

Arno Kret

Curriculum Vitae



Faculty of Science,
KdV-Instituut
Amsterdam, 1090 GE
T +31(0)205256079
E arnokret@gmail.com
staff.fnwi.uva.nl/a.l.kret/

Experience

Assistant Professor, <i>University of Amsterdam</i> , Amsterdam.	Aug 2015–present
Professeur Invité, <i>Ecole Polytechnique</i> , Paris.	Sept 2015–Oct 2015
Post-Doc, <i>Max-Planck-Institut für Mathematik</i> , Bonn.	Jan 2015–Aug 2015
Post-Doc, <i>Mathematical Sciences Research Institute</i> , Berkeley.	Aug 2014–Dec 2014
Member, <i>Institute for Advanced Study</i> , Princeton.	Sept 2013–July 2014
Phd Student, <i>Université Paris-Sud 11</i> , Orsay.	Sept 2009–Sept 2013

Education

PhD mathematics, <i>Université Paris-Sud 11</i> , Orsay, <i>Mention Très Honorable</i> .	June 2013
MSc mathematics, <i>Leiden University</i> , Leiden, <i>Cum Laude</i> .	Sept 2009
MSc mathematics, <i>Université Paris-Sud 11</i> , Orsay, <i>Mention Très Bien</i> .	Sept 2009
BSc mathematics, <i>Leiden University</i> , Leiden, <i>Cum Laude</i> .	Sept 2007

Research Grants

VENI grant (250k€), <i>the Dutch organisation for scientific research (N.W.O.)</i> , 2017–2020.	2016
Mathematics Cluster PhD position (100k€), <i>the Dutch organisation for scientific research (N.W.O.)</i> , 2018–2021.	2017

Publications

Galois generic points on Shimura varieties (with Anna Cadoret), <i>Algebra and Number theory</i> .	2016
Combinatorics of the basic stratum, <i>Documenta Mathematica</i> .	2015
Equidistribution in supersingular Hecke orbits, <i>Journal für die Reine und Angewandte Mathematik</i> .	2014
The basic stratum of some simple Shimura varieties, <i>Mathematische Annalen</i> .	2013
Jacquet modules of Ladder representations (with Erez Lapid), <i>Comptes Rendus</i> .	2012

Preprints

Galois representations for the general symplectic group (with Sug Woo Shin), *submitted*.
The trace formula and the existence of Newton strata modulo p , *submitted*.
Existence of cuspidal representations of p -adic reductive groups, .
Integral points on Hilbert-Blumenthal varieties (with Rafael von Känel), *in preparation*.

International visits

Guest researcher, <i>Korea Institute for Advanced Study</i> .	July 2018
Guest researcher, <i>Korea Institute for Advanced Study</i> .	July 2017

Professeur invité, <i>Ecole Polytechnique</i> , Paris.	Sept 2015
Guest researcher, <i>Korea Institute for Advanced Study</i> , Seoul.	July 2015
Universtiy of Jerusalem, .	June 2011

