

Curriculum Vitae

Surname: Lysenko **Forenames:** Sergey Anatolievich

Institutional affiliation address:

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Date and Place of Birth: 23 December 1969 at Kharkov (Ukraine)

Nationality: France

Permanent residency: France

Marital Status: Unmarried

Education:

- B. Sc. Kharkov State University, Ukraine (1994)
- PhD course hold jointly in Kharkov State University and University Paris-Sud (Orsay, France) under supervision of Professors V. G. Drinfeld and G. Laumon.
Ph.D thesis "Orthogonality relations between automorphic sheaves attached to 2-dimensional irreducible local systems on a curve" defended at University Paris-Sud (April 1999).

Field of study: Algebraic geometry, geometric Langlands program,
geometric representation theory

Employment:

- professor at Université de Lorraine (since 1.09.2008 till present)
- member of IAS (Princeton, USA) for the academic year 2006-2007
- maitre de conférences at University Paris 6 (01.09.2001 - 31.08.2008)
- Postdoctoral European Institute Fellow (IPDE) at IHES, Bures-sur-Yvette, France (2000/2001 academic year)
- ATER, a full-time teaching position, University Paris-Sud, Orsay (1999/2000 academic year)

Degree:

- Ph.D in pure mathematics, University Paris-Sud (France), awarded April 9, 1999
- Habilitation à diriger les recherches, awarded June 14, 2006 (University Paris 6, France)

Visiting positions (at least one month):

- Max-Plank Institute, Bonn, Germany (spring term 2000)
- University of Chicago, USA (October 2000)
- Tata Institute of Fundamental Research, Bombay, India (February 2001)
- Tata Institute of Fundamental Research, Bombay, India (January 2002)
- University of Chicago, USA (May 2004)

Grants:

- INTAS 94-4720 (Kharkov group of INTAS)
- PhD course at University Paris-Sud supported by a grant of French government
- BQR Region Lorraine joint with Universit de Lorraine, 2010
- coordinator of the ANR VARGEN project ANR-13-BS01-0001-0

PhD students:

- Lizao Ye, advanced to candidacy, October 2014

- Banafsheh Farang Hariri (thesis defended in 2012, University Paris 6)

Invitations to conferences:

- workshop Geometric Langlands (ANR VARGEN), April 2014
- Towards the proof of the geometric Langlands conjecture, IAS Jerusalem, March 2014
- Automorphic forms and harmonic analysis on covering groups (American Institute of Mathematics, Palo Alto, California), June 2013
- Conference in honor of Gérard Laumon, IHES, June 2012
- Theta festival, Postech (Pohang, South Korea) August 2011
- Double affine Hecke algebras, the Langlands program, affine flag varieties, Conformal field theory, Super Yang-Mills theory, Luminy (CIRM)- Cargese, June-July 2011
- Derived categories of algebro-geometric origin and integrable systems, IAS Jerusalem, December 2010
- Representation Theory of Real Reductive Groups, University of Utah, July 2009
- The Geometric Langlands Program (Lorentz center, Pays-Bas) July 2008
- Conference on vector bundles in honour of S. Ramanan, Miraflores de la Sierra (Madrid, Spain), Juin 2008
- Geometric Langlands, CIRM (France), Juin 2006
- Representation theory, geometry and automorphic forms, in honour of Joseph Bernstein's 60th birthday (Tel Aviv University), June 2005
- Conference on the geometric Langlands correspondence (Institute for Advanced Studies, Jerusalem), June 2005
- Noncommutative aspects of number theory, Durham University, invited mini-course on geometric Langlands, August-September 2003
- Geometric Aspects of the Langlands Program, Mars 2002, MSRI (Berkeley, USA)
- geometric Langlands program, TIFR (Bombay), final conference of the program 2001-2002
- Geometric Aspects of the Langlands Program, TIFR (Bombay), invited mini-course
- Journées jeunes chercheurs en théorie de nombres, University of Bordeaux 1, June 2000

