

# Francesco Meazzini

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Dipartimento di Matematica  
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## Academic Positions

- 2022 - today **RTD-A (Junior Researcher)**, *Alma Mater - Università di Bologna*
- 2022 **Postdoctoral Fellow**, *Alma Mater - Università di Bologna*
- 2021 - 2022 **Postdoctoral Fellow**, *Istituto Nazionale di Alta Matematica (INdAM)*
- 2019 - 2020 **Postdoctoral Fellow**, *Sapienza - Università di Roma*

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## Education

- 2018 **PhD in Mathematics**, *Sapienza - Università di Roma*, Supervisor: Marco Manetti  
Thesis title: “Model categories in deformation theory”
- 2014 **MSc in Pure Mathematics**, *Sapienza - Università di Roma*, Supervisor: Marco Manetti,  
Final mark: 110/110 cum laude  
Thesis title: “Model categories and derived endomorphisms of quasi-coherent sheaves”
- 2012 **BSc in Pure Mathematics**, *Sapienza - Università di Roma*, Supervisor: Domenico Fiorenza,  
Final mark: 110/110 cum laude  
Thesis title: “Supersymmetry and Morse Theory”

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## Publications

### Published Articles

**Hyper-holomorphic connections on vector bundles on hyper-Kähler manifolds**, with Claudio Onorati, *Mathematische Zeitschrift*, Volume 303:17, Issue 1, 2023, Pages 1-34.

**Hilbert squares of degeneracy loci**, with Enrico Fatighenti, Giovanni Mongardi, Andrea Tobia Ricolfi, To appear in *Rendiconti del Circolo Matematico di Palermo Series II*, 2022.

**Deformations of polystable sheaves on surfaces: quadraticity implies formality**, with Ruggero Bandiera, Marco Manetti, *Moscow Mathematical Journal*, Volume 22, Number 2, 2022, Pages 239-263.

**Formality conjecture for minimal surfaces of Kodaira dimension 0**, with Ruggero Bandiera, Marco Manetti, *Compositio Mathematica*, Volume 157, Issue 2, 2021, Pages 215-235.

**Quiver representations over a quasi-Frobenius ring and Gorenstein-projective modules**, *Rendiconti di Matematica e delle sue Applicazioni*, (7), Volume 42, 2021, Pages 1-33.

**Deformations of algebraic schemes via Reedy-Palamodov cofibrant resolutions**, with Marco Manetti, *Indagationes Mathematicae*, 31, 2020, Pages 7-32.

**Formal Deformation Theory in left-proper model categories**, with Marco Manetti, *New York Journal of Mathematics*, 25, 2019, Pages 1259-1311.

### Preprints

**A DG-enhancement of  $D(\text{QCoh}(X))$  with applications in deformation theory**, *arXiv:1808.05119*, submitted.

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## Research Interests

*Moduli spaces of sheaves, Hyperkähler manifolds, Deformation Theory, Derived Algebraic Geometry, Model Categories.*

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## Summary of Scientific Achievements

Products	7 published papers (source: Scopus)
Total Impact Factor	5.765 (source: JCR Clarivate)
Total Citations	13 (source: Scopus)
Average Citations	1.86 citations per product (source: Scopus)
Hirsh (H) Index	3 (source: Scopus)
Normalized H Index	0.6 (H Index divided by the academic seniority - source: Scopus)

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## Teaching experience

### Undergraduate Teaching

- 2022/23 Lecturer for Teoria dei Numeri. Corso di Laurea in Matematica, Alma Mater Università di Bologna. 48 hours.
- 2022/23 Lecturer for Algebra 1. Corso di Laurea in Matematica, Alma Mater Università di Bologna. 20 hours.
- 2021/22 Lecturer for Geometria. Corso di Laurea in Ing. Meccanica, Sapienza Università di Roma. 60 hours.
- 2020/21 Lecturer for Geometria. Corso di Laurea in Ing. Elettrotecnica, Sapienza Università di Roma. 90 hours.
- 2019/20 Lecturer for Geometria. Corso di Laurea in Ing. Meccanica, Sapienza Università di Roma. 60 hours.
- 2019/20 Lecturer for Geometria. Corso di Laurea in Ing. Clinica, Sapienza Università di Roma. 30 hours.
- 2018/19 Lecturer for Geometria. Corso di Laurea in Ing. Meccanica, Sapienza Università di Roma. 60 hours.
- 2017/18 Teaching Assistant for Geometria. Corso di Laurea in Ing. Clinica, Sapienza Università di Roma. 20 hours.
- 2017/18 Teaching Assistant for Geometria. Corso di Laurea in Ing. Chimica, Sapienza Università di Roma. 20 hours.
- 2016/17 Teaching Assistant for Geometria. Corso di Laurea in Ing. Civile, Sapienza Università di Roma. 20 hours.
- 2015/16 Teaching Assistant for Algebra Lineare. Corso di Laurea in Matematica, Sapienza Università di Roma. 20 hours.
- 2014/15 Teaching Assistant for Probabilità I. Corso di Laurea in Matematica, Sapienza Università di Roma. 20 hours.

