

Curriculum Vitae

Name: Nicaise
First name: Johannes
Sex: M
Place of birth: Leuven, Belgium
Nationality: Belgian
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Current positions: - Professor at Imperial College London, UK
- Associate Professor at KU Leuven, Belgium (5%)
- Chargé de Recherche première classe (CR1) of the Centre National de Recherche Scientifique (CNRS), France – on leave

Affiliation: Imperial College London
Department of Mathematics
South Kensington Campus
London SW7 2AZ, UK

Academic positions

9/2018 – today : Professor at Imperial College London (UK)
9/2015 – 8/2018 : Reader at Imperial College London (UK)
10/2014 – today : Associate Professor at KU Leuven (Belgium), position reduced to 10% since 9/2015
10/2009 – 09/2014: Assistant Professor at KU Leuven
2/12/2008: Habilitation thesis *The trace formula and the analytic Milnor fiber*, Lille
03/2006 – today : Chargé de Recherche (CNRS) at Université Lille 1 (France). On leave since 10/2009
10/2005 – 02/2006 : Post-doctoral fellow of the Fund for Scientific Research – Flanders
8/12/2004: PhD thesis *Igusa zeta functions and motivic generating series*, Leuven
10/2001 - 09/2005 : PhD fellow of the Fund for Scientific Research – Flanders at KU Leuven and École Normale Supérieure de Paris (France)

Grants and awards:

- PhD and postdoctoral grant of FWO Flanders (see Curriculum)
- Marie Curie Fellowship for the Semester on K-theory and Non-Commutative Geometry, IHP, Paris, April - July 2004 (7 Keuro)
- FWO travel grant for a visit to the Université Bordeaux 1, January – May 2005 (10 Keuro)
- Founding member of the ANR projet jeunes chercheurs “Espaces de Berkovich” ANR-07-JCJC-0004 (2007-2011; 107 Keuro)
- EPSRC and LMS funding for the organization of the conference “Motivic Integration and its Interactions with Model Theory and Non-Archimedean Geometry” (ICMS, Edinburgh, May 2008; 18 500 GBP).
- Promoter of FWO grant G.0415.10 “Motivic integration and motivic Haar measure, zeta functions, and p-adic groups with the Howe - Moore property” (2010-2014; 305 Keuro; copromoter: R. Cluckers)
- Copromoter of OT grant 11/069 “Motivic zeta functions and Bernstein polynomials” (2011-2015; 325 Keuro; promoter: W. Veys)
- Copromoter of FWO grant G.0342.12 “Reestablishing smoothness for matrix manifold optimization via resolution of singularities” (2012-2016; 300 Keuro; promoter: R. Vandebril)
- Principal Investigator of ERC Starting Grant MOTZETA, “Motivic zeta functions and the monodromy conjecture” (2013-2018; 1 Meuro)
- Research member of MSRI, Berkeley (January - March 2014)
- Copromotor of KU Leuven Methusalem Grant (2015-2022; 2,8 Meuro; PI: S. Vaes)
- 2017 Prize of the Ferran Sunyer i Balaguer Foundation for the monograph “Motivic Integration” (15Keuro, joint with A. Chambert-Loir and J. Sebag)
- Elected member of the London Mathematical Society (2017 - today)
- Senior Marie Curie Fellow of the Freiburg Institute for Advanced Studies (2017-2018, for a total of 3 months)
- Copromotor of FWO grant “Igusa type zeta functions and the monodromy conjecture” (2018-2023; 290 Keuro; promoter: W. Veys)

PhD students:

- Otto Overkamp, 2014-2018 (co-advisor: A. Skorobogatov, Imperial College)
- Enrica Mazzon, 2015-2019
- Luigi Lunardon, 2016-2020
- Corinne Bedussa, 2018-2022 (co-advisor: N. Budur, KU Leuven)

Former PhD students:

- Lorenzo Fantini, FWO project G.0415.10, 2010-2014, currently post-doc at Paris 6
- Giovanni Rosso, FWO fellow at KU Leuven, 2010-2015 (co-advisor: J. Tilouine, Paris Nord), currently post-doc at University of Cambridge
- Arne Smeets, FWO fellow at KU Leuven, 2010-2014 (co-advisor: J.-L. Colliot-Thélène, Paris Sud), currently Assistant Professor at University of Nijmegen
- Emmanuel Bultot, FWO fellow at KU Leuven, 2011-2015
- Ben Jeuris, FWO project G.0342.12N, 2011-2015 (co-advisor: R. Vandebril, KU Leuven) currently post-doc at KU Leuven
- Thomas Cauwbergs, OT project 11/069, 2011-2015 (co-advisor: W. Veys, KU Leuven), currently post-doc at University of Bielefeld
- Christophe Debry, FWO fellow at KU Leuven, 2012-2016 (co-advisor: L. Taelman, Amsterdam)

