

# Curriculum Vitae of Sandro Vaienti

Updated March 2017

## Positions Held

- 1993-present** Full Professor ( classe exceptionnelle) of mathematics, University of *Toulon*, and researcher at the *Centre de Physique Théorique* (CPT) at Luminy, Marseille. The CPT is a laboratory of the French CNRS (Centre National de la Recherche Scientifique, UMR 7332).
- 1992-1993** One year position as *Directeur de recherche associé au CNRS* at the Institut of Mechanics and Statistics of Turbulence of Marseille and at the *Ecole Supérieure de Mécanique (ESM-2)* of the University of Aix-Marseille 2.
- 1990-1992** Two-years fellowship of the EEC at the CPT in Marseille under the direction of Prof. J. Bellissard.
- 1989-1990** Visiting Assistant Professor at the Département of Mathematics of the University of Southern California, Los Angeles, California.
- 1987-1989** Post-Doctoral Fellowship, CNR-NATO at the CPT in Marseille.

## Education and Degrees

- Graduate Studies** at the University of Bologna (Italy), from 1984 to 1987. Advisor : Prof. G. Turchetti. Subject of the Ph. D. thesis : *Ergodic and geometric properties of mixing repellers*.
- Undergraduate Studies** at the University of Bologna (Italy), Department of Physics, from 1975 to 1982. *Tesi di laurea*, under the direction of Prof. G. Turchetti, title *Application of KAM theorem to relativistic hamiltonian systems*.

## Service to Profession

- 2001-2011 : Director of the *Fédération de Recherche des Unités de Mathématiques de Marseille* (FRUMAM), FR 2291, which is a structure of the french CNRS composed by three mathematical laboratories in Marseille.
- From January 2002 to December 2007 : I was Vice-Director of the *Centre de Physique Théorique* in Marseille.
- 2017- : elected president of the *Interdisciplinary Committee CID-51* of the French CNRS (*Modélisation, et analyse des données et des systèmes biologiques : approches informatiques, mathématiques et physique*).
- 2011-2014 : Appointed member of the *Scientific Advisory Board* (Conseil Scientifique), of INSMI : Institut National des Sciences Mathématiques et de leurs interactions, CNRS. From 2014 : the same appointment at the Institut National de Physique (INP).
- 2011-2015 : elected member of the French CNU *Conseil National des Universités*, Sect. 26 (Mathématiques appliquées et applications des mathématiques).
- I am the coordinator of the team *Dynamical Systems and Ergodic Theory* at the Centre de Physique Théorique in Marseille.
- 2012-2015 : in charge of the first year of the *Master* in mathematics at the University of Toulon.
- In the period 2006-2011 I had in charge the allocation of fellowships and other funding for PhD students of my University ( chargé de mission *Recherche/Relations Internationales*). I am still in charge of the *International Exchanges* at the Faculty of Sciences.
- From 1997 to 2001 I was the Director of the Mathematics Department of the University of Toulon.

## International Funded Research and Grants

- Since 1996 I hold the **PEDR**, successively **PES** (*Prime d'excellence scientifique*) ; it is a bonus given by the University for high standard research and supervision of PhD students.
- **ANR** Grant from the *Agence Nationale de la Recherche*, Project *PERTURBATIONS*, for four years : 2011-2014, principal investigator.
- **Délegations** from CNRS : to work in my laboratory in the periods : February-July 2006 and February-July 2007 ; from February 2012 and for six months : UMI 2807-CMM, *Center for Mathematical Modeling*, University of Santiago, Chili.
- **CONYCIT** Four months Fellowship to work at the **University of Valparaiso** Chili (2014-2016) under a CONYCIT contract.

