

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/dupublico/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