

Curriculum Vitae

Jean-Baptiste Teyssier
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Nationality: French
Born on March 15th 1985.

Current and former positions

- 2016–** : Post-doctorate fellow of the Methusalem project in pure Mathematics. KU Leuven.
- 2014–2016** : Post-doctorate fellow of the joint Hebrew University of Jerusalem and Freie Universität Berlin program. Mentors: H el ene Esnault and Yakov Varshavsky.
- 2013–2014** : Post-doctorate at Freie Universit at Berlin. Mentor: H el ene Esnault.
- 2010–2013** : Thesis: *Autour de l'irr egularit  des connexions m eromorphes*. Advisor: Claude Sabbah, Ecole Polytechnique. Palaiseau.
- 2008–2009** : Master 2 of Mathematics at Denis Diderot University. Paris.
- 2006–2010** : Ecole Normale Sup erieure, Paris.
- 2003–2006** : Classe pr eparatoire MP, Lyc ee Louis-Le-Grand, Paris.

Scientific Interests and written work

My research interests include various aspects of the theory of \mathcal{D} -modules in char 0: nearby cycles, irregularity, periods, Stokes structures and their moduli, as well as wild ramification for ℓ -adic sheaves in char > 0 . I also have an interest for various topics related with the cohomology (De Rham, Betti,  tale etc) of algebraic varieties.

1. Thesis: *Autour de l'irr egularit  des connexions m eromorphes*. Supervis ee par C. Sabbah. Defended on September 23th 2013. Jury: A. Abbes, Y. Andr e, G. Chenevier, M. Granger, C. Sabbah, T. Saito.
2. *Un analogue pour les connexions m eromorphes d'une construction d'Abbes et Saito: aspect formel en dimension 1*. **Publ. RIMS, Kyoto Univ. 50 (2014)**.
3. *Sur une caract erisation des \mathcal{D} -modules holonomes r eguliers*. **Mathematical Research Letters Vol. 22 (2015)**.
4. *Tensor product and irregularity for holonomic \mathcal{D} -modules*. **C.R. Acad. Sci. 353 (2015)**.
5. *Un th eor eme de lin earit  de la construction d'Abbes et Saito pour les connexions m eromorphes*. 2014. Preprint.
6. *A Boundedness theorem for nearby slopes of holonomic \mathcal{D} -modules*. **Compositio Mathematica. Vol 152. (2016)**
7. *Nearby slopes and boundedness for ℓ -adic sheaves in positive characteristic*. 2015. Preprint.

Teaching

- Sept. 2017** : Course on singularities of differential equations. University of Sevilla.
- Oct.-Dec. 2016** : Tutoring of two bachelor Projects (20 hours). Leuven University.
- Oct. 2015** : Course on singularities of algebraic connections (6 hours). ETH. Zurich.
- March 2015** : Course on \mathcal{D} -modules (5 hours) + exercise sessions (3 hours) given for the Winter school "Derived categories, Weyl algebras and Hodge theory". University of Warwick.
- 2011-2013** : Teaching sessions for first year foreign students of Ecole Polytechnique.
- 2010-2013** : Exercise sessions for first year students of Ecole Polytechnique.
- 2011-2012** : Various teaching sessions for high school students preparing for Mathematic Olympiads.

Talks

Talks at international conferences with scientific committee.—

- Sept. 2017** : Conference " \mathcal{D} -modules and singularities". University of Sevilla.
- April 2017** : Conference "Hodge Theory, Stokes Phenomenon and Applications". CIRM, Luminy.
- April 2017** : Conference "Around the work of M. Kashiwara". IRMA, Strasbourg.
- Feb. 2017** : Conference "A panorama on Singular Varieties: a conference to celebrate Le Dung Trang 70th birthday". Seville, Spain.
- Jan. 2017** : Conference " \mathcal{D} -module and Hodge theory". IPMU. Kyoto. Japan.
- April 2016** : Conference "Generalizations of \mathbb{A}^1 -Homotopy Invariance in Algebraic Geometry and Homotopy Theory". Zinnowitz/Usedom, Germany.
- Sept. 2015** : Conference " \mathcal{D} -module and singularities". University of Padova.
- July 2015** : Contributed talk. Arithmetic geometry week of the AMS Algebraic Geometry Summer Institute. Salt Lake City. USA.
- March 2015** : Workshop "Derived categories, algebra and representation theory". Warwick.
- Feb. 2014** : Contributed talk. Conference "Higher structures in algebraic analysis". Padova University.
- June 2013** : Sino-French conference of arithmetic geometry. Chern Institute. Tianjin, Chine.
- Feb. 2013** : Conference "Recent trends in Algebraic Analysis". Padova University.

