NICOLA PAGANI

University of Liverpool
Department of Mathematical Sciences
Liverpool L69 7ZL

+44 0151 794 4067

pagani@liv.ac.uk
http://pcwww.liv.ac.uk/ pagani/

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PERSONAL DETAILS

Name: Nicola Pagani

Address: University of Liverpool, Department of Mathematical Sciences, Liverpool L69 7ZL

Date of Birth: 22 June 1982
Place of Birth: Milan

FURTHER/HIGHER EDUCATION

1. Certificate of Professional Studies in Learning and Teaching in Higher Education, University of Liverpool (November 2015)

2. PhD in Geometry, SISSA/ISAS (Trieste)
(August 2009)
Thesis: Chen-Ruan cohomology of moduli of curves
Supervisor: Prof. B. Fantechi

3. IUSS Laureate, IUSS (Pavia)
(June 2007)
Thesis: Weierstrass preparation theorem and GAGA principles
Supervisor: Prof. P. Pirola

4. MSc. in Mathematics, Università di Trieste
(September 2006. Classification: 110/110 summa cum laude)
Thesis: Orbifold cohomology of the moduli space of elliptic curves with marked points
Supervisor: Prof. B. Fantechi

5. BSc. in Mathematics, Università di Pavia
(September 2004. Classification: 110/110 summa cum laude)
Thesis: The Lie-Cartan correspondence
Supervisor: Prof. P. Pirola

OTHER RELEVANT QUALIFICATIONS

2. Italian Habilitation as Full Professor (prima fascia) in Algebra and Geometry (October 2023)

2. Italian Habilitation as Associate Professor (seconda fascia) in Algebra and Geometry (March 2017)

3. Fellow of the Higher Education Academy (HEA) (Since December 2015)

4. Member of the London Mathematical Society (since November 2017)

EMPLOYMENT RECORD

1. Associate professor in Mathematics
(December 2024- present)
University of Bologna, Bologna

2. Reader in Pure Mathematics
(October 2023- present)
University of Liverpool, Liverpool

3. Senior Lecturer in Pure Mathematics
(September 2017- September 2023)
University of Liverpool, Liverpool

4. Lecturer in Pure Mathematics
(September 2013- August 2017. Tenured from September 2016.)
University of Liverpool, Liverpool

5. Wissenschaftlicher Mitarbeiter (Assistant Professor, 2+3 years position)
(October 2012- August 2013)
Leibniz Universität Hannover, Hannover

6. Postdoc (DFG project on moduli spaces - 2 years position)
(October 2011 - September 2012)
Leibniz Universität Hannover, Hannover

7. Wallenberg fellowship (2 years postdoc position)
(September 2009 - August 2011)
KTH, Royal Institute of Technology, Stockholm

8. PhD scholarship (3+1 years position)
(November 2006 - August 2009)
SISSA/ISAS, Trieste

TEACHING EXPERIENCE AND ACTIVITY

Below is the list of my teaching activities as module coordinator, with full teaching load, since 2020. Until the end of 2024 it was all at the University of Liverpool.

2024/2025

- Metric Spaces and Calculus (Year 2, 15 credits, 43 students),
- Measure Theory (University of Bologna)
- Discrete Mathematics (University of Bologna)
- Complex Geometry (University of Bologna)

2023/2024

- Metric Spaces and Calculus (Year 2, 15 credits, 69 students),
- Riemann Surfaces (Year 4, 15 credits, 9 students).
- Geometric and combinatorial aspects of compactified Jacobians (PhD course, March 2024, Bologna).

2022/2023
- Metric Spaces and Calculus (Year 2, 15 credits, 95 students),
- 1x Tutorial for Calculus I (25 students)

2021/2022
- Metric Spaces and Calculus (hybrid course - Year 2, 15 credits, 96 students),
- Riemann Surfaces (hybrid course - Year 4, 15 credits, 13 students).

2020/2021
- Metric Spaces and Calculus (hybrid course - Year 2, 15 credits, 63 students),
- 2x Tutorial for Calculus II (25 students each).

LEADERSHIP, PROFESSIONAL AND COLLEGIAL EXPERIENCE

As a member of the Department of Mathematical Sciences at the University of Liverpool, I have helped in many leadership roles and contributed to the success of the department in various activities. Prior to August 2018 I was mostly involved in teaching committees, because of my role as Academic Lead of the Staff-Student Committee. From September 2018 I have been involved in most research admin bodies, because of my role as Departmental Director of Postgraduate Research (PhD). I have helped as a member of the hiring panel for a Teaching and Scholarship academic position. I regularly review other's lectures via peer observation. I have been the internal mentor of Koseki, Rizzardo and Wennink. I have been the main supervisor and line manager of a PDRA (Postdoc).

