2006).

[102] Invited Seminar, C. Desceliers, Inverse problem using experiments for uncertain fluid-solid multilayer systems in ultrasonic domain, Workshop : Uncertainties in Structural Dynamics, University of Innsbruck, Institute of Engineering Mechanics, Innsbruck, Austria, 19 Octobre 2007.

[103] C. Desceliers, C. Soize, Grimal Q., G. Haiat, S. Naili, Identification of the probabilistic model of structural uncertainties of a fluid-structure multilayer systems by ultrasonic experiments, 9th US National Congress on Computational Mechanics, July 23-26 2007, San Francisco, California, USA (2007).

[104] Invited Seminar, C. Desceliers, Identification of chaos representations of random fields using an experimental database, Workshop on Challenges and Opportunities in Polynomial Chaos Methodologies, University of Southern California, Los Angeles, CA, 21-22 Août, 2008.

[105] Invited Seminar, C. Desceliers, Stochastic inverse problem for the identification of the probabilistic model of cortical bone, on uncertainties in structural mechanics, Université Paris-Est Marne-la-Vallée, Marne-la-Vallée, 12 décembre, 2008

[106] C. Desceliers, C. Soize, Q. Grimal,M. Talmant, S. Naili, Identification of the elasticity tensor of an uncertain biomechanical computational model using axial transmission", 8th World Congress on Computational Mechanics (WCCM8) coupled with the 5th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008), Venice, Italy, 30 Juin- 5 Juillet 2008.

[107] C. Desceliers, C. Soize, Q. Grimal, G. Haiat, S. Naili, Probabilistic model of the geometrical and mechanical properties for a nonhomegeneous cortical bone using in vivo measurements in ultrasonic range,10th US National Congress on Computational Mechanics, , Columbus, Ohio, USA 16-19 Juillet 2009

[108] C. Desceliers, C. Soize, Q. Grimal, M. Talmant, S. Naili, Identification of the probabilistic model for a nonhomegeneous cortical bone using in vivo measurements in ultrasonic range , ECCOMAS Conference on Computational Mechanics, Solids, Structures and Coupled Problems in Engineering (ECCM-2010), Paris, 16-21 Mai 2010.

[109] C. Desceliers, C. Soize, Q. Grimal, M. Talmant, S. Naili, Probabilistic model of human cortical bones with uncertain mechanical properties: Modelling and identification with experimental measurements in ultrasonic range, Sixth International Conference on Computational Stochastic Mechanics, Rhodos, Greece, 13-16 Juin 2010.

[110] M. Zarroug, C. Desceliers, L. Rota, Uncertainty modelling of crash test, ECCOMAS Conference on Computational Mechanics, Solids, Structures and Coupled Problems in Engineering (ECCM-2010), Paris, 16-21 Mai 2010.

[111] C. Desceliers, C. Soize, Q. Grimal, G. Haiat, S. Naili, Experimental identification in the ultrasonic range of a probabilistic model for a non-homogeneous cortical bone, 11th US National Congress on Computational Mechanics, Minneapolis, Minnesota, USA 25-29 Juillet 2011.

[112] Invited Seminar, C. Desceliers, Maximum Likelihood Estimation of Stochastic Chaos Representations from Experimental Data, Working meeting (Research topics) organized by GDR Mascot-Num, Paris, 11 mai, 2012

[113] Invited Seminar, C. Desceliers, Identification of an elasticity-tensor random field at mesoscale using experimental measurements at mesoscale and at macroscale, Workshop TYCHE, Paris, 6-7 décembre 2012

[114] C. Desceliers, M.-T. Nguyen, C. Soize. Identification of a prior probabilistic mesoscale model with experimental multiscale observations of one specimen under external loads. US Association for Computational Mechanics. 12th U.S. National Congress on Computational Mechanics, USNCCM XII 2013, Raleigh, North Carolina, United States, Jul 2013.

[115] V. Sansalone, S. Naïli, C. Soize, C. Desceliers. A stochastic homogenization approach to estimate bone elastic properties. Z.S. Liu & G.R. Liu. APCOM & ISCM 2013, Singapore, Singapore, Dec 2013.

[116] M.-T. Nguyen, C. Desceliers, C. Soize. Identification of a mesoscale model with multiscale experimental observations. 11th World Congress on Computational Mechanics (WCCM11), Barcelone, Spain, July 2014.

[117] 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. Ecole des Ponts ParisTech. Workshop on Numerical Methods for High-Dimensional Problems, Champs-sur-Marne, Marne-la-Vallée, France Apr 2014.