### Graduate Teaching

- 2016 PhD Course “Cotangent Complex and Deformation Theory”, Sapienza Università di Roma. 6 hours.
- 2015 PhD Course “Derived categories, model categories and cohomology”, Sapienza Università di Roma. 4 hours.

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## Honours, Awards and Fundings

- 2023 NSERC Grant (Natural Sciences and Engineering Research Council of Canada), together with Nathan Ilten and Andrea Petracchi, Canadian dollars:
- 2016 Grant “Bando Ricerca Scientifica 2016” for a research project entitled: “Model Categories in Deformation Theory”,

- 2015 Grant “Bando Ricerca Scientifica 2015” for a research project entitled: “Model Categories in Deformation Theory”.
- 2015 Travel grant from GRIFGA to visit IHÉS, Paris,
- 2015 Winner of the “Laureato Eccellente Sapienza” prize.
- 2014 “Percorso d’eccellenza” for Master Degree in Mathematics.
- 2013 “Percorso d’eccellenza” for Bachelor Degree in Mathematics.
- 2009 Exemption from tuition fees for the BSc in Mathematics at Sapienza Università di Roma after selective examination.

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## Talks

- 2022 Seminar: *Algebra and Geometry group* Alma Mater Studiorum, Bologna
- 2022 Conference: *Sheaves on Hyperkähler Manifolds*, Milan
- 2022 Seminar: *Algebra and Geometry group* Roma Tre, Rome
- 2021 Conference: *Algebraic Geometry - Christmas in Rome*, Palazzo Argiletum, Roma Tre
- 2020 Seminar: *Algebra and Geometry group*, Sapienza, Rome
- 2019 Conference: *Seminari di Natale*, Milan
- 2019 Conference: *Friends in Algebraic Geometry*, Turin
- 2018 Seminar: *Algebra and Geometry group*, Turin
- 2018 Conference: *Enumerative Invariants from Differential Graded Lie Algebras and Categories*, Montegufoni Castle, Florence
- 2018 Seminar: *Algebra and Geometry group*, Milan
- 2017 Conference: *Deformations in Turin*, Turin
- 2017 Seminar: *Algebra and Geometry group*, Sapienza, Rome
- 2016 Conference: *Calf*, Warwick
- 2016 Conference: *Noncommutative Geometry and Higher Structures*, Perugia
- 2015 Conference: *Deformation Theory, Homological Mirror Symmetry and Noncommutative Geometry*, Copenhagen

## Upcoming

- 2023 Conference: *Giornate di Geometria Algebrica ed Argomenti Correlati, XVI*, Cetraro

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## Academic activities

Referee for the following journals: International Mathematics Research Notices, Springer INdAM series, Annali di Matematica Pura e Applicata, Communications in Algebra.

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## Conferences Organised

- 2022 **Organiser of the conference “Hyper-Kähler manifolds and related topics”**, *Sapienza, Università di Roma*, together with Enrico Fatighenti, Daniel Huybrechts, Gabriele Mondello, Kieran O’Grady, Claudio Onorati.
- 2021 **Organiser of the conference “Moduli spaces and Hyper-Kähler varieties”**, *Sapienza, Università di Roma*, together with Marco Manetti and Claudio Onorati.
- 2015 **Organiser of the conference “Algebraic Geometry and Representation Theory”**, *Sapienza, Università di Roma*, together with Ruggero Bandiera, Laura Fedele, Giovanni Cerulli Irelli, Margherita Lelli Chiesa.

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## Languages

Italian Native  
English Fluent