Talks

Integral points on Hilbert modular varieties, <i>Effective Methods for Diophantine Problems</i> .	June 2018
Galois representations for the general symplectic group, <i>London Number Theory Seminar</i> .	June 2018
Galois representations for the general symplectic group, <i>Conference Reductive groups and automorphic forms at IHES</i> .	May 2018
The Langlands program, <i>UvA Faculty Colloquium</i> .	Jan 2018
Représentations Galoisiennes pour GSp , <i>Université de Strassbourg</i> .	Oct 2017
Galois representations for the general symplectic group, <i>Workshop N-cube Days VII</i> .	Oct 2017
Galois representations for the general symplectic group, <i>Joint seminar IAS and University of Princeton</i> .	Mar 2017
Galois representations for the general symplectic group, <i>University of Cambridge</i> .	Feb 2017
Représentations Galoisiennes pour GSp , <i>Université d'Aix-Marseille</i> .	Feb 2017
Galois representations for the general symplectic group, <i>Workshop on Shimura varieties, representation theory and related topics, Kyoto, Japan</i> .	Nov 2016
Galois representations for the general symplectic group, <i>University of Leiden</i> .	Oct 2016
Wiles' modularity theorem, <i>University of Leuven</i> .	Sept 2016
Galois representations for the general symplectic group, <i>Intercity Number Theory Seminar</i> .	Oct 2015
Conjectural connections between automorphic representations and Galois representations, <i>Geometry and Quantum Theory Colloquium</i> .	Oct 2015
Représentations Galoisiennes pour GSp , <i>Seminaire Chevalley Université Paris 6/7</i> .	Oct 2015
Conjecture de Langlands. (Series of two lectures on the Langlands conjectures for the non-expert), <i>Ecole Polytechnique</i> .	Oct 2015
Représentations Galoisiennes pour GSp , <i>Université Paris 13</i> .	Sep 2015
Integral points on Hilbert-Blumenthal Varieties (joint work with Rafael von Känel), <i>General Mathematics Colloquium, University of Amsterdam</i> .	Sep 2015
Galois representations for the general symplectic group, <i>University of Bielefeld</i> .	May 2015
Galois representations for the general symplectic group, <i>University of Mainz</i> .	Jun 2015
Galois representations for the general symplectic group, <i>Korea Institute for Advanced Study</i> .	Jun 2015
The Newton stratification of Shimura varieties and the Arthur-Selberg trace formula, <i>Max-Planck-Institute für Mathematik, Postdoc seminar</i> .	Mar 2014
The Newton stratification of Shimura varieties and the Arthur-Selberg trace formula, <i>University of Leiden</i> .	Mar 2014
The Newton stratification of Shimura varieties and the Arthur-Selberg trace formula, <i>Mathematical Sciences Research Institute, Berkeley</i> .	Mar 2014
The Newton stratification of Shimura varieties and the Arthur-Selberg trace formula, <i>Universtiy of Maryland</i> .	Mar 2014
The Newton stratification of Shimura varieties and the Arthur-Selberg trace formula, <i>Massachusetts Institute of Technology</i> .	Mar 2014

The Newton stratification of Shimura varieties and the Arthur-Selberg trace formula, <i>Princeton graduate student seminar</i> .	Feb 2014
The Newton stratification of Shimura varieties and the Arthur-Selberg trace formula, <i>Institute for Advanced Study, postdoc seminar</i> .	Sep 2013
The Newton stratification of Shimura varieties and the Arthur-Selberg trace formula, <i>University Duisenberg-Essen</i> .	Mar 2013
Equidistribution in the supersingular locus of the modular curve, <i>Seminaire mathjeunes, École normale supérieure de Paris</i> .	Mar 2013
The Newton stratification of Shimura varieties and the Arthur-Selberg trace formula, <i>University of Paderborn</i> .	Mar 2013
The Langlands-Kottwitz method for the supersingular locus of the modular curve, <i>Universtiy of Paderborn</i> .	Mar 2013
La stratification de Newton des varieties de Shimura et la formule des traces d'Arthur-Selberg, <i>Universié de Bordeaux</i> .	Feb 2013
The Newton stratification of Shimura varieties and the Arthur-Selberg trace formula, <i>University of Copenhagen</i> .	Feb 2013
La stratification de Newton des varieties de Shimura et la formule des traces d'Arthur-Selberg, <i>Universié Paris 6 et 7</i> .	Feb 2013
La stratification de Newton des varieties de Shimura et la formule des traces d'Arthur-Selberg, <i>Universié Paris 11</i> .	Dec 2012
The supersingular locus of the modular curve, <i>University of Tel Aviv</i> .	Jun 2012
The basic stratum of some simple Shimura varieties, <i>University of Jerusalem</i> .	Jun 2012
Strate basique d'une courbe de Shimura, <i>Seminaire REGA, Paris</i> .	Mar 2012
The basic stratum of a simple Shimura curve, <i>Algebra, Geometry and number theory seminar, Leiden</i> .	Jan 2012
The point counting formula of Kottwitz for the modular curve, <i>Seminar on Motives, Université Paris 11</i> .	Jun 2011
The lambda-adic representations associated to some simple Shimura varieties, <i>Seminaire Math Jeunes, Université Paris 11</i> .	Jun 2011
A Lefschetz Trace Formula for Certain Shimura Varieties, <i>Seminaire Math Jeunes, Université Paris 11</i> .	Mar 2010
The Fundamental Group of Abelian Varieties, <i>Seminaire Math Jeunes, Université Paris 11</i> .	Jan 2010
Modular forms and automorphic forms, Series of 3 talks, <i>Seminaire Math Jeunes, Université Paris 11</i> .	Oct 2009
Galois Representations, Defence of my master's thesis, <i>University of Leiden</i> .	Jun 2009
The Global Langlands Conjecture, 2 talks, <i>Seminaire Math Jeunes, Université Paris 11</i> .	Mar 2009
The Global Langlands Conjecture, 2 talks, <i>Seminar Adelic Methods, University of Leiden</i> .	Dec 2008
Local Class Field Theory, <i>Seminar Adelic Methods, University of Leiden</i> .	Nov 2008
Categories with a Group Action, <i>Bachelor's Seminar, University of Leiden</i> .	May 2007
Tensor products, <i>Bachelor's Seminar, University of Leiden</i> .	Feb 2007
The ABC-conjecture for finite fields, <i>Bachelor's Seminar, University of Leiden</i> .	Jan 2007
Equivalence of R and R, <i>Seminar Leren presenteren en communiceren, University of Leiden</i> .	Nov 2005