[118] C. Soize, C. Desceliers, J. Guilleminot, M.T. Nguyen, J.-M. Allain, et al. Statistical inverse method for the multiscale identification of the apparent random elasticity field of heterogeneous microstructures. Ecole des Ponts ParisTech. Workshop on Inverse problems for multiscale and stochastic problems, Champs-sur-Marne, Marne-la-Vallée, France, Oct 2014.

[119] R. Capillon, C. Desceliers, C. Soize. Modélisation non paramétrique des incertitudes satisfaisant le principe de causalité pour les structures viscoélastiques en dynamique numérique. CSMA 2015, 12ème Colloque National en Calcul des Structures, May 2015, Giens (Var), France. pp.1-4, 2015, Actes du 12ème Colloque National en Calcul des Structures (CSMA 2015), May 2015.

[120] R. Capillon, C. Desceliers, C. Soize. Nonparametric stochastic modeling satisfying the causality principle for viscoelastic structures in computational structural dynamics. UNCECOMP 2015, 1st ECCOMAS Thematic International Conference on Uncertainty Quantification in Computational Sciences and Engineering, The Island of Crete, Greece, May 2015.

[121] V. Sansalone, D. Gagliardi, S. Naili, C. Desceliers, F. Pled, et al. Image-based multiscale modeling of bone elasticity: how to make the most out of uncertainty? 12th World Congress on Computational Mechanics (WCCM XII), Seoul, South Korea, Jul 2016.

[122] C. Desceliers. Non Parametric Probabilistic Modeling for the Problem of Scattering Waves by a Solid with a Random Geometry into an External Acoustics Fluids. 13th World Congress on Computational Mechanics (WCCM XIII) July 22-27, 2018, New York, NY, USA

[123] T. Zhang, C. Desceliers, F. Pled. Experimental identification of mesoscopic elasticity tensor field for heterogeneous materials with complex microstructure using multiscale experimental imaging measurements. 3rd International Conference on Uncertainty Quantification in Computational Sciences and Engineering (UNCECOMP 2019), Hersonissos, Crete Island, Greece, June 2019 (hal-02176038)

[124] J. Reyes, C. Soize, L. Gagliardini, C. Desceliers. Multilevel model reduction for uncertainty quantification in computational vibro-acoustical dynamics. 3rd International Conference on Uncertainty Quantification in Computational Sciences and Engineering (UNCECOMP 2019), Hersonissos, Crete Island, Greece, June 2019

[125] F. Pled, C. Desceliers, A.H. Gandomi, C. Soize. Neural network prediction of cortical bone damage using a stochastic computational mechanical model. 3rd International Conference on Uncertainty Quantification in Computational Sciences and Engineering (UNCECOMP 2019), Hersonissos, Crete Island, Greece, June 2019

[126] C. Desceliers, R. Capillon. Statistical inverse problem for random geometry in external vibroacoustic computational models. 3rd International Conference on Uncertainty Quantification in Computational Sciences and Engineering (UNCECOMP 2019), Hersonissos, Crete Island, Greece, June 2019

[127] F. Pled, C. Desceliers, A.H. Gandomi. An artificial neural network-based identification method applied to a random elasto-acoustic wave propagation problem in computational biomechanics. 4th International Conference on Uncertainty Quantification in Computational Sciences and Engineering (UNCECOMP 2021), Athens (virtual), Greece, June 2021.

[128] C. Desceliers, F. Pled. A probabilistic artificial neural network for a robust identification of the random apparent elasticity tensor field at mesoscale. 16th U.S. National Congress on Computational Mechanics (USNCCM16), Chicago, Illinois (virtual), United States, July 2021.

[129] A. Sinha, C. Desceliers, C. Soize, G. Coelho-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, United States, July 2023.

[130] O. Ezvan, C. Soize, C. Desceliers. 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, Athens, Greece, June 2023.

[131] A. Sinha, C. Desceliers, C. Soize, G. Coelho-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, Athens, Greece, June 2023.

Technical reports on contracts

[132] C. Desceliers, 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.

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

[134] C. Soize, C. Desceliers, Oxand SA, 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; contrat de recherche 09CTR192 avec la Société OXAND S.A., Université Paris-Est Marne la Vallée / Laboratoire Modélisation et Simulation Multi Echelle, décembre 2009.

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

7 Visiting position

- November, 2005, Pontefica Universidade Catholica (PUC), Rio de Janeiro, Brésil.