- Lore Kesteloot, FWO fellow at KU Leuven, 2012-2016 (co-advisor: O. Wittenberg, ENS Paris)
- Annelies Jaspers, ERC project MOTZETA, 2013-2017 (co-advisor: L. Halle, Copenhagen)

PhD thesis:

“Igusa zeta functions and motivic generating series”, Leuven, 8/12/2004

- Advisors: - Prof. Dr. J. Denef (KU Leuven)
 - Prof. Dr. F. Loeser (ENS Paris).
- Jury: - Prof. Dr. E. Looijenga (Universiteit Utrecht)
 - Prof. Dr. W. Veys (KU Leuven)
 - Prof. Dr. J. Van Hamel (KU Leuven)
 - Prof. Dr. K. Dekimpe (Kulak)

Habilitation thesis:

“Formule des traces et fibre de Milnor analytique” (*The trace formula and the analytic Milnor fiber*), Lille, 2/12/2008

- Jury: - Prof. Dr. A. Chambert-Loir (Université Rennes 1)
 - Prof. Dr. J. Denef (KU Leuven)
 - Prof. Dr. A. Ducros (Université de Nice; Referee)
 - Prof. Dr. H. Esnault (Universität Duisburg-Essen; Referee)
 - Prof. Dr. F. Loeser (ENS Paris)
 - Prof. Dr. M. Mustață (University of Michigan; Referee)
 - Prof. Dr. L. Ramero (Université Lille 1)

Education:

- I skipped two grades in elementary school
- High school: Latin-Mathematics, Sint-Albertuscollege (Heverlee, Belgium), June 1997
- University degrees:
 - Master in Mathematics, option pure mathematics, KU Leuven, June 2001
 results: 1st year: 91,65% (greatest distinction with congratulations of the jury)
 2nd year: 94,33% (greatest distinction with congratulations of the jury)
 3rd year: 95,79% (greatest distinction with congratulations of the jury)
 4th year: 95% (greatest distinction with congratulations of the jury)
 - Certificate of the Philosophical Academy, KU Leuven, 06/2003. result: 83% (great distinction)
 - Part-time History studies at Universiteit Antwerpen, 2005-2006. Overall result: 90%

Research visits (> 2 weeks):

- January - December 2004 : doctoral research at École Normale Supérieure de Paris, under the direction of F. Loeser.
- April - July 2004 : Marie Curie fellow at Institut Henri Poincaré, Paris, "Semester on K-theory and non-commutative geometry"
- November 2004 : Università degli Studi di Padova
- January - May 2005: Université Bordeaux 1
- May 2007 : Universidad de Valladolid
- November - December 2007 : Universidad Autonoma de Madrid
- January 2008 : Kyoto University
- September 2008 - February 2009: Université Bordeaux 1
- September 2009: University of British Columbia
- April 2010: University of Michigan
- May 2012: UC Berkeley
- October 2012: Morningside Center of Mathematics, Chinese Academy of Sciences, Beijing.
- November-December 2012: IHES, Paris
- September 2013: ICMAT, Madrid
- January-March 2014: MSRI, Berkeley (program: Model Theory, Arithmetic Geometry and Number Theory)
- September 2014: Yale University
- October-November 2017, April 2018: Freiburg Institute for Advanced Studies

Organization of international conferences:

- GAeL 2005 – Géométrie Algébrique en Liberté (CIRM, Luminy, 21-25 March 2005), an international school and conference organized by and for PhD students and starting postdocs.
- "Motivic Integration and its Interactions with Model Theory and Non-Archimedean Geometry" (International Centre for Mathematical Sciences, Edinburgh, 12-17 May 2008), funded by EPSRC and LMS.
- "Motivic integration and complex singularities" (Lyon, 27-29 January 2010).
- International Summer School on Berkovich Spaces (Université Paris 6, 28 June – 9 July 2010) .
- "Toric geometry and applications" (Leuven, 6-10 June 2011)
- "Number theory, algebraic geometry and model theory" in honour of Jan Denef's 60th birthday (CIRM, Luminy, 12 – 16 September 2011)
- "Trends in arithmetic geometry" (Lorentz Center, Leiden, 14-18 January 2013)
- Oberwolfach seminar "Motivic integration" (Oberwolfach, 13-19 October 2013)
- Summer school "Toric degenerations and mirror symmetry" (Sophus Lie Center, Nordfjordeid, 16-20 June 2014)
- Oberwolfach seminar "Berkovich Spaces and Degenerations of Calabi-Yau Varieties" (Oberwolfach, 16 - 22 October 2016)
- "Arc spaces and singularities" (Rennes, 21-25 November 2016)
- "P-adic differential equation" (CIRM, Luminy, 27-31 March 2017)

Other scientific and administrative responsibilities:

- Together with Ben Moonen (Nijmegen) and Lenny Taelman (Amsterdam), I founded the Belgian-Dutch Algebraic Geometry Seminar in 2012. We organize three one-day workshops per year.
- On October 1, 2010, I organized at the KU Leuven the first Belgian edition of the International Mathematics Tournament for high school students, in collaboration with the universities of Nijmegen and Köln. I was also the main organizer of the next editions in 2011, 2012 and 2014. See: wis.kuleuven.be/events/IntWis2014.
- During the academic year 2008-2009, I was a member of the selection committee for the appointment of a Maître de Conférence at the Laboratoire Painlevé of Université Lille 1. In 2014, 2015 and 2016, I was a member of the national evaluation committee for the French ANR grants. In 2016-2017, I was lead selector for geometry applications to the London School of Geometry and Number theory (LSGNT), the joint PhD program of Imperial, UCL and King's.
- I am a member of the editorial boards of Manuscripta Mathematica, the Bulletin of the Belgian Mathematical Society and the North-Western European Journal of Mathematics.

Jury member of PhD theses outside KU Leuven:

Karl Rokaesus (Stockholm, 15 May 2009), Michel Raibaut (Nice, 13 July 2010), Emel Bilgin (Essen, 25 January 2012), Annabelle Hartmann (Essen, 7 September 2012), Le Quy Thuong (Paris 6, 6 December 2012), Florent Martin (Paris 6, 7 October 2013), Federico Bambozzi (Padova, 28 April 2014), Olof Bergvall (Stockholm, 22 May 2014 – “licentiate”), Ana Belen de Felipe (La Laguna, 9 September 2015), Thibaud Lemanissier (Paris 6, 2 October 2015), Arthur Forey (Paris 6, 7 December 2017), Giulio Orecchia (Bordeaux-Leiden, 2018)

Teaching:

- Exercise courses at KU Leuven, 2001-2004 :
 - Mathematical Logic (1st year of Mathematics, Physics, and Informatics)
 - Algebra, Number Theory, Topology (3rd year of Mathematics)
 - Higher Mathematics for biologists and bio-engineers (1st and 2nd year)
 Nominated by the students for the award of “best teaching assistant” in 2003.
- Master course in Algebraic Geometry (2009-2014), Bachelor course in Algebra (2010 - 2015) and Master course in Algebraic Number theory (2014-2015) at KU Leuven. Nominated by the students of the Mathematics program for the award of “best professor of Mathematics” in 2011 and 2012.
- Bachelor course in Mathematics for economists at KU Leuven (2009-2015)
- Undergraduate course in Algebraic Topology at Imperial College London (2015-2016)
- Graduate course on Berkovich spaces at Imperial College London (2016-2017)
- Several international mini-courses (cf. list of seminar and conference talks)

Invited seminar and conference talks:

- Motivic generating series for toric surface singularities - Arcs, Jets, and Motivic integration, LAMA, Versailles, 25 February 2003
- Motivic generating series - Seminaire "Intégration motivique", ENS, Paris, 4 December 2003
- Arcs and resolution of singularities - GAC 2003, CIRM, Luminy, 8 December 2003
- Oscillating integrals and Newton polyhedra - Angers, 27 February 2004

