GABRIELE VEZZOSI's CURRICULUM VITÆ

EDUCATION and POSITIONS

- October 10, 1994 - degree in Physics (110/110 cum laude) Università di Firenze, title of Thesis *"Algebraic Geometry of PDE's and a point of view on quantization"*, advisor Prof. Alexandre M. Vinogradov (Moscow);

- December 1995 - December 1998: PhD Program in Mathematics at Scuola Normale Superiore (Pisa, Italy);

- May 13, 1999 - PhD Thesis' defense (70/70 cum laude) *"The Chow ring of the classifying stack of PGL_3"* at Scuola Normale Superiore (Pisa, Italy) (Advisor: Prof. A. Vistoli (Bologna); Jury: Prof. E. Arbarello (SNS, Pisa), Dr. B. Totaro (Cambridge), Prof. G. Tomassini (SNS, Pisa), Dr. M. Manetti (SNS, Pisa));

- March 1999-December 2003: PostDoc position at Dipartimento di Matematica, Università di Bologna, on the Project "Intersection Theory";

- 26 February 2001, *Qualification* as *Maitre de Conferences* (Section 25 -Mathematiques) by Ministère de l'Education Nationale (France);

- February 2003, winner of an Assistant Professor (Ricercatore) position in Geometry (MAT-03), Facoltà di Ingegneria, Università di Firenze;

- January 2004 - 29 December 2010, Assistant Professor (Ricercatore) in Geometry (MAT-03) at Dipartimento di Matematica Applicata "G. Sansone", Facoltà di Ingegneria dell'Università di Firenze.

- February 2006, winner of a *Concorso* (*Job Competition* in English, *Concours* in french) as Full Professor (PR1) in Geometry - National Job Competition held at the University of Bologna - Italy.

- March 2009, Qualification à Professeur by Ministère de l'Education Nationale (France).

- October 2010, shortlisted for a Full Professor position in Geometry at ETH, Zürich (Switzerland).

- 30 December 2010 - present, permanent Full Professor position in Geometry at Università di Firenze (Italy). On leave since January 2013- July 2014.

- May 15, 2012, qualified first in Concours à Professeur, Université Diderot - Paris 7, Paris, France

- January 2013 - July 2014 (resigned), Professeur at Institut de Mathématiques de Jussieu, Université Diderot - Paris 7, Paris, France.

- July 2014- present, Full Professor of Geometry, Dipartimento di Matematica ed Informatica " Ulisse Dini" Università di Firenze (Italy).

VISITS and POSITIONS ABROAD

- 1996-now: member of G.N.S.A.G.A (Gruppo Nazionale Strutture Algebriche e Geometriche e Applicazioni) INDAM group;

- 1997, Spring Semester: visiting fellow all'Harvard Department of Mathematics (Cambridge, Boston, Mass., USA);

- February 10 - March 1, 1999: Visiting Fellow at Department of Mathematics and Mathematical Statistics, Cambridge University, Cambridge UK (collaboration with Prof. Burt Totaro);

- March 1 - March 31, 2000: visitor at the Institute for Advanced Study, Princeton NJ, USA ("Motivic Homotopy Theory Program" org. V. Voevodsky);

- November, 2000: visitor at Max Planck Institut für Mathematik, Bonn, Germany;

- February-March 2001, visitor at the Department of Mathematics, University of Utah, Salt Lake City (USA);

- April 2001, Maitre de Conferences invité (1 month) at the Institut Fourier, Grenoble, France;

- June 2001, Maitre de Conferences invité (1 month) at Department de Mathematique, Laboratoire J. Dieudonné Université de Nice (France);

- March-April 2002, member of the MSRI (Mathematical Sciences Research Institute) Berkeley, CA - USA;

- October 6-24, 2002, *Research in Pairs* Program at Mathematisches Forschungsinstitut Oberwolfach, Germany (with B. Toen, Title *From homotopical algebraic geometry to derived algebraic geometry*);

- June 2003, visitor alla Fachbereich Mathematik und Informatik, Westfälische Wilhelms-Universität Münster, Münster (Germania).

- May 16-26, 2004, visitor presso il Matematisk Institutt, Univ. Oslo (Norway).

- July 3-20, 2004, visitor presso il CIRGET (Centre Interuniversitaire des Recherches en Géométrie et Topologie), Université du Quebèc à Montreal (Montreal, Canada).

- Fall 2006, visitor at Matematisk Institutt, Univ. Oslo (Norway).

- February 2007, Special Program in Algebraic Geometry, Institute for Advanced Study, Princeton, USA.

- April 2007, Ohio State University, Columbus, Ohio, USA.

- May 13-20, 2007 - Workshop *Stacks in geometry and topology*, Fields Institute, Toronto, Canada.

- September 2007 - visitor SISSA, Trieste. Italy.

- March 2008 - Special Program in *Representation theory, algebraic geometry and physics*, Institute for Advanced Study, Princeton, USA.

- May 2008, Professeur invité, Institut de Mathématiques, Université Paul Sabatier, Toulouse, France.

- May 2009, invited professor at Mathematisches Institut der Universität Bonn.

- November 2010, visitor at I3M, Université de Montpellier2, Montpellier, France.

- March-May 2012, visitor at Institut des Hautes Etudes Scientifiques (IHES), Bures-sur-Yvette, Paris, France.

- April 30 - May 4, 2012, visitor at at I3M, Université de Montpellier2, Montpellier, France.

- September 8- September 13, 2013, visitor at Galileo Galiei Institute for Theoretical Physics, Arcetri (Florence), Italy.

- April 13-19, 2014, visitor at at I3M, Université de Montpellier2, Montpellier, France.

- June 2-6, 2014, visitor at the Oxford Mathematical Institute, Oxford, UK.

- March 1- March 31, 2015, Visiting Member at Institute for Advanced Study, Princeton, USA.

- May 1- May 31, 2015, Visiting Member at Institut des Hautes Etudes Scientifiques (IHES), Bures-sur-Yvette, Paris, France.

- May 1-May 31, 2016, Professeur invité, Institut de Mathématiques de Jussieu-Paris Rive Gauche, Paris, France.

- October-December, 2018, Professeur invité, Institut de Mathématiques, Université Paul Sabatier, Toulouse, France.