8 Advising

8.1 Supervised Doctoral students

13 Doctoral students supervised
3 ongoing PhD theses
10 defended PhD theses

2005 – 2007 **Sami HAMZA** "Analyse probabiliste de la vulnérabilité sismique des bâtiments existants: application aux structures à portiques en béton armé"

Defended : 2 February, 2007

Co-advisor : Guy Bonnet (50%)

Funding : CSTB

2010 – 2013 **Manh-Tu NGUYEN** "Identification du champ stochastique des propriétés élastiques à l'échelle mésoscopique d'une microstructure hétérogène à l'aide d'une expérimentation multi-échelle macro-méso-micro sous charges"

Defended : 8 October, 2013

Co-advisor : Christian Soize (50%)

Funding : Grant from Univ. Paris-Est MLV

2012 – 2015 **Corentin COGUENANFF** "Problème inverse statistique pour des éléments structuraux légers bois en vibro-acoustique"

Funding : CSTB

2013 – suspended in 2016 - Defense in 2019 Rémi CAPILLON "Réduction de modèle et quantification des incertitudes en dynamique linéaire et non linéaire des structures viscoélastiques sous excitations déterministes et stochastiques"

Co-adviser : Christian Soize (10%)

Funding: Grant from Univ. Paris-Est MLV

2015 – 2018 **Nazim NOUAIL** "Quantification des incertitudes dans les modèles PML pour l'interaction Sol-Structure en basse fréquence"

Co-adviser : Rachid Lassoued (50%)

Funding: Grant from Univ. Constantine (Algeria)

2015 – 2018 **Fabio REAL** "Modélisation, identification expériementale et contrôle robuste de la dynamique d'une colonne de forage en présence d'incertitudes"

Co-adviser : Anas Batou, Thiago Ritto

Funding: CAPES

2016 – 2019 **Yifu GUO** "Analyse robuste des structures en bois pour le génie civil en vibro-acoustique moyenne et haute fréquence"

Funding: CSTB

2016 – 2019 **Tianyu ZHANG** "Modélisation 3D et identification des propriétés élmastiques apparentes à l'échelle mésoscopique pour des matériaux à microstructure complexe"

Co-adviser : Florent Pled (25%)

Funding: Grant from Univ. Paris-Est MLV

2017 – 2020 **Vincent DANGLA** "Robust design of nacelle noise reduction technologies"

Co-adviser : Christian Soize (70%)

Funding: CIFRE Airbus

2017 – 2020 **Justin REYES** "Modélisation vibro-acoustique multi-fréquentielle"

Co-adviser : Christian Soize (50%)

Funding: CIFRE PSA

2021 – present **Amritesh SINHA** "Optimization of innovative acoustic treatment of engines for green aviation using numerical simulations and machine learning."

Co-adviser :Christian Soize (25%)

Funding: Airbus, DGAC

2023 – present **Gia Khai HOANG** "Optimization of Self-Healing Materials through Advanced Computational Modeling and Machine Learning Techniques"

Co-adviser : Florent Pled (10%)

Funding: Université Gustave Eiffel

2023 – present **Erwan LE COURRIC** "Computational Nonlinear Dynamics And Machine Learning In The Field Of New Engine Technologies For Plane Propellers"

Co-adviser : E. Capiez-Lernout (90%)

Funding: Université Gustave Eiffel

8.2 Supervised Master students

2007 **Loic Gabriel** "Modélisation probabiliste des incertitudes pour l'analyse de la robustesse des modèles de durabilité des bétons à armature métallique"

2010 **Manh-Tu Nguyen** "Comportement d'une barre en matériau hétérogène avec des gradients de propriétés élastiques à ses extrémités"

2010 **Dinh Viet Tran** "Une nouvelle méthode pour accélérer la méthode de Monte-Carlo"

2011 **Hai Bang Ly** "Éléments finis en déplacements finis pour le flambement d'un tube creux"

2011 **Quoc Viet Doan** "Etudes numériques des propriétés mécaniques d'un milieu hétérogène de type matrice/inclusion"

2011 **Thuy Linh Nguyen** "Identification d'un modèle mésoscopique pour un matériau complexe à partir de données issues de l'imagerie de champ"

2012 **Hai Bang Ly** "Méthodes numériques appliquées à l'étude des fluctuations statistiques d'un modèle 3D non linéaire en déplacements finis : Cas du flambement d'une barre constituée d'un matériau hétérogène et aléatoire"

2012 **Karim Houhanoh** "Modélisation éléments finis en plasticité: étude du sertissage des pions de fixation"