Interview talks. —

Jan. 2016 : Interview talk for a post-doctorate of the Methusalem project in pure Mathematics. Accepted (4 positions/200 candidates).

May 2015 : Interview talk for the junior professorship "Complex/Algebraic geometry". University of Augsburg. Final rank: 2nd.

Seminar talks. —

April 2017 : *Skeletons, Stokes torsors and application*. Seminar of algebraic geometry. University of Zurich.

March 2017 : *Skeletons, Stokes torsors and application*. Seminar of algebraic geometry. University of Padova.

Dec. 2016 : *Skeletons, Stokes torsors and application*. Seminar of algebraic geometry. University of Montpellier.

Dec. 2016 : *Skeletons, Stokes torsors and application*. Seminar of algebra and geometry. University of Grenoble.

Nov. 2016 : *Skeletons, Stokes torsors and application*. Algebraic geometry seminar. Augsburg University.

Nov. 2016 : *Skeletons, Stokes torsors and application*. Seminar of arithmetic geometry. University of Rennes.

Oct. 2016 : *From characteristic 0 to characteristic p , and vice versa*. Number theory and algebraic geometry seminar. Leuven University.

Oct. 2016 : *Beilinson's existence theorem for the singular support of an ℓ -adic sheaf*. Seminar of algebraic geometry and Number theory. Hebrew University of Jerusalem.

Sept. 2016 : *Skeletons, Stokes torsors and application*. Geometry and topology seminar. Weizmann Institute.

Sept. 2016 : *Skeletons, Stokes torsors and application*. Seminar of algebraic geometry and Number theory. Hebrew University of Jerusalem.

March 2016 : *Slopes and periods of algebraic connections*. Seminar of algebraic geometry. University of Montpellier.

March 2016 : *Slopes and periods of algebraic connections*. Seminar of algebra and geometry. University of Grenoble.

Nov. 2015 : *Nearby slopes and applications*. Representation theory seminar. University of Bonn.

Sept. 2015 : *Slopes and periods of algebraic connections*. Mathematic seminar. University of Bologna.

June 2015 : *Slopes and periods of algebraic connections*. Algebraic geometry Seminar. University of Chemnitz.

May 2015 : *Nearby slopes for holonomic \mathcal{D} -modules*. Seminar of algebraic geometry. University of Mannheim.

Apr. 2015 : *Slopes and periods of algebraic connections*. Algebra Seminar. Seville.

Jan. 2015 : *Diagonale et irrégularité des équations différentielles linéaires*. Seminar arithmetic and algebraic geometry. Strasbourg University.

- Oct. 2014** : *On a characterization of regularity for holonomic \mathcal{D} -modules*. Algebraic Geometry seminar. Stony Brook University. USA.
- May 2014** : *On a characterization of regularity for holonomic \mathcal{D} -modules*. Algebraic Geometry seminar. Zurich University.
- Feb. 2014** : *La construction d'Abbes et Saito pour les connexions méromorphes*. Algebraic analysis seminar. Jussieu University.
- Jan. 2014** : *Sur une caractérisation des \mathcal{D} -modules holonomes réguliers*. Grenoble University.
- Jan. 2014** : *Sur une caractérisation des \mathcal{D} -modules holonomes réguliers*. Algebra, topology and geometry seminar. Nice University.
- Jan. 2014** : *Sur une caractérisation des \mathcal{D} -modules holonomes réguliers*. Algebraic Geometry seminar. Angers University.
- Sept. 2013** : *La construction d'Abbes et Saito pour les connexions méromorphes*. Number theory seminar. Caen University.
- Nov. 2012** : *Un analogue pour les modules différentiels d'une construction d'Abbes et Saito*. Algebra, topology and geometry seminar. Nice University.
- Nov. 2012** : *Un analogue pour les modules différentiels d'une construction d'Abbes et Saito*. Algebraic Geometry seminar. Angers University.
- Oct. 2012** : *Abbes and Saito's construction for differential modules*. Oberseminar. Augsburg University.

