

# 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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**Born:** March 12, 1962, Leiden, The Netherlands.

**Citizenship:** Dutch.

**Marital status.** Married to Reinie Alexandra Ern , born November 5, 1969, Gen ve (Switzerland).  
Children: Luc, born July 23, 1995, Tom, born July 26, 1998.

## Education.

1. Masters degree in mathematics at the University of Utrecht in the Netherlands. Adviser: F. Oort. Date: August 1985.
2. Ph. D. in mathematics at the University of Utrecht in the Netherlands. Thesis adviser: F. Oort. Date: June 1989.

## **Positions held.**

1. Research assistant at the university of Utrecht, from September 1985 until July 1989.
2. Morrey Assistant Professor at the university of California at Berkeley, from July 1989 until July 1991.
3. Research fellow (Constantijn and Christiaan Huygens fellowship) employed by the Dutch Organisation for Scientific Research (N.W.O.) from July 1991 until October 1992, at the university of Utrecht.
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 <http://algant.eu>.

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 Matemàtica 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.
3. Miller visiting professor, University of California at Berkeley, March, April and May 1997.
4. Tata institute for fundamental research, Bombay. Three weeks in February 1998.
5. Mathematical Sciences Institute, Madras, one week in February 1998.
6. M.I.T., Boston, one week in January 2000.
7. University of Utrecht, one month: June 2000.
8. Oberwolfach, “Arithmetic Geometry”, one week, August 2000.
9. MSRI, Berkeley, one week in December 2000.

10. Research Center “Centre de Recerca Matemàtica 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.
13. Oberwolfach, “Arithmetic and Differential Galois groups”, one week, July 2002.
14. Invited lecturer at the Lenstra Treurfeest, Berkeley, March 2003.
15. American Institute of Mathematics Research Conference Center, Palo Alto, workshop “Future Directions in Algorithmic Number Theory”, March 2003.
16. Luminy, conference on  $p$ -adic and mod  $p$  representations of  $p$ -adic groups and Iwasawa theory, one week, June 2003.
17. Rennes, conference “Semaine cohomologique de Rennes”, June 2003.
18. Oberwolfach, workshop “Explicit methods in number theory”, one week, July 2003.
19. Banff, conference “Current trends in arithmetic geometry and number theory”, Banff International Research Center, August 2003.
20. Luminy, conference “Groupes de Galois arithmétiques et différentiels”, one week, March 2004.
21. Conference “The analogy between number fields and function fields”, one week, April 2004.
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.
23. Conference “Shimura varieties, lattices and symmetric spaces”, Graduate School Zürich Berlin, Ascona, May 2004.
24. University of Essen, Conference on the occasion of Frey’s 60th birthday, July 2004.
25. Oberwolfach, workshop “Arithmetic Algebraic Geometry”, one week, August 2004.
26. CRM Bellaterra, Spain, one week in May 2005.
27. Oberwolfach, workshop “Explicit methods in number theory”, one week, July 2005.
28. ANTS VII, Berlin, one week in July 2006.
29. University of Tokyo, Japan, one week in September 2006.
30. RIMS, Kyoto, Japan, conference “Arithmetic Geometry”, one week in September 2006.
31. Montreal, one week in December 2006.
32. University of Stellenbosch, South Africa. Two weeks in January-February 2007.
33. Euler conference on arithmetic geometry, June 13–19, 2007.
34. ICTP Trieste, “ Summer School and Conference on Automorphic Forms and Shimura Varieties”, July 2007.

35. Columbia University, New York, 2007/12/12–2007/12/15.
36. Bangalore, Workshop and Conference on Arithmetic Geometry, 2008/03/24–29, 2008.
37. Number Theory days, Zürich, 2008/11/17–18.
38. Oberwolfach, workshop on Hypergeometric functions. 2008/09/28–2008/10/02.
39. Rennes, professeur invité. 2008/11/01–2008/11/15
40. Conference “Arakelov Days”. Rennes, 2008/12/18–19.
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.
48. Oberwolfach, Explicit methods in number theory, 2011/07/18–22.
49. Beijing, Tsinghua and Capital Normal University, for a series of 6 lectures (Modular curves and Galois representations: computational aspects), 2011/11/27–2011/12/10.

### **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.
2. Conference on the work of Wiles and Taylor, Lunteren, March 1995.
3. Seminar at the Institut Henri Poincaré on the work of Wiles and Taylor.
4. Conference in the honour of F. Oort’s 60th birthday, Utrecht, June 1995.
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.
6. Summer School on elliptic curves, August 11–29, 1997, ICTP, Trieste, Italy.
7. Instructional conference “Formes modulaires et représentations galoisiennes : une introduction”, Luminy, November 3–7, 1997.
8. Conference and workshop “Arithmetic Geometry”, Utrecht, June 2000.
9. Cryptography seminar of the university of Rennes and the CELAR (Centre Electronique de l’Armement), from December 2001 until 2011.

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.
12. Workshop “Mathematics of cryptology”, Lorentz Center in Leiden, one week, September/October 2003.
13. Workshop “On the conjecture of André and Oort: Special points in Shimura varieties”, Lorentz Center in Leiden, one week, December 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.
19. Conference “Modular forms”, with Ben Moonen and Gerard van der Geer, Schiermonnikoog (Netherlands), one week, October 2006.
20. One day Intercity Seminar Number Theory on the Sato-Tate conjecture, Leiden, November 2006.
21. Research Seminar on Faltings heights of covers, weekly, academic year 2006–2007, Leiden.
22. A special day in the Intercity Number Theory Seminar, on the occasion of Wilberd van der Kallen’s 61st birthday. Utrecht, 2008/03/14.
23. A special year in Arithmetic Geometry, 2009-2010, at the CRM near Barcelona, with Henri Darmon, Fred Diamond, Luis Dieulefait and Victor Rotger.
24. Organisation of a workshop at the CRM in Montreal, March 2010, with William Stein, Michael Rubinstein and Craig Citro.
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.
26. Belgian-Dutch Algebraic Geometry day in Leiden, December 11, 2015, with Ben Moonen, Johannes Nicaise and Lenny Taelman.
27. Van de Ven memorial symposium, on December 18, 2015, Leiden, with Gerard van der Geer and Chris Peters.
28. Parallel session ‘Algebra, Number Theory and Cryptology’ at the BeNeLuxMC 2016, Amsterdam, 22–23 March, with Gabor Wiese.

