

# Andrea Petracci

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CONTACT INFORMATION	Freie Universität Berlin Institut für Mathematik Arnimallee 3 14195 Berlin Germany	<a href="mailto:andrea.petracci@alumni.sns.it">andrea.petracci@alumni.sns.it</a> ( <i>permanent</i> ) <a href="mailto:andrea.petracci@fu-berlin.de">andrea.petracci@fu-berlin.de</a> <a href="https://userpage.fu-berlin.de/petracci">https://userpage.fu-berlin.de/petracci</a>
PERSONAL INFORMATION	I am an Italian citizen.	
EMPLOYMENT	<b>Freie Universität Berlin</b> <i>Wissenschaftlicher Mitarbeiter</i> In the research group of Klaus Altmann	Berlin, Germany October 2018 – present
	<b>University of Nottingham</b> <i>Research Fellow</i> In the research group of Alexander Kasprzyk	Nottingham, UK October 2017 – September 2018
	<b>Imperial College London</b> <i>Research Associate</i> In the research group of Tom Coates	London, UK April 2017 – September 2017
EDUCATION	<b>Imperial College London</b> <i>Doctor of Philosophy in Mathematics</i> – Thesis title: On Mirror Symmetry for Fano varieties and for singularities – Advisor: <a href="#">Alessio Corti</a> – Examiners: Alessandro Chiodo, Richard Thomas	London, UK October 2013 – September 2017
	<b>Scuola Normale Superiore</b> <i>Diploma in Mathematics</i> – Assesment: 70/70	Pisa, Italy October 2010 – May 2013
	<b>University of Pisa</b> <i>Master of Science in Mathematics</i> – Thesis title: The hyperelliptic locus in the moduli stack of curves of given genus – Advisor: <a href="#">Angelo Vistoli</a> – Assessment: 110/110 cum laude	Pisa, Italy October 2010 – March 2013
	<b>University of Pisa</b> <i>Bachelor degree in Mathematics</i> – Thesis title: Il teorema della sezione iperpiana di Lefschetz – Advisor: <a href="#">Rita Pardini</a> – Assessment: 110/110 cum laude	Pisa, Italy October 2007 – July 2010
HONORS, GRANTS AND AWARDS	Won the ‘Federigo Enriques’ prize from Unione Matematica Italiana, September 2019	
	Awarded a grant from Heilbronn Institute for Mathematical Research to organise a workshop about cluster algebras (£7,500), April 2018	

Won the Doris Chen PhD Award in the academic year 2016-2017 from the Department of Mathematics of Imperial College London

Awarded the ‘Roth Studentship’ of the Department of Mathematics of Imperial College London, October 2013

Won a full scholarship at Scuola Normale Superiore di Pisa after selective examination, September 2010

#### PUBLICATIONS

A. Corti, P. Hacking, A. Petracci, *Smoothing toric Fano 3-folds*, in preparation.

A. Petracci, *K-moduli of Fano 3-folds can have embedded points*, preprint [arXiv:2105.02307](https://arxiv.org/abs/2105.02307)

A. Petracci, *On deformation spaces of toric varieties*, preprint [arXiv:2105.01174](https://arxiv.org/abs/2105.01174)

A. Petracci, *A 1-dimensional component of K-moduli of del Pezzo surfaces*, preprint [arXiv:2102.13510](https://arxiv.org/abs/2102.13510)

Y. Liu, A. Petracci, *On K-stability of some del Pezzo surfaces of Fano index 2*, preprint [arXiv:2011.05094](https://arxiv.org/abs/2011.05094)

S. Felten, A. Petracci, *The logarithmic Bogomolov–Tian–Todorov theorem*, preprint [arXiv:2010.13656](https://arxiv.org/abs/2010.13656)

A.-S. Kaloghiros, A. Petracci, *On toric geometry and K-stability of Fano varieties*, preprint [arXiv:2009.02271](https://arxiv.org/abs/2009.02271) to appear in Trans.AMS Series B

A. Corti, M. Filip, A. Petracci, *Mirror Symmetry and smoothing Gorenstein toric affine 3-folds*, preprint [arXiv:2006.16885](https://arxiv.org/abs/2006.16885) to appear on “Facets of algebraic geometry”

A. Petracci, *On deformations of toric Fano varieties*, to appear on “Interactions with Lattice Polytopes”, preprint [arXiv:1912.01538](https://arxiv.org/abs/1912.01538)

A. Petracci, *An example of Mirror Symmetry for Fano threefolds*, Birational Geometry and Moduli Spaces (2020), Springer, pp. 173-188.