- January 22 - May 24, 2019, member of the MSRI (Berkeley) as an Organizer of the Program *Derived Algebraic Geometry*.

- January 29-February 8, visitor at IRMA Strasbourg (France).

INVITED TALKS

- October 3-8, 1994: invited talk "On higher de Rham complexes" all' "*International Conference on Secondary Differential Calculus and Nonlinear Problems in Physics*", Vietri sul Mare, Italy;

- 29 August- 4 September 1999: Conference "*Proprietà geometriche delle varietà reali e complesse: nuovi contributi Italiani*", Mondello (Palermo), invited talk "The Chow ring of the classifying stack of PGL(3)";

- March 26-28 1999: invited talk "The Chow ring of the classifying stack of PGL_3" at the Conference "*Algebraic cycles: Hodge theory, Motives and K -theory*", Dipartimento di Matematica dell'Università di Genova (organized by L. Barbieri-Viale, C. Pedrini, V. Srinivas);

- December 1999, *International Conference on Intersection Theory* (Bologna), invited talk "On the Chow ring of the classifying space of PGL$_3$";

- April 1- April 5 2000, invited talk at University of Missouri at Columbia (MO-USA), "Classifying spaces in Algebraic Geometry";

- June 22-23, 2000: 2 invited talks "Introduction to $\mathbb{A}^1$-homotopy theory", "Some open problems in $\mathbb{A}^1$-homotopy theory", Dipartimento di Matematica dell'Università di Genova (organized by Prof. C. Pedrini);

- 28 February 2001, talk "Motivic refined cycle maps", Department of Mathematics, University of Utah, Salt Lake City (USA);

- April 6, 20, 27, 2001, Grenoble, Institut Fourier, invited talks "Some open problems in $\mathbb{A}^1$-homotopy theory", "Higher equivariant algebraic K-theory of group actions with finite stabilizers" and "Higher algebraic equivariant K-theory for diagonalizable group schemes";

- June 14, 21, 2001, Nice, Laboratoire J. A. Dieudonné: invited talk "Higher algebraic equivariant K-theory for diagonalizable group schemes" at the Workshop "*Rencontres Nice-Genes*" and talk "Algebraic Geometry over model categories: a general approach to

derived algebraic geometry" at *Séminaires de Géométrie* ;

- 21-25, November 2001 - Laboratoire J. Dieudonné, Nice (Francia), Workshop "CATS 1: *Higher Categorical Structures in Algebraic Geometry* ", talk "Algebraic Geometry over model categories";

- March 2002, invited speaker at the Workshop "*Non-abelian Hodge Theory*", MSRI (Berkeley, CA -USA); title of talk "Homotopy Algebraic Geometry"; Notes and Streaming Video are available at:
http://www.msri.org/publications/ln/msri/2002/hodgetheory/vezzosi/1/index.html);

- June 2002, invited speaker at "WAGP2002-Workshop on Algebraic Geometry and Physics- *K-Theory, Derived Categories and Strings*", Dipartimento di Matematica, Università di Genova (25-28 June 2002); title of talk "Homotopy Algebraic Geometry";

- August 4 - 10, 2002, Mathematisches Forschungsinstitut Oberwolfach, *Algebraische K-Theorie* (org. Dan Grayson (Urbana), Uwe Jannsen (Regensburg), Bruno Kahn (Paris)), invited speaker;

- October 25-26, 2002, Universitat Essen, DFG SCHWERPUNKT-Globale Methoden in der Komplexen Geometrie- Workshop "*From homotopical algebra to homotopical algebraic geometry*", Speakers: Bertrand Toen and Gabriele Vezzosi (Organizzato da Hélène Esnault, Stefan Müller-Stach, Eckart Viehweg). Informations and nots available at: http://www.uni-essen.de/˜mat930/homotopy.html.

- December 2002, Isaac Newton Institute for Mathematical Sciences (Cambridge, UK), Euroworkshop *Elliptic Cohomology and Higher Chromatic Phenomena* (9 - 20 December 2002), invited talk "An idea of homotopical algebraic geometry" (Dec. 20, h. 15:30). Notes are available at
http://www.newton.cam.ac.uk/webseminars/pg+ws/NSTW04/201202/vezzosi/ ;

- 17-25, May 2003 - Laboratoire J. Dieudonné, Nice (Francia), Workshop "CATS 2: *Higher Categorical Structures in Algebraic Geometry* "; title of talk "Derived moduli spaces";

- 16 June 2003, Fachbereich Mathematik und Informatik, Westfälische Wilhelms-Universität Münster, Münster (Germania), talk "K-theory depends only on the simplicial localization".

- 8-13 September 2003, invited speaker at Congresso dell'Unione matematica Italiana (Milano - Università Milano Bicocca).

- 18-20 December 2003, *Meeting on Algebraic Varieties* (Incontro di metà periodo del progetto MIUR - Geometria delle Varietà Algebriche), Roma; title of talk "Homotopical algebraic geometry and global derived moduli spaces".

- March, 14-20, 2004, invited speaker at the workshop *Motives and homotopy theory of schemes*, organized by T. Geisser (Los Angeles), B. Kahn (Paris), F. Morel (Paris), Mathematisches Forschunginstitut Oberwolfach - Germany.

- March, 8-9 April, 2004, Dept. de Math., Université de Geneve, talk "Homotopical algebraic geometry: introduction and new directions".

- May, 21, 2004, Colloquium (Felleskollokvium) talk "Algebraic Geometry on homotopy theories" al Matematisk Institutt, Univ. Oslo (Norway).

- May 31 - June 6, 2004, Workshop "Derived non-abelian Hodge theory", Toulouse (France).

- June 11-18, 2004, invited speaker at "2004 Summer Program: n-Categories: Foundations and Applications" (June 7-18, 2004, IMA Minneapolis, USA).

- August 19-28, 2005 Conference "The Arithmetic of Structured Ring Spectra", Barony Rosendal, Rosendal - Norway.

- May 2006, Workshop *Derived Algebraic Geometry and Nonabelian Hodge Theory*,Dept. de Math., Nice - France.

- September 4-8, 2006, Topological Algebraic Geometry Workshop, Matematisk Institutt, Oslo, Norway.