#### Membership of editorial boards.

1. *Compositio Mathematica* (editor 2000–2003, (co)managing editor 2003–2012).
2. *Journal de Théorie des Nombres de Bordeaux* (1998–2004).
3. *Expositiones Mathematicae* (since 2003).
4. *Journal of Number Theory* (2004–2012).
5. *Indagationes Mathematicae* (since 2010).

#### Membership of committees.

1. Program board mathematics for the Lorentz Center, Leiden.
2. Beoordelingscommissie wiskunde, Open competitie N.W.O., 2003–2007.
3. Member of the C.J. Kokfonds committee (since 2003, chairmen since 2014).
4. Commissie STW/NWO Vernieuwingsimpuls 2005.
5. Scientific Committee of the 25th Journées Arithmétiques, Edinburgh.
6. Member of a review panel for the DFG Excellence Initiative, June 2006.
7. Member of Scientific Advisory Board of the Max Planck Institute for Mathematics in Bonn, 2007–2016.
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).
13. Member of a “Comité de sélection” for a Maitre de Conférence position in Paris, 2011.
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.

1. Co-director (together with X.P. Wang of Nantes) of the “Ecole Doctorale Mathématiques de l’Ouest” (graduate affairs of the universities of Angers, Brest, Nantes and Rennes), 1996–2000.
2. Member of the “commission des thèses” of the “Réseau Doctoral Ouest Mathématiques” (a committee that proposes referees for PhD. theses). Until September 2002.

3. Director of the DEA (Diplôme d'Etudes Approfondies) "Mathématiques fondamentales et applications", 2000–2001.
4. President of the library committee of the departments of mathematics and computer science in Leiden, 2003–2016.
5. President of the "Opleidings Commissie Wiskunde" at Leiden university, from 2004 until June 2007.
6. "Onderwijsdirecteur" of the Department of Mathematics, from September 2007 until September 2011.
7. Chairman of the board (RegieOrgaan) of Mastermath, a collaboration of the ten masters programs of mathematics at Dutch universities, August 2012–August 2017.
8. Chairman of the Dutch research cluster DIAMANT, from January 2014 until July 2016.
9. Member of the Scientific Advisory Panel of the Korteweg de Vries Instituut (department of mathematics of the Universiteit van Amsterdam), since January 2015.
10. with Cor Kraaikamp: organisation of a national program, in Mastermath, of 7 mathematics courses for education of high-school teachers, since January 2014.

#### 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.

1. Constantijn and Christiaan Huygens fellowship of the Dutch organisation for scientific research (N.W.O.), from July 1989 until October 1992. (From July 1989 until July 1991 they only payed my travel expenses.)

2. N.S.F. grant for Summer research, 1990.
3. Prime d'encadrement doctoral et de recherche, since October 1994.
4. Junior Member of the Institut Universitaire de France, from July 1995 until July 2000.
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).
7. Invited lecture at the 5th European Congress for Mathematicians, July 2008.
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.

1. *Minimal resolution and stable reduction of  $X_0(N)$* . *Annales de l'Institut Fourier, Grenoble*, **40**, 1, 31–67 (1990).
2. *L'action de l'algèbre de Hecke sur les groupes de composantes des jacobiniennes des courbes modulaires est "Eisenstein"*. *Courbes modulaires et courbes de Shimura, Astérisque 196–197*, 59–70 (1991).
3. *Elliptic curves over the rationals with bad reduction at only one prime*. Co-auteurs: A. de Groot and J. Top. *Mathematics of Computation* **54**, 413–419 (1990).
4. *On the Manin constants of modular elliptic curves*. *Arithmetic Algebraic Geometry, Progress in Mathematics 89* (G. van der Geer, F. Oort, J. Steenbrink editors), 25–39, Birkhäuser (1990).
5. *Néron models and tame ramification*. *Compositio Mathematica* **81**, 291–306 (1992).
6. *The weight in Serre's conjectures on modular forms*. *Inventiones Mathematicae* **109**, 563–594 (1992).
7. *Arithmetic part of Faltings's proof*. This is Chapter XI of the book "Diophantine approximation and abelian varieties", *Lecture Notes in Mathematics 1566* (Edixhoven and Evertse, eds.), Springer-Verlag (1993).
8. *Rational torsion points on elliptic curves over number fields (after Kamienny and Mazur)*. *Séminaire Bourbaki, exposé 782* (1994). *Astérisque 227*, 209–227 (1995).
9. *On the prime-to- $p$  part of the groups of connected components of Néron models*. *Compositio Mathematica* **97**, 29–49 (1995).
10. *The  $p$ -part of the group of components*. With Q. Liu and D. Lorenzini. *Journal of Algebraic Geometry, Volume 5, Number 4, October 1996*, 801–813.



11. *Specialization of Heegner divisors on jacobians of Shimura curves.* Appendix to the article “A rigid analytic Gross-Zagier formula and arithmetic applications” by M. Bertolini and H. Darmon. *Annals of Mathematics* 146, 138–147 (1997).
12. *Serre’s conjecture.* In : *Modular Forms and Fermat’s Last Theorem* (Gary Cornell, Joseph Silverman and Glenn Stevens, editors). Springer-Verlag, 1997, 209–242.
13. *On the semi-simplicity of the  $U_p$  operator on modular forms.* With R.F. Coleman. *Mathematische Annalen* 310, 119–127, (1998).
14. *Special points on the product of two modular curves.* *Compositio Mathematica* 114, 315–328 (1998).
15. *On Néron models, divisors, and modular curves.* *Journal of the Ramanujan Mathematical Society* 13, 157–194 (1998).
16. *Sur un résultat d’Imin Chen.* With Bart de Smit. *Mathematical Research Letters*, Volume 7, Number 2–3, 147–154 (2000).
17. *Pull-back components of the space of holomorphic foliations on  $\mathbf{CP}(N)$ ,  $N$  at least 3.* With D. Cerveau et A. Lins Neto. *Journal of Algebraic Geometry* 10 (2001), no. 4, 695–711.
18. *On the André-Oort conjecture for Hilbert modular surfaces.* *Moduli of abelian varieties, Progress in Mathematics* 195 (2001), 133–155, Birkhäuser.
19. *Rational elliptic curves are modular (after Breuil, Conrad, Diamond and Taylor).* *Séminaire Bourbaki*, 52ème année, 1999–2000, exposé 871. *Astérisque* 276, 161–188 (2002).
20. *Subvarieties of Shimura varieties.* With A. Yafaev. *Annals of Mathematics*, Volume 157, No. 2, March 2003, 621–645.
21. *Hasse invariant and group cohomology.* With C. Khare. *Documenta Mathematica* 8 (2003), 43–50.
22. *The Néron model of  $J_1(p)$  has connected fibers.* With B. Conrad and W. Stein. *Documenta Mathematica* 8 (2003), 331–408.
23. *Special points on products of modular curves.* *Duke Math. J.* 126 (2005), no. 2, 325–348. [arXiv:math.NT/0302138]
24. *On the  $p$ -adic geometry of traces of singular moduli.* *International Journal of Number Theory*, Vol. 1, No. 4 (2005) 495–497.  
Arxiv:math.AG/0502213
25. *Algebraic stacks whose number of points over finite fields is a polynomial.* With Theo van den Bogaart. ”Number Fields and Function Fields: Two Parallel Worlds”, *Papers from the 4th Conference held on Texel Island, April 2004.* *Progr. Math.*, 239, Birkhäuser Boston, Boston, MA, 2005.  
Arxiv:math.AG/0505178
26. *Comparison of integral structures on spaces of modular forms of weight two, and computation of spaces of forms mod 2 of weight one, with appendices by Jean-François Mestre and Gabor Wiese.* *Journal of the Inst. of Math. Jussieu* (2006) **5**(1), 1–34.  
Arxiv:math.NT/0312019

