Curriculum Vitae

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On these pages most of the publications cited below can be found, as well as the texts of some lectures and some course notes.

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Citizenship: Dutch.


Education.


Positions held.


4. Professor at the university of Rennes 1 from October 1992 until September 2002 and in March 2009 (“première classe” since September 1998). (“En détachement” from September 1, 2002 until August 31, 2007.)

5. Professor at the university of Leiden, since September 2002.

International activities.

Participant of the Research Training Network “Arithmetic Algebraic Geometry” of the European Community, under the programs “Improving Human Potential and the Socio-Economic Knowledge Base” and “Training and Mobility of Researchers (and of one of its predecessors: “$p$-adic methods in Algebraic Geometry”).

Participant of the European FP6 Research and Training Network “Galois Theory and Explicit Methods” (GTEM).

Participant of the Erasmus Mundus Master and Doctorate program ALgebra, Geometry And Number Theory by the universities of Bordeaux, Leiden and Padova, see

www.math.u-bordeaux1.fr/ALGANT/.

Participant of the International Research Training Group GRK 1800, Moduli and Automorphic Forms, see

http://www.math.hu-berlin.de/~grk1800/index.html

See the list of publications for invited lectures at international conferences, and for joint publications.

Recent invitations.

1. Research Center “Centre de Recerca Matematica Institut d’Estudis Catalans” in Barcelona, August 1996.

2. University of Georgia at Athens, one week in February 1997, for a series of four lectures.


5. Mathematical Sciences Institute, Madras, one week in February 1998.


9. MSRI, Berkeley, one week in December 2000.

10. Research Center “Centre de Recerca Matematica Institut d’Estudis Catalans” in Barcelona, two weeks in July 2001, for teaching a course at a Summer School.

11. Lorentz Instituut, University of Leiden, one week in September 2001, and one week in December 2001.

12. McGill University, Montreal, invited lecturer for the CNTA/ACTN meeting, May 2002.


22. Miniworkshop “Calcul de représentation Galoisienne associée à une forme modulaire” in Rennes, one week in May 2004, with Jean-Marc Couveignes and Robin de Jong.


26. CRM Bellaterra, Spain, one week in May 2005.


29. University of Tokyo, Japan, one week in September 2006.


31. Montreal, one week in December 2006.


41. Leopoldina-Symposium in Algebraic and Arithmetic Algebraic Geometry, Centro Stefano Franscini, Monte-Verità, Ascona, Switzerland, 2009/05/10–15.

42. Poznan, one week in January 2010.

43. Luminy, one week conference “Groupes de Galois”, March 2010.

44. Indonesia, one week in the program “Presidential Friends of Indonesia”, August 2010.

45. Pisa, Centro de Giorgi, one week conference “Unlikely intersections”, March 2011.

46. Luminy, Etats de la recherche, La conjecture de Zilber-Pink, 2011/05/16–20.

47. Lyon, Conference Cethop, 2011/06/06–09.


**Other academic activities.**

Participation in the organisation of conferences, etc.

1. Algebraic geometry seminar of the university of Rennes (one session per week), April 1993 until July 1999.


5. Special session on modular forms, during the Conference of the Mathematical Societies of the Netherlands, Belgium, Luxemburg and the U.S.A., Antwerp, May 1996.


10. Geometry seminar at the university of Leiden (one session per week), since October 2002.

11. EIDMA-Stieltjes Graduate course “Mathematics of cryptology”, Lorentz Center, Leiden, one week, September 2003.


14. Workshop “Algebraic Cycles and Motives”, together with Jan Nagel (Lille) and Chris Peters (Grenoble), Lorentz Center in Leiden, one week, August/September 2004.

15. Organisation (with Peter Stevenhagen) of the participation of Leiden University to the Erasmus Mundus program ALGANT (together with the universities of Bordeaux and Padova).

16. Organisation of an intercity seminar on progress on Khare’s work on Serre’s conjecture in the Fall of 2005.

17. Workshop “Rings of low rank”, together with (and mostly by) Bart de Smit and Hendrik Lenstra, Lorentz Center in Leiden, one week, June 2006.