- November 2006, talk *A derived moduli-theoretic approach to elliptic cohomology*, Labo. Picard, Univ. P. Sabatier, Toulouse, France.

- February 2007, Special Program in *Algebraic Geometry*, Insitute for Advanced Study, Princeton, USA.

- May 13-20, 2007, invited speaker allo Workshop *Stacks in geometry and topology*, Fields Institute, Toronto, Canada.

- 4-8 June 2007, invited speaker al convegno CIRM *Algebraic Geometry in Higher Dimensions*, Levico Terme, Italy.

- June 2007, invited speaker at joint meeting UMI-DMF, Perugia, talk "An idea of derived algebraic geometry".

- March 2008, invited speaker Special Program in Representation Theory, Insitute for Advanced Study, Princeton, USA.

- 15-28 June 2008, invited speaker at the conference "Aspects of Moduli", Centro de Giorgi, Scuola Normale Superiore, Pisa, Italy.

- June 2008, invited speaker "HOCAT 2008. Homotopy Structures in Geometry and Algebra. Derived Categories, Higher Categories", Centre de Recerca Matematica, Bellaterra, Barcelona, Spain.

- May 2009, invited talk Mathematisches Institut der Universität Bonn, Germany.

- May 2009, invited talk Max Plank Institut für Mathematik, Bonn, Germany.

- 1-5 June, 2009, invited series of talks on Derived Algebraic Geometry (i-MATH School on Derived Algebraic Geometry), Instituto Universitario de Fisica Fundamental y Matemàticas, IUFFyM, Salamanca, Spain.

- July 12 - August 02, 2009, "Dacha Seminar" on Recent Developments in Derived Algebraic Geometry (Speakers: B. Toen, G. Vezzosi), Steklov Institute, Moscow, Russia.

- September 7-12, 2009, invited speaker at "Advanced School on Homotopy Theory and Algebraic Geometry", Mathematical Research Institute, University of Sevilla (IMUS), Sevilla, Spain.

- April 19-22, 2010, invited speaker at the "Seminario di Geometria Algebrica" - Roma La Sapienza- Rome, Italy.

- April 24 - May 7, 2010, invited speaker at Conference "Geometry at Large", Fakultät für Mathematik, Universität Wien, Wien - Austria.

- May 24-30, 2010, invited speaker at GAD I - "Géométrie Algébrique à la Dérive" - Montpellier, France (première rencontre autour du projet blanc ANR HODAG).

- August 29 - September 3, 2010, invited speaker at the Conference "Categorical methods in geometry and gauge theory", Chern Institute of Mathematics, Nankai University, Tianjin - China.

- October 6, 2010, invited Colloquium talk & Job Interview (shortlisted for Professor position), ETH-Zurich, Switzerland

- November 17, 2010, invited talk at Scuola Normale Superiore, Pisa, Italy.

- January 17-20, 2011, 2 invited talks on "Introduction to derived algebraic geometry and applications", Dipartimento di Matematica Pura e applicata, Università di Padova.

- March 28 - April 1, 2011, invited speaker at the International Conference on Homotopy and Non-Commutative Geometry, Tbilisi State University, Tbilisi (Georgia).

- March 26, 2012, invited talk *Derived algebraic geometry and obstruction theories, with applications to stable maps to a K3 surface*, Séminaire Analyse Algébrique, Institut de Mathématiques de Jussieu, Paris 6, Paris - France.

- March 27, 2012, invited talk *Derived symplectic structures and quantization* , Séminaire de Topologie, Université Paris Diderot, Paris 7, Paris - France.

- April 23, 2012, invited talk *Derived symplectic structures and quantization* , Séminaire de Géométrie, Institut Fourier, Grenoble - France.

- May 10, 2012, invited talk *Derived symplectic structures and quantization*,Séminaire de Topologie Algébrique, LAGA - Institut Galilée, Paris 13, Paris - France

- May 3, 2013, invited talk *First steps in derived symplectic geometry*, Scuola Normale Superiore, Pisa, Italy.

- May 10, 2013, invited talk *First steps in derived symplectic geometry*, ETHZ Moduli Seminar, ETH, Zürich, Switzerland.

- May 30, 2013, invited talk *First steps in derived symplectic geometry*, Séminaire de géométrie algébrique, Institut de Mathématiques de Jussieu, Paris, France.

- September 9, 2013, invited talk *Derived symplectic geometry*, Conference 'Geometry of Strings and Fields', Galileo Galilei Institute for Theoretical Physics, Arcetri (Florence), Italy.

- October 9, 2013, invited talk at Réga (Reseaux Etudiants en Géométrie Algébrique), Amphiteatre Darboux, IHP, Paris.

- January 24, 2014, invited talk at Séminaire Caen Cergy Clermont Paris - Théorie des Représentations, *An overview of derived geometry*, Bâtiment Sophie Germain, Université Paris Diderot, Paris.

- April 17, 2014, invited talk Université de Montpellier 2, *First steps in derived logarithmic geometry*.

- March 2015, invited speaker at Conference *Chow groups, motives and derived categories*, in Special Program 'Topology of algebraic varieties', Institute for Advanced Study, Princeton, USA.

- April 7-17, 2015, invited speaker at EPSRC Symposium *Symplectic Techniques in Derived Algebraic Geometry*, Mathematics Institute, Warwick (UK).

- July 6-10, 2015, invited speaker at *GAP (Geometry and Physics) XIII*, IBS Center for Geometry and Physics, Pohang, South Korea.

- July 20-25, 2015, invited speaker at *Algebraic Geometry 2015*, AMS Summer Institute in Algebraic Geometry, University of Utah, Salt Lake City (US).

- March 06-16, 2016, invited at *Program on Higher Structures in Geometry and Physics*, MPIm, Bonn (Germany).

- April 3-7, 2017, invited speaker at the *Conference on invertible objects and duality in derived algebraic geometry and homotopy theory*, Regensburg, Germany. This Conference is part of the Program "Higher Invariants" by SFB 1085 - Interactions between Arithmetic Geometry and Global analysis.

- June 6-9, 2017, invited speaker at the Conference *Algebraic Anlaysis in honor of Masaki Kashiwara's 70th Birthday*, IHES, Paris, France.