- **MATH-AmSud** Two years grant MATH-AmSud between France and South-America (Chili, Uruguay), for the years 2016-2017, Director of the project.
- **PICS** Grant from the CNRS for the Program PICS *Projet International de Coopération Scientifique*, for three years 2012-2014 with the University of Houston : *Propriétés statistiques des systèmes dynamiques déterministes et aléatoires*, principal investigator.
- **Leverhulme** I am local responsible of the *Projet Statistical Properties of Non-Uniformly Hyperbolic Dynamical Systems : Computer Assisted Proofs and Rigorous Computations*, with a Leverhulme Trust contract managed by the University of Loughborough (UK).
- **Indam** I got a two months grant from the University of Insubria (Como, Italy), in 2014 and financed by the Italian INDAM, Istituto Nazionale di Alta Matematica.
- **PEPS** Grant from *Projets Exploratoires Pluridisciplinaires*, CNRS, *Project Mathematical method of climate models*, 2010-2011, principal investigator.
- **NEWTON INSITUTE** I organized together with M. Cullen, K. Fraedrich, V. Lucarini and B. Pelloni, the Project *Mathematics for the Fluid Earth*, at the Isaac Newton Institute for Mathematical Sciences in Cambridge from October 21 to December 20, 2013.
- **BREUDS** I was member of the Project **DynEurBra**, between France and Bresil and in the framework of the *Seventh Program "Marie Curie Actions"*, 2009-2012. The project has been renewed under the name of *Breuds* for the period 2013-2016
- **GREFI-MEFI** From 2005 to 2013 I was the French coordinator of the CNRS European Research Group (GDRE) GREFI-MEFI in mathematical physics, between France and Italy.

### Scientific organisation

- In charge of the *Socrates-Erasmus* Project between the Department of Mathematics of the University of Toulon and the Universities of : Bologna (Italy) ; Como (Italy) ; Porto (Portugal), Cosenza (Italy).
- Summer School and Conference em Dynamical systems, from cristal to chaos, organised (with S. Ferenczi, P. Hubert, R. Lima) at CIRM in Luminy, Marseille June-July 1998.
- Summer School and Conference *Return times, entropy and complexity*, organised (with A. Asselah, X. Bressaud, P. Picco) at CIRM (Luminy), March 2000.
- Summer School and Conference *Dynamical Systems 2001 : a Dynamic Odissey* (organised with X. Bressaud, J-Y. Briend, J. Cassaigne, P. Hubert, P. Liardet, J. Los, M. Lustig, C-A. Pillet, S. Troubetzkoy) at CIRM and IML (Luminy), from January 29 to March 2 2001.
- Conference on *Piecewise Isometries*, co-organised at IML in Marseille, June 2002.
- Conference and Summer School *Systèmes dynamiques multidimensionnels non-uniformement hyperboliques*, at CIRM 17-28 Mai 2004
- Member of the organization committee of the Summer School and Conference on *Probability, Dynamical Systems and Statistical Mechanics* at CIRM (Luminy, France) in February 2008 (5 weeks)
- Co-organiser with I. Melbourne, M. Nicol and D. Volny of the Conference at CIRM *Large Deviations and Dynamical Systems*, 4-8 July 2011.
- Co-organiser with B. Hasselblatt, J. Schmeling, Y. Pesin and S. Troubetzkoy, of the Conference at CIRM *Hyperbolicité et dimension*, 2-6 December 2013.
- Co-organiser with V. Lucarini of the Conference *Non-equilibrium Statistical Mechanics and the Theory of Extreme Events in Earth Science*, Newton Institute for Mathematical Science, Cambridge, 29 October 2013 - 1 November 2013.
- Co-organiser with M. Cullen, K. Fraedrich, V. Lucarini and B. Pelloni, of the two months Workshop *Mathematics for the Fluid Earth*, at the Newton Institute for Mathematical Science, Cambridge, 21 October - 20 December 2013.
- Co-organiser with Françoise Pène, Benoît Saussol and Jean-René Chazottes of the Workshop *Rare et extrême*, Mzrch 24-28 2014, Aber Wrac’h, Bretagne.
- Co-organiser of the two Conferences at CIRM :
  - 7 july-11 july 2014 : *Limit Theorems in Dynamics and Applications*, with D. Volny, G. Reinert and S. Olla ;
  - 14 july-18 july 2014 *Extreme Value Theory and laws of rare events*, with A. C. Freitas, J. Freitas and M. Todd.
- Co-organiser of the Conference *Chaos, Complexity and Transport*, Marseille 1-5 Juin 2015.
- Co-organiser of the week *Non-uniformly and partially hyperbolic dynamical systems ; coupling and renewal* during the five weeks Workshop *Thematic Month on Dynamical Systems and Interactions*, CIRM, Marseille, January 30- March 3, 2017.