18. Two day symposium “Geometry in Autumn/Meetkunde in de herfsttij”, with Gerard van der Geer and Martin Lübke, at the Lorentz Center in Leiden, September 2006.


20. One day Intercity Seminar Number Theory on the Sato-Tate conjecture, Leiden, November 2006.


25. Member of the scientific committee for the Summer School “Group Schemes, an introduction to the SGA 3 seminar of Demazure-Grothendieck”, Luminy (CIRM), August 29 to September 9, 2011.

Membership of editorial boards.
5. Indagationes Mathematicae (since 2010).

Membership of committees.

1. Program board mathematics for the Lorentz Center, Leiden.
3. Member of the C.J. Kokfonds committee (since 2003, chairmen since 2014).
6. Member of a review panel for the DFG Excellence Initiative, June 2006.
8. Member of a review panel for the Science Foundation of Ireland. October 2007.
9. Member of the VIDI selection committee of NWO in 2008.
10. Member of a “Comité de sélection” for a full Professor position in Rennes, 2009 and 2010.
11. Member of the review committee for the DFG-Priority Programme SPP 1489 ”Algorithmic and Experimental Methods in Algebra, Geometry and Number Theory”, February 2010.
12. Member of the “Commissie Onderzoek” of the “Platform Wiskunde Nederland” (PWN), 2010–2012 (September).
14. Secretary of the Foundation Compositio Mathematica, since 2013.
15. Member of the Scientific Committee of the Gesellschaft für mathematische Forschung, the society that runs the Mathematisches Forschungsinstitut Oberwolfach, 2013–2016.

Administrative responsibilities.

2. Member of the “commission des thèses” of the “Réseau Doctoral Ouest Mathématiques” (a committee that proposes referees for PhD. theses). Until September 2002.
4. President of the library committee of the departments of mathematics and computer science in Leiden, since 2003.


Collaboration with industry.

1. Organisation of a small research project (“stage de DEA”, 5 months) on geometric error correcting codes, done at Canon Recherche France (Rennes).

2. Organisation of a long term research project on geometric error correcting codes at Canon Recherche France (Rennes).

3. Contract with the French Ministry of Defense (CELAR, Rennes). The result of this contract is published on arxiv and on Edixhoven’s webpage, open to the public.

Re-edition of mathematical texts.

1. Edixhoven has launched a project to have the volumes of Grothendieck’s “Séminaire de Géométrie Algébrique” typeset in TeX, by volunteers. (For details, see personal home page.)

Public relations for and popularisation of mathematics.

1. President of the board of “Stichting Vierkant voor Wiskunde”, since August 2003.

2. Coordination of the mathematical part at Leiden of the “nationale wetenschapsdag”, annually, since October 2003 until October 2006.

Scholarships, prizes, distinctions.


2. N.S.F. grant for Summer research, 1990.


5. Correspondent of the Dutch Academy of Sciences, from April 2001 until September 2002 (ended automatically after return to the Netherlands).

6. VICI grant (1.25 M€) the Dutch organisation for scientific research (N.W.O.), 2005–2009 (5 years).

8. Member of the Dutch Academy of Sciences (K.N.A.W.), since May 2009.

**List of publications.**

Many of the following items can be found on the author’s personal web page.

**International (refereed) journals.**


22. The Néron model of $J_1(p)$ has connected fibers. With B. Conrad and W. Stein. Documenta Mathematica 8 (2003), 331–408.


**National (refereed) journals.**


**Books, or contributions to books.**

The contributions mentioned here are also mentioned above, under “international refereed journals” because their contents have been refereed, and are of international character.

Most of the editorial work on the second item (LNM 1566) was done by Edixhoven.


**Other.**

Items 52–62 are available from the author’s personal home page.


54. *Algèbre avancée.* Syllabus for a third year course in Rennes (in french).