- June 26-30, 2017, invited speaker at the Workshop *Non-Archimedean geometry, motives and vanishing cycles*, Institut Mittag-Leffler, Stockholm, Sweden.

- March 20-22, 2018, Kavli IPMU (Tokyo), invited speaker at the Worskshop *Lectures on higher structures and quantisation* (two talks, 1:30 h each).

- July 4-6, 2018, *The Arithmetic of Derived Categories*, CIRM, Trento (Italy).

- March 29, 2019, invited speaker at the workshop "Derived algebraic geometry and its applications", MSRI, Berkeley, USA; talk title *Vanishing cycles, Bloch's conductor conjecture and non-commutative geometry.*

- April 5, 2019, DAG Seminar, MSRI, Berkeley USA; talk title *Formal gluing along non-linear flags.*

- November 27, 2019, Seminario di Geometria Algebrica ed Aritmetica (Università di Pisa); talk title *Decomposition along a non-linear flag.*

SERIES OF LECTURES

- 1995: 5 lectures on "*Groupoids in symplectic Geometry*" at Dipartimento di Fisica dell'Università di Firenze (Notes of the talks are available as Preprint DFF 225/04/1995 by the Dipartimento di Fisica);

- February-March 1998: 2 lectures, "*Holonomy groupoids of a foliation and associated C^*-algebras*", "*Spectra of abelian categories and Gabriel-Rosenberg reconstruction theorems for general schemes*", in the Program "*Introduction to Non-Commutative Geometry*", Scuola Normale Superiore, Pisa (organized by Prof. G. Tomassini, SNS, Pisa) - Italy;

- November 1999, Dipartimento di Matematica, Università di Trento, series of lectures on "*Equivariant Intersection Theory*".

- October 2002, Univeritat Essen, DFG SCHWERPUNKT-Globale Methoden in der Komplexen Geometrie - Workshop/School "*From homotopical algebra to homotopical algebraic geometry*", Speakers: Bertrand Toën and Gabriele Vezzosi (Organizzato da Hélène Esnault, Stefan Müller-Stach, Eckart Viehweg).

- September 2007 - Series of lectures "Derived Algebraic Geometry: Introduction and open problems", SISSA, Trieste - Italy.

- 1-5 June, 2009, invited series of talks on Derived Algebraic Geometry (i-MATH School on Derived Algebraic Geometry), Instituto Universitario de Fisica Fundamental y Matematicas, IUFFyM, Salamanca, Spain.

- July 12 - August 02, 2009, Dacha Seminar on *Recent Developments in Derived Algebraic Geometry* (Speakers: B. Toen, G. Vezzosi), Steklov Institute, Moscow, Russia.

- September 7-12, 2009, invited series of lectures at "Advanced School on Homotopy Theory and Algebraic Geometry", Mathematical Research Institute, University of Sevilla (IMUS), Sevilla, Spain.

- January 10-16, 2010, invited speaker at the MFO-Oberwolfach Workshop *Moduli spaces in Algebraic Geometry*, org. Dan Abramovich (Providence), Gavril Farkas (Berlin), Stefan Kebekus (Freiburg).

- January - April 2011, Phd Course 'DG-categories and derived algebraic geometry' (University of Padova, Italy).

- January 2013- June 2013, Séminaire *Autour de la Géométrie Algébrique Dérivée*, organizer, run by my students, IMJ, Université Paris Diderot, Paris (webpage with Notes http://www.math.jussieu.fr/~vezzosi/seminar/)

- September 2013- June 2014, Groupe de Travail *Factorization algebras and derived symplectic geometry*, in collaboration with G. Ginot, V. Melani, M. Porta, IMJ, Paris.

- January 2014- July 2014, Sḿinaire *Algèbre et topologie homotopiques*, joint with G. Maltsiniotis and B. Keller, IMJ, Paris.

- September 14-18, 2015, *Summer School on Derived Algebraic Geometry*, Collegio Cairoli, Pavia (Italy).

- 22 Nov - 28 Nov 2015, *Oberwolfach Seminar: Derived Geometry*, MFO Oberwolfach (Germany).

- 12-15, June 2017, *État de la Recherche - DAGIT (Derived Algebraic Geometry and Interactions)*, IMT Toulouse.

CONFERENCES AS AN ORGANIZER AND SCIENTIFIC COMMITTEE MEMBER

- February 2002, with M. Manaresi (Bologna), C. Pedrini (Genova), A. Vistoli (Bologna), organizer of the Workshop "*K-Theory and Algebraic Cycles*", Bologna 7-9, February 2002 - Italy;

- 2007, May 30 - June 2, organizer with G. Ottaviani (Firenze) of the International Workshop "*Interactions with Algebraic Geometry*" Firenze, May 30 - June 2, 2007 (supported by Gruppo Nazionale Strutture Algebriche Geometriche ed Applicazioni, MIUR - PRIN 2006 - Geometria delle varietà algebriche e dei loro spazi di moduli, and Ente Cassa di Risparmio di Firenze);

- September 2008, organizer with B. Toën (CNRS, Toulouse), C. Simpson (CNRS, Nice), T. Pantev (UPenn) of the Conference "*CATS3 - Higher categories and Algebraic Geometry*", Centro De Giorgi, Scuola Normale Superiore, Pisa - Italy. This was the third conference of the CATS-series; the previous editions took place in Nice (2001 and 2003). Among the participants to the whole series, so far: A. Bondal, K. Costello, V. Hinich, A. Joyal, D. Kaledin, M. Kapranov, B. Keller, M. Kontsevich, J. Lurie, M. Olsson, T. Pantev, J. Pridham, P. Schapira, V. Schechtman, Y. Soibelman, A. Yekutieli.

- July 2012, organizer with B. Toën (CNRS, Toulouse), C. Simpson (CNRS, Nice), T. Pantev (UPenn), M. Vaquié (CNRS, Toulouse) of the Conference "*CATS4 - Higher categories and Algebraic Geometry*", 2-7 July 2012, CIRM - Luminy - France.