27. *On the computation of the coefficients of a modular form*. Algorithmic number theory, 30–39, Lecture Notes in Comput. Sci., 4076, Springer, Berlin, 2006.
28. *On the computation of the coefficients of modular forms*. Proceedings of the Fifth European Congress of Mathematics, 17–29. André Ran, Herman te Riele, Jan Wiegerinck, editors. Eur. Math. Soc., Zürich, 2010.
29. *Covers of surfaces with fixed branch locus*. Together with R. de Jong and J. Schepers. Internat. J. Math. 21 (2010), no. 7, 859–874.
30. Appendix to *Special points and Poincaré bi-extensions* by D. Bertrand, 2011. arXiv:1104.5178v1 [math.NT]
31. *Short introduction to heights and Arakelov theory*. With R. de Jong. Computational aspects of modular forms and Galois representations, 79–94, Ann. of Math. Stud., 176, Princeton Univ. Press, Princeton, NJ, 2011.
32. *Computing coefficients of modular forms*. Computational aspects of modular forms and Galois representations, 383–398, Ann. of Math. Stud., 176, Princeton Univ. Press, Princeton, NJ, 2011.
33. *Computing the residual Galois representations*. Computational aspects of modular forms and Galois representations, 371–382, Ann. of Math. Stud., 176, Princeton Univ. Press, Princeton, NJ, 2011.
34. *Bounds for Arakelov invariants of modular curves*. With R. de Jong. Computational aspects of modular forms and Galois representations, 217–256, Ann. of Math. Stud., 176, Princeton Univ. Press, Princeton, NJ, 2011.
35. *Applying Arakelov theory*. With R. de Jong. Computational aspects of modular forms and Galois representations, 187–201, Ann. of Math. Stud., 176, Princeton Univ. Press, Princeton, NJ, 2011.
36. *Description of  $X_1(5l)$* . Computational aspects of modular forms and Galois representations, 173–185, Ann. of Math. Stud., 176, Princeton Univ. Press, Princeton, NJ, 2011.
37. *First description of the algorithms*. With J-M. Couveignes. Computational aspects of modular forms and Galois representations, 69–78, Ann. of Math. Stud., 176, Princeton Univ. Press, Princeton, NJ, 2011.
38. *Modular curves, modular forms, lattices, Galois representations*. Computational aspects of modular forms and Galois representations, 29–68, Ann. of Math. Stud., 176, Princeton Univ. Press, Princeton, NJ, 2011.
39. *Introduction, main results, context*. Computational aspects of modular forms and Galois representations, 1–27, Ann. of Math. Stud., 176, Princeton Univ. Press, Princeton, NJ, 2011.
40. *Approximate computations with modular curves*. With J-M. Couveignes, 2012. Geometry and arithmetic, 91–112, EMS Ser. Congr. Rep., Eur. Math. Soc., Zürich, 2012. arXiv:1205.5896v1 [math.NT]
41. *Group schemes out of birational group laws, Néron models*. With M. Romagny. Autour des schémas en groupes. Vol. III, 15–38, Panor. Synthèses, 47, Soc. Math. France, Paris, 2015. arXiv:1204.1799v1 [math.AG]

## National (refereed) journals.

42. *Le rôle de la conjecture de Serre dans la démonstration du théorème de Fermat.* Gazette des Mathématiciens, October 1995, 25–41.

## 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.

43. *On the Manin constants of modular elliptic curves.* Arithmetic Algebraic Geometry, Progress in Mathematics 89 (G. van der Geer, F. Oort, J. Steenbrink editors), 25–39, Birkhäuser (1990).
44. *Diophantine approximation and abelian varieties,* Lecture Notes in Mathematics 1566 (Edixhoven and Evertse, eds.), Springer-Verlag (1993, 2nd printing 1997).
45. *Serre’s conjecture.* In : Modular Forms and Fermat’s Last Theorem (Gary Cornell, Joseph Silverman and Glenn Stevens, editors). Springer-Verlag, 1997, 209–242.
46. *On the André-Oort conjecture for Hilbert modular surfaces.* Moduli of abelian varieties, Progress in Mathematics 195 (2001), 133–155, Birkhäuser.
47. *Algebraic stacks whose number of points over finite fields is a polynomial.* With Theo van den Bogaart. ”Number Fields and Function Fields: Two Parallel Worlds”, Papers from the 4th Conference held on Texel Island, April 2004. Progr. Math., 239, Birkhäuser Boston, Boston, MA, 2005.  
Arxiv:math.AG/0505178
48. *On the computation of the coefficients of a modular form.* Algorithmic number theory, 30–39, Lecture Notes in Comput. Sci., 4076, Springer, Berlin, 2006.
49. *Modular forms on Schiermonnikoog.* Editors: Bas Edixhoven, Gerard van der Geer, Ben Moonen. Cambridge University Press, 2008. ISBN-13 987-0-521-49354-3.
50. *Computational aspects of modular forms and Galois representations.* Edited with J-M. Couveignes, and with contributions by Johan Bosman, Jean-Marc Couveignes, Bas Edixhoven, Robin de Jong, and Franz Merkl. Arxiv:math.NT/0605244. Volume 176 of “Annals of Mathematics Studies”, Princeton University Press, 2011.
51. *Autour des schémas en groupes.* Vol. I. A celebration of SGA3. Lecture notes from the summer school held at the Centre International de Rencontres Mathématiques (CIRM), Luminy, September 2011. Edited by Bas Edixhoven, Philippe Gille, Gopal Prasad and Patrick Polo. Panoramas et Synthèses, 42–43. Société Mathématique de France, Paris, 2014.
52. *Autour des schémas en groupes.* Vol. II. A celebration of SGA3. Lecture notes from the summer school held at the Centre International de Rencontres Mathématiques (CIRM), Luminy, September 2011. Edited by Bas Edixhoven, Philippe Gille, Gopal Prasad and Patrick Polo. Panoramas et Synthèses, 46. Société Mathématique de France, Paris, 2015.

