Si Ying Lee

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INFORMATION 450 Jane Stanford Way Building 380

Stanford, California 94305

WEBSITE https://siyinglee.github.io

RESEARCH My research interests lie in the fields of number theory and algebraic geometry, with a INTERESTS particular focus on the geometry and cohomology of Shimura varieties, and applications to the Langlands program.

Employment Stanford University 2023 - present

Szegö Assistant Professor

Max Planck Institut für Mathematik 2022 - 2023

Postdoctoral Fellow

EDUCATION Harvard University 2017 - 2022

Ph.D. in Mathematics

• Thesis: Eichler-Shimura relations

• Advisor: Mark Kisin

National University of Singapore

Bachelor of Science (Honours) in Mathematics

• Honours with Highest Distinction

PREPRINTS & PUBLICATIONS

Si Ying, Lee & Keerthi Madapusi. p-isogenies with G-structure, in preparation

Si Ying, Lee. Unramifiedness of weight 1 Galois representations associated to Hilbert modular varieties, available on author's website

Thomas L. Browning, Pavel Čoupek, Ellen Eischen, Claire Frechette, Serin Hong, Si Ying Lee & David Marcil. Constructing vector-valued automorphic forms on unitary groups,

https://arxiv.org/abs/2408.05198

Linus, Hamann & Si Ying, Lee. Torsion vanishing for some Shimura varieties, https://arxiv.org/abs/2309.08705

Si Ying, Lee. Semisimplicity of étale cohomology of certain Shimura varieties, http://arxiv.org/abs/2206.07283

Si Ying, Lee. Eichler-Shimura relations for Shimura varieties of Hodge type, http://arxiv.org/abs/2006.11745

Heng Huat, Chan & Si Ying, Lee. Congruences associated with the modular j-invariant, INTEGERS (2017)

2013 - 2017

Awards and Scholarships	2019 2017 2017 2017 2016 2015 2013–2017	Raphael and Daniel Salem Fellowship Medal of Excellence in Mathematics Lijen Industrial Development Medal Special Programme in Mathematics Prize Tan Teck Chwee Prize Lim Soo Peng Prize Kent Ridge Undergraduate Merit Scholarship
Invited Talks	Oct 2024 Aug 2024 July 2024 July 2024 March 2024 March 2024 Feb 2024 Nov 2023 Aug 2023 Mar 2023 Mar 2023 Feb 2023 Jan 2023 Oct 2022 Cet 2022 Feb 2022 Jan 2022	Clay Research Workshop BICMR Number theory Seminar Oberwolfach Arithmetic Geometry Workshop ICMS Workshop, Families of p-adic automorphic forms Johns Hopkins Number Theory Seminar Simons Annual Collaboration Meeting Berkeley Number Theory Seminar Stanford Number Theory Seminar Hausdorff Trimester Global Langlands Conference Universite Lille Number Theory Seminar MSRI Shimura Varieties and L-functions Oberwolfach Arithmetic of Shimura Varieties Workshop MSRI Connections Workshop MPIM Arbeitsgemeinschaft Arithmetische Geometrie (2 talks) London Number Theory Seminar Boston College Number Theory Seminar Stanford Number Theory Seminar
	Jan 2022 Dec 2021 Oct 2021 Nov 2020 Nov 2020 Sep 2020	National University of Singapore Number Theory and Representa- tion Theory Seminar Johns Hopkins Junior Number Theory Days 2021 Berkeley Number Theory Seminar Harvard Number Theory Seminar University of Wisconsin - Madison Number Theory Seminar University of Maryland - College Park Number Theory Seminar
TEACHING EXPERIENCE	Stanford: Fall 202 Spring 202 Fall 202 Harvard: Fall 202 Fall 202 Fall 201 Fall 201	Instructor, Math 216C (Introductory Algebraic Geometry III) Instructor, Math 20 (Calculus II) (2 lecture groups, 130 students, Sole instructor) Teaching Fellow, Math 22a (Vector Calculus and Linear Algebra I) Teaching Fellow, Math 22a (Vector Calculus and Linear Algebra I) Awarded the Certificate for Distinction in Teaching Teaching Fellow, Math 23a (Linear Algebra and Real Analysis I) Awarded the Certificate for Distinction in Teaching
SERVICE	Organizer, BIRS-IASM New Tools in the Local and Global Langlands Programs 2025 Organizer, Noetharian Ring, Stanford Mathematics Department Teaching Assistant, IAS Women+ and Mathematics 2024	

Learning seminar on Uniform Mordell

Seminars Organized Fall 2021

CITIZENSHIP Singapore

LANGUAGES English

Chinese