

1 Curriculum vitæ

Name : Xiangyu LIANG
Date of birth : 03.02.1984;
Citizenship : Chinese;
Qualification: Ph.D. in mathematics

Contact

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1.1 Actual situation

2014.9-present Maître de conférences at Université Claude Bernard Lyon 1

2012.9-2014.8 Postdoctoral Research Fellow at University of Warwick

2010-2012 Teaching assistant at Université Paris-Sud 11

2007-2010 Ph.D fellowship funded by Région Ile de France at Université Paris-Sud 11

1.2 Education and Qualifications

2007.9-2010.12 Ph.D student at Université de Paris-Sud XI (Orsay, France), under the supervision of Guy David.
Title : Ensembles et cônes minimaux de dimension 2 dans les espaces euclidiens.
Defense at Université de Paris-Sud XI on December 7th, 2010.
Commitee of defense : President : Jean-Pierre Kahane. Reporters : Thierry De Pauw, Nicola Fusco. Examinators : Françoise Dibos, Filippo Santambrogio. Supervisor : Guy David.

2006.9-2007.7 Master at l'Université de Paris-Sud XI.
Title of master memoir : Soap films and covering spaces, after Kenneth A. Brakke.
Advisor : Guy David.

2002.9-2006.7 Undergraduate student of mathematics at Tsinghua University (Beijing, P.R.C).

2 Research activities

2.1 Publications and preprints

Publications

- [1] Xiangyu Liang, *Ensembles et cônes minimaux de dimension 2 dans les espaces euclidiens*, Ph.D. thesis, Université de Paris-Sud 11, Orsay, December 2010.
- [2] Xiangyu Liang, *Almgren-minimality of unions of two almost orthogonal planes in \mathbb{R}^4* , Proc. Lond. Math. Soc. (3) 106 (2013), no. 5, 1005-1059.
- [3] Xiangyu Liang, *Topological minimizers and their applications*, Calc. Var. Partial Differential Equations 47 (2013), no. 3-4, 523-546.
- [4] Xiangyu Liang, *Almgren and topological minimality for the set $Y \times Y$* , Journal of Functional Analysis 266 (2014), 6007-6054.

Articles accepted for publication

- [5] Xiangyu Liang, *Global regularity for minimal sets near a \mathbb{T} set and counter examples*, to appear in Revista Matemática Iberoamericana. [arXiv:1112.3565]
- [6] Xiangyu Liang, *Regularity for minimal sets near a union of two planes*, to appear in Annales de L'Institut Fourier, [arXiv:1203.0560].

Preprints

- [7] Xiangyu Liang, *On the topological minimality of unions of planes of arbitrary dimension*, [arXiv: 1312.3489].
- [8] Xiangyu Liang, *Limits of topological minimal sets with finitely generated coefficient group*, [arXiv: 1403.3838].

2.2 Talks given at seminars and conferences

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| Dec 2009 | "Ensembles et cônes minimaux de dimension 2 dans \mathbb{R}^4 ", at the seminar of analysis of Fourier Institute, Grenoble. |
| Dec 2009 | "Ensembles et cônes minimaux de dimension 2 dans \mathbb{R}^4 ", at the seminar of harmonic analysis of Université Paris-Sud XI (Orsay). |
| Dec 2009 | "Ensembles minimaux", at Ph.D students seminar at Université Paris-Sud XI. |
| Aug 2010 | "Minimal sets", International conference on fractals and dynamic system, East China normal university, Shanghai. |
| Mar 2011 | "Ensembles et Cônes minimaux de dimension 2 dans \mathbb{R}^4 ", at the seminar of geometry and analysis of University of Nice. |
| May 2011 | "Ensembles minimaux", at the seminar of analysis of University of Toulouse. |