55. *Théorie algébrique des nombres.* Syllabus for a fourth year course in Rennes (in french).


57. *Variétés abéliennes.* Syllabus for a DEA course (5th year) in Rennes (in english).

58. *Géométrie variable.* Syllabus for a DEA course (5th year) in Rennes (in english).


60. *The modular curves $X_0(N)$.* Syllabus for a Summer Course in Trieste, August 1997.


65. *Opschudding over veeltermen*, together with Theo van den Bogaart, for the Dutch organisation “Kennislink”.
   http://www.kennislink.nl/web/show?id=118051


   http://www.physics.leidenuniv.nl/eureka/


   http://www.nieuwarchief.nl

**Lectures.**


77. *Néron models of abelian varieties and tame ramification*. Queens University (Canada), January 1990.


100. Introduction to the arithmetic theory of modular forms. Series of three lectures at an “instructional conference” at Treto, June 1995.


104. Néron models and tame ramification. Workshop of three days in Münster, October 1995.


107. Simplicity of Frobenius eigenvalues in Galois representations associated to modular forms. Conference for the 50th anniversary of the SMC, Amsterdam, February 1996.


128. *The modular curves $X_0(N)$.* Minicourse of 7 hours in the “Summer School on elliptic curves”, at the ICTP, Trieste, August 1997.


144. **Subvarieties of Shimura varieties.** AMS meeting New York, November 2000.

145. **Sous-variétés de variétés de Shimura.** Séminaire de théorie des nombres de Bordeaux, November 2000.

146. **Sous-variétés de variétés de Shimura.** Séminaire d’arithmétique et de géométrie algébrique d’Orsay, November 2000.


149. **Sur le calcul des coefficients de formes modulaires.** Séminaire AGATA, Montpellier, March 2001.

150. **Modular forms, Galois representations and local Langlands.** Course at a Summer School at the “Centre de Recerca Matemática”, Barcelona, July 2001.


154. **Comparison theorems, p-adic cohomology and p-adic Galois representations.** Algebraic Geometry Intercity Seminar, Utrecht, April 2002.

155. **On mod p modular forms of weight one.** Plenary Lecture at the Seventh Canadian Number Theory Association meeting, Montreal, Quebec (Canada), May 2002.

156. **Modular parametrisations 1, Modular parametrisations 2, Non-triviality of Heegner points 1: Andrè–Oort conjecture, Non-triviality of Heegner points 2.** Ecole d’été de l’Institut de Mathématiques de Jussieu (Paris), la conjecture de Birch et Swinnerton-Dyer, four one hour lectures, July 2002.


158. **Galois action and complex multiplication.** Workshop “Explicit algebraic number theory”, Lorentz center, University of Leiden, September 2002.

159. **Formes modulaires modulo p de poids un et symboles modulaires.** Algebraic geometry seminar, Rennes, October 2002.


161. **Formes modulaires modulo p de poids un et symboles modulaires.** Seminar, Université de Paris 7, November 2002.

162. **Equations for covers of \( P^1 \).** Intercity Number Theory seminar, Nijmegen, November 2002.


166. Counting solutions of systems of equations over finite fields. This weeks discoveries colloquium, Leiden, February 2003.


172. Point counting on hyperelliptic curves. Three one hour lectures, EIDMA-Stieltjes Graduate Course, Lorentz Center, Leiden, September 2003.


189. *How fast can one compute Ramanujan’s tau-function?* Seminar at the CRM Bellaterra (Barcelona), 2005/05/03.


193. *Overview of Khare’s proof.* Intercity seminar, 2005/10/07.


200. A lecture on collaboration between France and the Netherlands, in mathematics, on the levels of master, PhD and research. Maison Descartes, Amsterdam, 2006/05/27.

201. *How to compute the field of definition of a torsion point?* Workshop on Abelian Varieties, Amsterdam, 2006/05/29.