Below is a list of my main roles after September 2017:

(September 2018 - August 2020) Member of the Faculty PGR committee.

(September 2018 - December 2024) Departmental Director of Postgraduate Studies (and core member of the Departmental Research Committee).

(September 2018 - August 2019) Organiser of the Terry Wall Lecture (invited speaker Prof. Martin Hairer).

(March 2017 - August 2018) Member of the Academic Environment & Estates Committee.

(until August 2018) Member of the EPSRC Early Career Forum.

(until August 2018) Member of the Early Career Researchers Forum of the Faculty of Sciences and Engineering.

(until August 2018) Academic Lead of the Staff-Student Committee (and member of the Board of Studies and Education Committee).

(until August 2018) Pure Mathematics Webmaster.

Member of the Annual Panel Review for postgraduate students.

Since September 2017, I have been the Internal examiner of 4 PhD theses. And the External examiner of 1 PhD thesis.

RESEARCH EXPERIENCE AND IMPACT ACTIVITY

Grants awarded

My research is regularly supported by UKRI via EPSRC, by the London Mathematical Society, and by internal UoL competitive bids. Below is a list of recent funding secured and managed or co-managed. Fundings are listed with the date of the main event or main events that they contributed to support.

(December 2016 - April 2019) Principal Investigator of the EPSRC grant EP/P004881 "Wall-Crossing on universal compactified Jacobians" (£126,370).

(October 2021 - September 2025) Co-I and co-manager of the Additional Funding Programme for Mathematical Sciences DTP EP/W524001/1, PI the HoD of Maths (Rachel Bearon). (£224,406).

(January 2022 - December 2022) 1 year of EPSRC funded Research Assistant, awarded via EP/W522399.

(July 2022) LMS travel grant 51906 + RCMM grant, total value £3,500 to sponsor the research visit of Prof. Abreu.

(September 2022) LMS Scheme 1 grant 12103 + Foundation Compositio support to sponsor the BRaG conference, hosted at Imperial College (£5,500+EU4000).

(April 2019) LMS Scheme 1 grant 11803 + Foundation Compositio support to sponsor the BrAg conference, hosted at Liverpool (£7,500+EU4,000).

(March 2023) UoL QR funding to support the visit of Prof. Abreu, Dr. Molcho and Dr. Ranghanathan. (£4,500).

PhD Supervision

1. Jason v. Zelm (PhD 2018) "The enumerative geometry of moduli of double covers of curves". Destination: postdoctoral fellowship at Humboldt University (Berlin) with advisors Gavril Farkas and Rahul Pandharipande.

2. Thomas Wennink (PhD 2022) "Reconstruction theorems for genus 2 Gromov-Witten invariants". Destination: 1 year visiting position at Max Planck Institute (Bonn) followed by 3 years postdoctoral fellowship at Stockholm University.

3. Rhys Wells (PhD 2024) "Combinatorial aspects of the stability space of compactified Jacobians".

4. Marco Fava (exp submission: Sept 2025) "Cohomology of fine compactified universal Jacobians".

5. Second PhD supervisor of successfully completed PhDs: Oliver Anderson, Stefano Nicotra, Alessio Cipriani, Philip Carter, Najar Almutairi.

INVITATIONS TO SPEAK

I am regularly invited to give talks about my research at Universities' algebraic geometry seminars.

Below is a list of the most important and recent conferences where I was invited as one of the (usually around 10) plenary speakers:

(September 2025 - Nottingham University) British Algebraic Geometry conference (BrAG) https://sites.google.com/site/bragmeeting/

(August - 2024 - University of Virginia) Richmond Geometry meeting https://researchseminars.org/seminar/RVAGeometry2024

(January 2023 - University of Sheffield) Structures in Enumerative Geometry. https://agmp.sites.sheffield.ac.uk/conferences/sieg-2023

(June 2023 - Mittag-Leffler Institute, Stockholm) Moduli and Algebraic Cycles.
https://www.mittag-leffler.se/activities/moduli-and-algebraic-cycles-2/

(November 2021 - Mittag-Leffler Institute, Stockholm) Moduli Spaces and Logarithmic Geometry.
https://sites.google.com/view/moduli-spaces-and-log-geometry/home

(August 2020 - Zoom Algebraic Geometry conference, online due to the Covid-19 pandemic) https://www.maths.ed.ac.uk/cheltsov/zag/

Other relevant activities:

I am regularly invited to review publications submitted to prestigious mathematical journals, to review applications for postdoctoral positions and to review grant applications for EPSRC. I have served in the EPSRC prioritization panel for the Mathematical Sciences (May 2024).

