

Conferences, Workshop, Seminars, International Schools

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First name

I received several invitations for presentations in several Universities, in the context of International Schools, International Workshops and Conferences. These talks have been all oriented to my activities in Uncertainty Quantification and Robust Optimization in scientific computing.

Conferences

1. Keynote Lecture, NICFD conference, Ecole Centrale de Lyon, October 31 2024.
2. Invited Speaker at Frontiers in Low Temperature Plasma Simulation II, Kerkrade, The Netherlands, 18-19 May 2020.
3. Keynote Lecture, Symposium of VKI PhD Research 2018, 5th of March 2018, von Karman Institute, Belgium.
4. Plenary speaker, SimHydro Conference 2017, 14-16th June, Nice.
5. Presentation at Journées Scientifiques INRIA, June 2016, Rennes.
6. "Uncertainty Quantification for compressible flows", International Conference on Uncertainty Quantification, BOQUSE 2013, Bordeaux, France, December 2013.
7. Semi-intrusive multiresolution schemes for UQ : Application to unsteady discontinuous flows, SIAM Conference on Uncertainty Quantification, Raleigh, USA, April 2012.
8. Dense gas flows: exploitation of non-classical properties, Cha-Cha Days, College of Charleston, South Carolina, Octobre 2006.

Workshops

9. Workshop Mathematical Foundations of AI, held in Paris, March 2025, Jussieu Campus, Paris.
10. CEA Gamni, 27-28 January 2025, IHP, Paris.
11. "Journées Scientifiques 2024 du réseau thématique RT Terre et Energies", Nouan-le-Fuzelier, November 4-8 2024.
12. GDR Mascot-num "Atelier sur la calibration/validation de code numérique", the 31st of May 2023, IHP, Paris.
13. Seminar at the 3rd European workshop on Multi Disciplinary Optimization, the 20th of September 2022, IHES, Paris.
14. Uncertainty Quantification in aerospace applications, Workshop on Rotorcraft Simulation Verification and Validation Metrics, Politecnico di Milano, Italie, January 28-29 2020.
15. Forward and Backward Uncertainty quantification methods for atmospheric reentry flows, Workshop LAPSIS "Vers le traitement des données massives: Défis et applications en Mécanique des Fluides et en Sciences de l'Ingénieur", LIMSI, November 2017.
16. CWI-INRIA Workshop, September 2017.
17. Numerical simulation and UQ in aerospace application, BIS conference 2016, Paris.
18. A phase transition model and scheme for reproducing cavitation, Workshop TOTAL MATHIAS, October 2015, Paris.
19. Short introduction to Uncertainty Quantification and application to Hypersonics Flows, Workshop on Kinetic Models and Methods for Rarefied Gas Dynamics, Bordeaux, October 2015.
20. Some recent studies on uncertainty quantification and robust optimization in the AQUARIUS Team, Workshop BIS2015 (Berkeley, INRIA, Stanford), Berkeley, May 2015.
21. Overview over some Uncertainty Quantification Activities in in Atmospheric Entry Flows, Séminaire ARA "Rentrée Atmosphérique des Débris Spatiaux", Jan 2015, Le Barp, France.
22. Numerical certification and uncertainty quantification in Fluid Mechanics, Alstom Workshop on high performance simulation, December 2014, Paris, France.
23. Advanced methods for uncertainty quantification in compressible flows, BIS 2014, Berkeley - Inria - Stanford Workshop 2014, Jun 2014, Paris, France.
24. Uncertainty analysis and numerical flow simulation, invited, Workshop BIS2013 (Berkeley, INRIA, Stanford), Stanford, May 2013.