- Co-organiser of the Workshop *Ergodic Theory, Algorithms and Rigorous Computations*, a Warwick (UK) du 3 au 7 Avril 2017.

## 1 Teachnig Experience

### 1.1 Courses given at the University of Toulon

- Théorie des distributions, cours en Maîtrise, (1993-1998)
- Théorie de la mesure, cours en L3 Math., (1997-2002, 2008-2012)
- Topologie, en L3 Math., (2002-2007)
- Analyse réelle et complexe, cours et TD en L1 et L2, Math. et PC (1998- 2007)
- Probabilité, en L1 et L2, M1, M2 et pour la préparation au CAPES, (2000-2004), (2008-)
- Algèbre linéaire, en L2, PC, cours et TD (2007-)
- Mathématique pour la Biologie, cours L1 (2007-)
- Cours de mathématique dans le cadre du Diplôme FLE (Français Langue Etrangère), (2008-2011)

### 1.2 Courses in Master M2

- From 2007 to 2012 : "Systèmes Dynamiques" at DEA (later Master M2) em Physique des Particules, Physique Mathématique et Modélisation, du Centre de Physique Théorique, commun aux Universités d'Aix-Marseille et Toulon.
- From 2004 I give a cours in *Systèmes Dynamiques et Aléatoires* at Master M2 *Physique Mathématique* of the University of Toulon.

-**Mémoires de DEA** B. Saussol, M. Pisani, D. Baro, Ph. Marie.

**Stage de Licence L3** : six étudiants en 2016.

**Stage de Master M1 Mathématique** Kevin M. Kouakou (2009), J. Weimer (2014), F. Larsen (2015).

**Stage de Master M2 Mathématique** Mohamed H. Abidi (2010) ; R. Aimino (2011), F. Ducros (2014), T. Caby (2016).

#### **Direction équipes pédagogiques**

As former Directeur of the Department of Mathematics (1997 to 2001), I contributed to the redaction of teaching programs.

## 2 Ph. D. thesis

Supervisor of **16** doctoral thesis : S. Siboni, B. Saussol, V. Penné, J. Luevano, G. Poggiaspalla, M. Kupsa, L. Rossi, J. Nilsson, Ph. Marie, H. Aytac, R. Aimino, R. Lambert, M. Abdelkader, G. Hamza, R.Tarek, Th. Caby.

## 3 Referee

- I evaluated scientific applications for local Institutions in Marseille ; for the French ANR and for foreign Universities.
- I am **Editor** of the journal *Chaos, Solitons and Fractals*.

## 4 Visits, Conferences, Talks : last 4 years

### 4.1 Research visits ( I gave talks during these visits)

- May- August 2012 : CNRS International Funded Research at UMI 2807-CMM, *Center for Mathematical Modeling*, University of Santiago, Chili.

- Departement of Mathematics, University of Lund, Sweden, (J. Schmeling), 18-27 December 2013 in the framework of the *CNRS-GDR- Multifractal Analysis*.
- Visit at the University of Houston from April 20 to May 4, 2013, in the framework of the project PICS *Propriétés statistiques des systèmes dynamiques déterministes et aléatoires*.
- Research residence at the Newton Institute (Cambridge), November and December 2013 for the Workshop *Mathematics for the Fluid Earth*, which I organised together with M. Cullen, K. Fraedrich, V. Lucarini and B. Pelloni.
- Visit at the University of Houston from February 22 to March 16, 2014, in the framework of the project PICS *Propriétés statistiques des systèmes dynamiques déterministes et aléatoires*.
- Visit at the University of Amherst, Massachusetts, from March 16 to April 6 2014 invited par Hongkun Zhang.
- Visit at the Gran Sasso Scientific Institute, (GSSI), L'Aquila (Italie), August 16-30, 2014 during the Workshop *Blowup for the equations of Fluid Dynamics and Renormalization Group methods*.
- Two weeks visit (February 15-March 1) to the Departement of Mathematics of the University of South Wales, Sydney.
- Two weeks at the ESI Institut in Vienna, May 2016, for the ESI Programme on "Mixing Flows and Averaging Methods".
- Three weeks participation at the *Conference on Statistical Properties of Nonequilibrium Dynamical Systems* at SUSTC, Shenzhen, China, on July 27 - August 2, 2016