- 20-21 June, 2013, organiser with J-Y. Charbonnel, G. Danila, S. Morier-Genoud of "Solstice 2013, *Géométries*", Institut de Mathématiques de Jussieu, Paris, France. List of Speakers : A. Corti (Imperial College London, England), V. Kac (M.I.T, USA), D. Kaledin (Russian Academy of Sciences, Moscow), A. Kirillov (University of Pennsylvania), M. Kontsevich (I.H.E.S), V. Ovsienko (Université Claude Bernard Lyon 1, France), R. Pandharipande (ETH-Zurich, Switzerland), J. Souto (University of Vancouver), B. Thibert (Université de Grenoble), B. Toën (Université de Montpellier).

- December 9th - 11th, 2013, organizer with L. Katzarkov (Univ. of Miami and Wien Univ.) and B. Toën (CNRS, Montpellier) of "*Carlos 50*", a Conference in honor of Carlos Simpson's 50th birthday, IHP Paris. List of Speakers : A. Beauville (CNRS, Nice), D. Gaitsgory (Harvard), P. Griffiths (IAS), N. Hitchin (Oxford), M. Kapranov (Yale), M. Kontsevich (IHES), L. Katzarkov (Miami&Wien), T. Pantev (UPenn), C. Sabbah (Paris), P. Schapira (Paris), B. Toën (CNRS, Montpellier), C. Voisin (Ec. Pol. Paris)

- June 15-20, 2015, member of Scientific Committee of "*The mathematics of 21st century: the vision of Alexander Grothendieck*, Université de Montpellier.

- November 22 - 28, 2015, *Oberwolfach Seminar: Derived Geometry* (organizer and main lecturer, together with D. Calaque and T. Pantev), MFO Oberwolfach (Germany).

- June 6-10, 2016, *Geometric methods in the mod p local Langlands correspondence* (organizer together with M. Harris, P. Schneider), Centro De Giorgi, Pisa, Italy.

- May 5 - May 11, 2018, *Infinity-Categories, Infinity-Operads, and their Applications*, BIRS-CMO Oaxaca (Mexico), Organizers: Rune Haugseng (University of Copenaghen, Denmark), David Gepner (Purdue University, US), Bertrand Toën (CNRS, Toulouse, France), Gabriele Vezzosi (Università di Firenze).

- June 4 -7, 2018, *A tale of Algebra and Geometry - A conference to celebrate Angelo Vistoli's 60th birthday*, Department of Mathematics, Pisa (co-organized with Michele Bolognesi (Montpellier), Mirella Manaresi (Bologna), Luca Migliorini (Bologna), Rita Pardini (Pisa)).

- January 22 - May 24, 2019, *Derived Algebraic Geometry*, MSRI, Berkeley (California-US); Organizers: Julie Bergner (University of California, Riverside), Bhargav Bhatt (University of Michigan), Dennis Gaitsgory (Harvard University), David Nadler (University of California, Berkeley), Nikita Rozenblyum (University of Chicago), Peter Scholze (Universität Bonn), Gabriele Vezzosi (Università di Firenze).

TEACHING and ADVANCED TEACHING

- March 1997, Dept. of Mathematics, Harvard University, Lectures on "K-theory, Intersection theory and the Grothendieck- Riemann-Roch theorem";

- October 2000 - January 2001, PhD Course "Algebraic Geometry", Dipartimento di Matematica, Universita' di Bologna - Italy.

- April 2001, Maitre de Conferences invité (1 month) at the Institut Fourier, Grenoble, France;

- June 2001, Maitre de Conferences invité (1 month), Department de Mathematique (Laboratoire J. Dieudonné) Université de Nice, France;

- January-April, 2003, Tutoring for the Course *Geometry and Linear Algebra*, Università di Bologna - Italy;

- November 2003-February 2004, Exercises' and Exams sessions for the Course *Geometry and Linear Algebra*, electronic Engineering School, Università di Firenze - Italy;

- September 2004 - December 2012, Course *Geometry and Linear Algebra*, School of Engineering and Informatics & School of Environmental Engineering, Università di Firenze - Italy.

Home-page: http://poincare.dma.unifi.it/~vezzosi/didattica/.

- 1-5 June, 2009, invited series of lectures on Derived Algebraic Geometry (*i-MATH School on Derived Algebraic Geometry*), Instituto Universitario de Fisica Fundamental y Matematicas, IUFFyM, Salamanca, Spain.

- July 12 - August 02, 2009, Dacha Seminar Lectures on *Recent Developments in Derived Algebraic Geometry* (Speakers: B. Toen, G. Vezzosi), Steklov Institute, Moscow, Russia.

- September 7-12, 2009, invited series of lectures at *Advanced School on Homotopy Theory and Algebraic Geometry*, Mathematical Research Institute, University of Sevilla (IMUS), Sevilla, Spain.

- September 2009 - current, Course *Algebraic Coding Theory*, School of Engineering and Informatics, Università di Firenze - Italy.

- 2010-2011, Third year Course *Introduzione alla Geometria Differenziale*, School of Engineering and Informatics, Università di Firenze - Italy.

- April 2011 - PhD Course *DG-categories* (joint with B. Toën), Math. Dept. Università di Padova, Italy.

- January 2013- May 2013, Cours&TD MM2 (Analyse et algèbre elementaires), Licence 1, Université Paris Diderot, Paris, France.

- September 2013- October 2013, Cours& TD, *Géométrie Différentielle*, Master 2, Université Paris Diderot, Paris, France.

- January 2014- May 2014, Cours&TD MM2 (Analyse et algèbre elementaires), Licence 1, Université Paris Diderot, Paris, France.

- March 2014- May 2014, Cours & TD, *Espaces de modules et prefaisceaux simpliciaux*, Master 2, Université Paris Diderot, Paris, France.

- 2014-current, *Geometry*, 1st year, School of Mechanical Engineering, Università di Firenze - Italy.

- 2015-current, *Higher Geometry* (special topic: Sheaf cohomology via derived functors), 4th year, School of Mathematics, Università di Firenze - Italy.

- 2015-current, *Homological algebra, sheaves and their cohomology*, Graduate School of Mathematics, Università di Firenze - Italy.

- 2019-current, *Introduction to linear codes and quantum computation*, School of Engineering and Informatics, Università di Firenze - Italy.

THESES

Bachelor

- Dec. 2010 - S. Frangioni (School of Informatics and Engineering - University of Florence - Italy), *Codes and algebraic curves* - Bachelor Thesis.