- Arithmetic Poincaré series - Valladolid, 18 March 2004
- **Mini-course** (3h): Introduction to motivic integration - UAM, Madrid, March 2004
- Arithmetic integration and quantifier elimination - Séminaire de Théorie des nombres, Bordeaux, 2 April 2004
- Relative motives and the theory of pseudo-finite fields - GAEL XII, CIRM, Luminy, 20 April 2004
- Motivic generating series - Arcs, differential calculus, and applications to singularities (in honour of M. Lejeune-Jalabert), CIRM, Luminy, 10 May 2004
- Motives and arithmetic motivic integration - Seminar on algebraic K-theory and related topics, IHP, Paris, 25 May 2004
- Relative motives and pseudo-finite fields - Motives, K-theory and arithmetic geometry, Genova, 30 June 2004
- Relative motives and pseudo-finite fields - Toulouse, 9 July 2004
- **Mini-course** (2h), Motivic integration and rigid geometry - Università degli Studi di Padova, November 2004
- Rigid Geometry and the monodromy conjecture - Young Singularists, CIRM, Luminy, 14 February 2005
- Rigid Geometry and the monodromy conjecture - Nice, 17 March 2005
- Rigid geometry and the monodromy conjecture - Séminaire de Théorie des nombres, Bordeaux, 29 April 2005
- Rigid geometry and the monodromy conjecture - Séminaire de Géométrie algébrique, Rennes, 17 November 2005
- Rigid geometry and the monodromy conjecture - Monomialization, desingularization and motivic integration, Versailles, 3 December 2005
- Rigid geometry and the monodromy conjecture - Séminaire de Géométrie algébrique de Jussieu, Paris, 2 March 2006
- **Mini-course** (2h): Rigid geometry and complex singularities - Aspects algébriques des singularités, CIRM, Luminy, 20 - 24 March 2006
- **Mini-course** (2h): Valladolid, 2 and 4 May 2006
- Rigid geometry and the monodromy conjecture - Séminaire de Géométrie Algébrique, Lille, 7 June 2006
- Rigid geometry and motivic zeta functions - Leuven, 11 October 2006
- **Mini-course** (4h): Introduction à la géométrie non-archimédienne - Lille, 2006-2007
- Géométrie rigide et fonctions zêta motiviques - Séminaire d'Arithmétique, Lille, 14 December 2006
- Géométrie rigide et fonctions zêta motiviques - Séminaire Géométrie et Théorie des modèles, ENS, Paris, 15 December 2006
- Rigid geometry and complex singularities - Topology and geometry of real and complex singularities, Lille, 21 March 2007
- Motivic integration and the analytic Milnor fiber - Applications de la géométrie analytique p-adique de Berkovich, Nice, 18-20 April 2007
- Rigid geometry and complex singularities - Algebraic Geometry Seminar, Antwerpen, 23 April 2007
- Géométrie rigide et fonctions zêta motiviques - Séminaire d'Arithmétique et de Géométrie Algébrique d'Orsay (SAGA), 24 April 2007
- **Mini-course** (4h): Géométrie formelle et géométrie rigide, et le lien avec le schéma des arcs - Valladolid, May 2007
- Rigid geometry and complex singularities - UAM, Madrid, 25 May 2007
- Intégration motivique sur les variétés complexes - Séminaire de géométrie algébrique, Lille, 20 June 2007