53. *Autour des schémas en groupes*. Vol. III. A celebration of SGA3. Lecture notes from the summer school held at the Centre International de Rencontres Mathématiques (CIRM), Luminy, September 2011. Edited by Bas Edixhoven, Philippe Gille, Gopal Prasad and Patrick Polo. Panoramas et Synthèses, 47. Société Mathématique de France, Paris, 2015.

## Other.

Items 55–65 are available from the author’s personal home page.

54. *The Polyakov measure and the modular height function*. Proceedings of the Arbeitstagung “Arithmetische Algebraische Geometrie 1987”, Wuppertal (org.: G. Faltings and G. Wüstholz).
55. *Stable models of modular curves and applications*. Thesis, university of Utrecht, June 1989.
56. *Relations entre développements en série de Fourier d’une nouvelle forme*. Proceedings of the conference “Arithmétique et surfaces algébriques”, Caen, June 11-12, 1993.
57. *Algèbre avancée*. Syllabus for a third year course in Rennes (in french).
58. *Théorie algébrique des nombres*. Syllabus for a fourth year course in Rennes (in french).
59. *Groupes et algèbres de Lie*. Syllabus for a DEA course (5th year) in Rennes (in english).
60. *Variétés abéliennes*. Syllabus for a DEA course (5th year) in Rennes (in english).
61. *Géométrie variable*. Syllabus for a DEA course (5th year) in Rennes (in english).
62. *Variétés jacobiennes*. Syllabus for a DEA course (5th year) in Rennes (in english).
63. *The modular curves  $X_0(N)$* . Syllabus for a Summer Course in Trieste, August 1997.
64. *Meetkunde/Geometry*. Syllabus for a 3rd/4th year course in Leiden, Fall 2002.
65. *Point counting after Kedlaya*. Syllabus for the EIDMA-Stieltjes Graduate course “Mathematics of Cryptology”, at the Lorentz Center in Leiden, September 2003.
66. *Van piramides tot modulaire krommen*. Inaugural lecture, Leiden, January 2004, printed version, 20 pages. Also: *Nieuw Archief voor Wiskunde*, June 2004, 98–105.
67. *De Rham cohomology*. Syllabus, 25 pages, for a 3rd year geometry course in Leiden, Spring 2004.
68. *Opschudding over veeltermen*, together with Theo van den Bogaart, for the Dutch organisation “Kennislink”.  
<http://www.kennislink.nl/web/show?id=118051>
69. *Modular parametrizations at primes of bad reduction*. Article in preparation.
70. *Mijn onderzoek aan computationele getaltheorie*. *Eureka!*, jaargang 4, nummer 15, pages 11–13, November 2006.  
<http://www.physics.leidenuniv.nl/eureka/>
71. *Snelle algoritmen in de getaltheorie*. Vakantiecursus voor leraren, CWI, 2011/08/26.  
<http://www.cwi.nl/system/files/Brochure-VC2011.pdf>

72. *Représentations galoisiennes et théorème de Fermat-Wiles*. Text for the commemoration of the bicentenary of Galois' birth, november 2011, IHP, Paris.
73. *Aritmetische meetkunde*. Nieuw Arch. Wiskd. (5) 15 (2014), no. 3, 192–197.  
<http://www.nieuwarchief.nl>
74. *The André-Oort conjecture*. With Lenny Taelman. Nieuw Arch. Wiskd. (5) 15 (2014), no. 4, 279–282.  
<http://www.nieuwarchief.nl>

## Lectures.

75. *The Polyakov measure and the modular height function*. Arithmetische Algebraische Geometrie, Wuppertal, June 1987.
76. *Hecke action on component groups of Néron models of jacobians of modular curves*. Abelian varieties, number theory and physics, Schloss Ringberg, July 1988.
77. *The graph method for  $X_0(p^2)$* . Algorithmes en théorie des nombres, Luminy, September 1988.
78. *On the Manin constants of strong modular elliptic curves*. Arithmetic Algebraic Geometry, Texel, April 1989.
79. *On the Manin constants of strong Weil curves*. Compactification of the moduli space of abelian varieties, Oberwolfach, May 1989.
80. *Sur les constantes de Manin des courbes elliptiques modulaires*. Séminaire Delange-Pisot-Poitou, Paris, June 1989.
81. *Néron models of abelian varieties and tame ramification*. Queens University (Canada), January 1990.
82. *On the weight of the modular form in Serre's conjectures*. Nationale meetkunde dag in Amsterdam, January 1991.
83. *On the weight of the modular form in Serre's conjectures*. Meeting of the Am. Math. Soc, 863, San Fransisco, January 1991.
84. *On the weight of the modular form in Serre's conjectures*. California Institute of Technology, April 1991.
85. *Sur le poids de la forme modulaire dans les conjectures de Serre*. Université de Rennes 1 (France), July 1991.
86.  *$q$ -expansions at various cusps of modular forms*. Utrecht, September 1991.
87. *Sur le poids de la forme modulaire dans les conjectures de Serre*. Université de Besançon (France), October 1991.
88. *Sur la mauvaise réduction des paramétrisations modulaires des courbes elliptiques sur  $\mathbb{Q}$* . Séminaire d'Arithmétique et Géométrie Algebrique, Orsay (France), January 1992.
89. *Points rationnels de torsion de courbes elliptiques sur des corps de nombres (d'après Kamienny et Mazur)*. Séminaire Bourbaki, Paris, March 1994.