- EMS Summer School in Algebraic Geometry (Eger, Hungary), July- August 1996

List of publications

- 1) S. Lysenko, On the functional equation $f(p(z)) = g(q(z))$, where f and g are meromorphic functions, and p and q are polynomials. Math. Physics, Analysis and Geometry, vol. 2, No.1, p.68-86 (1995) (Russian)
- 2) S. Lysenko, On the functional equation $f(p(z)) = g(q(z))$, where p, q are "generalized" polynomials and f, g are meromorphic functions, Izv. Ross. Akad. Nauk Ser. Math., vol. 60, No.5, p.89-110 (1996), translation in: Izv. Math. 60 (1996), no. 5, p. 963-984
- 3) S. Lysenko, On the functional equation $f(p(z)) = g(q(z))$, where f and g are meromorphic functions, and p and q are generalized polynomials, Dopov. Nats. Akad. Nauk Ukr. Math. Prirodozn. Tekh. Nauki, No. 7, p.31-34 (1997) (Russian)
- 4) D. Arinkin and S. Lysenko. Invertible sheaves on the moduli variety of $SL(2)$ -bundles with a connection on \mathbb{P}^1 , Dopov. Nats. Akad. Nauk Ukr. Math. Prirodozn. Tekh. Nauki, No.6, p.7-11 (1997) (Russian).
- 5) D. Arinkin and S. Lysenko. Isomorphisms between moduli spaces of $SL(2)$ -bundles with connections on $\mathbb{P}^1 \setminus \{x_1, \dots, x_4\}$, Math. Research Letters, vol. 4, No.2-3 (1997), p.181-190.
- 6) D. Arinkin and S. Lysenko. On the moduli of $SL(2)$ -bundles with connections on $\mathbb{P}^1 \setminus \{x_1, \dots, x_4\}$. IMRN, No. 19, p.983-999 (1997).
- 7) S. Lysenko, Local geometrized Rankin-Selberg method for $GL(n)$ and its application, C.R. Acad. Sci. Paris, t.329, Serie 1, p.1065-1070 (1999).
- 8) S. Lysenko, Local geometrized Rankin-Selberg method for $GL(n)$, Duke Math. J., vol. 111, no.2 (2002)
- 9) S. Lysenko, Whittaker and Bessel functors for GSp_4 , Annales Institut Fourier, t.56, No. 5 (2006), 1505-1565
- 10) S. Lysenko, Geometric Bessel models for GSp_4 and multiplicity one, IMRN, vol. 43 (2005), p. 2657-2694
- 11) S. Lysenko, Moduli of metaplectic bundles on curves and Theta-sheaves, Ann. Scient. École Norm. Sup., 4^e série, t. 39 (2006), p. 415-466
- 12) S. Lysenko, Geometric Waldspurger periods. Compos. Math. 144 (2008), no. 2, p. 377-438

- 13) V. Lafforgue, S. Lysenko, Geometric Weil representation: local field case, *Compos. Math.* 145 (2009), no. 1, 56–88
- 14) S. Lysenko, Geometric theta-lifting for the dual pair $\mathrm{SO}_{2m}, \mathrm{Sp}_{2n}$, *Annales ENS*, 4e serie, t. 44 (2011), p. 427-493
- 15) M. Finkelberg, S. Lysenko, Twisted geometric Satake equivalence, *J. Inst. Math. Jussieu*, 9 (2010), no. 4, p. 719739
- 16) V. Lafforgue, S. Lysenko, Compatibility of the Theta correspondence with the Whittaker functors, *Bull. Soc. math. France*, 139 (1), (2011), p. 75-88
- 17) A. Genestier, S. Lysenko, Geometric Weil representation in characteristic two, *J. Inst. Math. Jussieu*, vol. 11/ Issue 02 (2012), p. 221-271
- 18) V. Lafforgue, S. Lysenko, Geometrizing the minimal representations of even orthogonal groups, *Represent. Theory* 17 (2013), 263-325
- 19) S. Lysenko, Twisted geometric Langlands for a torus, to appear in *IMRN*

Preprints

- 1) S. Lysenko, Orthogonality relations between automorphic sheaves attached to irreducible local systems of rank 2 on a curve, PhD thesis (1999)
http://www.math.u-psud.fr/~biblio/the/1999/2111/the_1999_2111.html
- 2) S. Lysenko, Global geometrised Rankin-Selberg method for $\mathrm{GL}(n)$, *math.AG/0108208*
- 3) S. Lysenko, On automorphic sheaves on Bun_G , *math.RT/0211067*
- 4) S. Lysenko, Geometric theta-lifting for the dual pair $\mathrm{GSp}_{2n}, \mathrm{GO}_{2m}$, *arXiv:0802.0457*
- 5) S. Lysenko, Geometric Whittaker models and Eisenstein series for Mp_2 , *arXiv:1211.1596*
- 6) S. Lysenko, Geometric Waldspurger periods II, *arXiv:1308.6531*
- 7) S. Lysenko, Geometric Eisenstein series: twisted setting, *arXiv:1409.4071*