25. Quantification of uncertainties in numerical simulation, Quantification d'incertitude et calcul intensif Workshop (Journée thématique du GDR MASCOT NUM), Mar 2013, Grenoble, France.
26. Innovative Contributions and work in progress for quantifying uncertainties in fluid flow problems, invited, Workshop BIS2012 (Berkeley, INRIA, Stanford), Paris, France, May 2012
27. Quantification des incertitudes en Mécanique des fluides, invited, Première rencontre GAMNI-MAIRCI : Précision et Incertitudes, Paris, France, February 2012
28. Numerical method for uncertainty quantification and prediction of high reynolds number flows, invited, CITRIS/INRIA Workshop, Berkeley, May 2011
29. Les incertitudes en thermo-hydraulique, invited, Atelier thermo-hydraulique du PCR-ANSF, Grenoble, June 2010

Invited Seminars

30. Seminar at the Journée de Rentrée EDMH, the 20th of October 2023, IHES, Paris.
31. Seminar at the UQ-Saclay seminars, the 3rd of February 2022.
32. Seminar at the ESA AITTAO 10666 Progress Meeting, the 30th of Avril 2021.
33. Séminaire de Machine learning", organized at the LMFA of the Ecole Centrale Lyon, 8 Décembre 2021.
34. Optimization under uncertainty methods with tunable fidelity, Lab MathApp of Onera, Meudon, November 29, 2019.
35. Some contributions to the Uncertainty Quantification of shock-dominated flows: application to non-ideal-gas dynamics, CMAP Lab, Ecole Polytechnique, January 18 2018.
36. Some contributions to the numerical simulation of cavitating turbulent two-phase flows from a UQ perspective, IMSIA Seminar, EDF Lab, Palaiseau, December 6 2017.
37. Presentation at CEA-Saclay (DEN), May 30 2017.
38. Final presentation of Aquarius Team, INRIA, October 2016.
39. Introduction to Polynomial Chaos methods, CNES, Toulouse, October 2016.
40. Computation of low-probability events, UQ Meetings, Stanford University, September 2016.
41. Uncertainty Quantification in Computational Science: some examples of interaction between numerical simulation and experiments, Laboratoire de Physique des Plasma (LPP, École Polytechnique), August 2016.
42. General introduction to Uncertainty Quantification, CNES, March 2016, Toulouse.
43. Efficient robust optimization methods for renewable energy based system, Séminaire à IMB - Bordeaux, March 2016.
44. Some recent advancements in uncertainty quantification methods : application to two ablation-oriented examples, CEA-CESTA, 20 July 2015.
45. About the investigation of relevant uncertainties during the robust optimization of an Organic Rankine Cycle, LIMS Laboratory (Orsay), June 2015.
46. Overview over some Uncertainty Quantification (UQ) Activities in Hypersonics, NASA Ames Research Center - Applied Modeling & Simulation (AMS) Seminar Series, October 2014, Ames, United States.
47. Reliability of numerical simulation in fluid mechanics : some examples on hypersonic flows and thermodynamically complex gases, Séminaire IRPHE (Institut de Recherche des Phénomènes Hors Equilibre), March 2014, Marseille, France.
48. Uncertainty quantification in numerical simulation and application to complex flows, MIP Seminar, IMT-Toulouse, Nov 2013, Toulouse, France.
49. Quantification of Uncertainties for the atmospheric reentry: State of Art and recent developments, CESTA, Nov 2013, Barp, France.
50. Simulation robuste de phénomènes non-classiques en dynamique des gaz, invited, Séminaires modélisation et calculs, IMB-Bordeaux, January 2011.

51. Robust optimization for uncertain dense gas flows, invited, UQ seminars, Stanford University, May 2011.
52. Contribution à la modélisation, la simulation et l'optimisation robuste des écoulements complexes : Applications aux cycles de Rankine à fluide organique, invited, Seminaire Arts et Métiers, ParisTech, Paris, March 2010.
53. Uncertain shape optimization for dense gas flows, invited, Université de Trieste (Italie), Trieste, May 2010.
54. Modélisation thermodynamique, optimisation et prise en compte des incertitudes dans la simulation d'écoulements de gaz réel, CEA, Saclay, 11 March 2009.
55. Simulation et Optimisation d'écoulements de gaz dense, LEGI, Grenoble, Août 2008.
56. Introduction to dense gas flows: exploitation of non-classical properties for energy applications, invited seminar, National Institute of Aerospace (NIA), Hampton, Virginia, August 2006.

