

Simon Pepin Lehalleur

Curriculum Vitae

Personal information and contact

Nationality: French

Date of birth : 9th of January 1986

Mail: simonpl@zedat.fu-berlin.de

RESEARCH AND TEACHING

Research interests

Mixed motives; triangulated categories of mixed motives over a base.

6 operations formalism.

Relative 1-motives; abelian schemes, Picard schemes, Neron models and related objects.

Motives of moduli stacks of bundles

Motivic aspects of intersection cohomology and perverse sheaves.

Shimura varieties, their compactifications and associated motives.

Research positions

Postdoc position in the research group of Prof. Hélène Esnault (supported by Einstein visiting professor Vasudevan Srinivas) 2016-

Phd with Prof. Joseph Ayoub (University Zürich), defended on November 6th 2015 2011-2015

Title: "An abelian category of relative 1-motives"

2 years as a PhD student in Paris 13 under the supervision of Prof. Jörg Wildeshaus 2009-2011

Research articles

Subgroups of maximal rank of reductive groups, in "Autour des schémas en groupes", *Panoramas et Synthèses* 47, 2015

On the relative motive of a commutative group scheme (with G. Ancona and A. Huber), *Algebraic geometry*, vol. 3 issue 2, 2016

The motivic t -structure for relative 1-motives, arXiv:1512.00266

Research talks

The Voevodsky motive of the moduli stack of vector bundles, Berlin February 2016

The motivic t -structure for relative 1-motives, Rennes, November 2016

Relative 1-motives, Mumbai, October 2016

The motivic t -structure for relative 1-motives, Conference "Generalizations of A-Homotopy Invariance in Algebraic Geometry and Homotopy Theory" April 2016

The motivic t -structure for relative 1-motives, Regensburg, January 2016

The motivic t -structure for relative 1-motives, Freiburg (Oberseminar), October 2015

Deligne 1-motives in the triangulated categories of mixed motives, Paris Réga	December 2012
The Borel-De Siebenthal theorem, Luminy (SGA3 summer school)	September 2011
Motives and compactifications of Shimura varieties, Zürich (Prodoc Seminar)	December 2009

Research grants

Forschungskredit: Candoc, University of Zürich, 55200 CHF	2013-2014
---	-----------

Teaching

Teaching assistant (TA) for graduate level courses: Algebraic Geometry (Prof. Joseph Ayoub), Differential Forms in Algebraic Topology (Prof. Camilo Arias Abad).

TA for Lineare Algebra in German (Prof. Christian Okonek)

TA for an programming online course based on Python (Prof. Paul-Olivier Dehaye); writing the automatic grader in Python and the programming assignments.

EDUCATION

A semester in Northeastern University (Boston) studying with Prof. Marc Levine	2008
M2 of mathematics in University Paris 7 Denis Diderot	2008
M2 memoir under the supervision of Anne Queguiner-Mathieu (University Paris 13)	2008
“Agrégation de Mathématiques”	2007
M1 of mathematics with mention, université Paris 11 Orsay	2006
L3 of mathematics with mention, université Paris 11 Orsay	2006
Passed the competitive examination to enter the Ecole Normale Supérieure	2005
“Classes préparatoires” in the lycée Henri IV (Paris)	2003-2004

SKILLS AND MISCELLANEA

Languages

French : native

English : written, spoken (fluent)

Spanish : written, spoken (near-fluent)

German : written, spoken (B2)

Programming and software environments

Working knowledge of Python for scientific computing (numpy, scipy, pandas, scikit-learn)

Service

Coorganised the Graduate Colloquium of the Graduate School of Mathematics Zürich 2013-2014

Worked with the association Animath on the preparation of French high-school students for the International Mathematical Olympiads 2012

Competitions and awards

Participated in the International Mathematical Olympiads

2003

"Concours Général de mathématiques", Paris, 3rd place

2003