

Ian Gleason

Born: May 21, 1992. Mexico City.
Nationality: Mexican, Lithuanian.
Languages: Spanish, English.
Email: ianandre@math.uni-bonn.de

Education

Phd in Mathematics, UC Berkeley.	Aug 2015-
Thesis title: “Specialization maps for Scholze’s category of diamonds.”	Aug 2021
Supervisor: Sug Woo Shin	

BA in Mathematics, UNAM Mexico.	Aug 2010-
Thesis title: “El antiprisma” (<i>The antiprism</i>)	Nov 2014
Supervisor: Isabel Hubard	

Currently

Postdoctoral position at the Mathematical Institute of the University of Bonn. Funded by DFG via Scholze’s Leibniz-Preis.	Sep 2021-
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Talks in Conferences

“Meromorphic vector bundles on the Fargues–Fontaine curve” <i>The Arithmetic of the Langlands Program: Conference on Local Langlands and p-adic methods.</i> Hausdorff Research Institute for Mathematics.	Jun 2023
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“The connected components of affine Deligne–Lusztig varieties and p -adic period domains” <i>Oberwolfach workshop: Arithmetic of Shimura varieties.</i>	
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Mathematisches Forschungsinstitut Oberwolfach.	Feb 2023
“On the p -adic theory of local models” <i>30 Rencontres arithmétiques de Caen</i> . Université de Caen.	May 2022
“Variedades de Shimura locales” (Expository) <i>5th Meeting of Mexican Mathematicians in the World</i> . BIRS-Casa Matemática Oaxaca.	Dec 2021
“On the geometric connected components of unramified local Shimura varieties” <i>Midwest Representation Theory Conference 2020</i> . Virtual Conference: https://homepage.divms.uiowa.edu/~mkrishna/2020mrtc/program.html	Oct 2020
“An introduction to p -divisible groups” (Expository) <i>50° Congreso Nacional de la Sociedad Matemática Mexicana</i> . Instituto de Matemáticas, UNAM. Mexico City, Mexico.	Dec 2017
“Products in abstract polytopes and the antiprism” <i>Kaleidoscope: A conference in honor of Javier Bracho</i> . Ixtapa Zihuatanejo, Mexico.	May 2014

Talks in seminars as invited speaker.

“Finiteness of the stack of p -adic local shtukas.” <i>University of Maryland. Number Theory and Representation Theory seminar</i> .	Sep 2023
“An invitation to the theory of diamonds (expository minicourse).” <i>University of Maryland. Number Theory and Representation Theory seminar</i> .	Sep 2023
“The connected components of affine Deligne–Lusztig varieties in mixed characteristic” <i>Universität Duisburg-Essen. Oberseminar</i> .	Nov 2022
“The connected components of affine Deligne–Lusztig varieties in mixed characteristic” <i>Universität Münster. Mittagseminar zur Arithmetik</i> .	Oct 2022

“Tubular neighborhoods of local models” *MPIM, Arbeitsgemeinschaft Arithmetische Geometrie*.

Apr 2022

“The formal geometry of the local models” *CUHK, Representation and Number Theory seminar*.

Mar 2022

“The specialization principle for p -adic kimberlites” *MPIM, Arbeitsgemeinschaft Arithmetische Geometrie*.

Nov 2021

“On the geometric connected components of moduli of p -adic shtukas” *CIMAT, Seminario álgebra conmutativa y geometría algebraica*.

Apr 2021

“On the geometric connected components of moduli of p -adic shtukas” *MIT, number theory seminar*

Mar 2021

“On the geometric connected components of moduli of p -adic shtukas” *University of Michigan, umich.zoom.us*

Jan 2021

Publications

Ian Gleason. Perfectoid Nullstellensatz: Results and counterexamples. *To appear in Proc. Amer. Math. Soc.*

Ian Gleason and João Lourenço. Tubular neighborhoods of local models. *To appear in Duke Math J.*

Ian Gleason and Isabel Hubard. Products of abstract polytopes. *Journal of Combinatorial Theory, Series A*, 157:287–320, 2018

Ian Gleason and Isabel Hubard. The antiprism of an abstract polytope. *ARS MATHEMATICA CONTEMPORANEA*, 2021

Preprints

Ian Gleason and Alexander B. Ivanov. Meromorphic vector bundles on the Fargues–Fontaine curve. *arXiv preprint arXiv:2307.00887*, 2023

Ian Gleason and João Lourenço. On the connectedness of p -adic period domains. *arXiv preprint arXiv:2210.08625*, 2022

Ian Gleason, Dong Gyu Lim, and Yujie Xu. The connected components of affine Deligne–Lusztig varieties. *arXiv preprint arXiv:2208.07195*, 2022

Johannes Anschütz, Ian Gleason, João Lourenço, and Timo Richarz. On the p -adic theory of local models. *arXiv preprint arXiv:2201.01234*, 2022

Ian Gleason. On the geometric connected components of moduli spaces of p -adic shtukas and local Shimura varieties. *arXiv preprint arXiv:2107.03579*, 2021

Ian Gleason. Specialization maps for Scholze’s category of diamonds. *arXiv preprint arXiv:2012.05483*, 2021

Works in progress

Ian Gleason. On the theory of kimberlites. *In preparation*

Ian Gleason, Linus Hamann, Alexander B. Ivanov, João Lourenço, and Konrad Zou. Comparing the two local Langlands categories. *In preparation*

Master Students

Nico Wolf
Felix Zillinger

Teaching

Lehrperson at Universität Bonn, Bonn, NRW.

V4A1 - Algebraic Geometry I. Lecture course.	2023
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Teaching Assistant at UC Berkeley, Berkeley, CA.

MATH 110 (Linear Algebra for STEM). 3 sections, 1 semester	2020
MATH 250A (Graduate Course on Abstract Algebra). 1 section 1 semester	2019
MATH 54 (Linear Algebra). 2 sections 1 semester	2017
MATH 54 (Linear Algebra). 2 sections 1 semester	2016
MATH 1B (Calculus). 2 sections 1 semester	2016
MATH 1A (Calculus). 2 sections 1 semester	2015

Teaching Assistant A at UNAM, Mexico City, Mexico.

Logic I.	2013
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Awards and Scholarships

Kenneth Ribet & Lisa Goldberg Award in Algebra Mathematics Department of UC Berkeley	2020-2021
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UC-MEXUS CONACYT Doctoral Fellowship for Mexican students	2017-2021
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Support Programme for Research Projects and Technological Innovation. DGAPA-UNAM	2014
International Student Mobility Scholarship. UNAM- DGECI.	2013
Scholarship for Science Olympiads. Mexican Academy of Science.	2010 - 2012

Service

Reviewed articles for:

1. Annals of Mathematics.
2. Inventiones.
3. Proceedings of the American Mathematical Society.