- June 2011 - N. Papalia (School of Informatics and Engineering - University of Florence - Italy) - Bachelor Thesis, *Quantum computation and quantum information*.

- October 2011 - G. Dabisias (School of Informatics and Engineering - University of Florence - Italy), *Quantum computation and Shor's algorithm* - Bachelor Thesis.

- October 2012, G. Lo Russo, (School of Informatics and Engineering - University of Florence - Italy), *Introduction to topological quantum computation* - Bachelor Thesis.

- October 2012, A. Tibo, (School of Informatics and Engineering - University of Florence - Italy), *Anyons & topological quantum computation* - Bachelor Thesis.

- October 2012, G. E. Pibiri, (School of Informatics and Engineering - University of Florence - Italy), *Quantum computation and Grover's algorithm* - Bachelor Thesis.

- December 2014, M. Pippi (Dip. Mat. Università‡ di Firenze), *Cobordism categories and Atiyah's topological quantum field theories* - Bachelor Thesis.

Master

- June 2013, M. Porta (Paris Sud, ALGANT), *Derived formal deformation theory* - Master Thesis (Mémoire M2).

- June 2013, B. Le Grignou (ENS, Paris), *Derived formal deformation theory* - Master Thesis (Mémoire M2).

- June 2013, P. Vertechi (ENS, Paris), *Derived loop spaces and de Rham cohomology* - Master Thesis (Mémoire M2).

- June 2013, Y. Ségalat (UPMC Paris), *Introduction to derived algebraic geometry* - Master Thesis (Mémoire M2).

- June 2014, Martin Gonzalez (UPMC, Paris), *Une introduction à la géométrie symplectique derivée* - Master Thesis (Mémoire M2).

- April 2018, Cipriano Jr Cioffo (Università di Firenze), *A first introduction to ∞-categories*, Master Thesis.

- December 2018, Alessandro D'Angelo (Università di Pisa), *Derived algebraic geometry and the multiplicative HKR theorem*, Master Thesis.

- 2019/2020, Tommaso Rossi (Università di Firenze), *An overview of topological K-theory, generalizations and applications*, Master Thesis.

- 2019/2020, Pietro Gigli (Università di Firenze), *From Grothendieck de Rham Theorem to derived de Rham cochomology*, Master Thesis.

PhD

- September 2011, T. Schürg (Johannes Gutenberg Universität - Mainz, Germany), *Deriving Deligne-Mumford stacks with perfect obstruction theories* - PhD Thesis.

- September 2013 - May 2016, Mauro Porta (Université Paris Diderot, Paris and Università di Firenze), *Derived analytic geometry*, PhD Thesis (mention très honorable).

- September 2013 - September 2016, Valerio Melani (Université Paris Diderot, Paris and Università di Firenze), *Derived Poisson and derived coisotropic strucures*, PhD Thesis (mention très honorable).

- November 2013 - September 2017, Martino Cantadore (Università Roma La Sapienza, Roma), *Deformations of dg-categories with applications to non commutative deformations of derived categories of cubic fourfolds*, co-advisor joint with Paolo Stellari (Dip. Matematica, Universtà di Milano), PhD Thesis.

- September 2017 - July 2020, M. Pippi (Université de Toulouse) *Singularity categories, matrix factorisations and vanishing cycles*, co-advised with B. Toën (CNRS, Toulouse).

CURRENT RESEARCH GRANTS

- Gruppo Nazionale Strutture Algebriche Geometriche ed Applicazioni, INDAM - Italy.

- MIUR - PRIN 2008 - Geometria delle varietà algebriche e dei loro spazi di moduli, Italy.

- Progetto Strategico di Ricerca 2015/16, *Deformation of algebro-geometric structures*, Università di Firenze - Italy.

- Membre du ANR-2017 "CatAG - Catégorification en géométrie algébrique" (Agence Nationale de la Recherche - France, 2017).

INTERNATIONAL EDITORIAL AND SCIENTIFIC DUTIES

- January 2017 - present: member of the Editorial Board of *Journal of Homotopy and Related Structures* (http://link.springer.com/journal/40062).

- May 2014 - present: member of the Editorial Board of *Rendiconti del Seminario Matematico dell'Università di Padova* (http://rendiconti.math.unipd.it/home.php?lan=english).

- July 2015 - present: member of the Editorial Board of *Journal of the Institute of Mathematics of Jussieu* (http://http://journals.cambridge.org/action/displayJournal?jid=JMJ).

- May 2019. present: member of the Advisory Board of *Lecture Notes in Mathematics* (Springer).

- European Research Council (ERC) Advanced Grants experts panels (field of Mathematics).

- Revisore PRIN (PRIN - Research Programs of National Relevant Interest (Italy) - evaluator) - since 2008.

- June 2012, Reviewer for GEV01 - VQR 2004-2010 (National evaluation of research and universities, Italy - Panel of Mathematics and Informatics).

- Referee for NSF-grants (US), Research Foundation FWO – Flanders (Belgium), Fonds National de la Recherche AFR (Luxembourg).

- Commission de spécialistes, poste MdC en Gèométrie, Université Paris Diderot (Mai-Juin, 2013).

- Referee for Inventiones Math., Compositio Math., Duke Math. Journal, Advances in Math., Journal of the AMS, Journal of K-theory, Journal of Topology, Math. Ann., Ann. ENS, IMRN, Acta Math.

PAPERS

1. Theses, Lecture Notes

- G. Vezzosi, *"Introduction to Riemannian Geometry"*, *"Introduction to Symplectic Geometry"*, *"Almost integrable Hamiltonian systems"*, 1993, three contributions to "Geometrical Methods in the theory of almost-integrable Hamiltonian systems", ENEA (National Centre for Atomic Energy) internal publication, edited by Dr. M. Pettini (Astrophysics Observatory, Arcetri, Firenze, Italy);

- G. Vezzosi, *Geometria algebrica delle equazioni alle derivate parziali ed un punto di vista sulla quantizzazione* (*Algebraic geometry of partial differential equations and a point*

of view on Quantization), Degree Thesis, Dipartimento di Fisica, Università di Firenze, (Defended on October 10th 1994, Advisor: Prof. Alexandre M. Vinogradov (Moscow));

- G. Vezzosi, *Groupoids in symplectic Geometry*, Notes of an introductory Seminar, preprint DFF 225/04/1995, Department of Physics, University of Florence ;