## 4.2 Talks and Conferences

- 7-10 May 2012; *Progress and Problems in Dynamics*, Houston, 14-16 May 2012, invited.
- Pontificia Universidad Católica de Chile (Santiago), 28 May 2012 : Escape Rates Formulae and Metastability for Randomly perturbed maps.
- Pontificia Universidad Católica de Valparaiso , 6 July 2012 : Extreme value theory for randomly perturbed dynamical systems.
- USACH (Universidad de Santiago de Chile) : 23 July 2012 : On the extreme value Theory in Dynamical Systems
- Centro de Modelamiento Matemático (Santiago) : 27 July 2012 : On statistical properties of randomly perturbed dynamical systems.
- Congreso de Matemática Capricornio (CONCA 2012), Antofagasta (Chili), 1-4 August 2012 (invited) : On some properties of randomly perturbed dynamical systems.
- Montevideo Dynamical Systems, Montevideo (Uruguay), 13-17 August 2012, (invited) : A survey on new results about statistical properties of deterministic and random dynamical systems.
- Conference *Non-equilibrium Statistical Mechanics and the Theory of Extreme Events in Earth Science*, January 8th-11th, 2013, University of Reading, UK, invited.
- Conference *Large deviations and thermodynamical formalism* - 18 to 22 March 2013 and 2 to 8 June 2013 - EPFL, Lausanne, invited.
- Conference *Random Perturbations and Statistical Properties of Dynamical Systems*, Leipzig, 8-12 July 2013, invited.
- Department of Mathematics University of Warwick (UK), November 2013, *Loss of memory for non-uniformly expanding maps*, invited.
- Department of Mathematics University of St. Andrews (UK), November 2013, *Loss of memory and extreme value theory in randomly perturbed dynamical systems*, invited.
- Conference *Non-equilibrium Statistical Mechanics and the Theory of Extreme Events in Earth Science*, Cambridge, October 2013, *Extreme value theory for randomly perturbed systems : getting the local dimensions*, invited.
- Conference *Mathematics for the Fluid Earth*, London, February 20 14, *Sequential dynamical systems : loss of memory and extreme value theory*, invited.
- Department of Mathematics, University of Houston, March 3 2014, *Random and sequential extreme value theory*.
- Department of Mathematics, Northeastern University, Boston, March 27 2014, *On a few statistical properties of sequential dynamical systems*.
- Department of Mathematics, University of Amherst, MA, April 3 2014, *On a few statistical properties of sequential dynamical systems*.
- Département de Mathématique, Université de Versailles et Saint Quentin, 25 Novembre 2014, *Séminaire Perte de mémoire et lois limites dans les systèmes séquentiels*.
- June 1 to June 5, 2015, *Stochastic methods for non-equilibrium dynamical systems*, American Institute of Mathematics, San Jose, California

- Workshop *Recurrence, mixing and fluctuations : statistics of dynamical systems*, Porto, 10th-13th June 2015, held in conjunction with the AMS-EMS-SPM International Meeting in Porto : *On recent results of Extreme Value Theory applied to dynamical systems*.
- Dipartimento di Matematica Università di Pisa (Italy) : *On recent results of extreme value theory applied to dynamical systems*, 17 juillet 2015.
- Dipartimento di Matematica Università di Bologna (Italy), *On a few recent results on statistical properties for sequential systems*, 29 Octobre 2015.
- Institut d'études scientifiques de Cargèse (IESC), Workshop *Statistical and mathematical tools for the study of climate extremes*, 9-13 Novembre 2015 : *Extreme values for random and sequential systems and couple map lattices*.
- Dipartimento di Matematica Università di Bologna (Italy), March 14, 2016 : *Optimal decay of correlations in low-dimensional dynamical systems*
- Instituto de Matematica y Estadística, University of Montevideo, April 1, 2016, *Optimal decay of correlations for non-uniformly hyperbolic systems*.
- Pontificia Universidad Católica de Valparaíso, Avril 15, 2016, *Optimal decay of correlations for non-uniformly hyperbolic systems*.
- Pisa (Italie), participation at the Conference *Analytical Methods in Classical and Quantum Dynamical Systems*, June 26, July 2 2016.
- Workshop *Fractals, Ergodic Theory and Number Expansions*, Utrecht, August 30, September 2, 2016 : *On a few statistical properties of sequential and random fibred systems*.
- Workshop *Statistical Properties of Dynamical Systems*, Porto (Portugal), September 6 to 9, 2016, *Limit theorems for randomly perturbed systems*.
- Workshop *Applications of statistical-mechanics and dynamical systems to climate*, November 15-16, 2016, LSCE CEA Saclay : *Extreme Value theory in Dynamical Systems*.