- Rigid geometry and motivic zeta functions - International Workshop on Zeta Functions in Algebra and Geometry, Segovia, 27 June 2007
- Motivic invariants for rigid varieties, and a trace formula - AAG Conference, Cetraro, 7-13 October 2007
- La nature motivique de certaines intégrales p-adiques - Séminaire GTEM, Lille, 17 October 2007
- Fonctions zêta p-adiques et motiviques - Séminaire de géométrie algébrique, Rennes, 24 October 2007
- Invariants motiviques des variétés rigides, et applications aux singularités complexes - Séminaire de géométrie algébrique, Rennes, 25 October 2007
- **Mini-course** (3h): Introduction to formal and rigid geometry, and applications to complex singularities via the analytic Milnor fiber - Universidad Complutense de Madrid, October-November 2007
- Espaces de Berkovich et structures de Hodge mixtes - MODNET Research workshop on the Model Theory of fields, CIRM, Luminy, 12-16 November 2007
- **Mini-course** (4h): Introduction to formal and rigid geometry, and applications to complex singularities via the analytic Milnor fiber - Universidad Autonoma de Madrid, November-December 2007
- **Mini-course** (2h): p-adic and motivic zeta functions - French-Japanese Winter School on Zeta and L-functions, Kanagawa, 8-11 January 2008
- Trace formula for varieties over a complete discretely valued field - Algebraic Geometry Seminar, Kyoto University, 18 January 2008
- Invariants motiviques des variétés rigides, et une formule des traces - Séminaire de Géométrie Algébrique, Paris 13, 22 February 2008
- Complex singularities and non-archimedean geometry - Algebraic Geometry Seminar, University of Michigan, 12 March 2008
- Une formule des traces pour les variétés algébriques sur un corps de valuation discrète - Séminaire de Géométrie Algébrique, Lille, 19 March 2008
- La fibre de Milnor analytique - En différents contextes, cycles évanescents, Nice, 26 March 2008
- Non-archimedean geometry and complex singularities - Münster, 7 April 2008
- A trace formula for varieties over a discretely valued field - Münster, 7 April 2008
- Geometric motivic integration - lecture in the Motivic Integration Tutorial, Modnet Training Workshop 2008, La Roche, 25 April 2008
- **Mini-course** (2h): Motivic integration and non-archimedean geometry - Motivic Integration and its Interactions with Model Theory and Non-Archimedean Geometry, ICMS, Edinburgh, 15 May 2008
- Espaces de Berkovich et structure de Hodge mixte sur la cohomologie proche - Séminaire de Géométrie, Grenoble, 2 June 2008
- Trace formula for varieties over a discretely valued field - Essen, 10 July 2008
- Formule des traces pour les variétés sur un corps de valuation discrète - Séminaire de géométrie arithmétique, Bordeaux, 26 September 2008
- Espaces de Berkovich et structures de Hodge mixtes - Séminaire de Théorie des nombres, Bordeaux, 10 October 2008
- Motivic zeta functions for abelian varieties - Essen, 8 January 2009
- **Mini-course** (2h): Introduction à la théorie de Hodge mixte - Séminaire de Géométrie Arithmétique, Bordeaux, February 2009
- Points rationnels sur les variétés sur un corps de valuation discrète - Séminaire des Géométries, Lyon, 27 March 2009
- La conjecture de monodromie pour les variétés abéliennes - Séminaire de Géométrie Algébrique, Rennes, 2 April 2009

- The monodromy conjecture for abelian varieties – KU Leuven, 22 April 2009
- A trace formula for varieties over a discretely valued field – Stockholm University, 13 May 2009
- Grothendieck rings and motivic integration, after K. Rökæus (opponent lecture at Rökæus' PhD defence) – Stockholm University, 15 May 2009
- Limits of Hodge structures and Berkovich spaces - Hodge Theory, Dijon, 29 May 2009
- Points rationnels sur les variétés sur un corps de valuation discrète - Tripode, ENS Lyon, 26 June 2009
- Rational points on varieties over a discretely valued field - Mathematics Colloquium, University of British Columbia, 11 September 2009
- Trace formula for varieties over a discretely valued field - PIMS/SFU/UBC Number Theory Seminar, Simon Fraser University, 17 September 2009
- The monodromy conjecture for abelian varieties - Algebraic Groups Seminar, University of British Columbia, 22 September 2009
- The monodromy conjecture for abelian varieties - Géométrie et Théorie des Modèles, Chevaleret, 11 December 2009
- The monodromy conjecture for abelian varieties - Università degli Studi di Padova, 18 December 2009
- Une preuve de la conjecture de monodromie pour les variétés abéliennes - Géométrie Algébrique et Géométrie Complexe, CIRM, Luminy, 11 January 2010
- Motivic integration on rigid varieties - Motivic integration, Berkovich spaces and complex singularities, Lyon, 28 January 2010
- A proof of the motivic monodromy conjecture for abelian varieties - Conference on Algebraic Geometry and Arithmetic, Essen, 17 February 2010
- Degenerating CY-varieties and monodromy - Cohomology of Algebraic Varieties, Hodge Theory, Algebraic Cycles, Motives, IHP, Paris, 26 April 2010
- A proof of the motivic monodromy conjecture for abelian varieties - Second International Workshop on Zeta Functions in Algebra and Geometry, Palma de Mallorca, 5 May 2010
- **Mini-course (6h):** Weak Néron models and rational points on varieties over discretely valued fields - Motivic Themes from Algebraic Geometry, Feza Gürsey Institute for Fundamental Sciences, Istanbul, 7-13 June 2010
- Limit mixed Hodge structures and Berkovich spaces - International Summer School on Berkovich Spaces, Paris, 9 July 2010
- From p-adic zeta functions to t-adic analytic geometry - Berkovich Spaces and p-adic Differential Equations, Strasbourg, 10 November 2010
- Finite group actions, rational fixed points and weak Néron models - Algebraic Geometry Seminar, Leiden, 15 December 2010
- A proof of the motivic monodromy conjecture for abelian varieties - Arithmetic and Algebraic Geometry 2011, Tokyo, 19 January 2011
- Rational fixed points for finite group actions, and a question of Serre - From p-adic differential equations to arithmetic geometry, Padova, 3 February 2011
- Chai's conjecture and Fubini properties of motivic integrals, Séminaire de Géométrie et Théorie des Modèles, ENS, Paris, 9 April 2011
- Rational fixed points for finite group actions, and a question of Serre - Algebraic Geometry Seminar, Oslo, 11 April 2011
- Rational fixed points for finite group actions, and a question of Serre - Algebraic Geometry Seminar, Zürich, 23 May 2011
- Rational fixed points for finite group actions, and a question of Serre - Algebraic Geometry Seminar, Mainz, 30 June 2011
- Néron component groups of wildly ramified abelian varieties – Arithmetic, Motives and Moduli Spaces, IHP, Paris, 9 January 2012

