

# Chengyang Bao

---

CONTACT INFORMATION	Department of Mathematics Huxley Building South Kensington Campus Imperial College London London, SW7 2AZ	c dot bao at imperial dot ac dot uk
RESEARCH INTERESTS	I am a number theorist with a particular interest in the Langlands program, especially the $p$ -adic properties of Galois representations attached to modular forms.	
EMPLOYMENT	2025 – <b>Research Associate in Number Theory</b> , Imperial College London 2024 – 2025 <b>Hedrick Assistant Adjunct Professor</b> , UCLA	
EDUCATION	<b>The University of Chicago</b> Ph.D. in Mathematics, June 2024 <ul style="list-style-type: none"><li>• Dissertation: Computing Crystalline Deformation Rings via the Taylor–Wiles–Kisin Patching Method.</li><li>• Advisor: Frank Calegari</li></ul> M.S. in Mathematics, December 2019  <b>Peking University</b> B.Sc. in Mathematics, July 2018	
PREPRINTS	(In preparation, available on request; thesis version) <i>Computing crystalline deformation rings via the Taylor–Wiles–Kisin patching method.</i> (Submitted) <i>Applications of patching the coherent cohomology of modular curves.</i> arXiv:2604.12830	
PUBLICATIONS	<i>Locally induced Galois representations with exceptional residual images.</i> Journal of Number Theory, <b>275</b> (2025), 49-66.	
SERVICE	Sep 2024 – Jun 2025	Organizer of Number Theory Seminar UCLA
	Apr 2022 – Jul 2022	Co-organizer of Weil Conjectures learning seminar UChicago
	Oct 2020 – May 2021	Organizer of No Theory seminar (student number theory seminar) UChicago

TEACHING EXPERIENCE	Winter	2025	UCLA	Instructor, MATH 115A: Linear Algebra
	Winter	2025	UCLA	Instructor, MATH 115A: Linear Algebra
	Fall	2024	UCLA	Instructor, MATH 115A: Linear Algebra
	Fall	2024	UCLA	Instructor, MATH 32A: Calculus of Several Variables
	Winter	2024	UChicago	Instructor, MATH 15200: Calculus II
	Fall	2023	UChicago	Instructor, MATH 15100: Calculus I
	Spring	2023	UChicago	Mentor, DRP <sup>1</sup> in number theory
	Winter	2023	UChicago	Mentor, DRP in commutative algebra
	Fall	2022	UChicago	Instructor, MATH 15100: Calculus I
	Summer	2022	UChicago	Supervisor, REU <sup>2</sup> in representation theory and algebra
	Winter	2022	UChicago	Instructor, MATH 15200: Calculus II
	Fall	2021	UChicago	Instructor, MATH 15100: Calculus I
	Spring	2021	UChicago	Tutor, MATH 13200: Elementary Functions and Calculus II
	Winter	2021	UChicago	Instructor, MATH 15300: Calculus III
	Fall	2020	UChicago	Instructor, MATH 15200: Calculus II
	Spring	2020	UChicago	College Fellow, MATH 25500: Basic Algebra II
	Winter	2020	UChicago	College Fellow, MATH 25400: Basic Algebra I
	Fall	2019	UChicago	College Fellow, MATH 16100: Honors Calculus I (IBL <sup>3</sup> )

---

<sup>1</sup>the Directed Reading Program

<sup>2</sup>the Research Experience for Undergraduates program

<sup>3</sup>Inquiry-Based Learning