

# JAKUB WITASZEK

## PERSONAL DETAILS

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DATE OF BIRTH 1 December 1990  
EMAIL j.witaszek14@imperial.ac.uk

## EDUCATION

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2014–NOW *Imperial College London*, PhD (Supervisor: Prof. Paolo Cascini)  
London School of Geometry and Number Theory  
2012–2014 *Bonn University, Germany*, MSc (Supervisor: Prof. Daniel Huybrechts)  
Mathematics, graduated with overall grade: *1.0*  
2009–2012 *Warsaw University, Poland*, BSc (Supervisor: Prof. Jarosław Wiśniewski)  
Mathematics, graduated with overall grade: *excellent*

## PAPERS AND PREPRINTS

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PREPRINT 2017 (with P. Achinger and M. Zdanowicz) *Liftability of Frobenius and images of toric varieties*  
PREPRINT 2017 (with C. Hacon) *On the rationality of klt singularities in positive characteristic*  
PAPER 2017 (with Y. Nakamura) *On base point free theorem and Mori dream spaces for log canonical threefolds over the algebraic closure of a finite field*  
Mathematische Zeitschrift  
PAPER 2017 (with P. Cascini and H. Tanaka) *On log del Pezzo surfaces in large characteristic*  
Compositio Mathematica  
PAPER 2017 (with P. Cascini and H. Tanaka) *Klt del Pezzo surfaces which are not globally  $F$ -split*  
International Mathematics Research Notices  
PAPER 2017 *Effective bounds on singular surfaces in positive characteristic*  
Michigan Mathematical Journal  
PAPER 2015 (with D. Martinelli and Y. Nakamura) *On base point free theorem for log canonical threefolds over the algebraic closure of a finite field*  
Algebra and Number Theory  
PAPER 2015 *The degeneration of the Grassmannian into a toric variety and the calculation of the eigenspaces of a torus action*  
Journal of Algebraic Statistics

## MAJOR ACHIEVEMENTS

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- 2012-2014 *Bonn International Graduate School* scholarship  
2011-2012 Scholarship of the *Minister of Science and Higher Education*, Poland  
2009 *50th International Mathematics Olympiad* in Bremen - bronze medal  
2009 *60th Polish Mathematics Olympiad* - 4th place, silver medal

## RESEARCH TALKS

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- 2017 Algebraic geometry seminar, University of Utah  
*Liftability of the Frobenius morphism and images of toric varieties*
- 2016 Edge days, University of Edinburgh  
*Birational geometry over the algebraic closure of a finite field*
- 2016 Tokyo-Princeton algebraic geometry conference, Princeton University  
*Global  $F$ -regularity of projective surfaces and liftability to the second Witt vectors*
- 2016 Workshop on birational geometry, Warwick University  
*Frobenius splittings in birational geometry*
- 2016 Oberseminar: Algebra, Zahlentheorie und Algebraische Geometrie, Freiburg University  
*Frobenius splittings in birational geometry*
- 2016 Seminar IMPANGA, IMPAN, Warsaw  
*Frobenius splittings in birational geometry*
- 2015 Seminar Algebra & Geometry, Basel University  
*Effective bounds on positive characteristic singular surfaces*
- 2015 Postgraduate Conference in Complex Geometry, Cambridge University  
*Effective bounds on positive characteristic singular surfaces*
- 2015 Géométrie Algébrique en Liberté, Leuven  
*Base point freeness of line bundles in positive characteristic*
- 2015 Junior geometry seminar, Imperial College London  
*Fourier-Mukai functor and a characterization of abelian varieties*
- 2014 Workshop in Birational Geometry and Fano Varieties, Imperial College London  
*On base point free theorem for log canonical threefolds over  $\overline{\mathbb{F}}_p$*
- 2014 University of Tokyo  
*The degeneration of the Grassmannian into a toric variety and the calculation of the eigenspaces of a torus action*

## POSTERS PRESENTED

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- 2016 *British algebraic geometry meeting*, Edinburgh  
Frobenius splittings in birational geometry
- 2015 *Summer Research Institute on Algebraic Geometry*, Utah, US  
The magic of  $\overline{\mathbb{F}}_p$  (presented with D. Martinelli, Y. Nakamura)

## CONFERENCES AND SCHOOLS

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- 2017 *Moduli of K-stable varieties*, Rome, Italy
- 2017 *Arizona Winter School: Perfectoid Spaces*, Tucson, US
- 2016 *Workshop on birational geometry and reduction to positive characteristic*,  
University of Edinburgh, UK
- 2016 *Local and global methods in algebraic geometry*, University of Illinois at Chicago, US
- 2016 *Tokyo-Princeton algebraic geometry conference*, Princeton University, US
- 2016 *British algebraic geometry meeting*, Edinburgh
- 2016 *School: Varieties of Calabi-Yau type*, IMPAN, Poland
- 2016 *Workshop on birational geometry*, Warwick University, UK
- 2015 *Summer Research Institute on Algebraic Geometry*, Utah, US
- 2015 *Géométrie Algébrique en Liberté*, Leuven, Belgium
- 2015 *New techniques in birational geometry*, Stony Brook, US
- 2014 *Birational methods in hyperkähler geometry*, Bonn, Germany
- 2014 *Birational geometry and Fano varieties*, Imperial College London, UK
- 2014 *Birational geometry and foliations*, Bonn, Germany
- 2013 *Topics in higher dimensional algebraic geometry*, Pragmatic, Catania, Italy

## TEACHING

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- 2016 *London International Tutors*, private tutoring
- 2016 *Analysis, demonstrating*, Spring trimester, Imperial College London
- 2015 *Linear algebra, demonstrating*, Winter trimester, Imperial College London
- 2015 *Galois theory, marking*, Winter trimester, Imperial College London
- 2015 *Analysis, demonstrating*, Spring trimester, Imperial College London

## PRE-PHD SEMINARS AND WORKSHOPS

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2014	Organising a student reading seminar <i>Toric varieties</i>
2012–2013	Organising a student reading seminar <i>Abelian varieties</i>
2012	Undegraduate research school, Weizmann Institute of Science, Israel
2012	Talks at the workshop <i>Elliptic Curves</i> , Teresin
2012	Talk at the workshop <i>Étale Cohomology</i> , Polish Academy of Science
2011	Talk at the workshop <i>Local Class Field Theory</i> , Polish Academy of Science
2011	Talk at the <i>II Conference of the Mathematics Student Society</i> , Teresin
2011–2012	President of the <i>Algebra and Category Theory Student Society</i> , Warsaw University

## OTHER ACTIVITIES, SKILLS AND VOLUNTARY WORK

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2012-2014	Experience in using <i>Sage, Magma and Macaulay2</i>
2011	Internship at Google, <i>Software Engineer</i> , London
2011–2013	Holding workshops, Polish Children's Fund program for talented pupils <i>Algebraic curves and Cayley-Bacharach theorem, Introduction to group theory, Vectors in geometry</i>
2008–2011	Holding mathematical classes and workshops, Stanisław Staszic High School in Warsaw The majority of 61st and 62nd Mathematics Olympiad's finalists from my high school - several dozen people - and 6 medallists attended my classes and workshops