2013 **Déborah Lavazec** "Algorithme de raffinement de maillage et construction des matrices élémentaires effectives sans homogénéiser les propriétés élastiques"

2013 **Rémi Capillon** "Dynamique linéaire basse et moyenne fréquence des structures élastiques - Analyse numérique de la transformée de Hilbert"

2013 **Dinh Han Nguyen** "Réduction des interfaces pour l'identification des impédances de bord par la méthode des variables cachées"

2013 **Karim Houhanoh** "Modélisation mécanique en plasticité et déplacement fini du contact entre solides déformables"

2015 **Yu Yang** "Identification stochastique des modèles probabiliste multi-échelle de la microstructure de l'os corticale par analyse d'image"

2016 **Thanh Son Nguyen** "Identification stochastique du comportement anisotrope et hétérogène du bois par analyse d'image"

8.3 Supervised Bachelor students

2011 **Karim Houhanoh** "Sertissage de pion de fixation"

2011 **Rémi Capillon** "Éléments finis stochastiques en déplacements finis"

2012 **Déborah Lavazec** "Modélisation d'un matériau alétoire: le bois"

9 Professional activities

9.1 Reviewer and jury of Thesis

- Serve on the jury of 12 Theses
- Reviewer of 5 Thesis

2004 **Rémi Lafargue** "Solveurs itératifs et modèles stochastiques d'interaction sol-structure". Adviser: Didier Clouteau

2007 **Sami Hamza** "Analyse probabiliste de la vulnérabilité sismique des biâtiments existants: application aux structures à portiques en béton armé"

Adviser : Guy Bonnet

2007 **Rachid Lassoued** "Modélisation analytique des structures unidimensionnelles et bidimensionnelles sous charges mobiles"

Adviser : Guy Bonnet

2011 **Quang Anh Ta** "Modélisation des propriétés mécaniques anisotropes aléatoires et impacts sur la propagation des ondes élastiques"

Adviser : Didier Clouteau

2013 **Eric Zaccardi** "Couplage stochastique-déterministe dans le cadre Arlequin et estimations d'erreurs en quantités d'intérêt"

Adviser : Hachmi Ben Dhia

2016 **Benjamin Morin** "Modélisation de liaisons flexibles amortissantes en élastomère pour la prédiction du comportement dynamique de système complexes"

Adviser : Jean-François Dëu

2016 **Antoisse Abdoulatuf** "Modélisation et simulation de la propagation d'ondes guidées dans des milieux élastiques en présence d'incertitudes : Application à la caractérisation ultrasonore"

Adviser : Salah Naili

2017 **Charly Faure** "Approches bayésiennes appliquées à l'identification d'efforts vibratoires par la méthode de Résolution Inverse"

Adviser : Jérôme Antoni

2020 **Chaima Soussi** "Développement de modèles numériques pour l'évaluation des performances vibro-acoustiques de fenêtres en basse fréquence"

Co-Advisers : Jean-François Deü, Walid Larbi, Mathieu Aucejo.

2022 **Chenchen Chu** "Multiscale and multiphysics robust design of a complex microstructure with uncertainties, and driven by target performances"

co-Advisers : David Dureisseix, Béatrice Faverjon

2023 **Stéphane Février** "Prediction of aircraft vibration environment using machine learning"
co-Advisers : Bérengère Podvin , Lionel Mathelin , Frédéric Giordano, Stéphane Nachar

2023 **Julien Puig** "Etude et modélisation numérique de la transmission acoustique des entrées d'air de fenêtre"
Co-Advisers : Jean-François Deü, Walid Larbi, Mathieu Aucejo.

9.2 Reviewers of International Journals

- Journal of Sound and Vibration.
- Computer Methods in Applied Mechanics and Engineering.
- Brazilian Journal of Probability and Statistics.
- Mechanical Systems and Signal Processing.
- Mechanics & Industries.
- Comptes Rendus Mécanique.
- Bulletin of Earthquake Engineering.
- Advances in Vibration Engineeringi.