90. *De stelling van Fermat*. Closing lecture at the annual national conference of the Dutch Mathematical Society. Leiden, April 1994.
91. *Fourier expansions of new forms at various cusps*. Number theory seminar of Barcelona, April 1994.
92. *L'algèbre de Hecke*. Colloque de géométrie arithmétique, Luminy, May 1994.
93. *Extensions presque étales*. Groupe de travail sur les conjectures de Fontaine, Rennes, June 1994.
94. *La partie première à  $p$  des groupes de composantes connexes de modèles de Néron*. Colloque sur l'arithmétique des courbes de genre deux, Luminy, August 1994.
95. *The prime-to- $p$  part of the groups of connected components of Néron models*. Journées  $p$ -adiques, Strasbourg, November 1994.
96. *La partie première à  $p$  des groupes de composantes connexes de modèles de Néron*. Séminaire de théorie des nombres, Bordeaux, December 1994.
97. *Rational torsion points of elliptic curves over number fields (after Mazur, Kamienny, Merel and Oesterlé)*. Number theory seminar, Heidelberg, December 1994.
98. *Classification de la partie première à  $p$  des groupes de composantes connexes de modèles de Néron et applications arithmétiques*. Séminaire de théorie des nombres, Paris, January 1995.
99. *Les groupes de composantes connexes des modèles de Néron*. Séminaire d'arithmétique et de géométrie algébrique d'Orsay, January 1995.
100. *On the Galois representations associated to modular forms*. Conference on the work of Wiles, Lunteren (Netherlands), March 1995.
101. *Lowering the level*. Conference on the work of Wiles, Lunteren (Netherlands), March 1995.
102. *Ajustement du niveau et du poids*. Séminaire sur les travaux de Wiles, I.H.P., Paris, April 1995.
103. *La propriété de Gorenstein pour les algèbres de Hecke*. Séminaire sur les travaux de Wiles, I.H.P., Paris, May 1995.
104. *Introduction to the arithmetic theory of modular forms*. Series of three lectures at an "instructional conference" at Trento, June 1995.
105. *Sur un résultat de de Jong*. Besançon, June 1995.
106. *Groups of connected components of Néron models*. Intercity seminar algebraic geometry, Utrecht, September 1995.
107. *Lissité, semi-stabilité et altérations, d'après de Jong*. Journée IUF à l'IHES, October 1995.
108. *Néron models and tame ramification*. Workshop of three days in Münster, October 1995.
109. *Groups of connected components of Néron models*. Number theory seminar, Cambridge, October 1995.
110. *Groups of connected components of Néron models*. Number theory seminar, Oxford, November 1995.

111. *Simplicity of Frobenius eigenvalues in Galois representations associated to modular forms.* Conference for the 50th anniversary of the SMC, Amsterdam, February 1996.
112. *Oort's conjecture for pairs of elliptic curves.* Intercity seminar algebraic geometry Utrecht, February 1996.
113. *La conjecture de Oort pour pairs of elliptic curves.* Séminaire de théorie des nombres de Paris, March 1996.
114. *Oort's conjecture for pairs of elliptic curves.* Arithmetic Geometry conference, Berlin, March 1996.
115. *Oort's conjecture for pairs of elliptic curves.* Conference of the Dutch, Belgian, Luxemburg and Americal mathematical societies at Antwerp, May 1996.
116. *Moduli spaces of abelian varieties in mixed characteristic.* Conference on modular forms and Galois representations, Durham, July 1996.
117. *Oort's conjecture for pairs of elliptic curves.* Conference on modular forms and Galois representations, Durham, July 1996.
118. *Special points on the product of two modular curves.* Barcelona, September 1996.
119. *On the semi-simplicity of the  $U_p$ -operator on modular forms.* Barcelona, September 1996.
120. *Two results on modular curves.* Conference on  $p$ -adic methods in algebraic geometry, Platja d'Aro, September 1997.
121. *Points spéciaux sur le produit de deux courbes modulaires.* Séminaire de géométrie algébrique et arithmétique à Orsay, October 1997.
122. *Construction of some examples of differential equations with finite Galois group.* Colloque sur la théorie de Galois classique et différentielle à Rennes, November 1997.
123. *Une caractérisation analytique des courbes modulaires.* Séminaire de géométrie analytique de Rennes, December 1997.
124. *Semisimplicité de l'opérateur  $U_p$  sur les formes modulaires.* Séminaire de géométrie algébrique de Strasbourg, February 1997.
125. *On the Manin constants of modular parametrizations of elliptic curves.* A series of four lectures at Athens (Georgia, U.S.A.), February 1997.
126. *On the semi-simplicity of the  $U_p$ -operator on modular forms.* Number theory seminar, Berkeley, April 1997.
127. *Counting solutions of systems of polynomial equations.* Lunch talk at the Miller Institute, Berkeley, April 1997.
128. *Polynomial relations between  $j$ -invariants of elliptic curves.* Colloquium Berkeley, May 1997.
129. *On the work of Pierre Parent.* Seminar on torsion points, Berkeley, May 1997.
130. *Néron models, divisors, and modular curves.* Number theory day, Berkeley, May 1997.
131. *On Néron models, divisors, and modular curves.* Institut Henri Poincaré, June 1997.

