Zheng BIAN

CURRENT ROLE	Postdoc at Clarkson Center for Complex Systems Science, Potsdam, NY, USA.	zheng@bian–zheng.cn
EDUCATION	PhD Applied and Computational Mathematics, ICMC – Universidade de São Paulo, Brazil.	2024
	Project: *Dynamics of Complex Heterogeneous Networks Reduction Techniques.*	
	Advisors: Tiago PEREIRA & Jeroen LAMB.	
	MSc Pure Mathematics, Imperial College London, UK.	2018
	Degree conferred with Distinction.	
	Thesis: *Feigenbaum Julia Sets*; Advisor: Trevor CLARK.	
	BA Mathematics & BA Hispanic Studies, Vassar College, Poughkeepsie, NY, USA.	2017
	Degrees conferred with General Honors and Departmental Honors.	
	Inducted to Phi Beta Kappa and Sigma Xi academic honor societies.	
PUBLICATION	*Emergence of chaotic cluster synchronization in heterogeneous networks*, joint with CORDER, MONTALBÁN & PEREIRA.	Editor's Pick, Fast Track, Chaos 2023
	Mean–field and fluctuations for hub dynamics in heterogeneous random networks, joint with LAMB & PEREIRA.	submitted
	Absolutely continuous shadowing via transport, joint with LAMB, PEREIRA & TANZI.	in preparation
	Random–like behaviors in complex network dynamics, joint with LAMB.	in preparation
AWARDS	Student travel award for Workshop Nordestino de Sistemas Dinâmicos, Salvador, BA, Brazil.	2023
	Student travel award for SIAM DS23, Portland, OR, USA.	2023
	FAPESP yearlong research internship at Imperial College London, São Paulo, Brazil.	2021
	FAPESP PhD fellowship, São Paulo, Brazil.	2019
	Graduate Summer School, Instituto de Matemática Pura e Aplicada, Brazil.	2019
	Undergraduate Summer School, IAS & PCMI, Utah, USA.	2017
	Undergraduate Summer Research Fellow, Fields Institute, Toronto, Canada.	2016
	Yearlong Academic Intern, Mathematics Department at Vassar College, USA.	2016
TALKS	(30min) Emergence of chaotic cluster sync in heterogeneous networks, ICMC–USP, Brazil.	2024
	(30min) Emergence of chaotic cluster sync, Oberseminar Dynamics TUM online.	2024
	(20mins) Emergence of chaotic cluster sync in heterogeneous networks, WIAS Berlin, Germany.	2023
	(30mins) Mean–field reduction for random systems heterogeneously coupled on complex networks, 7EBSD Fortaleza, CE, Brazil.	2023
	(poster) Mean–field reduction for RDS on complex networks, Salvador, Brazil.	2023

	(30mins) Probabilistic reduction principle on heterogeneous networks, SIAM DS23, USA.	2023
	(poster) Mean-field reduction for RDS on complex networks, CIRM Luminy, France.	2022
	(2hrs) Correspondence Theorem in RDS, Nesin Math Village, Turkey.	2022
	(2hrs) Introduction to Ergodic Theory, Nesin Math Village, Turkey.	2022
	(40mins) Mean-field reduction principle, WIAS & FU Berlin & U Potsdam, Germany.	2022
	(2hrs) Random Dynamical Systems, ICMC-IPM-IMPA, online.	2020
Teaching	graduate-level ODE (in Portuguese), with Tiago PEREIRA at ICMC-USP summer school.	2023
	mini-course (4hrs) on Random Dynamical Systems, Nesin Math Village, Turkey.	2022
	mini-course (17hrs) on Random Dynamical Systems, online.	2020
	mini-course (4hrs) on Iterated Function Systems, ICMC-USP, Brazil.	2019
Organizing	Transfer operators reading group on various approaches to smooth expanding circle maps, ICMC-USP, Brazil.	2023
	Iterated Function Systems reading group, ICMC-USP, Brazil.	2023
	Transfer operators reading group on abstract results leading to Hennion's Theorem and Nagaev's approach to Central Limit Theorem, ICMC-USP, Brazil.	2020
	Dynamical systems research seminars, joint with Edmilson ROQUE, ICMC-USP, Brazil & Imperial College London.	2019–2023
Peer review	joint with Tiago PEREIRA, refereed for *Annales Henri Poincaré*, *Nonlinearity*, and *Chaos*.	
Languages	Python: Good knowledge. Matlab: Basic knowledge. Mathematica: Basic knowledge. Chinese: Native. English: Fluent. Spanish: Fluent. Portuguese: Fluent. German: Good knowledge.	
References	**Jeroen LAMB,** Professor in Mathematics, Imperial College London, UK. email: jeroen.lamb@imperial.ac.uk	
	Tiago PEREIRA, Professor of Applied Mathematics, ICMC, Universidade de São Paulo, Brazil. email: tiago@icmc.usp.br	
	Edgar MATIAS, Adjunct Professor of Mathematics, IME, Universidade Federal da Bahia, Brazil. email: edgar.matias@ufba.br	
	Ali TAHZIBI, Professor of Mathematics, ICMC, Universidade de São Paulo, Brazil. email: tahzibi@icmc.usp.br	

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