9.3 University service academic activities

Université Gustave Eiffel

2002 – 2010 Coordinator for computational resources at the Laboratory of Mechanics (LaM), and then the Mechanics department at the Laboratory MSME

2005 – 2010 Co-coordinator for the "Engineering Mechanics" department at the "Ingénieur 2000" school, later at ESIPE-MLV

2012 – 2013 Master Program Coordinator for "Projects in Civil Engineering" within the "Civil Engineering" Master (IFSA)

2012 – 2019 Bachelor Program Coordinator for the "Mechanics" program of the "Physics Science" Bachelor (IFSA)

2020 – present Master Program Coordinator for the "Mechanics, Materials, and Structure for Construction and Transportation" within the "Civil Engineering" Master (IFSA)

2021 – present Master Program Coordinator for the "Civil Engineering" Master (IFSA)

9.4 Other University service activities

Université Gustave Eiffel

2014 – 2019 Communication Coordinator Laboratory MSME

2020 – present Webmaster and coordinator of Laboratory MSME's web pages

2020 – present Head of the Mechanics department of the Laboratory MSME

10 Contrats (funded)

1. Contrat d'association EDF/R&D / Université Marne-la-Vallée(Laboratoire de Mécanique), 2001 – 2002 : Construction de modèles probabilistes mixtes non paramétrique – paramétrique des incertitudes en dynamique non linéaire transitoire d'un circuit primaire principal [3, 132].

2. Contrat ANR 2005, Projet : ANR-05-BLAN-0082-01 (CORODYNA, 2005 – 2008). Partenaires : Université de Marne-la-Vallée (laboratoire de Mécanique) : Conception Robuste en Dynamique [7, 9].

3. Contrat ANR 2006, Projet : BLAN06-2-144777 (BONECHAR, 2007 – 2009). Partenaires : Université Paris 12 (Laboratoire de biomécanique et biomatériaux ostéo-articulaires), Université Paris 6 (Laboratoire d'imagerie paramétrique) et Université de Marne-la-Vallée (Laboratoire de Mécanique) : Modèle et validation expérimentales de la caractérisation ultrasonique en biomécanique et en présence d'incertitudes: application à l'os cortical (BONECHAR) [8, 10, 11, 12].

4. Contrat de recherche Peugeot Citroen SA / Université Paris-Est Marne-la-Vallée (Laboratoire de Mécanique), juin 2007 – février 2008 : Méthodologie d'implémentation des modèles probabilistes des incertitudes dans les modèles numériques de crash [133].

5. Contrat de recherche OXAND S.A. / Conseil Général de Seine-et-Marne/ Université Paris-Est Marne-la-Vallée (Laboratoire Modélisation et Simulation Multi Echelle), décembre 2009 : Analyse de la performance et du risque associés à l'intégrité des puits dans le contexte du stockage géologique du CO2 : approche prédictive et probabiliste [19, 134].

6. Contrat de recherche Peugeot Citroen SA / Université Paris-Est Marne-la-Vallée (Laboratoire Modélisation et Simulation Multi-Echelle), 2009 : Solveur stochastique pour l'analyse robuste du Crash avec modèle numérique incertain [20, 135].

7. Contrat ANR 2010, Projet BLAN 090401 (TYCHE, Décembre 2010 - Août 2013). Partenaires : Université Paris Est Marne-la-Vallée (Laboratoire Modélisation et Simulation Multi-Echelle), Ecole Centrale de Paris (Laboratoire Mécanique des Sols, Structures et Matériaux),

Université Paris Sud (Laboratoire d'Informatique et de Mécanique pour les Sciences de l'Ingénieur), Ecole Centrale de Nantes (Institut de recherche en Génie Civil et Mécanique) [15]

8. Contrat de recherche avec PSA Peugeot-Citroen, 2017-2020 : Modélisation vibro-acoustique multi-fréquentielle, porté par C. Soize avec la participation de C. Desceliers, correspondant à la thèse CIFRE de Justin REYES, du 01 janvier 2017 au 31 janvier 2021. Montant de 60000 Euros HT pour le contrat d'accompagnement (hors salaire du doctorant)

9. Contrat de recherche avec Airbus, DGAC, 2021-2024 : Méthodes avancées pour la modélisation du bruit moteur et avion (projet MAMBO), porté par C. Desceliers avec la participation de C. Soize, correspondant à la thèse de Amritesh SINHA. Montant de 169500 Euros HT incluant le salaire du doctorant

10. Thèse CIFRE PSA, 2017-2020 : "Multi-scale stochastic reduced-order model in computational vibroacoustics applied to automobiles", par Justin REYES sous la direction de C. Soize (50%) et co-encadrement de C. Desceliers (50%), soutenue le 5 novembre 2020 à l'université Paris-Est

11. Thèse Airbus - DGAC, 2021-2024 (en cours) : "Optimization of innovative acoustic treatment of engines for green aviation using numerical simulations and machine learning", par Amritesh SINHA, dirigée par C. Desceliers (70%) et co-encadrée par C. Soize (30%), soutenance prévue en mai 2024 à l'université Gustave Eiffel