- G. Vezzosi, *The Chow ring of the classifying stack of PGL_3*, PhD Thesis, Scuola Normale Superiore, Pisa (defended on May 13th, 1999; Supervisor: Prof. A. Vistoli (Bologna); Jury: Prof. E. Arbarello (SNS, Pisa), Prof. B. Totaro (DPMMS, Cambridge), Prof. G. Tomassini (SNS, Pisa); Referees: Prof. B. Totaro (DPMMS, Cambridge), Prof. L. Barbieri-Viale (Genova), Prof. A. Vistoli (Bologna));

- B. Toen, G. Vezzosi, *From Homotopical Algebra to Homotopical Algebraic Geometry* p. 1-63, Lecture Notes for the DFG-Schwerpunkt "Globale Methoden in der Komplexen Geometrie" Workshop, Essen 25/26 October 2002; Speakers: B. Toen, G. Vezzosi; Organizers: H. Esnault, S. Müller-Stach, E. Viehweg. available at the Workshop webpage http://www.uni-essen.de/~mat930/homotopy.html.

2. Publications

- G. Vezzosi, *Localization of differential operators and of higher order de Rham complexes*, Rendiconti del Seminario Matematico dell'Università di Padova, Vol. 97 (1997), 113-133;

- G. Vezzosi, A.M. Vinogradov, *Infinitesimal Stokes' formula for higher-order de Rham complexes*, Acta Appl. Math., Vol. 49, N. 3 (1997), 311-329;

- G. Vezzosi, *On the Chow ring of the classifying stack of PGL_3*, Journal für die reine und angewandte Mathematik (Crelles), **523** (2000), 1-54;

- G. Vezzosi, A. Vistoli, *Higher algebraic K-theory of group actions with finite stabilizers*, Duke Math. J., **113** (2002), 1-55 ;

- G. Vezzosi, *Brown-Peterson spectra in stable $\mathbb{A}^1$-homotopy theory*, Rendiconti del Seminario Matematico dell'Università di Padova, Vol. 106 (2001), 47-64;

- G. Vezzosi, A. M. Vinogradov, *On higher order analogues of de Rham cohomology*, Differential Geometry and its Applications, **19** (2003) 29-59;

- G. Vezzosi, A. Vistoli, *Higher algebraic K-theory for actions of diagonalizable groups*, Inventiones Math., **153**, Number 1 (2003), p. 1-44 (DOI: 10.1007/s00222-002-0275-2); Erratum, Inventiones Math., p. 219-224, Volume 161, Number 1 July 2005.

- S. Schröer, G. Vezzosi, *Existence of vector bundles and global resolutions for singular surfaces*, Compositio Mathematica, **140**/3 (2004), 717-728.

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- B. Toën, G. Vezzosi, *From HAG to DAG: derived moduli spaces*, p. 175-218, in "Axiomatic, Enriched and Motivic Homotopy Theory", Proceedings of the NATO Advanced Study Institute, Cambridge, UK, (9-20 September 2002), Ed. J.P.C. Greenlees, NATO Science Series II, Volume 131 Kluwer, 2004; also available as Preprint math.AG/0210407, October 28, 2002.

- B. Toën, G. Vezzosi, *A remark on K-theory and S-categories*, Topology, **43**/4 (2004), pp. 765-791.

- B. Toën, G. Vezzosi, *Homotopical algebraic geometry I: Topos theory*, Advances in Mathematics, Volume 193, Issue 2 , 1 June 2005, Pages 257-372.

- B. Toën, G. Vezzosi, *"Brave New" algebraic geometry and global derived moduli spaces of ring spectra*, pp. 325-359, in "Elliptic Cohomology", Cambridge Univ. Press, 2007, H. Miller, D. Ravenel eds.

- B. Toën, G. Vezzosi, *Homotopical Algebraic Geometry II: geometric stacks and applications*, p. 1-228, Memoirs of the American Mathematical Society, volume 193, number 902, May 2008.

- B. Toën, G. Vezzosi, *A note on Chern character, loop spaces and derived algebraic geometry* , in "Algebraic Topolgy – Proc. of the 2007 Abel Symposium" - Oslo, Abel Symposia, 2009, Volume 4, 331-354, Springer Verlag, 2009.

- B. Toën, G. Vezzosi, *Algèbres simpliciales S^1-équivariantes, théorie de de Rham et théorèmes HKR multiplicatifs*, Compositio Math., Volume 147 / Issue 06 (November 2011), pp. 1979 - 2000.

- G. Vezzosi *WHAT IS...a Derived Stack?*, Notices AMS - Volume 58 Issue 07 - August 2011, pp. 955-958.

- T. Pantev, B. Toën, M. Vaquié, G. Vezzosi, *Shifted Symplectic Structures*, Publications Mathématiques de l'IHES June 2013, Volume 117, Issue 1, pp 271-328, DOI: 10.1007/s10240-013-0054-1

- T. Schürg, B. Toën, G. Vezzosi, *Derived algebraic geometry, determinants of perfect complexes, and applications to obstruction theories for maps and complexes*, p. 1-40, Journal für die reine und angewandte Mathematik (Crelles Journal), Volume 2015, Issue 702 (May 2015). ISSN (Print) 0075-4102, DOI: 10.1515/crelle-2013-0037, (published Online 2013-06-20).

- B. Toën, G. Vezzosi,*Caractères de Chern, traces équivariantes et géométrie algébrique dérivée*, Selecta Math., April 2015, Volume 21, Issue 2, pp 449-554. DOI: 10.1007/s00029-014-0158-6.

- Steffen Sagave, Timo Schürg, G. Vezzosi, *Logarithmic Derived Geometry I*, Journal of the Institute of Mathematics of Jussieu, 15 (2016), no. 2, 367-405, Published online DOI : http://dx.doi.org/10.1017/S1474748014000322.

- G. Vezzosi, *A model structures on relative dg-Lie algebroids*, in "Stacks and Categories in Geometry, Topology, and Algebra", Contemporary Mathematics (AMS), 643 (2015).

- G. Vezzosi, *Quadratic forms and Clifford algebras on derived stacks*, Advances in Math., Volume 301, 161-203 (October 2016).