## LIST OF PUBLICATIONS

**Books** *Extremes and Recurrence in Dynamical Systems*, Wiley Interscience, 2016, Pure and Applied Mathematics : A Wiley Series of Texts, Monographs and Tracts, 9781118632192, hal-01258387v1  
Auteurs : Valerio Lucarini, Davide Faranda, Ana Cristina Moreira Freitas, Jorge Milhazes Freitas, Mark Holland, Tobias Kuna, Matthew Nicol, Mike Todd, Sandro Vaienti

### Referred journals : submitted

4. D. DRAGICEVIC, G. FROYLAND, C. GONZALEZ-TOKMAN, S. VAIENTI, Almost sure invariance principle for random piecewise expanding maps, submitted, <https://arxiv.org/pdf/1611.04003.pdf>
3. A.C.M. FREITAS, J.M. FREITAS, S. VAIENTI, Extreme value laws for sequences of intermittent maps, submitted, <http://arxiv.org/pdf/1605.06287.pdf>
2. S. VAIENTI, H. ZHANG Optimal bounds on correlation decay rates for nonuniform hyperbolic systems, submitted, <https://arxiv.org/pdf/1605.01793.pdf>
1. H. HU, S. VAIENTI, Polynomial Decay for Non-uniformly Expanding Maps, submitted, <http://arxiv.org/submit/74hal-01127756v1>

### Referred journals : published

89. M. NICOL, A. TÖRÖK, S. VAIENTI, Central limit theorem for sequential and random intermittent dynamical systems, *Ergodic Theory and Dynamical Systems* DOI : <https://doi.org/10.1017/etds.2016.69>  
Published online : 22 September 2016, pp. 1-27
88. A.C.M. FREITAS, J.M. FREITAS, S. VAIENTI, Extreme value laws for nonstationary processes generated by sequential and random dynamical systems, à paraître dans *Annales de l'Institut Henri Poincaré*, arxiv : 1510.04357, accepted 06/04/2016.
87. A.C.M. FREITAS, J.M. FREITAS, M. TODD, S. VAIENTI, Rare events for the Manneville-Pomeau map, soumis, *Stochastic Processes and their Applications*, **126**, Issue 11, (2016), Pages 3463-3479
86. N. HAYDN, M. NICOL, A. TOROK, S. VAIENTI, Almost sure invariance principle for sequential and non-stationary dynamical systems, à paraître dans *Trans. Amer Math. Soc.*, accepté le 23 Août 2015, <https://arxiv.org/submit/1002>, hal-01127754v1
85. D. FARANDA, J.M. FREITAS, P. GUIRAUD, S. VAIENTI, Extreme Value Theory for Piecewise Contracting Maps with Randomly Applied Stochastic Perturbations, *Stochastic and Dynamics*, **16**, 3, 23 p., (2016) <http://arxiv.org/abs/1501.02913>, hal-01127758v1
84. G. TURCHETTI, S. SINIGARDI, G. SERVIZI, F. PANICHI, S. VAIENTI, Errors, correlations and fidelity for noisy hamiltonian flows. theory and numerical examples, *Journal of Physics A : Mathematical and Theoretical*, **50**, Number 6, (2017), doi :10.1088/1751-8121/aa5192.
83. D. FARANDA, J.M. FREITAS, P. GUIRAUD, S. VAIENTI, Statistical properties of random dynamical systems with contracting direction, accepté par publication en Février 2016 dans *J. Phys. A : Math. Theor*, hal-01258390v1
82. R. AIMINO, M. NICOL, S. VAIENTI, Annealed and quenched limit theorems for random expanding dynamical systems, *Probability Theory and Related Fields*, June 2015, **162**, Issue 1, pp 233-274, <http://arxiv.org/abs/1310.4359>, hal-01126718v1
81. H. AYTAC, J.M. FREITAS, S. VAIENTI, Laws of rare events for deterministic and random dynamical systems, *Trans. Amer Math. Soc.*, **367**, no. 11, 8229-8278, 2015, [arxiv.org/pdf/1207.5188](http://arxiv.org/pdf/1207.5188), hal-01126671v1
80. R. AIMINO, H. HU, M. NICOL, A. TOROK, S. VAIENTI, Polynomial loss of memory for maps of the interval with a neutral fixed point, *Discrete and Continuous Dynamical Systems*, **A3 5**, 3, 793-806 (2015) <http://arxiv.org/pdf/1402.4399.pdf>, hal-01126735v1
79. R. AIMINO, S. VAIENTI, *A note on the large deviations for piecewise expanding multidimensional maps*, in Nonlinear Dynamics : New Directions, Theoretical Aspects 1, Edgardo Ugalde, Gelasio Salazar, Editors, Series Mathematical Method and Modeling, Springer, 1-10, 2015, <http://arxiv.org/abs/1110.5488>, hal-01126638v1
78. W. BAHOUN, J. SCHMELING, S. VAIENTI, On transfer operator and maps with random holes, *Nonlinearity*, **28**, 713-731, 2015, <http://arxiv.org/pdf/1405.0361.pdf>, hal-01126738v1

