

Curriculum Vitae

Chiara Damiolini

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Research interests

- Vertex operator algebras and sheaves of conformal blocks in algebraic geometry.
- Moduli spaces of curves, of coverings of curves, and their compactifications.
- Moduli spaces of (parahoric) bundles on curves.

Employment

University of Texas at Austin Assistant Professor	01/2023 -
University of Pennsylvania Postdoctoral Fellow	09/2021 - 12/2023
Rutgers University Hill Assistant Professor	07/2020 - 08/2021
Princeton University Instructor	07/2019 - 06/2020
Princeton University Lecturer	09/2018 - 06/2019
Rutgers University Visiting post doctoral position	Spring 2018

Education

Universität Duisburg-Essen PhD Thesis: Conformal blocks attached to twisted groups	2013 - 2017
Università degli studi di Milano - Universiteit Leiden Algant Master Thesis: The braid group and the arc complex	2011 - 2013
Università degli Studi di Milano Bachelor in Mathematics Thesis: Categorical Galois theory	2008 - 2011

Publications and Preprints

- Wonderful compactification and rational curves with cyclic action
<https://arxiv.org/abs/2208.05463> with E. Clader, S. Li and R. Ramadas
- Factorization resolutions
<https://arxiv.org/abs/2207.05110> with A. Gibney and D. Krashen
- On equivariant bundles and their moduli spaces
<https://arxiv.org/abs/2109.08698>
- On global generation of vector bundles on the moduli space of curves from representations of vertex operator algebras
Accepted for publication in Algebr. Geom.
<https://arxiv.org/abs/2107.06923> with A. Gibney
- Permutohedral complexes and rational curves with cyclic action
Accepted for publication in Manuscripta Mathematica
<https://arxiv.org/abs/2104.06526> with E. Clader, D. Huang, S. Li and R. Ramadas
- Vertex algebras of CohFT-type
Facets of algebraic geometry. Vol. I, 164–189, London Math. Soc. Lecture Note Ser., 472
<https://arxiv.org/abs/1910.01658> with A. Gibney and N. Tarasca
- On factorization and vector bundles of conformal blocks from vertex algebras
Accepted for publication in Ann. Sci. Éc. Norm. Supér.
<https://arxiv.org/abs/1909.04683> with A. Gibney and N. Tarasca
- Conformal blocks from vertex algebras and their connection on $\overline{M}_{g,n}$
Geom. Topol. 25 (2021), no. 5, 2235–2286
<https://arxiv.org/abs/1901.06981> with A. Gibney and N. Tarasca
- Conformal blocks attached to twisted groups
Math. Z. 295 (2020), no. 3-4, 1643–1681
<https://arxiv.org/abs/1707.04448>

Invited talks and conferences

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| Oxford University
Research seminar | 05/2022 |
| VBAC - Vector Bundles on Algebraic Curves
Stacks and Good Moduli Spaces | 03/2022 |
| IMPA, Rio de Janeiro
International Workshop on Representation theory, Vertex and Chiral Algebras | 03/2022 |
| 2021 CMS Winter Meeting
Combinatorics and Geometry of Moduli Spaces | 12/2021 |
| University of North Carolina at Chapel Hill
Geometric Methods in Representation Theory seminar | 10/2021 |
| Universität Hamburg
Research Seminar Algebra and Mathematical Physics | 10/2021 |