132. *The modular curves  $X_0(N)$* . Minicourse of 7 hours in the “Summer School on elliptic curves”, at the ICTP, Trieste, August 1997.
133. *The Néron model of  $J_0(p)$* . Trieste, August 1997.
134. Two lectures in the conference “Formes modulaires et représentations galoisiennes : une introduction”, Luminy, November 1997.
135. *On the proof of the theorem of Langlands-Deligne-Carayol*. Series of three lectures at the Tata Institute, Bombay, February 1998.
136. *Counting solutions of systems of polynomial equations*. Bombay University, February 1998.
137. *Polynomial relations between  $j$ -invariants of elliptic curves*. Colloquium at the Tata Institute, Bombay, February 1998.
138. *On the semi-simplicity of the  $U_p$ -operator on modular forms*. Colloquium at the Mathematical Sciences Institute, Madras, February 1998.
139. *The Oort-André conjecture for curves in a product of modular curves*. In the conference “points spéciaux” at the IHP, March 1999.
140. *On the André-Oort conjecture*. Conference “Moduli of abelian varieties”, Texel (Netherlands), April 1999.
141. *Sur la conjecture d’André-Oort*. Seminar, Rennes, June 1999.
142. *On the André-Oort conjecture*. Journées Arithmétiques, Rome, July 1999.
143. *Sur la conjecture d’André-Oort*. Seminar, Brest, December 1999.
144. *Sur la conjecture d’André-Oort*. Séminaire automorphe, Paris, January 2000.
145. *Sur la modularité des courbes elliptiques rationnelles*. Séminaire Bourbaki, Paris, March 2000.
146. *Hecke modules, and suitable deformation problems*. Conference “Arithmetic Geometry”, Utrecht, June 2000.
147. *On the André-Oort conjecture*. Workshop Arithmetic Geometry, Oberwolfach, July 2000.
148. *Subvarieties of Shimura varieties*. AMS meeting New York, November 2000.
149. *Sous-variétés de variétés de Shimura*. Séminaire de théorie des nombres de Bordeaux, November 2000.
150. *Sous-variétés de variétés de Shimura*. Séminaire d’arithmétique et de géométrie algébrique d’Orsay, November 2000.
151. *On the computation of coefficients of modular forms*. Workshop Computational Arithmetic Geometry, MSRI, Berkeley, December 2000.
152. *Sur le calcul des coefficients de formes modulaires*. Séminaire d’arithmétique et de géométrie algébrique de Rennes, February 2001.
153. *Sur le calcul des coefficients de formes modulaires*. Séminaire AGATA, Montpellier, March 2001.



154. *Modular forms, Galois representations and local Langlands*. Course at a Summer School at the “Centre de Recerca Matemàtica”, Barcelona, July 2001.
155. *On computing coefficients of modular forms*. Conference “L-functions from algebraic geometry”, Lorentz Center, Leiden, September 2001.
156. *Sous-variétés des variétés de Shimura*. Séminaire université de Paris-Nord, October 2001.
157. *Computing spaces of modular forms mod 2 of weight one*. Miniworkshop on Algebraic Varieties, Rome, January 2002.
158. *Comparison theorems, p-adic cohomology and p-adic Galois representations*. Algebraic Geometry Intercity Seminar, Utrecht, April 2002.
159. *On mod p modular forms of weight one*. Plenary Lecture at the Seventh Canadian Number Theory Association meeting, Montreal, Quebec (Canada), May 2002.
160. *Modular parametrisations 1, Modular parametrisations 2, Non-triviality of Heegner points 1: André–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.
161. *Computing étale cohomology with Galois action*. Arithmetic and Differential Galois groups, Oberwolfach, July 2002.
162. *Galois action and complex multiplication*. Workshop “Explicit algebraic number theory”, Lorentz center, University of Leiden, September 2002.
163. *Formes modulaires modulo p de poids un et symboles modulaires*. Algebraic geometry seminar, Rennes, October 2002.
164. *Counting solutions of systems of equations over finite fields*. Colloquium, Groningen, October 2002.
165. *Formes modulaires modulo p de poids un et symboles modulaires*. Seminar, Université de Paris 7, November 2002.
166. *Equations for covers of  $\mathbb{P}^1$* . Intercity Number Theory seminar, Nijmegen, November 2002.
167. *On rational points on modular curves, after Pierre Parent*. Cohomology of Moduli Spaces, Amsterdam, December 2002.
168. *Counting solutions of systems of equations over finite fields*. Colloquium, Amsterdam, January 2003.
169. *Counting solutions of systems of equations over finite fields*. Colloquium, Leiden, January 2003
170. *Counting solutions of systems of equations over finite fields*. This weeks discoveries colloquium, Leiden, February 2003.
171. *On special n-tuples of elliptic curves*. Berkeley, Lenstra Treurfeest, invited speaker, March 2003.
172. *About point counting over arbitrary finite fields*. Palo Alto, Workshop on Future directions in algorithmic number theory, invited lecturer, March 2003.

173. *On the computation of the field of definition of torsion points on jacobians.* Intercity Seminarium Getaltheorie, April 2003.
174. *A propos des sous-variétés spéciales des variétés de Shimura; la conjecture d'André-Oort.* Semaine cohomologique de Rennes, June 2003.
175. *Computing fields of definition of torsion points.* Workshop "Explicit methods in number theory", Oberwolfach, July 2003.
176. *Point counting on hyperelliptic curves.* Three one hour lectures, EIDMA-Stieltjes Graduate Course, Lorentz Center, Leiden, September 2003.
177. *A possible generalisation of Schoof's algorithm.* Workshop "Mathematics of Cryptology", Leiden, September/October 2003.
178. *Sur le calcul du corps de définition d'un point de torsion d'une jacobienne d'une courbe de genre quelconque.* Séminaire de Théorie des Nombres de Montpellier, October 2003.
179. *A simple introduction to special points in Shimura varieties.* Colloquium, Utrecht, December 2003.
180. *Galois action on special points.* Intercity Seminar Number Theory, Utrecht, December 2003.
181. *Galois Orbits, Hecke Correspondences, Intersections.* Workshop "Special points in Shimura Varieties", Lorentz Center, Leiden, December 2003.
182. *Van piramides tot modulaire krommen.* Inaugural lecture, Leiden, January 2004.
183. *Sur le calcul du corps de définition d'un point de torsion d'une jacobienne d'une courbe de genre quelconque.* Séminaire de cryptographie, Rennes, January 2004.
184. *Stacks: geometry.* Intercity Seminar Geometry, Leiden, February 2004. item *Mijn favoriete rekenmachine is gratis.* Nationale Wiskunde Dagen, Noordwijkerhout, February 2004.
185. *Stacks: sheaves and cohomology.* Intercity Seminar Geometry, Utrecht, February 2004.
186. *The André-Oort conjecture.* Conference on Shimura varieties, lattices and symmetric spaces, organised by the ETH Zürich and the Humboldt University of Berlin. Monte Verità, Ascona, May 2004.
187. *On certain  $l$ -torsion points of  $J_1(l)$ .* At the conference "From Arithmetic to Cryptology", Essen, July 2004.
188. *Computation of mod  $l$  Galois representations associated to modular forms.* Workshop Arithmetic Algebraic Geometry (organisers Faltings, Harder, Katz), Oberwolfach, August 2004.
189. *Une majoration de fonctions de Green sur des courbes modulaires.* Séminaire de de géométrie algébrique de Rennes, 2004/10/28.
190. *Formes modulaires et représentations  $p$ -adiques I, II,* Séminaire de théorie des nombres du Mirail (Toulouse), deux journées spéciales sur les représentations  $p$ -adiques, (other speakers: Berger and Mézard), Toulouse, 2004/12/15–16.
191. *Point counting after Kedlaya I, II,* Oberseminare Geometrie, Topologie und Zahlentheorie, University of Mainz, 2005/01/27–28.