A. Petracci, *Some examples of non-smoothable Gorenstein Fano toric threefolds*, Mathematische Zeitschrift (2020), no. 295, 751–760.

A. Petracci, *Homogeneous deformations of toric pairs*, to appear on Manuscripta Math., [arXiv:1801.05732](https://arxiv.org/abs/1801.05732)

A. Oneto, A. Petracci, *On the quantum periods of del Pezzo surfaces with  $\frac{1}{3}(1,1)$  singularities*, Adv. Geom. 18 (2018), no. 3, 303-336.

M. Akhtar, T. Coates, A. Corti, L. Heuberger, A. Kasprzyk, A. Oneto, A. Petracci, T. Prince, K. Tveiten, *Mirror Symmetry and the Classification of Orbifold del Pezzo Surfaces*, Proc. Amer. Math. Soc. 144 (2016), no. 2, 513-527.

INVITED TALKS	Algebraic geometry seminar Princeton University, US — online	July 2021
	Algebraic geometry seminar University of Milan, Italy — online	June 2021
	Algebra and Geometry seminar Frankfurt, Germany — online	May 2021
	Algebra, Geometry and Combinatorics colloquium McMaster University, Canada — online	May 2021
	Geometry and TACoS workshop University of Florence — online	April 2021
	Iskovskikh Seminar, Steklov Mathematical Institute Moscow, Russia — online	April 2021
	Algebra and Geometry seminar, University of Trieste Trieste, Italy — online	February 2021
	EDGE days “Explicit K-stability and moduli problems” Edinburgh, UK — online	December 2020
	Workshop “Toric Fano Varieties and Beyond” Palermo, Italy — online	December 2020
	3CinG Workshop 2020 “Algebraic and tropical geometry” London, UK — online	September 2020
	Online Algebraic Geometry Seminar Nottingham, UK — online	August 2020
	Workshop “Superpotentials in Algebra and Geometry” Oberwolfach, Germany	February 2020
	North German Algebraic Geometry Seminar Leibniz Universität Hannover	January 2020
	Einstein Workshop on Polytopes and Algebraic Geometry Freie Universität Berlin	December 2019
	Workshop “Toric Geometry” Oberwolfach, Germany	September 2019
	Workshop “Mutations: Mirror Symmetry, Deformations” BIRS, Banff, Canada	August 2019
	Workshop “Del Pezzo surfaces and Fano varieties” Universität Düsseldorf	July 2019

Séminaire d'algèbre et géométrie Université de Versailles	March 2019
Workshop "Young perspectives in deformation theory" Università di Torino	November 2018
Conference "Giornate di Geometria Algebrica e argomenti correlati" Università di Genova	June 2018
Università di Torino, Seminario di Geometria	May 2018
Seminar Algebraische Geometrie Freie Universität Berlin <i>Mirror Symmetry, Fano varieties and deformations of toric varieties</i>	April 2018
Workshop on moduli spaces of curves and mirror symmetry Institut Mittag-Leffler, Stockholm <i>Mirror Symmetry and Fano varieties</i>	March 2018
Mirror Symmetry and applications conference Higher School of Economics, Moscow <i>Quantum periods of orbifold del Pezzo surfaces</i>	December 2017
EDGE Seminar University of Edinburgh <i>Deformations of toric singularities and Mirror Symmetry</i>	November 2017
Experimental Classification of Fano varieties workshop Universität Tübingen, Germany <i>Quantum periods of orbifold del Pezzo surfaces and Mirror Symmetry</i>	August 2017
Higher dimensional birational geometry workshop University of Warwick <i>Deformations of toric singularities via Mirror Symmetry</i>	July 2017
IMPA, Algebra seminar Rio de Janeiro, Brazil <i>Deformations of toric Gorenstein singularities</i>	February 2017
Imperial College London, Junior Geometry Seminar <i>Toric stacks</i>	January 2017
Imperial College London, Junior Geometry Seminar <a href="#"><i>Elliptic curves</i></a>	October 2015
Postgraduate Conference in Complex Geometry University of Cambridge <a href="#"><i>Mirror Symmetry of del Pezzo surfaces</i></a>	September 2015
University of Cambridge, CALF Seminar	December 2014