Reading group talks. —

- July 2015** : *Serre's conjecture II*. Reading group "Rational sections and Serre's conjecture". Freie Universität. Berlin.
- Dec. 2014** : *A moving lemma after Gabber, Liu, Lorenzini*. Reading group "Chow groups of zero cycles over p-adic fields". Freie Universität. Berlin.
- Nov. 2014** : *On a vanishing theorem of Saito-Sato*. Reading group "Chow groups of zero cycles over p-adic fields". Freie Universität. Berlin.
- Jan. 2014** : *Constructible complexes in the pro-étale topology*. Reading group "Pro-étale cohomology after Bhatt-Scholze". Freie Universität. Berlin.
- Nov. 2013** : *The theorem of Katz-Lang*. Reading group "Higher Dimensional Class Field Theory and Ramification". Freie Universität. Berlin.

Invitations

- 06-15/09/17** : Invited by Prof. Dr. L. N. Macarro. University of Sevilla.
10-21/10/15 : Invited by Prof. Dr. Peter Jossen. ETH Zurich.
26-30/04/15 : Invited by Prof. Dr. L. N. Macarro and Prof. Dr. F.-J. Castro Jimenez.
University of Seville.
20-22/10/14 : Invited by Prof. Dr. Schnell. Stony Brook University.
19-24/05/13 : Invited by Prof. Dr. Chiarellotto. Padova University.
29-31/10/12 : Invited by Prof. Dr. Hien. Augsburg University.
25/01/10-5/02/10 : Invited by Prof. Dr. Pantev. Philadelphia University.

Selected attended conferences

- Aug. 2017** : Summer school *Motives for periods*. Freie Universität. Berlin. Germany.
March 2017 : *Galois Theory of Periods and Application*. MSRI. Berkeley. USA
July 2015 : AMS Algebraic Geometry Summer Institute. Salt Lake City. USA.
June 2015 : *Mathematics of the 21st century: the vision of Alexander Grothendieck*.
Montpellier University.
March 2015 : Workshop *Derived categories, algebra and representation theory*. Warwick.
Nov. 2014 : *Workshop on Stokes Structures*. Augsburg University.
Oct. 2014 : *The Topology of Algebraic Varieties*. IAS.
Sept. 2014 : *Journées de géométrie arithmétique de l'IHÉS*.
July. 2014 : *Workshop Moduli spaces of connections*. Rennes University.
June 2014 : Conference *Arithmetic Algebraic Geometry on the occasion of Gerd Faltings' 60th birthday*. Max-Planck Institute. Bonn.
March 2014 : Conference *Motives and Galois groups on the occasion of Uwe Jannsen's 60th birthday*. Regensbourg University.
Feb. 2014 : *Higher structures in Algebraic Analysis*. Padova University.
Oct. 2013 : *Conference on Arithmetic Algebraic Geometry* . University of Paderborn.
June 2013 : *Conférence Sino-Française de géométrie arithmétique*. Chern Institute.
Tianjin, China.
Feb. 2013 : Conference *Recent trends in Algebraic Analysis*. Padova University.
June 2012 : *Structures catégoriques supérieures et leurs interactions avec la géométrie algébrique, la topologie algébrique et l'algèbre*. CIRM, Luminy.
May 2012 : Semaine spéciale *Cohomologie et formes automorphes*. Strasbourg.

Miscellaneous

Nov. 2016 : Referring for Journal of Singularities.

April 2015 : Referring for Mathematical Research Letters.

April 2012 : Organization of "Young French Mathematicians Competition".
<http://www.animath.fr/spip.php?article395>

Language skills

French: mother tongue

English: fluent

German: B 2.1 Level

Hebrew: beginner