- Néron component groups of wildly ramified abelian varieties – Number Theory Seminar, UC Berkeley, 6 April 2012
- Néron component groups of wildly ramified abelian varieties – Arithmétique en Plat Pays, Gent, 21 May 2012
- **Graduate course** (16h): The motivic monodromy conjecture for abelian varieties, Morningside Center of Mathematics (Chinese Academy of Sciences), Beijing, October 2012
- The Kontsevich-Soibelman skeleton of a degeneration of Calabi-Yau varieties – Non-Archimedean Analytic Geometry, Oberwolfach, 10 November 2012
- Le squelette de Kontsevich-Soibelman d'une dégénération de variétés de Calabi-Yau – Séminaire de géométrie algébrique, Besançon, 10 January 2013
- The Kontsevich-Soibelman skeleton of a degeneration of Calabi-Yau varieties – Algebraic Geometry Seminar, Hannover, 6 March 2013
- The Kontsevich-Soibelman skeleton of a degeneration of Calabi-Yau varieties – Simons Symposium: Non-Archimedean & Tropical Geometry, US Virgin Islands, 5 April 2013
- The Kontsevich-Soibelman skeleton of a degeneration of Calabi-Yau varieties – Algebraic Geometry Seminar, Michigan, 11 April 2013
- The Kontsevich-Soibelman skeleton of a degeneration of Calabi-Yau varieties – Motivic Invariants and Singularities, Notre Dame, 6 June 2013
- The Kontsevich-Soibelman skeleton of a degeneration of Calabi-Yau varieties – Arithmetic Algebraic Geometry, Berlin, 13 June 2013
- The essential skeleton of a degeneration of algebraic varieties – Algebra and Geometry and Topology of Singularities, Madrid, 10 September 2013
- **Graduate course** (8h): Berkovich spaces and birational geometry – New aspects on Singularity Theory, ICMAT, Madrid, 16-27 September 2013
- **Mini-course** (5h): Motivic integration over discrete valuation rings – Motivic integration, Oberwolfach, 14-18 oktober 2014
- A logarithmic interpretation of Edixhoven's filtration on Néron models of Jacobians – Séminaire autour des cycles algébriques, Paris 6, 13 November 2013
- Une interprétation logarithmique de la filtration d'Edixhoven sur les modèles de Néron des Jacobiennes – Séminaire de théorie des nombres, Caen, 15 November 2013
- Le squelette essentiel d'une dégénérescence de variétés algébriques – Séminaire de géométrie algébrique, ENS Paris, 19 December 2013
- **Mini-course** (4h) : Berkovich skeleta and birational geometry – Université Lille 1, 9 January 2014
- The essential skeleton of a degeneration of algebraic varieties – Algebraic Geometry Seminar, Columbia University, 7 March 2014
- The essential skeleton of a degeneration of algebraic varieties – Algebra Seminar, Georgia Tech, 12 March 2014
- Weight functions on Berkovich spaces and poles of maximal order of motivic zeta functions – Semester on Model theory, Arithmetic Geometry and Number Theory, MSRI, Berkeley, 25 March 2014
- Berkovich spaces and birational geometry – Mathematics Colloquium, Hamburg, 25 May 2014
- **Mini-course** (4,5h): Skeleta of Berkovich spaces and birational geometry – Special week on Berkovich spaces and applications, Strasbourg, 23 -26 June 2014
- Poles of maximal order of motivic zeta functions – Algebraic and Tropical Geometry Seminar, Yale University, 4 September 2014
- Poles of maximal order of motivic zeta functions – Algebraic Geometry Seminar, Brown University, 5 September 2014
- Espaces de Berkovich et le programme des modèles minimaux – SAGA, Orsay, 23 September 2014