192. *How fast can one compute Ramanujan's tau-function?* General colloquium, University of Delft, 2005/04/21.
193. *How fast can one compute Ramanujan's tau-function?* Seminar at the CRM Bellaterra (Barcelona), 2005/05/03.
194. *On certain torsion points of jacobians of modular curves.* Workshop on  $p$ -adic cohomology and its applications in cryptography. Rennes, 2005/05/30.
195. *On the computation of the coefficients of a modular form, I; introduction.* Explicit methods in number theory, Oberwolfach, 2005/07/18.
196. *On the computation of the coefficients of a modular form, IV; the Arakelov contribution.* Explicit methods in number theory, Oberwolfach, 2005/07/21.
197. *Overview of Khare's proof.* Intercity seminar, 2005/10/07.
198. *An introduction to the Fermat-Wiles theorem.* One lecture in a series of 4, during the inaugural week of the ALGANT Erasmus Mundus Master, 2005/10/25, Bordeaux.
199. *Sur le calcul des coefficients des formes modulaires.* Séminaire de théorie des nombres, Jussieu, Paris, 2005/12/05.
200. *Hilbert modular forms and local Langlands.* Intercity seminar, 2005/11/11.
201. *Hoe snel kan Ramanujan's  $\tau$ -functie worden uitgerekend?* Lunchpauzelezing voor de studievereniging Christiaan Huygens te Delft, 2005/12/21.
202. *How fast can one compute Ramanujan's tau-function?* Mathematics colloquium Heidelberg, 2006/01/19.
203. *Moduli of abelian varieties.* Three lectures of two hours each during the Spring School on Abelian Varieties in Utrecht, May 2006.
204. 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.
205. *How to compute the field of definition of a torsion point?* Workshop on Abelian Varieties, Amsterdam, 2006/05/29.
206. *Geometry of cubic algebras after Deligne.* Workshop "Rings of low rank", Leiden, 2006/06/12.
207. *Geometry of quartic algebras, after Deligne.* Workshop "Rings of low rank", Leiden, 2006/06/14.
208. *Ramanujan's  $\tau(p)$  can be computed in time polynomial in  $\log p$ .* Colloquium Regensburg, 2006/06/22.
209. *The mod  $l$  Galois representation associated to Ramanujan's  $\tau$ -function can be computed in time polynomial in  $l$ .* Seminar Regensburg, 2006/06/23.
210. *Peut-on calculer la cohomologie étale à coefficients mod  $l$  en temps polynomial en  $l$ ?* Séminaire de cryptographie, Rennes, 2006/06/30.
211. *Fast computation of Ramanujan's tau function at primes.* Colloquium, LMU München, 2006/07/06.

212. *On the computation of the coefficients of a modular form.* 7th International Symposium, ANTS–VII, Berlin, 2006/07/27.
213. *Computation of the mod  $l$  Galois representations associated to  $\Delta$ .* Algebraic geometry seminar, Tokyo University, 2006/09/6.
214. *On the computation of Galois representations associated to modular forms.* RIMS, Kyoto, 2006/09/14.
215. *On the computation of the coefficients of a modular form.* Conference “Modular forms”, Schiermonnikoog, Netherlands, 2006/10/11.
216. *On the computation of the coefficients of a modular form.* Algebraic geometry seminar, Humboldt Universität, Berlin, 2006/11/21.
217. *Recent results on the Sato-Tate conjecture.* Two hours. Intercity Seminar Number Theory, Leiden, 2006/11/24.
218. *On the computation of coefficients of a modular form.* Quebec-Vermont Number Theory Seminar, Mc Gill University, Montreal, 2006/12/14.
219. *Height bounds, using Arakelov theory.* Quebec-Vermont Number Theory Seminar, Concordia University, Montreal, 2006/12/14.
220. *On the computation of the coefficients of modular forms.* Seminar Aachen-Köln-Lille-Siegen on Automorphic Forms, January 2007.
221. *Computing coefficients of modular forms.* Conference on Arithmetic Geometry and Applications, Stellenbosch, South Africa, January 2007.
222. *Computation of étale cohomology and some applications.* Eidma Seminar Combinatorial Theory, Eindhoven, 2007/02/28.
223. *Height bounds for covers of a given curve in the function field case.* Marius Fest, Groningen, April 2007.
224. *Computational aspects of Galois representations associated to modular forms.* Arithmetic Geometry “Euler” conference, St. Petersburg, June 2007.
225. *Modular curves.* A series of 4 one hour lectures in the “ Summer School and Conference on Automorphic Forms and Shimura Varieties”, ICTP, Trieste, July 2007.
226. *General Introduction.* Intercity Seminar Algebraic Geometry on “Derived categories and stability conditions”. Utrecht, 2007/09/28.
227. *How to count vectors with integral coordinates and given length in  $\mathbf{R}^n$ ?* Colloquium Leiden, 2007/11/01.
228. *Computational aspects of coefficients of modular forms.* Joint Columbia-CUNY-NYU number theory seminar, New York, 2007/12/13.
229. *How to count vectors with integral coordinates and given length in  $\mathbf{R}^n$ ?* Colloquium Düsseldorf, 2008/01/18.
230. *Computation of Galois representations associated to modular forms: numerical part using finite fields, after Couveignes.* Workshop Arithmetic Geometry, Essen, 2008/01/22.