77. L. BOUCHARA, O. OURRAD, X. LEONCINI, S. VAIENTI, Anomalous transport and observable average in the standard map, *Chaos, Solitons and Fractals*, Volume **78**, September 2015, Pages 277-284, hal-01258380v1
76. D. FARANDA, F.M.E. PONS, E. GIACHINO, S. VAIENTI, B. DUBRULLE, Early Warnings Indicators of Financial Crises via Auto Regressive Moving Average Models, *Communications in Nonlinear Science and Numerical Simulation*, Volume **29**, Issues 1-3, December 2015, Pages 233-239, hal-01258385v1
75. D. FARANDA, J.M. FREITAS, P. GUIRAUD, S. VAIENTI, Sampling local properties of attractors via extreme value theory, *Chaos, Solitons and Fractals*, Volume **74**, May 2015, Pages 55-66, <http://arxiv.org/pdf/1407.0412.pdf>, hal-01126747v1
74. W. BASHOUN, H. HU, S. VAIENTI, Pseudo-Orbits, Stationary Measures and Metastability, *Dynamical Systems : an International Journal*, **29**, Issue 3, (2014), p. 322-336, <http://arxiv.org/pdf/1211.2952.pdf>, hal-01126704v1
73. D. FARANDA, S. VAIENTI, Extreme Value laws for dynamical systems under observational noise, *Physica D*, **280-281**, (2014), 86-94, 2014, arXiv :1308.5624, hal-01126706v1
72. D. FARANDA, X. LEONCINI, S. VAIENTI, Mixing properties in the advection of passive tracers via recurrences and extreme value theory, *Physics Review E*, **90**, 019902, Published 14 July 2014, [arxiv.org/abs/1402.3798](http://arxiv.org/abs/1402.3798), hal-01126730v1
71. N. HAYDN, M. NICOL, T. PERSSON, S. VAIENTI, A note on Borel-Cantelli Lemmas for non-uniformly hyperbolic dynamical systems, *Ergodic Theory and Dynamical Systems*, **33**, 02, 475-498, (2013), [arxiv.org/pdf/1103.2113.pdf](http://arxiv.org/pdf/1103.2113.pdf), hal-00975710, v1
70. N. HAYDN, M. NICOL, S. VAIENTI, L. ZHANG, Central limit theorems for the shrinking target problem, *Journal of Statistical Physics*, **153**, (2013), 864-887 <http://arxiv.org/pdf/1305.6073.pdf>, hal-01126678v1
69. W. BASHOUN, S. VAIENTI, Escape rates formulae and metastability for randomly perturbed maps, *Nonlinearity*, **26** (2013) 1415-1438, [arxiv.org/pdf/1206.3654](http://arxiv.org/pdf/1206.3654), hal-01126644v1
68. D. FARANDA, J.-M. FREITAS, V. LUCARINI, G. TURCHETTI, S. VAIENTI, Extreme Value Statistics for Dynamical Systems with Noise, *Nonlinearity*, **26**, 2597-2622, (2013), <http://arxiv.org/pdf/1208.558> hal-01126656v1
67. D. FARANDA, S. VAIENTI, A new recurrences based technique for detecting robust extrema in long temperature records, *Geophysical Research Letters*, **40**, Issue 21, 16 November 2013, Pages : 5782-5786 arXiv :1308.5622, hal-01126695v1
66. M. GIANFELICE, F. MAIMONE, V. PELINO, S. VAIENTI, On the recurrence and robust properties of Lorenz'63 model, *Communication in Mathematical Physics*, **313**, 3, 745-779, (2012), [arxiv.org/pdf/1103.1850.pdf](http://arxiv.org/pdf/1103.1850.pdf), hal-00957501v1
65. W. BASHOUN, S. VAIENTI, Metastability of certain intermittent maps, *Nonlinearity*, **25**, 107-124, (2012), [arxiv.org/pdf/1105.0538.pdf](http://arxiv.org/pdf/1105.0538.pdf), hal-00975711v1
64. D. FARANDA, V. LUCARINI, G. TURCHETTI, S. VAIENTI, Extreme value distributions for singular measures, *Chaos*, **22**, 023135, (2012), 17 pages, [arxiv.org/abs/1106.2299](http://arxiv.org/abs/1106.2299), hal-00975713v1
63. D. FARANDA, V. LUCARINI, G. TURCHETTI, S. VAIENTI, Generalized Extreme Value distribution parameters as dynamical indicators of Stability, *International Journal of Bifurcation and Chaos*, **22**, N°11, 1250276, (2012), 13 pages, [arxiv.org/pdf/1107.5972](http://arxiv.org/pdf/1107.5972), hal-00975712v1
62. D. FARANDA, V. LUCARINI, G. TURCHETTI, S. VAIENTI, Numerical convergence of the block-maxima approach to the Generalized Extreme Value distribution, *Journal of Statistical Physics*, **145**, 1156-1180, (2011), hal-00975709v1
61. J. ALVES, J. FREITAS, S. LUZZATTO, S. VAIENTI, From rates of mixing to recurrence times via large deviations, *Advances in Mathematics*, **228**, (2011) 1203-123, hal-00957684v1
60. G. TURCHETTI, S. VAIENTI, F. ZANLUNGO, Asymptotic distribution of global errors in the numerical computations of dynamical systems, *Physica A : Statistical Mechanics and its Applications*, **389**, (2010), 4994-5006, hal-00476240v1
59. G. CRISTADORO, N. HAYDN, Ph. MARIE, S. VAIENTI, Statistical properties of intermittent maps with unbounded derivative, *Nonlinearity*, **23**, 1071-1096, (2010), hal-01258190v1
58. G. TURCHETTI, S. VAIENTI, F. ZANLUNGO, Relaxation to the asymptotic distribution of global errors due to round off, *Europhys. Lett.*, **89**, 40006, (2010), hal-01258199v1

