

# Curriculum Vitae

## Personal Data

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Name Timo Richarz  
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Birth date, place 01.04.1987, Bad Honnef, Germany

## Experience

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since 10/16 **Postdoc**, with Prof. Dr. Jochen Heinloth, University of Duisburg-Essen  
08/16 – 09/16 **Guest program**, Max-Planck-Institut für Mathematik, Bonn  
04/16 – 07/16 **Visiting lecturer**, University of Duisburg-Essen  
→ Lecture course: Figuren und Abbildungen im Geometrieunterricht  
08/14 – 07/16 **Fellow** for Teach First Deutschland at a highschool in Cologne  
→ Teaching children mathematics and philosophy  
→ Projects with external partners in mathematics, environmental education and interview training  
10/11 – 03/14 **Scientific Assistant**, Bonn University  
→ Assistant for lecture courses of Prof. Dr. Michael Rapoport  
→ Exercise groups for master students in Topology and Complex Geometry  
04/07 – 03/10 **Student Assistant**, Bonn University  
→ Exercise groups for bachelor students in Analysis and Algebra

## Education

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04/14 – 07/14 **Trainee** at Teach First Deutschland  
→ Preparation for work in schools  
→ Focus in learning culture, leadership and teaching  
09/10 – 03/14 **Dissertation** in mathematics with Prof. Dr. Michael Rapoport, Bonn University (Grade: 0,0 summa cum laude)  
→ Title: Affine Grassmannians and Geometric Satake Equivalences  
10/06 – 08/10 **Diploma** in mathematics with Prof. Dr. Michael Rapoport, Bonn University (Grade: 1,1)  
→ Focus in Arithmetic Algebraic Geometry  
→ Diploma Thesis: Local models of Schubert varieties in twisted affine Grassmannians (Grade: 1,0)  
until 06/06 **Abitur** (German A-level equivalent), Bischöfliches Clara-Fey-Gymnasium, Schleiden (Grade: 1,2)

## Curriculum Vitae

### Scholarships

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- 09/10 – 08/13 International Max Planck Research School  
03/08 – 08/10 Studienstiftung des Deutschen Volkes

### Stays and conferences

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- 04/17 Oberwolfach Arbeitsgemeinschaft Higher Gross Zagier formulas, MFO  
02/14 Oberwolfach Workshop on Langlands correspondence and constructive Galois theory, MFO  
07/13 Teaching assistant of Prof. Dr. Peter Scholze, MSRI, Berkeley, CA, USA  
02/12 – 03/12 Research stay, Fields Institute, Toronto, CAN  
09/10 – 12/10 Fellow visitor of Prof. Dr. Michael Rapoport, Harvard University, Cambridge, MA, USA  
01/10 – 03/10 Trimester on p-adic methods in algebraic geometry, Institut Henri Poincaré, Paris, FRA

### Selected talks

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- 09/17 Lyon, title: The test function conjecture for parahoric local models  
01/17 Regensburg, title: Spaces with  $\mathbb{G}_m$ -action and applications  
01/17 Münster, title: Spaces with  $\mathbb{G}_m$ -action and applications  
05/14 Bayreuth, title: The geometric Satake isomorphism  
02/14 Oberwolfach, title: Ramified Geometric Satake Isomorphisms  
11/12 Paderborn, title: On the Geometric Satake Isomorphism  
11/12 Essen, title: On the Geometric Satake Isomorphism  
11/12 Wuppertal, title: Schubert varieties in twisted affine flag varieties  
03/12 Toronto, title: On the Geometric Satake Isomorphism

### Publications/Preprints

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- 2016 Spaces with  $\mathbb{G}_m$ -action, hyperbolic localization and nearby cycles, To appear, Journal of Algebraic Geometry  
2016 On the Iwahori-Weyl Group, Bulletin de la SMF 144, fascicule 1 (2016), 117-124  
2015 Affine Grassmannians and Geometric Satake Equivalences, Int Math Res Notices (2015), doi: 10.1093/imrn/rnv226  
2015 Appendix to The Geometrical Satake Correspondence for Ramified Groups joint with X. Zhu, Annales scientifiques de l'ENS série 4 48, fascicule 2 (2015)  
2014 A new approach to the Geometric Satake Equivalence, Documenta Mathematica 19 (2014) 209-246  
2013 Schubert Varieties in Twisted Affine Flag Varieties and Local Models, Journal of Algebra 375 (2013), 121-147

### Teaching

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- summer 2017    Lecture course, University of Duisburg-Essen: Figuren und Abbildungen im Geometrieunterricht  
Seminar, University of Duisburg-Essen: Forschungsseminar Arithmetische Geometrie
- winter 2016/17    Lecture course, University of Duisburg-Essen: Didaktik der linearen Algebra und analytischen Geometrie  
Seminar, University of Duisburg-Essen: Forschungsseminar Arithmetische Geometrie jt with Michael Wong
- summer 2016    Lecture course, University of Duisburg-Essen: Figuren und Abbildungen im Geometrieunterricht
- winter 2013/14    Exercises for Prof. Rapoport, Bonn University: Algebra II
- summer 2013    Exercises for Prof. Rapoport, Bonn University: Algebra I
- summer school 07/2013    Teaching assistant of Prof. Scholze, MSRI Berkeley: New Geometric Techniques in Number Theory
- winter 2012/13    Exercises for Prof. Rapoport, Bonn University: Introduction to Algebra
- summer 2012    Tutor, Bonn University: Complex hyperbolic spaces
- summer 2011    Seminar: The unramified Drinfeld-Langlands correspondence
- summer 2007 – winter 2010/11    Tutor, Bonn University: Topology, Algebra, Complex Geometry, Linear Algebra and Analysis