

# Marco Ramponi

## Contact

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## Current position

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Postdoctoral fellowship – BMS Math+ (2019)  
HUMBOLDT-UNIVERSITÄT ZU BERLIN  
Institut für Mathematik  
Mentor: Prof. Dr. Gavril Farkas

## Past positions

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Postdoctoral researcher (2018–2019)  
UNIVERSITÄT AUGSBURG  
Institut für Mathematik  
Mentor: Prof. Dr. Marc Nieper-Wißkirchen

Postdoctoral fellowship – Einstein Foundation (2017)  
HUMBOLDT-UNIVERSITÄT ZU BERLIN  
Institut für Mathematik  
Mentor: Prof. Dr. Gavril Farkas

Phd scholarship – French government (2014–2017)  
UNIVERSITÉ DE POITIERS  
Laboratoire de Mathématiques et Applications  
Advisor: Prof. Dr. Alessandra Sarti

## Degrees

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Ph.D. Mathematics (2017)  
UNIVERSITÉ DE POITIERS  
Defended on December 20, 2017.  
Ph.D. advisor: Prof. Dr. Alessandra Sarti

MSc. Mathematics (2014)  
UNIVERSITÁ DEGLI STUDI DI MILANO  
Obtained on April 8, 2014. Final mark: 110/110 cum laude<sup>1</sup>  
Thesis advisors: Prof. Dr. Alessandra Sarti & Prof. Dr. Paolo Stellari

BSc. Mathematics (2012)  
UNIVERSITÁ DEGLI STUDI DI MILANO

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<sup>1</sup>In the Italian grading system, 110/110 is the maximum grade. For outstanding results, “cum laude” is added to the maximum grade.

Obtained on February 27, 2012.

## Research interests

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Algebraic geometry: Brill-Noether theory and its applications to the study of the geometry of moduli spaces of curves and surfaces, with special emphasis for K3 and abelian surfaces; vector bundles on algebraic varieties and stability problems; Gauss-Wahl maps on varieties.

## Publications and preprints

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D. Agostini, M. Ramponi, *Syzygies of Kummer surfaces and Koszul divisors on the moduli space of abelian surfaces*, (in preparation)

M. Ramponi, *A note on Nikulin surfaces and their moduli spaces*, Mathematische Zeitschrift (2019), to appear

M. Ramponi, *Special divisors on curves on K3 surfaces carrying an Enriques involution*, Manuscripta Mathematica (2017) 153(1), 315-322

M. Ramponi, *Gonality and Clifford index of curves on elliptic K3 surfaces with Picard number two*, Archiv der Mathematik (2016), 106(4), 355-362

## Scientific visits

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Humboldt-Universität zu Berlin  
May 2017, Berlin, Germany

Università degli Studi di Roma Tor Vergata  
March-May 2017, Rome, Italy

Università degli Studi di Roma Tor Vergata  
January 2015, Rome, Italy

## Invited talks at conferences

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YPAG 2019  
*University of Bayreuth*  
April 3–5, 2019, Bayreuth, Germany  
“On Nikulin K3 surfaces and their moduli”

GAGC 2017 (short talks session)  
*Rencontre GAGC 2017 at CIRM*  
December 11–15, 2017, CIRM, Luminy, France  
“On the geometry of Nikulin K3 surfaces”

Workshop of Algebraic Geometry  
*Università degli Studi di Milano, December 21-22, 2015, Milan, Italy*  
“Brill-Noether theory of curves on special elliptic K3 surfaces”

## Invited talks at research seminars

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Philipps-Universität Marburg

*Arbeitsgruppe algebraische und komplexe Geometrie*

July 11, 2017, Marburg, Germany

“K3 surfaces and special divisors on algebraic curves”

Université de Poitiers

*Séminaire de groupes, algèbre et géométrie*

June 15, 2017, Poitiers, France

“Surfaces K3 et théorie de Brill-Noether”

Humboldt-Universität zu Berlin

*Forschungsseminar Algebraische Geometrie*

May 24, 2017, Berlin, Germany

“Curves on K3 double covers of Enriques surfaces”

Università degli Studi di Roma Tor Vergata

*Seminar of Algebraic Geometry*

April 18, 2017, Rome, Italy

“Curves on K3 double covers of Enriques surfaces”

Université de Poitiers

*Groupe de travail*

September 2016, Poitiers, France

“Positivité en géométrie algébrique”

University of Augsburg

*Oberseminar zur Algebra und Zahlentheorie*

June 29, 2016, Augsburg, Germany

“K3 surfaces and special divisors on algebraic curves”

Université de Poitiers

*Groupe de travail*

January 2016, Poitiers, France

“Fibrés de Lazarsfeld-Mukai et applications”

Université de Poitiers

*Groupe de travail*

October 2015, Poitiers, France

“K3 surfaces, automorphisms and the Clifford index”

Università degli Studi di Roma Tor Vergata

*Seminar of Algebraic Geometry*

January 26, 2015, Rome, Italy

“K3 surfaces, automorphisms and Brill-Noether theory”

Université de Poitiers

*Groupe de travail*

February 2014, Poitiers, France

“Curves on 2-elementary K3 surfaces (after K. Watanabe)”