Teaching Experience

Galois theorie, <i>University of Amsterdam</i> .	2017-2018
Algebraic Geometry 1 (with B. Edixhoven), <i>MasterMath</i> .	2017-2018
Galois theorie (with van der Geer), <i>University of Amsterdam</i> .	2016-2017

Wiskunde 1C (linear algebra for physics), <i>University of Amsterdam.</i>	2016–2017
Wiskunde 1B (calculus and linear algebra for physics), <i>University of Amsterdam.</i>	2016–2017
Galois representations and automorphic forms (with Peter Bruin), <i>national MasterMath course.</i>	2016–2017
Wiskunde 1C, <i>University of Amsterdam.</i>	2015–2016
Wiskunde 1B, <i>University of Amsterdam.</i>	2015–2016
TA Mathematics 1 (Biology), <i>Université Paris–Sud as teaching assistant.</i>	2011–2013
TA Topology, <i>Leiden University.</i>	2007/2008
TA Analyse 3, <i>Leiden University.</i>	2007/2008

PhD Students

Jeroen Huijben, *University of Amsterdam.* (starting in Sept 2018)

Master Students

Robert Mann, <i>University of Amsterdam.</i>	(in progress)
Guillermo Fernández Castro, <i>University of Amsterdam.</i>	(in progress)
David van Overeem, <i>University of Amsterdam.</i>	Sept 2016
Philip van Reeuwijk, <i>University of Amsterdam.</i>	Sept 2017

Bachelor Students

Abe ten Voorde, <i>University of Amsterdam.</i>	(in progress)
Lennart van Lierop, <i>University of Amsterdam.</i>	July 2017
Ugur Taytas, <i>University of Amsterdam.</i>	July 2017

Member of PhD-committee

Maxim Mornev, <i>Leiden University.</i>	2018
Qijun Yan, <i>Leiden University.</i>	2017
Francesca Bergamschi, <i>Leiden University.</i>	2017
Christophe Debry, <i>University of Amsterdam.</i>	2016
Yongqi Feng, <i>University of Amsterdam.</i>	2015

Outreach

Leve de Wiskunde! Hoe rekt de rekenmachine? – Talk for high school students, <i>University of Amsterdam.</i>	2016
Introduction to the Langlands program, <i>UvA Faculty Colloquium.</i>	2018
Introductie college wiskunde, <i>Proefstudereren voor Bacheloropleidingen (UvA).</i>	2018

Administrative responsibilities

Member of mathematics examination committee, *University of Amsterdam.* 2017–present

Languages

Dutch, English French.

References

Laurent Clozel, Laurent Fargues, Guy Henniart, and Sug Woo Shin.