- **Mini-course** (3h): Berkovich spaces and birational geometry – Singularités et géométrie tropicale, Paris 7, 29 September – 1 October 2014
- Berkovich spaces and birational geometry – Algebraic Geometry Seminar, University of Michigan, 5 November 2014
- Poles of maximal order of motivic zeta functions – Motivic Integration, Orbital Integrals, and Zeta-Functions, Banff, 5 December 2014
- **Graduate course** (12h), together with Sam Payne (Yale): Berkovich skeleta – WONDER mini-course, Utrecht, 8-12 December 2014
- Poles of maximal order of Igusa zeta functions – SFN Colloquium, Regensburg, 15 January 2015
- Poles of maximal order of Igusa zeta functions – Simons Symposium on Tropical and Non-Archimedean Geometry, San Juan (Puerto Rico), 3 February 2015
- Pôles d'ordre maximal des fonctions zêta d'Igusa – Séminaire de Géométrie Algébrique, Rennes, 26 February 2015
- Poles of maximal order of Igusa zeta functions – Algebraic Geometry Seminar, Cambridge, 4 March 2015
- Refined curve counting and Hrushovski-Kazhdan motivic integration – Singular Landscapes, Conference in honor of Bernard Teissier, Aussois, 23 June 2015
- Refined curve counting and Hrushovski-Kazhdan motivic integration – AMS Summer Institute, Salt Lake City, 24 July 2015
- The essential skeleton of a degeneration of algebraic varieties – Collapsing Calabi-Yau manifolds, Simons Center, Stony Brook, 1 September 2015
- Poles of maximal order of Igusa zeta functions – Algebra and Geometry Seminar, Sheffield, 13 October 2015
- Poles of maximal order of Igusa zeta functions – Algebraic Geometry Seminar, Oxford, 3 November 2015
- Poles of maximal order of Igusa zeta functions – Algebraic Geometry Seminar, Warwick, 18 November 2015
- Poles of maximal order of Igusa zeta functions – Geometry & Topology Seminar, Imperial College London, 27 November 2015
- Geometric invariants of non-archimedean semi-algebraic sets – Non-Archimedean geometry and applications, Oberwolfach, 17 December 2015
- Geometric invariants of non-archimedean semi-algebraic sets – Workshop on Birational Geometry, Warwick, 11 February 2016
- Geometric invariants of non-archimedean semi-algebraic sets – Singularities and Topology, Nice, 8 March 2016
- From elementary number theory to string theory, and back again – Semi-Plenary talk at the joint meeting of the Mathematical Societies of Belgium, Luxembourg and The Netherlands, Amsterdam, 22 March 2016
- Geometric invariants of non-archimedean semi-algebraic sets – Geometry seminar, EPFL, Lausanne, 12 April 2016
- Poles of maximal order of Igusa zeta functions – Algebraic Geometry seminar, Leuven, 20 April 2016
- Geometric invariants of non-archimedean semi-algebraic sets – Batmobile, Yale University, 28 April 2016
- Refined tropical curve counting and motivic integration – Algebraic, Tropical, and Nonarchimedean Analytic Geometry of Moduli Spaces, CMO, Oaxaca, 5 May 2016
- Geometric invariants of non-archimedean semialgebraic sets – Tropical geometry seminar, Paris 6, 18 May 2016
- A logarithmic interpretation of Edixhoven's jumps for Jacobians – Sino-French conference in algebraic and arithmetic geometry, Bordeaux, 25 May 2016