- D. Calaque, T. Pantev, B. Toën, M. Vaquié, G. Vezzosi, *Shifted Poisson structures and deformation quantization*, Journal of Topology Volume 10, Issue 2, June 2017, Pages 483-584.

- B. Toën, G. Vezzosi, *Géométrie non-commutative, formule des traces et conducteur de Bloch*, in "Actes du 1er congrès national de la SMF - C. Lecouvrey, éd.", Séminaires et Congrès, 31, Soc. Math. de France, p. 77-107 (2018).

- T. Pantev, G. Vezzosi, *Symplectic and Poisson derived geometry and deformation quantization*, "Algebraic Geometry, Salt Lake City 2015", Proceedings of Symposia in Pure Mathematics, Volume: 97 (part 2) AMS; Print ISBN: 978-1-4704-3578-3; p. 405-458 (2018).

- B. Toën, G. Vezzosi, *The ℓ-adic trace formula for dg-categories and Bloch's conductor conjecture*, to appear in BUMI, 166 (2018), special issue in memory of Paolo De Bartolomeis, DOI: 10.1007/s40574-018-0166-0, Springer Verlag.

- A. Blanc, M. Robalo, B. Toën, G. Vezzosi, *Motivic realizations of singularity categories and vanishing cycles*, Journal de l'Ecole Polytechnique, 5 (2018), p. 651-747.

- B. Antieau, G. Vezzosi, *A remark on the Hochschild-Kostant-Rosenberg theorem in characteristic p*, to appear in Annali della Scuola Normale Superiore, October 2018, doi: 10.2422/2036-2145.201711007.

- M. Maggesi, G. Vezzosi, *Some elementary remarks on lci algebraic cycles*, Riv. Mat. Univ. Parma Vol. 9 (2018), 365-372.

- B. Toën, G. Vezzosi, *The ℓ-adic trace formula for dg-categories and Bloch's conductor conjecture*, BUMI, volume 12 (2019), p. 3-17.

- G. Vezzosi, *Basic structures on derived critical loci*, Differential Geometry and Applications, Volume 71, August 2020 - Special issue on Geometry of PDE's - In memory of Alexandre Mikhailovich Vinogradov, 1-12 .

- T. Pantev, G. Vezzosi, *Introductory topics in derived algebraic geometry* to appear in Panorama&Synthèse, SMF (France), 2020, pp. 1-36.

3. Submitted

- B. Hennion, M. Porta, G. Vezzosi, *Formal glueing along non-linear flags*, arXiv:1607.04503, July 2016.

- G. Vezzosi, Appendix to: D. Anderson, R. Gonzales, S. Payne, *Equivariant Grothendieck-Riemann-Roch and localization in operational K-theory*, Preprint arXiv:1907.00076 (submitted) , June 2019, p. 36-43

- B. Toën, G. Vezzosi, *Trace and Künneth formulas for singularity categories and applications*, arXiv:1710.05902, last version: January 2019.

4. Preprints

- G. Vezzosi, *The Chow ring of the classifying stack of PGL(2) is generated by Chern classes of the adjoint representation*, Preprint June 1998.

- G. Vezzosi, A. M. Vinogradov, *On Higher Analogs of the de Rham Complex*, Preprint ESI 202 (1995), available at `ftp://ftp.esi.ac.at:/pub/Preprints/esi202.ps`.

- B. Toën, G. Vezzosi, *Algebraic geometry over model categories: a general approach to derived algebraic geometry*, p. 1-52, Research announcement, Preprint `math.AG/0110109`, October 10, 2001.

- G. Vezzosi, *A sketchy note on enriched homotopical topologies and enriched homotopical stacks*, Preprint `math.CT/0507447`, July 2005, not intended for publication (available online at `http://xxx.lanl.gov/abs/math.CT/0507447`).

- B. Toën, G. Vezzosi, *Segal topoi and stacks over Segal sites*, p. 1-22 Preprint `math.AG/0212330`, December 25, 2002, contribution to Proceedings of the Program **"Stacks, Intersection theory and Non-abelian Hodge Theory"**, MSRI, Berkeley, January-May 2002.

- G. Vezzosi, *A note on the cotangent complex in derived algebraic geometry*, Preprint `arXiv:1008.0601`, September 2010.

- G. Vezzosi, *Derived critical loci I - Basics*, Preprint `arXiv:1109.5213`, August 2011.

- D. Calaque, G. Vezzosi, *The BV formalism in derived geometry*, Preprint, November 2013.

- B. Toën, G. Vezzosi, *The ℓ-adic trace formula for dg-categories and Bloch's conductor conjecture*, Research announcement, arXiv:1605.08941, May 2016.

- M. Maggesi, G. Vezzosi, *Some elementary remarks on lci algebraic cycles*, Notes for students, arXiv:1612.04570.

- B. Toën, G. Vezzosi, *Géométrie non-commutative, formule des traces et conducteur de Bloch*, arXiv:1701.00455.

- B. Toën, G. Vezzosi, *Trace formula for dg-categories and Bloch's conductor conjecture I*, arXiv:1710.05902.

- G. Vezzosi, *Symmetric algebra of a cochain complex: cheat-sheet*, pp. 1-14, July 2019, Notes for students.

- B. Toën, G. Vezzosi, *Algebraic foliations and derived geometry: the Riemann-Hilbert correspondence*, arXiv:2001.05450 (January 2020).

4. Ongoing

- G. Vezzosi, *Formal Dirac operator on the loop space via derived algebraic and derived analytic geometry.*

- B. Toën, M. Vaquié, G. Vezzosi, *Derived non abelian mixed Hodge structure with perfect coefficients.*

- B. Toën, M. Vaquié, G. Vezzosi, *Deformation of dg-categories revisited*, January 2012.

- G. Vezzosi, *Derived singular loci II - deformations and quantization.*

- G. Vezzosi, *String topology on algebraic varieties via derived algebraic geometry.*

- G. Vezzosi, *Non abelian Hodge theory and the derived loop space.*

5. Books

- *Stacks and categories in Geometry, Topology and Algebra - Proceedings of CATS4*, Contemporary Mathematics, American Mathematical Society, 2015, (editor, joint with T. Pantev, C. Simpson, B. Toën, M. Vaquié).

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