204. Ramanujan’s $\tau(p)$ can be computed in time polynomial in $\log p$. Colloquium Regensburg, 2006/06/22.

205. The mod $l$ Galois representation associated to Ramanujan’s $\tau$-function can be computed in time polynomial in $l$. Seminar Regensburg, 2006/06/23.


207. Fast computation of Ramanujan’s tau function at primes. Colloquium, LMU München, 2006/07/06.


209. Computation of the mod $l$ Galois representations associated to Delta. Algebraic geometry seminar, Tokyo University, 2006/09/6.


215. Height bounds, using Arakelov theory. Quebec-Vermont Number Theory Seminar, Concordia University, Montreal, 2006/12/14.


223. How to count vectors with integral coordinates and given length in $\mathbb{R}^n$? Colloquium Leiden, 2007/11/01.


225. How to count vectors with integral coordinates and given length in $\mathbb{R}^n$? Colloquium Düsseldorf, 2008/01/18.


227. Computation of Galois representations associated to modular forms, with an application to lattices. Geometry seminar, Leuven. Two hours, 2008/03/05.


236. Algebraic geometry and complexity bounds in computational number theory. 2 times 45 minutes, colloquium, Utrecht, 2009/04/09.

237. Introduction to Shimura varieties. Leopoldina-Symposium in Algebraic and Arithmetic Algebraic Geometry, Centro Stefano Franscini, Monte-Verità, Ascona, Switzerland, 2009/05/12.

238. Introduction to Shimura varieties. 3 times 2 hours, advanced course at the CRM in Bellaterra, 2009/10/19–21.


241. Using torsion points for computational purposes. Workshop on torsion points, Bordeaux, 2010/01/27.
244. Two unrelated results on modular forms, Galois representations, and cubic curves. GTEM meeting in Leuven, 2010/05/10.
246. Modular curves, their jacobians, modular parametrisations of elliptic curves. Two lectures at the ALGANT Summer School in Bordeaux, 2010/07/15–18.
250. On Daniel Bertrand’s counterexample to relative Manin-Mumford for semiabelian schemes. AIM workshop on Unlikely intersections in Pisa, 2011/03/28–2011/04/01.
252. Le contre-exemple par Daniel Bertrand pour la conjecture de Manin-Mumford relativ semi-abelien. Seminar Strasbourg, 2011/05/06.
253. Comment compter rapidement les vecteurs à coordonnées entières de longueur donnée? Colloquium, Strasbourg, 2011/05/06.
254. (Counter)example to semiabelian relative Manin-Mumford. Etats de la recherche, Luminy, 2011/05/19.
255. Computation of modular 2-dimensional Galois representations. Lyon, Conference Cethop, 2011/06/06.

Ph. D. students.


5. Theo van den Bogaart, June 2008, Leiden. Teacher in mathematics and physics, high school. Works also at the Freudenthal Instituut in Utrecht on “projectuittvoering Wiskunde D”.


10. Ariyan Javanpeykar, supervision mostly by Robin de Jong and Jean-Benoît Bost (Orsay), started September 2010. Defended in June 2013.


13. Albert Gunawan, together with Qing Liu (Bordeaux), started September 2012.


15. Ziyang Gao, together with Emmanuel Ullmo (Orsay), started September 2012.

16. Maarten Derickx, together with Pierre Parent (Bordeaux) and Bert van Geemen (Milano), started October 2012.

17. Wouter Zomervrucht, together with Lenny Taelman and Hélène Esnault (in the context of IRTG 1800), since January 2014.

18. Alexey Beshenov, together with Boas Erez and Baptiste Morin, from September 2014.

Exchange students since 2003.

Edixhoven has supervised the following exchange students.


7. Lars Halvard Halle, PhD student of Carel Faber at the KTH in Stockholm, April 2006.


11. Hélène Hivert, Charlotte Perrin and Julie Sauzeau, Rennes (ENS Cachan), May and June 2010 (together with Peter Stevenhagen).

12. Axel Rogue, Clément Rouffort, Rennes (ENS Cachan), May and June 2010 (together with Peter Stevenhagen).