- From elementary number theory to string theory, and back again – Plenary talk at the joint meeting of the Mathematical Societies of Belgium, Luxembourg and Spain, Logrono, 7 June 2016
- Tropical refined curve counting and motivic integration – Arithmetic, Geometry and Physics, Herstmonceux Castle, 20 June 2016
- Poles of maximal order of Igusa zeta functions – Mathematics Colloquium, Tuebingen, 27 June 2016
- Tropical refined curve counting and motivic integration – Algebraic geometry seminar, Tuebingen, 28 June 2016
- Poles of maximal order of Igusa zeta functions – Algebraic Geometry: Satellite Conference of 7ECM, Hannover, 13 July 2016
- **Mini-course (4h):** Berkovich spaces and birational geometry – Summer school of the Berlin-Amsterdam-Leiden graduate program, Vlieland, 28 August – 2 September 2016
- **Mini-course (3h):** The non-archimedean SYZ fibration and Igusa zeta functions – Higher Dimensional Algebraic Geometry and Characteristic p , CIRM, Luminy, 12-16 September 2016
- **Mini-course (4h):** The non-archimedean SYZ fibration and Igusa zeta functions – Berkovich spaces and degenerating Calabi-Yau varieties, Oberwolfach, 17-21 October 2016
- The non-archimedean SYZ fibration – Arc schemes and singularities, Rennes, 21 and 22 November 2016
- From elementary number theory to string theory, and back again – Mathematics Colloquium, Durham, 12 December 2016
- From elementary number theory to string theory, and back again – Number Theory seminar, Copenhagen, 21 December 2016
- A logarithmic interpretation of Edixhoven's jumps for Jacobians – Number Theory seminar, Oxford, 9 February 2017
- A tropical motivic Fubini theorem – Algebraic Geometry Seminar, FU Berlin, 20 April 2017
- A tropical motivic Fubini theorem – Simons Symposium on Nonarchimedean and Tropical Geometry, Schloss Elmau, 19 May 2017
- A tropical motivic Fubini theorem – Fourth international conference on zeta functions in algebra and geometry, Bielefeld, 2 June 2017
- A motivic Fubini theorem for the tropicalization map – Non-Archimedean geometry, motives and vanishing cycles, Mittag Leffler Institute, 27 June 2017
- The non-archimedean SYZ fibration – Annual Meeting of the Vietnamese Institute for Advanced Study in Mathematics, VIASM Hanoi, 19 August 2017
- The non-archimedean SYZ fibration and the minimal model program – Algebra Seminar, Institute of Mathematics, Hanoi, 29 August 2017
- A motivic Fubini theorem for the tropicalization map, with applications to Donaldson-Thomas theory – British Algebraic Geometry meeting (BrAG), Cambridge, 11 September 2017
- Specialization of (stable) rationality in families with mild singularities – Algebraic Geometry Seminar, Bonn, 19 October 2017
- Specialization of (stable) rationality in families with mild singularities – Algebraic Geometry Seminar, Lausanne, 26 October 2017
- Igusa zeta functions and the SYZ conjecture singularities – Algebraic Geometry Seminar, Freiburg, 10 November 2017
- Specialization of (stable) rationality in families with mild singularities – Algebraic geometry with Fancy coefficients, Caen, 16 November 2017
- Specialization of (stable) rationality in families with mild singularities – Algebraic Geometry Seminar, Orsay, 12 December 2017

- Specialization of (stable) rationality in families with mild singularities – Belgian-Dutch Algebraic Geometry Day, Nijmegen, 15 December 2017
- Specialisation of (stable) rationality in families with mild singularities – Geometry Seminar, Loughborough, 21 February 2018
- **Mini-course (4,5h):** The non-archimedean SYZ fibration and Igusa zeta functions – Tianyuan Advanced Seminar on the Moduli Spaces in Algebraic Geometry, Shanghai Center for Mathematical Sciences, 2-7 April 2018
- A motivic Fubini theorem for the tropicalization map – Workshop on tropical varieties and amoebas in higher dimension, KTH Stockholm, 17 April 2018
- A motivic Fubini theorem for the tropicalization map – Algebraic geometry seminar, Sheffield, 8 May 2018
- A logarithmic interpretation of Edixhoven's jumps for Jacobians – A p-adic day in Exeter, 15 June 2018
- Specialization of (stable) rationality in families with mild singularities – N-cube week, Mittag Leffler Institute, Stockholm, 27 June 2018
- The non-archimedean SYZ fibration – 30 years of Berkovich spaces, IHP, Paris, 11 July 2018