*On the quantum periods of del Pezzo surfaces*

Summer School in Gromov–Witten Theory 2014 July 2014  
Pingree Park, Colorado (US)

*Quantum periods of del Pezzo surfaces with  $\frac{1}{3}(1,1)$  singularities*

KTH & University of Stockholm, Algebra and Geometry Seminar June 2014  
*On the quantum cohomology of a particular type of Del Pezzo surfaces*

Imperial College London, Junior Geometry Seminar March 2014  
*An introduction to moduli of curves and algebraic stacks*

University of Pisa, Seminario di Geometria February 2012  
*The fundamental quandle of a knot*

TEACHING

Summer Semester 2021, at Freie Universität Berlin, exercise classes of Algebraic Geometry (Algebra II), seminar on algebraic surfaces

Winter Semester 2020/21, at Freie Universität Berlin, lab course in Computer Algebra

Summer Semester 2020, at Freie Universität Berlin, lectures and exercise classes of Complex Analysis (Funktionentheorie)

Winter Semester 2019/20, at Freie Universität Berlin, lab course in Computer Algebra

Summer Semester 2019, at Freie Universität Berlin, lectures and exercise classes of Complex Analysis (Funktionentheorie)

Winter Semester 2018/19, at Freie Universität Berlin, exercise classes of Commutative Algebra

In the academic year 2016/2017 I was a teaching assistant for the undergraduate courses ‘Real analysis’ and ‘Metric spaces and Topology’ at Imperial College London.

In the academic year 2015/2016 I was a teaching assistant for the undergraduate course ‘Foundations of mathematical analysis’ at Imperial College London.

In the academic year 2014/2015 I was a teaching assistant for the undergraduate courses ‘Foundations of mathematical analysis’ and ‘Algebraic topology’ at Imperial College London.

In May 2014 I taught revision classes for the undergraduate courses linear algebra, real analysis, fundamentals of analysis at Imperial College London.

ORGANISING  
ACTIVITIES

In October 2019 I co-organised the opening conference of the Einstein semester on Algebraic Geometry in Berlin

	In July 2018 I co-organised <i>Cluster algebras and algebraic geometry</i> workshop at the University of Nottingham	
	In the academic year 2014/2015 I co-organised the <i>Junior Geometry Seminar</i> at Imperial College London.	
	In April 2014 I co-organised <i>Traumatic Workshop: Birational Geometry and Fano Varieties</i> at Imperial College London.	
OTHER ACTIVITIES	Referee for Compositio Mathematica and European Journal of Mathematics	
	Co-supervised BSc thesis by Michael Mavroskoufis at FU Berlin, Summer Semester 2019	
	Reviewer for Mathscinet and zbMATH.	
COMPUTER SKILLS	I can use <i>MAGMA</i> software.	
LANGUAGE SKILLS	Italian (mother tongue), English (fluent), German (B2)	
REFERENCES	Alessio Corti (Imperial College London)	<i>a.corti@imperial.ac.uk</i>
	Tom Coates (Imperial College London)	<i>t.coates@imperial.ac.uk</i>
	Klaus Altmann (Freie Universität Berlin)	<i>kaltmann@math.fu-berlin.de</i>
	Richard Thomas (Imperial College London)	<i>rpwt@ic.ac.uk</i>
	Mark Gross (University of Cambridge)	<i>M.Gross@dpmms.cam.ac.uk</i>

12/07/2021

Dushan Petrović