## Invited lectures

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Università degli Studi Roma Tre

*Seminar for the Phd course “Selected topics on K3 surfaces” (by F. Viviani)*

May 4, 2017, Rome, Italy

“On the Brill-Noether theorem via K3 surfaces”

Palazzone di Cortona

*Pre-course at SMI Cortona summer school*

August, 2015, Cortona, Italy

“A crash course on K3 surfaces and the Torelli theorem”

## Dissemination of scientific knowledge

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Université de Poitiers

*Cérémonie de remise de diplômes*

December 14, 2018, Poitiers, France

“L’espace des surfaces K3”

## Grants, awards and distinctions

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Poitiers University Award

€600 - Prix de thèse 2018 <sup>(2)</sup>

Clay Mathematics Institute

\$1000 - Travel grant Bucharest IAG (September 2017)

GDRI “Representation Theory” 2016-2019

€1000 - Visiting Berlin Humboldt University (May 2017)

Ecole Doctorale S2IM - Mobilité Internationale

€800 - Visiting Berlin Humboldt University (May 2017)

Laboratoire Ypatia des Sciences Mathématiques

€3000 - Visiting University of Rome Tor Vergata (March-May 2017)

Ecole Doctorale S2IM - Mobilité Internationale

€2000 - Visiting University of Rome Tor Vergata (January 2015)

## Organized and co-organized activities

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Oberseminar zur Algebra und Zahlentheorie

2018–2019. University of Augsburg, Germany

Research working group “Derived categories and stability conditions”

Spring 2018. University of Augsburg, Germany

Ph.D. students seminar “Seminaire en Liberté”

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<sup>2</sup>Awarded for a distinguished PhD thesis in science for the academic year 2017–2018

2014–2017. LMA, Poitiers, France

Conference “Et Après la Thèse?”

June 26, 2015, Université de Poitiers, Poitiers, France

## Workshops and schools attended

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EMS Summer School “Curves and surfaces, a history of shapes”

September 1–5, 2019, Levico, Italy

Trieste Algebraic Geometry Summer School

July 1–5, 2019, Trieste, Italy

Young Perspectives in Algebraic Geometry

April 3–5, 2019, Bayreuth, Germany

Workshop on Complex Algebraic Geometry – Pirola 60th

February 5–9, 2018, Barcelona, Spain

Géométrie algébrique et géométrie complexe 2017

December 11–15, 2017, CIRM, Luminy, France

Instruments of algebraic geometry

September 11–22, 2017, Bucharest, Romania

Modern algebra and classical geometry Together with Edoardo Sernesi

June 21–24, 2017, Trento, Italy

Mediterranean Complex Projective Geometry

May 23–27, 2016, Carry-le-Rouet, France

Géométrie algébrique et géométrie complexe 2015

November 23–27, 2015, CIRM, Luminy, France

Cox Rings and Mori Dream Spaces

September 6–12, 2015, Łuków, Poland

SMI Cortona 2015

August 3–14, 2015, Cortona, Italy

ACM Bundles on Algebraic Varieties

June 15–19, 2015, Ankara, Turkey

Workshop on geometry and arithmetic of hyperkähler manifolds

February 9–11, 2015, IAG, Hannover, Germany

Géométrie algébrique et géométrie complexe 2014

November 24–28, 2014, CIRM, Luminy, France

SMI Perugia 2014

July 28 - August 28, 2014, Perugia, Italy

Around Torelli’s theorem for K3 surfaces

October 25 - November 1, 2013, IRMA, Strasbourg, France

## Teaching

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Algebraic geometry II (2018-2019)

Lecturer. MSc course (7 students)

University of Augsburg

Algebraic geometry I (2018-2019)

Lecturer. MSc course (10 students)

University of Augsburg

Special topics in algebra and geometry (2017-2018)

Lecturer. MSc course (6 students)

University of Augsburg

Seminar in harmonic analysis (2017-2018)

Assistant. MSc course (16 students)

University of Augsburg

Methodologie M2 (2015-2016)

Assistant. MSc course (5 students)

Université de Poitiers

Linear Algebra 1 (2012-2013)

Assistant. BSc course (180 students)

University of Milan

## Students supervision

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Claudia Fevola (2019)

MSc thesis (in preparation)

University of Augsburg and Università degli Studi di Napoli Federico II

## Service and responsibilities

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Elected member of the mathematics department council (2016–2017)

Laboratoire de Mathématiques et Applications

Université de Poitiers

Elected representative of PhD students of the Doctoral School S2IM (2014–2017)

Ecole Doctorale Sciences et Ingénierie pour l'Information et Mathématiques

Université de Poitiers

## Other personal skills

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Programming languages

C

C++

Java

Computer skills

Working experience in basic web design, HTML, javascript

## Languages

Italian (native)

English (fluent)

French (fluent)

Greek (advanced intermediate)

German (early intermediate, learning)

## Referees

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Gabi Farkas

Humboldt University of Berlin

Andreas Leopold Knutsen

University of Bergen

Marc Nieper-Wisskirchen

University of Augsburg

Alessandra Sarti

University of Poitiers