57. Ph. MARIE, G. TURCHETTI, S. VAIENTI, F. ZANLUNGO, Error Distribution in randomly perturbed orbits, *Chaos*, **19**, 043118, (2009), hal-00476224v1
56. G. MANTICA, S. VAIENTI, On the statistical distribution of first-return times of balls and cylinders in chaotic systems, *International Journal of Bifurcations and Chaos*, **20**, 1845-1858, (2010), hal-00476239v1
55. N. HAYDN, S. VAIENTI, The Rényi Entropy Function and the Large Deviation of Short Return Times, *Ergodic Theory and Dynamical Systems*, **30**, 159-179, (2010), hal-00294306v1
54. H. HU, S. VAIENTI, Absolutely continuous invariant measures for non-uniformly expanding maps, *Ergodic Theory and Dynamical Systems*, **29**, 1185-1215, (2009), hal-00012575v1
53. N. HAYDN, S. VAIENTI, The compound Poisson distribution and return times in dynamical systems, *Probability Theory and Related Fields*, **144**, (2009), 517-542, hal-00285201v1
52. M. ABADI, S. VAIENTI, Large deviations for short returns, *Discrete and Continuous Dynamical Systems A*, **21**, (2008), 729-747, hal-00294301v1
51. N. HAYDN, E. LUNEDEI, S. VAIENTI, Averaged number of visits, *Chaos*, **17**, 033119, 13 pages, (2007), hal-00476241v1
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