

UNIVERSITY OF MILAN

Public selection for recruiting No.1 tenure track researcher (RTT) for competition sector _____ 01/A2 - Geometry and Algebra _____, (scientific-disciplinary sector MAT/03 - Geometry) at the Department of Mathematics "Federigo Enriques"_, (announcement published in Official Gazette No. G.U. 97 of 22/12/2023) - Competition code 5467

Luca Dall'Ava

CURRICULUM VITAE

PERSONAL DATA (DO NOT INCLUDE YOUR PERSONAL ADDRESS AND LANDLINE OR MOBILE PHONE NUMBER)

SURNAME	Dall'Ava
NAME	Luca
DATE OF BIRTH	03,05,1993

QUALIFICATIONS**DEGREE**

(Specify full degree name, University, date, etc.)

PhD in Mathematics , (Doktor der Naturwissenschaften "Dr. rer. nat."), University of Duisburg-Essen, Faculty of Mathematics, 30 September 2021

DOCTORAL DEGREE OR EQUIVALENT QUALIFICATION EARNED IN ITALY OR ABROAD / MEDICAL SPECIALISATION DIPLOMA OR EQUIVALENT QUALIFICATION, FOR THE RELEVANT SECTORS, EARNED IN ITALY OR ABROAD

(Specify qualification full name, institution, date, etc.)

PhD in Mathematics , (Doktor der Naturwissenschaften "Dr. rer. nat."), University of Duisburg-Essen, Faculty of Mathematics, 30 September 2021

RESEARCH CONTRACTS, RESEARCH FELLOWSHIP CONTRACTS, POSTDOCTORAL SCHOLARSHIPS OR SIMILAR CONTRACTS

(Specify, for each contract, university/institution, starting and termination date, etc.)

AY 2022/2023, 2023/2024 - Postdoctoral Research Assistant at Università degli Studi di Milano, Oct. 2022 - present. Expected termination date, after renewal of the contract: Oct. 2025.

AY 2021/2022 - Postdoctoral Research Assistant at Università degli Studi di Padova, Dec. 2021 - Sept. 2022.

TEACHING ACTIVITIES AT ITALIAN OR FOREIGN UNIVERSITIES

(Specify academic year, university, degree course, number of hours etc.)

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2021/2022 SS: With Maria Rosaria Pati, Ph.D. course "Basics on Hida Theory" at Università degli Studi di Padova. 4 out of 8 hours.

2020/2021 SS: Teaching assistant for Master course Modular Forms 2 at Universität Duisburg-Essen. 30 hours.

2020/2021 WS: Teaching assistant for Master course Modular Forms 1 at Universität Duisburg-Essen. 30 hours.

2018/2019 WS: Teaching assistant for Master course Modular Forms 1 at Universität Duisburg-Essen. 30 hours.

SPEAKING AT NATIONAL AND INTERNATIONAL CONFERENCES AND CONVENTIONS

(Specify conference/convention title, date, etc.)

- 19/12/2023 *Number Theory Seminar*, University of Genoa: Balanced triple product p-adic L-functions and classical weight one forms.
- 12/12/2023 *Poster presentation for RTG Meeting*, University of Duisburg-Essen: Triple product p-adic L-functions and weight 1 modular forms.
- 25/05/2023 *Number Theory Seminar*, University of Oxford (UK): Balanced triple product p-adic L-functions and classical weight one forms.
- 4/11/2022 *Arithmetic Geometry Seminar*, Università degli Studi di Milano, *Hida theory for Special quaternionic orders*.
- 22/09/2002 *Séminaire d'arithmétique à Lyon*, *Unité de Mathématiques Pures et Appliquées* of the *École normale supérieure de Lyon*, *Hida theory for Pizer's quaternionic orders*.
- 22/07/2021 *RTG Seminar*, University of Duisburg-Essen, *Hida theory for Pizer's quaternionic orders*.

SCIENTIFIC PRODUCTION

SCIENTIFIC PUBLICATIONS

(For each publication, specify the following: authors' names, full title, publisher, date and place of publication, ISBN/ISSN/DOI or equivalent code)

Peer-reviewed papers:

Dall'Ava, L., Approximations of the balanced triple product p-adic L-function, *J. Number Theory*, vol. 246, 2023, pp. 189-226, doi:10.1016/j.jnt.2022

Dall'Ava, L., Hida theory for special orders, *Int. J. Number Theory*, vol. 19, no. 2, 2023, pp. 347-73, doi:10.1142/S1793042123500

PhD Thesis:

Dall'Ava, L., 2021. Quaternionic Hida families and the triple product p-adic L-function. PhD Thesis, <https://doi.org/10.17185/duerpublico/74866>

OTHER INFORMATION

Good knowledge of the computer algebra softwares Magma, PARI/GP and SageMath. Moderate skills of programming in C and Python.

Personal Website: <https://sites.google.com/view/luca-dallava/home-page>

2023/2024:

- I am co-organizing the *Arithmetic Geometry Seminar* at Università degli Studi di Milano.
- I am co-organizing with Rodolfo Venerucci a Working seminar about *Lue Pan's work on locally analytic vectors*.
- I am co-organizing, together with Carlo Mazza and Alberto Vezzani, the ALGANT Pizza Seminar at Università degli Studi di Milano, a seminar aimed at ALGANT master students, third year bachelor students and young PhDs.

2022/2023:

- I co-organized the *Arithmetic Geometry Seminar* at Università degli Studi di Milano

2021/2022: I co-organized, together with Matteo Longo, two seminars:

- A working seminar about Dasgupta and Kakde's work on Hilbert's 12th Problem and Stark-Heegner points.
- A series of number theory seminars, mostly on Zoom, held by young researchers.

TRAINING OR RESEARCH ACTIVITY

My research interests lie in the broad area of special values of p-adic and complex L-functions associated with automorphic representations, mainly triple product L-functions. I am particularly interested in the arithmetic aspect of modular forms, and automorphic forms on quaternion algebras, both from a theoretical and a computational point of view. Recently, I became more interested in the geometry of the eigenvarieties and Drinfeld modular forms together with their relation with quaternion algebras. In my Ph.D. thesis, I extend the theory of Hida families to quaternionic modular forms with level structure given by the special orders defined by Pizer and Hijikata-Pizer-Shemanske; more concretely, I prove a control theorem in the spirit of Hida. I also provide an algorithm for approximating the limit value at $(2,1,1)$ of the balanced triple product p-adic L-function.

Date

21/01/2024

Place

Milano