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BIRTH	1991, Les Lilas (93) - France
STATUT	PostDoc, Los Alamos - USA
E-MAIL	david.metivier@unice.fr (or metivier@lanl.gov)
WEBSITE	<a href="https://cnls.lanl.gov/~metivier/html/">https://cnls.lanl.gov/~metivier/html/</a> or <a href="#">Google Scholar profile</a>

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POST-DOC	<b>Los Alamos National Laboratory - Theoretical Division, CNLS</b> , Los Alamos - NM, USA <b>November 2017 - Now</b> Synchronization in engineered systems and physics
EDUCATION	– <b>Mathematics Laboratory J.A. Dieudonné</b> , Nice - France <b>2014 - 2017</b> Physics Ph.D. advised by Julien Barré, <i>Kinetic models, from Kuramoto to Vlasov: bifurcations and experimental analysis of a Magneto-Optical Trap</i> – <b>École Normale Supérieure of Lyon</b> , Lyon - France <b>2014 - 2012</b> : M.S. Physics (Concepts and Applications - Matter Science) <b>2011 - 2012</b> : B.S. Physics (Concepts and Applications - Matter Science) – <b>Lycée Chaptal</b> , Paris - France <b>2009 - 2011</b> : 1 <sup>st</sup> and 2 <sup>nd</sup> year of “Classe préparatoire aux grandes écoles” (PCSI/PC)
INTERSHIPS	<b>2014</b> : 4 months at Mathematics laboratory J.A. Dieudonné (Nice - France) advised by Julien Barré, <i>The Vlasov-Fokker-Planck equation</i> <b>2013</b> : 3 months at National Institute for Theoretical Physics (Stellenbosch - South Africa) advised by Michael Kastner, <i>Velocity of a perturbation in an infinite lattice</i> <b>2012</b> : 2 months at Langevin Institute (Paris - France) advised by Alexandre Aubry, <i>Ultrasound propagation in heterogeneous media</i>
TEACHING	Physics practical work supervisor for 2 <sup>nd</sup> year engineer students (63h per year from 2014 to 2017) Co-supervising the PhD student Ilia Luchnikov for a 2018 summer project Lecturer at the online Winter School <a href="#">Spectral Methods for Complex Systems</a> (January 2019)
ORGANIZING	<b>March 2018 - Now</b> Organizer of the weekly Post-Doc/Student seminar at Center for Nonlinear Studies (Los Alamos National Laboratory)
REVIEWING	Europhysics Letters, Journal of Physics A, JSTAT, Electric Power Systems Research, IEEE Transactions on Control of Network Systems
SOFTWARE	C, Julia, Python, Mathematica, GPU parallel computing, Maple, Matlab, L <sup>A</sup> T <sub>E</sub> X, HTML (notions)
SCIENCE POPULARIZATION	<b>Audience prize and 2<sup>nd</sup> jury’s prize</b> at the 3 minutes thesis popularization contest "Ma Thèse en 180s" 2016 University Côte d’Azur. Animations for “Fête de la science” (science festival) 2015 in Nice.
LANGUAGES	French (native), English (fluent), Spanish (can survive)

- PUBLICATIONS
1. Métivier, D., Vuffray M., Misra S. (2019). *Efficient Polynomial Chaos Expansion for Uncertainty Quantification in Power Systems*. [arXiv:1910.06498](#) (Submitted)
  2. Barré J., Métivier D., Yamaguchi Y. Y. (2019). *Towards a classification of bifurcations in Vlasov equations*. [arXiv:1909.11344](#) (Submitted)
  3. Métivier, D., Wetzel, L., Gupta S., *Onset of synchronization in networks of second-order Kuramoto oscillators with delayed coupling : Exact results and application to phase-locked loops* (2019). [arXiv:1906.02643](#)
  4. Métivier, D., Chertkov C. (2019). *Mean Field Control of the Energy Load Ensemble with Disorder* (Submitted).
  5. Métivier, D., Chertkov C. (2018). *Mean Field Control for Efficient Mixing of Energy Loads* ; [arXiv:1810.00450](#) (Submitted).
  6. Barré J., Kaiser R., Labeyrie G., Marcos B., Métivier, D. (2019). *Towards a measurement of the Debye length in very large Magneto-Optical traps*. *Phys. Rev. A* **100**, 013624 ; [arXiv:1808.02098](#).
  7. Métivier D., Gupta S. (2019). *Bifurcations in the time-delayed Kuramoto model of coupled oscillators : Exact results* ; *J Stat Phys* **176**: 279 ; [arXiv:1808.10436](#).
  8. Métivier, D., Luchnikov I., Chertkov C. (2019). *Power of Ensemble Diversity and Randomization for Energy Aggregation* ; *Scientific reports* **9** (1), 5910 ; [arXiv:1808.09555](#).
  9. Barré J, Métivier D. (2018) *Vlasov-Fokker-Planck equation : stochastic stability of resonances and unstable manifold expansion* ; *Nonlinearity* **31** 4667 ; [arXiv:1703.01668](#).
  10. Barré J., Métivier D. (2016). *Bifurcations and singularities for coupled oscillators with inertia and frustration* ; *Physical Review Letters*, **117**(21), 214102. ; [arXiv:1605.02990](#).
  11. Barré J., Métivier D., Yamaguchi Y. Y. (2016). *Trapping scaling for bifurcations in the Vlasov systems*. *Physical Review E*, **93**(4), 042207. ; [arXiv:1511.07645](#)
  12. Métivier D., Bachelard R., Kastner M. (2014). *Spreading of Perturbations in Long-Range Interacting Classical Lattice Models*. *Physical Review Letters*, **112**(21), 210601. ; [arXiv:1405.7556](#).

## RECENT TALKS

- (July 2019) Conference StatPhys 27, Nonlinear physics session, Buenos Aires, Argentina
- (May 2019) External Advisory Committee and Review of the Center for Nonlinear Studies, Los Alamos NM, USA
- (April 2019) Conference Arizona - Los Alamos Days, Tucson AZ, USA
- (April 2019) PostDoc Seminar CNLS, Los Alamos NM, USA
- (March 2019) School of Mathematical and Statistical Sciences Seminar, Phoenix AZ, USA
- (October 2018) Institute for Physical Science and Technology Seminar, College Park MD, USA
- (May 2018) Workshop on Long-range Interactions and Synchronization, São Paulo, Brazil