I have been on the organizing panel of some of the most prestigious events in the UK, including the British Algebraic Geometry (BrAG) conference, and for the COW (Cambridge Oxford Warwick) Algebraic Geometry network.

Events (co)-organised:

Modern Trends in Gromov-Witten Theory (Hannover, September 2014),

Moduli Spaces and their Applications (Liverpool, September 2015).

BrAG – British Algebraic Geometry colloquium (Cambridge, September 2017 – Liverpool, April 2019 – Imperial College, September 2022).

Moduli of curves in Gothenburg (Goteborg, October 2017).

Moduli of curves in Stockholm (Faber 60) (Stockholm, June 2022).

Algebraic and tropical geometry of the moduli space of curves (Bologna, September 2025).

JOURNAL PUBLICATIONS AND PREPRINTS

1. A complete theory of smoothable compactified Jacobians of nodal curves SUBMITTED
(with Marco Fava and Filippo Viviani),
arXiv:2412.03532

2. Stability conditions for line bundles on nodal curves
(N. Pagani and O. Tommasi)
Forum of Math. Sigma, Volume 12, 2024 , e87, 1-31.
arXiv:2309.08509

3. Wall-Crossing of universal Brill-Noether classes SUBMITTED
(A. Abreu and N. Pagani)
arXiv:2303.16836

4. Geometry of genus one fine compactified universal Jacobians
(N. Pagani and O. Tommasi)
Int. Math. Res. Not. IMRN 2022 https://doi.org/10.1093/imrn/rnac094

5. Pull-backs of universal Brill-Noether classes via Abel-Jacobi morphisms (N. Pagani, A. Ricolfi and J.v Zelm)
Math. Nachr. 293 (2020), no. 11, 2187-2207.

6. The stability space of compactified universal Jacobians
(J.L.Kass and N. Pagani)
Trans. Amer. Math. Soc. 372 (2019), no. 7, 4851–4887.

7. Extending the Double Ramification Cycle using Jacobians
(D.Holmes, J.L. Kass and N. Pagani)
Eur. J. Math. 4 (2018), no. 3, 1087–1099.

8. Extensions of the universal theta divisor (J.L.Kass and N. Pagani) Adv. Math. 321 (2017), no. 1, 221-268.

9. Moduli of abelian covers of elliptic curves (N. Pagani)
J. Pure Appl. Algebra 220 (2016), no.3, 1258-1279.

10. The class of the bielliptic locus in genus 3 (C.Faber and N. Pagani) Int. Math. Res. Not. IMRN 2015, no. 12, 3943-3961,

11. Harer stability and orbifold cohomology (N. Pagani)
Pacific J. Math. 267 (2014), no. 2, 465–477.

12. The orbifold cohomology of moduli of genus 3 curves
(N. Pagani and O. Tommasi),
Manuscripta Math. 142 (2013), no. 3, 409-437.

13. Chen-Ruan cohomology of M_{1,n} and \bar{M}_{1,n}
(N. Pagani)
Ann. Inst. Fourier (Grenoble) 63 (2013), no. 4, 1469-1509.

14. The orbifold cohomology of moduli of hyperelliptic curves
(N. Pagani)
Int. Math. Res. Not. IMRN 2012, no. 10, 2163-2178.

15. The Chen-Ruan cohomology of moduli of curves of genus 2 with marked points (N. Pagani)
Adv. Math. 229 (2012), no. 3, 1643-1687.

16. Generating stable modular graphs (S. Maggiolo and N. Pagani),
J. Symbolic Comput. 46 (2011), no. 10, 1087--1097.

Other publications

1. Chen-Ruan cohomology of moduli of curves,
(N. Pagani) PhD thesis, 116 pages, SISSA preprint

2. La coomologia orbifold degli spazi di moduli di curve,
(N. Pagani) La Matematica nella Società e nella Cultura, Rivista dell' UMI, Serie I, Vol. III, Aprile 2010, 55-58.