Technische Universität Darmstadt Conference on Vertex Algebras and related topics	09/2021
Universität Duisburg-Essen Oberseminar	05/2021
Università Roma 3 Seminar of Geometry	04/2021
Rutgers University Lie Groups/Quantum Mathematics seminar	04/2021
MIT Harvard-MIT Algebraic geometry seminar	03/2021
ICERM Geometry and combinatorics from root systems	03/2021
University of Colorado, Boulder Rocky Mountain Representation Theory Seminar	12/2020
Colorado State University Fragment Seminar	10/2020
University of Washington, Seattle Algebra and Algebraic Geometry Seminar and Pre-Seminar	01/2020
Goethe-Universität, Frankfurt am Main Oberseminar Algebra und Geometrie	12/2019
Yale University Geometry, symmetry and physics seminar	04/2019
Auburn university AMS Sectionals	03/2019
ICTP, Trieste TAGSS II - Summer School on Geometry of Moduli Spaces of Curves Working group leader	07/2018
Princeton University Algebraic geometry seminar	04/2018
University of California San Diego Algebraic geometry seminar	04/2018
Rutgers university AGNES: Algebraic Geometry Northeastern Series	04/2018
Rutgers university Algebra seminar	04/2018
University of North Carolina at Chapel Hill Geometric Methods in Representation Theory seminar	03/2018
University of Pennsylvania Geometry and Physics seminar	02/2018
University of Bath Géométrie Algébrique en Liberté Poster session	06/2017

Universität Duisburg-Essen Vector Bundles on Algebraic Curves	09/2017
Universität Freiburg Third meeting for young women in mathematics	02/2017
Max-Planck-Institut für Mathematik, Bonn Graduate school on moduli spaces Held one of the courses	09/2015

Teaching experience

Reading course in Algebraic Geometry University of Pennsylvania	Spring 2022
Instructor of Math 151 Rutgers University, virtual	Spring 2021
Instructor of Math 151 Rutgers University, virtual	Fall 2020
Instructor of MAT175 Princeton University Course Head Departmental Teaching Award	Spring 2020
Instructor of MAT103 Princeton University Exam Prep section	Fall 2019
Instructor of MAT175 Princeton University	Spring 2019
Instructor of MAT175 Princeton University	Fall 2018
TA of Math 135 Rutgers University	Spring 2018
TA of Algebraic Topology Universität Duisburg-Essen	Spring 2014
Tutor of Algebra 1 Università degli Studi di Milano	Spring 2012

Service

Organized Seminars and Conferences

Bundles and Conformal Blocks with a Twist ICMS Edinburgh, https://www.icms.org.uk/events/workshops/BCBT with J. Martens and S. Mukhopadhyay	2022
Algebra Seminar Rutgers University, virtual	2020, 2021

with I. Coley and F. Rota

Algebraic geometry seminar 2019

Joint seminar: Princeton University and IAS

with R. van Dobben de Bruyn

Annual meeting of graduate students 2016

SFB/TR 45 Integrated Research Training Group

with F. Binda

Reading course on Linear Algebraic Groups 2015

PhD students seminar at Universität Duisburg-Essen

with N. uit de Bos

Outreach

How to apply for a postdoc in Europe? 2020

Early career section of the Notices of the AMS

with F. Binda

Videos for Connect+ Solve 2019

Princeton University

part of the Freshman Scholars Connect program

Archive Project 2019, 2020

Princeton University

create a versatile archive of Calculus exams

Mathematics in English 2017, 2018

Scuole Medie di Cedegolo and Ponte di Legno, Italy

teaching mathematics in English in Italian middle schools

Selected attended conferences, workshops and schools

Moduli spaces beyond geometric invariant theory 01/2021

AIM (virtual)

Women in Algebraic Geometry - Workshop 07/2020

ICERM (virtual)

Moduli spaces, representation theory and quantization 06/2019

Research Institute for Mathematical Sciences, Kyoto

Higgs bundles and related topics 05/2017

Université de Nice

Geometry, Topology and Dynamics of Moduli Spaces 08/2016

Institute of Mathematical Sciences, National University of Singapore

Summer School: Algebraic Stacks and Related Topics 08/2015

Johannes Gutenberg Universität Mainz

2015 Summer Research Institute on Algebraic Geometry 07/2015

University of Salt Lake City

Triple Masterclass by Nitin Nitsure, Indranil Biswas and Vikraman Balaji 06/2014

Centre for Quantum Geometry of Moduli Spaces, Aarhus Universitet

Conformal blocks, vector bundles on curves and moduli of curves

Università Sapienza, Rome

09/2013

Languages

English
Fluent

Italian
Native

German
Intermediate

French
Basic

August 31, 2022