Oct 2011	"Probleme de Plateau, ensemble minimal et la classification des singularites de dimension 2", at the seminar of ergodic theory and dynamical systems of University of Picardy, Amien.
Nov 2011	"Ensembles minimaux et topologie", at the seminar of analysis of Fourier Institute, Grenoble.
May 2012	"Ensembles minimaux", at the seminar of calculus of variations at Université Paris Sud, Orsay.
Sept 2012	"Minimal sets", at the Birmingham-Warwick analysis seminar at University of Warwick.
Dec 2012	"An introduction to the theory of minimal sets and their local structure", International conference on advances on Fractals and related topics, Hong Kong.
Dec 2012	"An introduction to the theory of minimal sets and their local structure", Tsinghua University, department of mathematical science, Beijing.
Jul 2013	"Minimal sets and classification of singularities", International Congress of Chinese Mathematicians, Taipei.
Aug 2013	"stationary varifold and uniqueness of tangent behavior", Morningside Centre of Mathematics, Chinese Academy of Sciences, Beijing.
Oct 2013	"Minimal sets and classification of singularities", ERC Workshop on Geometric Measure Theory, Analysis in Metric Spaces and Real Analysis, Centro De Giorgi, Scuola Normale Superiore Pisa.
Jan 2014	"An introduction to the theory of minimal sets", series lecture given during the visit to Chinese University of Hong Kong, Hong Kong.
Mar 2014	"Comparison surfaces", Max Planck Institute, Golm, Germany.
Apr 2014	"Topological minimal sets", Max Planck Institute, Golm, Germany.
Apr 2014	"Minimal sets and classification of singularities", University of Helsinki, Finland.
Apr 2014	"Minimal sets and classification of singularities", University of Jyväskylä, Finland.
July-August 2014	"An introduction to the theory of minimal sets", series lecture given during the visit to the Mathematical Science Centre at Tsinghua University.
Oct 2014	"Plateau's problem, minimal sets and classification of singularities", Université Lyon 1, Lyon, France.
Nov 2014	"Plateau's problem, minimal sets and classification of singularities", Ecole centrale Lyon, Lyon, France.
Nov 2014	"Plateau's problem, minimal sets and classification of singularities", Toulouse, France.

2.3 Participations to national and international conferences

Jul 2008	Harmonic analysis conference at Orsay, in honor of Noël Lohoué, Orsay.
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Oct 2008	Optimal transportation, geometry and functional inequalities, Pisa, Italy.
Nov 2008	Optimal transportation and applications, Pisa, Italy.
Jun 2009	Harmonic analysis, geometric measure theory and quasiconformal mappings, CRM, Bellaterra, Espagne.
May 2010	CODY Fourth Year Conference : Conformal Methods in Analysis and Dynamics, Seillac, France.
Jun 2010	GNAMPA - ERC SUMMER SCHOOL (Analytic Techniques for Geometric and Functional Inequalities), Ischia, Italy.
Aug 2010	International conference on fractals and dynamic system, East China normal university, Shanghai, China
Jun 2011	Fractal and related fields II, Porquerolles, France.
Jun-Jul 2011	SMS 2011 Summer School "Metric Measure Spaces: Geometric and Analysis Aspects", Montréal, Canada.
Jul 2012	AEI workshop "Geometric measure theory", Golm, Germany.
Oct 2012	First meeting of the ANR project "GEOMETRYA", Lyon, France.
Dec 2012	International conference on advances on Fractals and related topics, Hong Kong.
Jul 2013	International Congress of Chinese Mathematicians, Taipei.
Sep 2013	Metric and variational structures in singular varieties, Chambéry.
Oct 2013	ERC School on Geometric Measure Theory and Real Analysis, Pisa.
Oct 2013	ERC Workshop on Geometric Measure Theory, Analysis in Metric Spaces and Real Analysis, Pisa.

2.4 Academic visits

Apr 2013	Université Paris Sud, Orsay, France, 1 week.
Dec 2013- Jan 2014	Chinese University of Hong Kong, Hong Kong, 6 weeks.
Mar-Apr 2014	Max Planck Institute, Golm, Germany, 3 weeks.
Apr 2014	University of Helsinki and University of Jyväskylä, Finland, 1 week.
July-Aug 2014	Mathematical Science Centre at Tsinghua University, Beijing, 2 months

3 Teaching and administrative activities

3.1 Teaching experience

2010-2011	University of Paris 11, Year 1 Term 1 Linear algebra I, tutorial class, 90 hours
2011-2012	University of Paris 11, Year 2 Term 1 Linear algebra II, tutorial class, 30 hours
2011-2012	University of Paris 11, Year 2 Term 1 Mupad, Practical work, 15 hours
2011-2012	University of Paris 11, Year 1 Term 1 Calculus, tutorial class, 45 hours
2011-2012	University of Paris 11, Year 1 Term 2 Analysis, tutorial class, 30 hours
2011-2012	University of Paris 11, Year 2 Term 2 Linear algebra, tutorial class, 45 hours
2014-2015	University of Tsinghua, Lecture "An introduction to the theory of minimal sets", 24 hours
2014-2015	University Lyon 1, Year 2 Term 1 Algebra III, tutorial class, 66 hours
2014-2015	University Lyon 1, Year 3 Term 1 Measure and integration, tutorial class, 16 hours

3.2 Administrative activities

2008-2011	I was the organizer of a student's reading seminar at Orsay. (Participants are Chinese Ph.D. students from universities at Paris.)
2012-2013	I was in two interview committees, and interviewed candidates for Ph.D. study with Professor David Preiss, and candidates for Postdoctoral Fellowship with Professor David Preiss respectively.