231. *Computation of Galois representations associated to modular forms, with an application to lattices.* Geometry seminar, Leuven. Two hours, 2008/03/05.
232. *Fast computation of Ramanujan's  $\tau$ -function.* Bangalore, Workshop and Conference on Arithmetic Geometry, 2008/03/24.
233. *Computing coefficients of a modular form and related diophantine problems, part I.* Number Theory days, Zürich, 2008/11/17.
234. *On the computation of coefficients of modular forms.* Invited lecture, 5th ECM, Amsterdam, 2008/07/14.
235. *Subvarieties of Shimura varieties.* Oberwolfach, workshop on Hypergeometric functions, 2008/09/30.
236. Néron models. In the Intercity Seminar on Ngo's proof of the Fundamental Lemma. Leiden, 2008/10/17.
237. *Sur les sommes de carrés d'entiers.* Algebraic Geometry seminar, Rennes, 2008/11/13.
238. *Arakelov theory and bounding the complexity of computing Galois representations.* Journées Arakelov, Rennes, 2008/12/19.
239. *Calcul de représentations galoisiennes associées aux formes modulaires et applications.* Ecole Normale Supérieure (rue d'Ulm), Paris, 2009/01/21.
240. *Algebraic geometry and complexity bounds in computational number theory.* 2 times 45 minutes, colloquium, Utrecht, 2009/04/09.
241. *Introduction to Shimura varieties.* Leopoldina-Symposium in Algebraic and Arithmetic Algebraic Geometry, Centro Stefano Franscini, Monte-Verità, Ascona, Switzerland, 2009/05/12.
242. *Introduction to Shimura varieties.* 3 times 2 hours, advanced course at the CRM in Bellaterra, 2009/10/19–21.
243. *Overview of results on the conjecture of André and Oort.* Geometry seminar VU, Amsterdam, 2009/11/10.
244. *Computational aspects of modular forms and Galois representations.* Colloquium, Poznan, 2010/01/13.
245. *Using torsion points for computational purposes.* Workshop on torsion points, Bordeaux, 2010/01/27.
246. *Computational aspects of 2-dimensional Galois representations.* Conference on Algebraic and Arithmetic Geometry, Essen, 2010/02/17.
247. *Galois representations and modular forms.* Five 1-hour lectures, Summer School "Shimura Varieties: Cohomology and Modular Forms", Mainz, 2010/02/9–11.
248. *Two unrelated results on modular forms, Galois representations, and cubic curves.* GTEM meeting in Leuven, 2010/05/10.
249. *Toveren met getallen?* Lezing in het kader van de Museum Jeugduniversiteit, Museum Boerhaave, Leiden, 2010/06/20.

250. *Modular curves, their jacobians, modular parametrisations of elliptic curves*. Two lectures at the ALGANT Summer School in Bordeaux, 2010/07/15–18.
251. *Modular forms, cubic curves, and numerical analysis*. Lecture in the conference “Geometry and Arithmetic”, Schiermonnikoog, September 20-24 2010.
252. *Snel en exact rekenen in getaltheorie door middel van benaderingen*. KNAW, 2010/10/25.
253. *Olsson’s standard family and moduli problem*. Three times 45 minutes in the Intercity Seminar “Functorial compactification of moduli of abelian varieties”, Leiden, 2010/11/12.
254. *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.
255. *Snelle algoritmen in de getaltheorie*. Vakantiecursus voor leraren, CWI, 2011/08/26.
256. *Le contre-exemple par Daniel Bertrand pour la conjecture de Manin-Mumford relatif semi-abelien*. Seminar Strasbourg, 2011/05/06.
257. *Comment compter rapidement les vecteurs à coordonnées entières de longueur donnée?* Colloquium, Strasbourg, 2011/05/06.
258. *(Counter)example to semiabelian relative Manin-Mumford*. Etats de la recherche, Luminy, 2011/05/19.
259. *Computation of modular 2-dimensional Galois representations*. Lyon, Conference Cethop, 2011/06/06.
260. *Fast computation of the number of vectors of given length in a lattice*. Colloquium, Bayreuth, 2011/07/14.
261. *Relative Manin-Mumford in the semi-abelian case*. Seminar, Bayreuth, 2011/07/15.
262. *Gauss’s theorem on sums of three squares, via group schemes*. Leiden, 2011/10/24.
263. *Le théorème de Gauss sur les sommes de 3 carrés en termes de schémas en groupes*. Bordeaux, France, 2011/11/15.
264. for more recent lectures, see <http://pub.math.leidenuniv.nl/~edixhovensj/talks/>

#### **Ph. D. students.**

1. Jeroen van Beele (promotor Murre and copromotor Edixhoven), June 1994, Leiden.
2. Pierre Parent, November 1999. Now tenured assistant professor (maître de conférences) at the university of Bordeaux.
3. Andrei Yafaev, December 2000, Rennes. Professor at the University College of London.
4. Gabor Wiese, September 2005, Leiden. First postdoc in Regensburg, then “Junior Professor” in Essen, now Professor in Luxemburg.

5. Theo van den Bogaart, June 2008, Leiden. Teacher in mathematics and physics, high school. Worked at the Freudenthal Instituut in Utrecht on “projectuitvoering Wiskunde D”. Works at the Hogeschool Utrecht as teacher trainer.
6. Johan Bosman. Defended in December 2008. Consultant at ORTEC. Postdoc in Essen. Marie-Curie postdoc in Warwick. Worked in industry, then at the TU Delft.
7. Peter Bruin (joint supervision with Robin de Jong). Defended in September 2010. Postdoc in Orsay, Zürich, Warwick. With VENI grant in Leiden since September 2014.
8. Arjen Stolk (joint supervision with Joost Batenburg). Defended in June 2011. Works for a software company.
9. Ariyan Javanpeykar, supervision mostly by Robin de Jong and Jean-Benoît Bost (Orsay). Defended in June 2013.
10. Samuele Anni, supervision with Pierre Parent (Bordeaux). Defended in October 2013.
11. Chao Zhang, supervision with Fabrizio Andreatta (Milano). Defended in October 2013.
12. Ziyang Gao, together with Emmanuel Ullmo (Orsay). Defended in November 2014.
13. Santosh Nadimpalli, together with Guy Henniart (Orsay). Defended in June 2015.
14. Albert Gunawan, together with Qing Liu (Bordeaux). Defended in March 2016.
15. Maarten Derickx, together with Pierre Parent (Bordeaux) and Bert van Geemen (Milano). Defended in September 2016.
16. Jinbi Jin, together with Lenny Taelman. Defended January 2017.
17. Wouter Zomervrucht, together with Lenny Taelman and Hélène Esnault (in the context of IRTG 1800), since January 2014.
18. Alexey Beshenov, together with Baptiste Morin, from September 2014.