International Schools

57. Second Training School, TRACES EU Project, TU Braunschweig, September 25 2024.
58. Opening Training School, TRACES EU Project, Politecnico di Milano, January 18 2024.
59. Organizers and chairmen of the Winter of Codes, TRACES EU Project, Inria Center of Saclay, December 9-14 2024.
60. Advanced Computational Fluid Dynamics Methods for Hypersonic Flows - VKI LS and STO LS AVT-358, von Karman Institut for Fluid Dynamics, March 25 2024.
61. Introduction to Uncertainty Quantification, "Introduction to CFD for energy applications" Summer School, Università di Brescia, Desenzano sul Garda, September 2019, 4h.
62. Introduction to Uncertainty Quantification, "Introduction to CFD for energy applications" Summer School, Università di Brescia, Desenzano sul Garda, September 2018, 4h.
63. Optimization under Uncertainty, 3rd Lecture Series on Uncertainty Quantification in Computational Fluid Dynamics, von Karman Institute, September 2018, 4h.
64. First training school in the context of the UTOPIAE Project, Introduction to Uncertainty Quantification November 20 2017.
65. UQ: application to algorithms, Uncertainty quantification: theory and application to algorithms, CFD and global change, May 2018, CERFACS, Toulouse, France.
66. UQ: application to algorithms, Uncertainty quantification: theory and application to algorithms, CFD and global change, May 2017, CERFACS, Toulouse, France.
67. Approximations par processus gaussiens et plans d'expérience, Ecole de Mécanique des Fluides Numérique, Approches statistiques pour la Mécanique des Fluides, 24-28th of April 2017.
68. UQ: application to algorithms, Uncertainty quantification: theory and application to algorithms, CFD and global change, Apr 2016, CERFACS, Toulouse, France.
69. Introduction to uncertainty quantification, 38th Advanced Computational Fluid Dynamics. Adjoint methods and their application in Computational Fluid Dynamics, September 2015, von Karman Institute.
70. Advanced methods for uncertainty quantification and application of adjoints, 38th Advanced Computational Fluid Dynamics. Adjoint methods and their application in Computational Fluid Dynamics, September 2015, von Karman Institute.
71. Some perspectives on uncertainty-based derivative-free optimization, 38th Advanced Computational Fluid Dynamics. Adjoint methods and their application in Computational Fluid Dynamics, September 2015, von Karman Institute.
72. UQ: application to algorithms, Uncertainty quantification: theory and application to algorithms, CFD and global change, April 2015, CERFACS, Toulouse, France.
73. Semi-intrusive multi-resolution methods, Uncertainty Quantification in CFD, von Karman Institute Lecture Series, September 2014.
74. Robust optimization, Uncertainty Quantification in CFD, von Karman Institute Lecture Series, September 2014.

75. UQ: application to algorithms, Uncertainty quantification: theory and application to algorithms, CFD and global change, Apr 2014, CERFACS, Toulouse, France.
76. Stochastic methods for shocked flows and robust optimization, Short course on UQ controls at CERFACS, Toulouse, June 2013.
77. Uncertainty Quantification and Robust Design in Complex Flow Simulations, International Workshop on Uncertainty Quantification and Design Optimization, February 2013, Trieste, Italy.
78. Introduction to Uncertainty Quantification, invited, Uncertainty Quantification for Aerospace Applications, von Karman Institute, October 2012.
79. New perspectives for robust design optimization, invited, Complex modeling, Convergence, and Uncertainty Quantification, Uppsala, Sweden, June 2012.
80. A simple, flexible, generic deterministic approach to UQ in non linear problems: description of the method, invited, RTO-AVT-VKI Short course on uncertainty quantification, Bruges, May 2011.